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**HOW ONLINE COLLABORATION MAKES TELEWORK POSSIBLE: AN
ETHNOMETHODOLOGICAL STUDY**

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10 November 2025

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HOW ONLINE COLLABORATION MAKES TELEWORK POSSIBLE: AN ETHNOMETHODOLOGICAL STUDY

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Acceptance Page

This paper prepared by **LEAH GEAN A. DIOPENES** with the title: “**HOW ONLINE COLLABORATION MAKES TELEWORK POSSIBLE: AN ETHNOMETHODOLOGICAL STUDY**” is hereby accepted by the Faculty of Information and Communication Studies, U.P. Open University, in partial fulfillment of the requirements for the Doctor of Communication.

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Biographical Sketch

The author, Leah Gean A. Diopenes, is an Application Developer who has been working in the Information Technology (IT) industry since February 2002 after earning a Bachelor of Science in Computer Science major in Information Technology degree (BS CS-IT) at De La Salle University (DLSU) in December 2001. She started with her post-graduate studies in 2011 after being accepted into the Diploma in Computer Science (DCS) program at the University of the Philippines Open University (UPOU). She decided to pursue post-graduate studies to gain professional growth. Before this, she took up different certifications, such as Microsoft Certification exams and Business Objects Certified Professional (BOCP) exams, which earned her titles, such as Microsoft Certified Technology Specialist (MCTS) for .Net Framework 2.0 Windows Applications and Level One Business Objects Certified Professional (BOCP) for Crystal Reports 2008. To keep up with continuously evolving technologies and programming platforms, she decided to obtain post-graduate studies instead. At first, she just wanted to gauge the waters if she could handle studying while working, which is why she opted to apply to DCS instead of immediately taking up Master of Information Systems (MIS). Taking up post-graduate studies in Distance Education (DE) mode while working seemed to work for her since she completed DCS in April 2013 with special awards: Dean's Lister and Excellence in Computer Science. After completing DCS, she proceeded to take MIS in 2014. She juggled her master's studies with office-based software development work. After postponing taking the MIS comprehensive exam for a year so that she could prepare for it and then completing her final project for three years, she graduated from MIS in 2021. After graduating, she took the opportunity to proceed to Doctor of Communication (DComm), which was also

offered in the Faculty of Information and Communication Studies (FICS) at UPOU, similar to DCS and MIS.

The author was born in Tuguegarao, Cagayan, though both of her parents are from Bacolod City. Before attending college at DLSU in Taft Avenue, Manila, she was a high school student at LIDE Learning Center, Inc. in Isabel, Leyte, who graduated as Salutatorian in March 1997. Her hobbies include participating in church ministries and engaging in physical activities, such as Zumba and running for exercise.

Acknowledgement

"Plans fail for lack of counsel, but with many advisers they succeed." - Proverbs

15:22

"Many are the plans in a person's heart, but it is the Lord's purpose that prevails." -

Proverbs 19:21

This research would not have been possible without the assistance of specific individuals and personalities. Because of this, the author would like to mention them to thank them personally for their support.

First, she would like to thank her parents for inspiring her to take doctoral studies and for their love and encouragement as she pursued Doctor of Communication (DComm). She learned about UPOU in 2011 from her mother, who was then taking up Doctor of Philosophy (PhD) in Education majoring in Chemistry Education at UPOU. She and her mother both graduated in 2013, with her mother finishing a PhD in Education while she completed DCS. Second, she would like to thank her dissertation adviser, Dr. Jean A. Saludadez, for her guidance on the different traditions of communication research and for helping her build her dissertation topic. Third, the author would also like to thank the other members of her dissertation panel, Dr. Alexander G. Flor and Dr. John N. Ponsaran, for accepting her invitation to become members of her dissertation committee and for their suggestions and recommendations on how she can further improve her research. Fourth, the author would like to thank the organization, WVI for permitting her to use as research data the video recording of an online collaboration meeting that she hosted while employed there as an application developer/technical support. Last but not least, the author would like to thank God for everything that He has made possible in her life. She is

thankful for the opportunity to pursue postgraduate studies and to proceed to the Doctor of Communication (DComm) program.

Dedication

“Take this as an encouragement: it is still possible to make discoveries; there's gold in the dust waiting for you.” - Paul ten Have

This work is dedicated to all teleworkers who participate in the co-creation of social order during telework.

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Abstract

This ethnomethodological research employed conversation analysis (CA) to examine how the communicative practice of online collaboration makes the phenomenon of telework possible. This study was framed within the perspective of the sociocultural tradition that theorizes communication as “a symbolic process that produces and reproduces shared cultural patterns (Craig, 1999, p.144).” Through conversation analysis, this study revealed teleworkers’ tacit, unacknowledged, and taken-for-granted collaborative practices, as well as their common sense, which enables them to create order and achieve work. This study utilized a pre-recorded Zoom recording of a remote session conducted by teleworkers. The pre-recorded remote session recording aligned with CA’s preference for recorded conversations, which are more natural and non-experimental, rather than provoked by the researcher (ten Have, 2011e, p. 4). The online written interaction found in the remote session recording was also added to the dataset used in this research. This study was guided by the research questions: “*What practices do teleworkers employ to accomplish the organization? What organizational arrangement is created in telework?*” Its findings include discovering six key practices that enable telework, which are: connecting, synchronizing/coordinating, sharing information, using digital technologies, initiating repair, and complying with data privacy and information security policies. It also proposed an organizational arrangement of telework, which provided a representation of how social order is formed during telework and a symbolic representation of how online collaboration is constituted for the purpose of accomplishing telework.

Chapter I

RATIONALE

Virtual Collaboration

Virtual collaboration has generated new forms of interaction and communication patterns that are worth examining and understanding. First, it brings together individuals from different locations and enables them to interact as though they were co-located. Second, it introduces new communication problems, such as challenges caused by the lack of visual cues present in face-to-face settings. Communicating in the virtual realm creates new ways of doing and generates new forms of meaning. Telework is one phenomenon that virtual collaboration enables.

The proliferation of digital technologies has changed the way people communicate. In the work setting, businesses are no longer limited to face-to-face communication. Virtual communication is a possible option, though it has pros and cons.

Telework as a Work Arrangement

Virtual communication has also opened doors to new ways of working, such as telework. Telework involves accomplishing work through the use of information and communication technologies (ICTs) from a remote work location (Athanasiadou & Theriou, 2021, p.2) (Allen et al., 2015, p.44). As a work arrangement, it has advantages and disadvantages. One of its most significant advantages is its potential to be utilized as a response to future crises (Atkinson, 2022, p.1406). During the

COVID-19 pandemic, for instance, telework was the means to ensure business continuity amid government-imposed lockdowns and social distancing measures. Now that COVID-19 is no longer a threat (Athanasiadou & Theriou, 2021, p.1), the telework setup may not end “but could become part of the ‘new and better normal’ for years to come, supported by digitalization, advanced communication, and cloud technologies (ILO, 2020, p.4).”

Chapter II

REVIEW OF RELATED LITERATURE

Definition of Telework

Telework is a work mode that involves working in another location away from the office and connecting with it through information and communication technologies (ICTs). It is derived from the combination of the Greek prefix “tele,” which means far (Athanasiadou & Theriou, 2021, p.1), and the English word “work”. It is often used interchangeably with “telecommuting,” a practice accepted in telework research (Harker Martin & MacDonnell, 2012, p.603). One difference between the two is that telework is a term more frequently used in literature outside of the United States, such as research published by European or Australian outlets (Allen et al., 2015, p.43).

Telework or telecommuting is not a new concept. The idea started in the United States as a work mode for coping with the oil crisis (Allen et al., 2015, p.41) that first occurred in 1973 (Kettell, 2024). The concept then “was to move the work to workers rather than move workers to work to alleviate traffic problems and reduce energy consumption (Allen et al., 2015, p.41).” Jack Nilles, an engineer working on projects for the National Aeronautics and Space Administration (Allen et al., 2015, p.41) was the first scholar to coin the term “telecommuting” (Harker Martin & MacDonnell, 2012, p.603) in the early 70s (Gohoungodji et al., 2022, p.607) (Allen et al., 2015, p.40-41) (Harker Martin & MacDonnell, 2012, p.603) (Athanasiadou & Theriou, 2021, p.1). The first definition of telecommuting which is “*activity that includes all work-related substitutions of telecommunications and related information technologies for travel* (Collins, 2005, p.115)” can also be credited to him.

Since its conception, telework has drawn research from various fields such as psychology, management, transportation, communication, and information systems (Allen et al., 2015, p.41) for multiple reasons. First, it is seen to be a plausible alternative to working in a traditional office (Gohoungodji et al., 2022, p.606). Second, it “changes how organizations have historically done business and has implications for a wide range of issues such as work-family balance, greenhouse emissions, and the expansion of work opportunities (Allen et al., 2015, p.41).” Research is required to investigate and understand these issues and related controversies. Third, the advancement of ICTs in the 2000s added to the popularity of telework. Lastly, the sudden shift to, and increase in telework during the COVID-19 pandemic, when most businesses were unprepared for this mode of work, accelerated research on telework (Gohoungodji et al., 2022, p.606) (Mutiganda et al., 2022, p.2).

Though there are numerous studies on telework, the results of these studies are often conflicting, so comprehensively understanding outcomes associated with telecommuting is a challenge (Allen et al., 2015, p.41). First, researchers have used various terminologies and conceptualizations when reporting the results of telecommuting studies. In different studies, telecommuting has been referred to with other labels such as “*telework, remote work, distributed work, virtual work, flexible work, flexpace, distance work* (Allen et al., 2015, p.42), *homeworking, telehomeworking, remote working, virtual work, electronic homeworking, e-Work, home-anchored work* (Athanasiadou & Theriou, 2021, p2)” and *work from home* among others. These terms “while overlapping often embody different conceptualizations of telecommuting (Allen et al., 2015, p.42).” In studies that use the identical label of ‘telecommuting’, the actual definition offered may vary (Allen et al., 2015, p.42). The lack of an accepted definition and conceptualization of telecommuting

has contributed to the fragmentation of telecommuting literature and has also hindered understanding of this work mode since results across studies are often not comparable (Allen et al., 2015, p.42). Second, studies from different disciplines often “have different emphases and do not always reference each other’s work (Allen et al., 2015, p.42).” Divergences in definitions and research focuses make it difficult to comprehensively synthesize knowledge of this work mode (Allen et al., 2015, p.42).

Although there seems to be no universally accepted definition of the term telework (Martínez-Sánchez et al., 2007, p.208), various definitions of telework seem to agree on a common premise which is: telework involves: 1) a remote work location and 2) the use of information and communications technologies (ICTs) (Athanasidou & Theriou, 2021, p.2) (Allen et al., 2015, p.44).

To compensate for “the lack of a universally accepted telework definition, some researchers have used project-specific definitions (Athanasidou & Theriou, 2021, p.2).” Sullivan argues that project-specific definitions of telework are inevitable. She further argues that these definitions are useful for refining future definitions and can help guide future sampling strategies (Sullivan, 2003, p.163). Allen et al. recommend that researchers provide a clear definition of telecommuting as it is being used within a given research study (Allen et al., 2015, p.42). Aside from this, they also recommend the following definitions of telecommuting and its alternative terms to be used in research.

Telework generally connotes “a broader form of telecommuting that involves working from a variety of alternative locations outside of the central office, including full-time work from home but not necessarily limited to home-based work and includes work from home-based businesses, telecenters, and call centers, and even work within an organization’s central office between individuals who are interacting through

the use of technology (Allen et al., 2015, p.42-43).” Virtual work “is a broader term often used to describe individuals, groups of individuals or organizations, who do not interact face-to-face because of geographic dispersion yet who interact using technology in some fashion (Allen et al., 2015, p.43).” Flexible-work arrangements “encompass telecommuting but often include a broad array of flexible work programs such as flextime and compressed work weeks, offering a more generalized view of telecommuting (Allen et al., 2015, p.43).” Remote work and distributed work “are generally considered broader than telecommuting and can denote any form of work not conducted in the central office, including work at branch locations and differing business units (Allen et al., 2015, p.43-44).” Teleworking is a component of remote work practices, allowing employees to alternate between the ordinary workplace and outside locations, through the use of information and communication technologies (ICT) (Mutiganda et al., 2022, p.2). Lastly, telecommuting is “a work practice that involves members of an organization substituting a portion of their typical work hours, ranging from a few hours per week to nearly full-time, to work away from a central workplace, typically principally from home, using technology to interact with others as needed to conduct work tasks (Allen et al., 2015, p.44).” Nilles argued that telecommuting is a subset of teleworking (Kilson & Tavares, 2024, p.2).

The above definition of telecommuting indicates that, generally, telecommuters:

- 1. substitute time typically spent in the central office with time spent working away from other employees, rather than working additional overtime hours that might be carried out after a full day in the office (Allen et al., 2015, p.44).*
- 2. do so for a portion of their regular work time, ranging from a few hours per week to nearly full-time, with hours spent telecommuting tending to follow a set pattern for*

individual telecommuters but potentially varying among telecommuters in any one organization (Allen et al., 2015, p.44).

3. are part of a larger organization, as opposed to independent contractors or those who are part of an outsourced labor pool (Allen et al., 2015, p.44).

4. work principally within their home during telecommuting periods, with an occasional period possibly spent elsewhere (Allen et al., 2015, p.44).

5. use some form of information or communication technology to interact as needed with others both within and external to their central office during telecommuting periods (Allen et al., 2015, p.44).

From this view, “telecommuters do not include mobile workers who do not work from a central office, such as employees who do not have an office or those whose work is at a customer site, such as an on-site repair person (Allen et al., 2015, p.44).” Excluded from this perspective are also “employees who work primarily at telecenters during periods away from the office (Allen et al., 2015, p.44).” Telecommuting practices may involve some scheduling flexibility but it does not include time spent working at home after a full day at the central office (Allen et al., 2015, p.44).

The evolution and growth of telecommuting can also be attributed to advancements in technology and changes in the economy (Allen et al., 2015, p.41). Although telecommuting was predicted to be the work arrangement of the future during the 1970s and 1980s, adoption of this work arrangement was slow (Athanasiadou & Theriou, 2021, p.1) primarily because the decision to adopt a teleworking arrangement depended on employers and organizational outcomes (Harker Martin & MacDonnell, 2012, p603). In the early 2000s, “telecommuting gained popularity due to advances in ICTs, such as the widespread use of computers and broadband internet, mobile devices, social media, cloud computing, and networking tools (Gohoungodji et al.,

2022, p.607).” However, it was not until the COVID-19 pandemic that a “massive shift to telework (Athanasidou & Theriou, 2021, p.1)” or “full-time remote work (Yang et al., 2021, p.43)” occurred. During the COVID-19 outbreak, when social distancing measures were strictly imposed to prevent the spread of the virus, telework became essential in preserving jobs and production (Athanasidou & Theriou, 2021, p.1). It became a strategic means of survival for many companies (Gohoungodji et al., 2022, p.605). The implementation of telework became required rather than chosen or offered as an option (Atkinson, 2022, p.1405). One of the outcomes of this “extensive mass teleworking experiment (ILO, 2020, p.1),” was the realization of organizations and individuals of the benefits of work from home (Rahman Fatmi et al., 2022, p.1). Now that the risk of COVID-19 has subsided, the increased use of telework will most likely remain instead of returning to the previous pre-pandemic workplace normal (Atkinson, 2022, p.1413). “The expanded use of telework may not end but could become part of the ‘new and better normal’ for years to come, supported by digitalization, advanced communication, and cloud technologies (ILO, 2020, p.4).” Many organizations are expected to rethink the locations from which their employees can effectively, efficiently, and safely fulfill their roles and responsibilities (Hajal, 2022, p.22). The extended use of telework adds to the importance of research on this topic. In general, research on the “influence of COVID-19 on the workplace in the post-pandemic era is significant since this can provide valuable insights into the changes and obstacles encountered by employees and organizations, facilitating the formulation of effective approaches to meet the requirements of employees, foster equilibrium between work and personal life, and enhance organizational productivity (Rahmani & Zeng, 2023, p.1).” Understanding the effects of COVID-19 on workplace practices in diverse national and cultural contexts can also aid in creating more comprehensive and culturally-sensitive

regulations and procedures (Rahmani & Zeng, 2023, p.1). In summary, examining the impact of COVID-19 on the workplace is crucial to adjusting to the new normal and constructing more resilient and sustainable workplaces (Rahmani & Zeng, 2023, p.1).

Review of Existing Studies on Telework

To find out about existing knowledge on telework, a review of existing communication studies on telework was conducted. [Scopus database](#), “a source recommended and applied by numerous researchers in their systematic literature review analyses (Athanasiadou & Theriou, 2021, p.2)” was used to search for existing literature on telework. On November 2, 2024, a search was made in the Scopus database using two sets of keywords, with each word or phrase in each set enclosed in curly brackets to denote an exact phrase (Elsevier Support Center, 2024). The first set: *{telework} OR {teleworking} OR {telecommuting} OR {virtual work} OR {remote work} OR {virtual teams} OR {distributed work}* yielded 19652 articles. The results were refined by applying the second set of keywords consisting of *{phenomenology} OR {ethnomethodology} OR {ethnography} OR {symbolic interactionism} OR {critical theory} OR {conversation analysis}*, which refer to the different traditions of qualitative research. This yielded 72 articles, which were further narrowed down to 41 by specifying the date range: 2020 to 2024, since this research focuses on studies done during the COVID-19 pandemic or after. These results were further narrowed down to 27 when only open-access articles were included. Since the search only included 1 article under critical theory, the second set of keywords was revised to *{critical theory} OR {critical studies} OR {communication studies}*, adding 3 more results. A total of 30 articles resulted from the search done in Scopus. Each of these articles was read

individually to investigate existing knowledge on telework and to find out what studies have been done about telework that would warrant a communications study of telework. The articles were then analyzed based on Research Methodology, Data Collection Methods, Analytic Strategies, Research Questions, and Findings/Key contributions. After reading the articles one by one, a final count of 26 articles valid for literature review resulted.

The literature review of communication studies on telework from Scopus database during the COVID-19 pandemic, ranging from 2020 to 2024, resulted in 10 ethnographic studies, 9 phenomenological studies, 5 ethnomethodological/conversation analysis studies, 1 symbolic interactionism study, and 1 critical theory study. Table 1 shows the number of qualitative studies included in the literature review based on tradition.

Table 1.

Number of Qualitative Studies Based on Tradition

| Traditions of Qualitative Research | Number of Studies |
|---|--------------------------|
| Ethnography | 10 |
| Phenomenology | 9 |
| Ethnomethodology/Conversation Analysis | 5 |
| Symbolic Interactionism | 1 |
| Critical Theory | 1 |
| Grand Total | 26 |

The topics discussed in these studies were varied. In general, they were about different aspects of varied experiences during telework. Table 2 below summarizes the research focus of each study. Research Focus of each Study

Table 2.

Research Focus of each Study

| # | Author(s), publication year | Tradition of Qualitative Research | Research Focus |
|---|-----------------------------|--|---|
| 1 | (Kilson & Tavares, 2024) | Phenomenology | The relationship between physical and temporal distance and employee perceptions of communication quality (p.4) |
| 2 | (Tiilikainen et al., 2024) | Symbolic Interactionism | Dealing with ICT interruption in online collaborative work |
| 3 | (Reeves et al., 2022) | Ethnomethodology/Conversation Analysis | How I'd Hide You (IHY) was practically accomplished as a performance (p.72); |
| 4 | (Meira & Messias, 2024) | Phenomenology | Job crafting practices employed by managers during telework |
| 5 | (Pfeffer, 2024) | Ethnography | Dynamics of interactions engaged during a remote work experience in coworking spaces (p.65) |
| 6 | (Mabaso & Manuel, 2024) | Phenomenology | Performance management practices (p.5,6) |
| 7 | (Ruvimova et al., 2023) | Ethnography | Challenges developers face in setting up their physical workstations at home (p.1) |

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|----|-----------------------------|---------------|---|
| 8 | (Flügge & Møller, 2022) | Ethnography | The role of physical cues and documentation in remote and co-located case work (p.287) |
| 9 | (Scholz & Szulc, 2023) | Ethnography | Impact of COVID-19 on female scholars working in the academe (p.1042-1043) |
| 10 | (Matthiesen et al., 2022) | Ethnography | The way collaborators involved in global software development (GSD) interpreted various collaborative activities, issues, or clashes (p.10) |
| 11 | (Schiemer et al., 2022) | Ethnography | Copresence in collaborative spaces (p.546) |
| 12 | (Zayts-Spence et al., 2022) | Ethnography | Mental health of mothers in Hong Kong during the COVID-19 pandemic (p.257) |
| 13 | (Fernanda et al., 2023) | Phenomenology | Dental students' perception of motivations and meanings regarding interprofessional learning in the period of Emergency Remote Teaching (ERT), during the Covid-19 pandemic, at a public university located in the South region of Brazil (p.2) |

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|----|------------------------|---------------|--|
| 14 | (Hu et al., 2022) | Ethnography | Collaboration breakdowns in remote work (p.48:3); intra-team and inter-team collaboration (p.48:3) |
| 15 | (Coyle et al., 2021) | Phenomenology | Experiences of academic institutions, pharmaceutical companies, and small-medium enterprises in developing and implementing remote decentralized clinical trial (RDCT) methods that can help identify actionable learning points to inform the future design and conduct of RDCTs (p.1032) |
| 16 | (Okpara et al., 2022) | Ethnography | Practices of CSEs to build a shared understanding of non-functional requirements (NFRs) (p.1) |
| 17 | (Messias et al., 2022) | Phenomenology | Meaning of work for liberal professionals from different sectors of the health area with at least 10 years of experience, in the context of the COVID-19 pandemic (p.4) |
| 18 | (Laari et al., 2021) | Phenomenology | Reasons for novice nurse educators' transition from practice to academia in three Health Training Institutions in the Upper East Region of Ghana (p.1). |

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| 19 | (Boudouraki et al., 2021) | Ethnomethodology/Conversation Analysis | Communicative asymmetries in assistance recruitment in Mobile Robotic telePresence (MRP) systems (p.111:2) |
| 20 | (Olbertz-Siitonen & Piirainen-Marsh, 2021) | Ethnomethodology/Conversation Analysis | Pointing achieved through the use of a technical device (p.1) |
| 21 | (Gatti, 2020) | Ethnomethodology/Conversation Analysis | Manifestations of individual ethos or virtuousness in the interplay between private and work-life frames, and the implications that this may have on the team's ethics (p.7) |
| 22 | (Piasecka et al., 2021) | Ethnography | Reactions and attitudes of psychotherapists towards patients and work in the situation of the COVID-19 pandemic (p.14) |
| 23 | (Hafermalz & Riemer, 2020) | Phenomenology | Ways interpersonal connectivity between two geographically distant people is achieved (p.1628) |
| 24 | (Ekberg et al., 2020) | Ethnomethodology/Conversation Analysis | Communication between healthcare professionals and families within paediatric palliative care services in Australia (p.1203) |
| 25 | (Klöpper & Köhne, 2022) | Critical Theory | Risks of People Analytics (p.12) |
| 26 | (Tanucan et al., 2023) | Phenomenology | Webinar fatigue (p.276) |

Among the studies included in the review, only four investigated online collaboration, which is the communication process in telework. The works of Tiilikainen et al. (2024), Matthiesen et al. (2022), Schiemer et al. (2022), and Hu et al. (2022) examined aspects of collaboration in a virtual environment. Using the lens of symbolic interactionism, Tiilikainen et al. examined practices of collaborative groups in handling ICT interruptions and presented a process model of dealing with ICT interruptions during group collaboration. Matthiesen et al. did an ethnographic study recognizing how negative stereotypes and implicit biases can challenge or shatter distributed collaborative work (Matthiesen et al., 2022, p.1) and proposed a solution. Schiemer et al. used ethnographic methods to examine how copresence in different spatial settings affects creative collaboration. Lastly, Hu et al., using the ethnographic lens, extended the Distance Matters framework, a research agenda in Computer-Supported Cooperative Work (CSCW), to account for inter-team collaboration (Hu et al., 2022, p.1) and discovered a paradox. In their ten-month ethnography in a remote organization, they observed that despite exhibiting excellent remote collaboration, teams paradoxically struggled to collaborate across team boundaries (Hu et al., 2022, p.1). These studies emphasize the importance of understanding collaboration in the context of a virtual environment, but they do not specifically focus on how online collaboration enables telework. Second, among these four studies, only the study by Tiilikainen et al. (2024) clearly presented a model of communication that portrayed how the communication process being studied was constituted. In this research, dealing with ICT interruptions was interpreted in terms of Goffman's concept of dramaturgy. Dealing with ICT interruptions was depicted as a stage performance resulting in a process model of dealing with ICT interruptions during group collaboration.

A communications study on how online collaboration enables telework is essential due to the relevance of digital technologies and the teleworking phenomenon in today's society. Second, a representation of how online collaboration constitutes the communication process in telework, which can be achieved through a communications study, can contribute to the knowledge and theoretical understanding of these topics. A deeper understanding of collaboration and telework can increase awareness about these topics, which can support and improve their practical implementation. Third, a qualitative communications study about how online collaboration enables telework is also essential since it gives an alternative perspective to quantitative studies about the topic. Qualitative research can provide insights into "people's experiences, behaviors, interactions, and social contexts without using statistical procedures or quantification (Fossey et al., 2002, p.717)." It provides an alternative way of knowing that can expand "the range of knowledge and depth of understanding that can be applied to a given problem or situation (Fossey et al., 2002, p.717)."

Collaboration

Collaboration, coordination, and cooperation are at the core of interorganizational relationships (IORs) (Castaner & Oliveira, 2020, p.966). Collaboration hails from the Latin *cum laborare*, which means working with others (Castaner & Oliveira, 2020, p.967). Collaboration generally refers to "the act of two or more persons working together toward an agreed upon goal (Castaner & Oliveira, 2020, p.967)." It is "a cooperative, interorganizational relationship that is negotiated in an ongoing communicative process (Hardy et al., 2003, p.323)." It is also "a process whereby two or more parties work with each other to achieve mutually beneficial

outcomes (Lee et al., 2023, p.3)." In collaboration, group participants are interdependent on each other and share unique ideas and experiences, leading to results better than any one individual could have achieved working alone (Hathorn & Ingram, 2002, p.33). When group members collaborate, they all work on the whole problem and the contribution of the participants often cannot be clearly separated in the final output in contrast with cooperation, where work is divided and a portion is delegated to each individual (Hathorn & Ingram, 2002, p.33).

Interpersonal collaboration can be categorized into three types: horizontal, vertical, and inter-work unit. Horizontal collaboration refers to collaboration among peers on the same level. Vertical collaboration refers to collaboration between managers and subordinates while inter-work unit collaboration refers to collaborative behaviors or activities among different work units in an organization. These three forms of collaboration cover the most fundamental levels of human interaction occurring within an organization. (Lee et al., 2023, p.4)

Collaboration is vital because it gives value to an organization. Active collaboration allows "employees to carry out strategic communication with collaborative partners to gain tangible and intangible resources that cannot be achieved by personal effort alone (Lee et al., 2023, p.4)." Collaboration also "improves work productivity by enabling collaborative partners to utilize critical resources attained from each other (Lee et al., 2023, p.4)." Collaboration allows organizations to effectively leverage their employees' capacity to achieve collective goals (Lee et al., 2023, p.4).

Because it is a crucial factor in achieving organizational goals, collaboration has been a topic of much research. However, most research on collaboration has been on collaboration in traditional workplaces (Lee et al., 2023, p.4). With the telework

arrangement continuing even after the COVID-19 pandemic ends (Lee et al., 2023, p.2), more research on collaboration in the telework context is needed. After all, “the rise of telework reshapes employees’ ability and willingness to collaborate (Lee et al., 2023, p.4).”

Collaboration in the telework context is usually done with the support of information and communication technologies (ICTs) or digital platforms. “Telework arrangements can present numerous complications in the effective management and encouragement of collaboration (Lee et al., 2023, p.4).” The first challenge is physical distance (Kilson & Tavares, 2024, p.3). In the telework context, “teleworkers access information and communicate with colleagues from a variety of different physical locations, possibly at different times, and work no longer occurs in a shared context as in the traditional office (Bélanger & Allport, 2008, p.102).” Replacing in-person interactions with ICT-mediated interactions due to physical separation significantly affects internal communication (Kilson & Tavares, 2024, p.3). Also, schedule flexibility in telework impacts coordination and also increases temporal distance. Since teleworkers do not work simultaneously, coordination of activities becomes more challenging (Kilson & Tavares, 2024, p.3). Second, computer-mediated communication (CMC) “filters out certain personal, social, and behavioral cues, such as voice and body language that people use in face-to-face communication affecting group dynamics (Bob & Sooknanan, 2014, p.47).” For some, the physical distance associated with telework and the “social disconnectedness of CMC (Yildirim & Gökçay, 2011, p.245)” makes it more challenging to establish and nurture relationships (Kilson & Tavares, 2024, p.3). Third, teleworkers are less likely to have informal meetings and in time, face challenges expanding their network. Teleworkers often feel isolated from the rest of the organization. (Kilson & Tavares, 2024, p.3) The impact of telework on

collaboration is yet to be sufficiently studied (Lee et al., 2023, p.4). Also, relatively little is known about how employees collaborate when they telework (Lee et al., 2023, p.1).

Computer-Supported Cooperative Work (CSCW)

Computer-Supported Cooperative Work (CSCW) “is an interdisciplinary research field devoted to understanding cooperative work practices with the aim of contributing, both conceptually and technically, to the development of ‘collaborative computing,’ which refers to computing technologies that facilitate, mediate, or regulate workers’ interdependent activities (Schmidt, 2016, p.2).” It is the “study of how people work together using computing and communication technologies, whether the people are collocated or remote, working at the same time or asynchronously, or trying to make a transition from one situation to the other, for example, getting a meeting scheduled, assigning work tasks to people to do in parallel, etc. (Olson & Olson, 2003, p.243).” CSCW “is broadly interdisciplinary, drawing from computer science, management information systems, information science, psychology, sociology, and anthropology (Olson & Olson, 2003, p.243).” As an interdisciplinary field, the disciplinary span of CSCW covers ethnographic fieldwork, experimental development of advanced technical solutions, and evaluation studies *in situ* (Schmidt, 2016, p.2).

Collaborative computing is the precondition to the formation of CSCW. It is as old as computing technology, which refers to electronic computers developed to automate massive calculations, such as the very first computers constructed during and immediately after World War II to automate calculation work required in complex areas such as cryptology or the development of new weapon systems. (Schmidt, 2016, p.2) Collaborative computing, on the other hand, refers to technology designed not to automate calculation work but rather to assist workers in their work and the

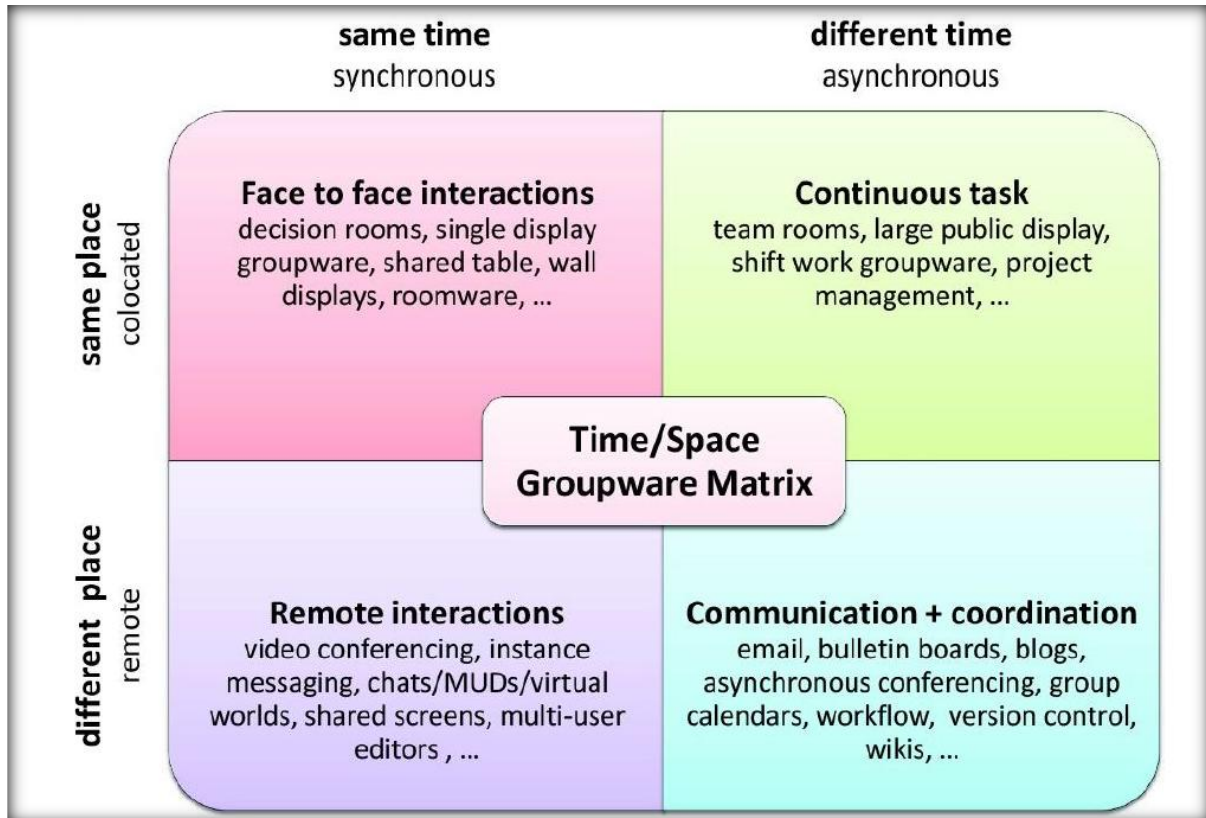
coordination of their work (Schmidt, 2016, p.2). Initially developed for the US air defense, collaborative computing that emerged in the 1940s eventually evolved into “online transaction processing” systems such as multiuser database systems, for example, airline reservation systems and online banking systems (Schmidt, 2016, p.2). Early forms of collaborative computing facilitated cooperative work by providing shared digital representation but offered workers limited means of coordinating their activities (Schmidt, 2016, p.2-3). When faced with contingencies, workers have to interact outside of the system through conversations (Schmidt, 2016, p.2-3). With the invention of time-sharing, which gave multiple workers access to the same “host” computer, posting messages to one another became possible but only within a closed network of terminals connected to a host computer. With the emergence of open computer networks and the Internet in the 1970s and 80s, communication technologies based on message handling, such as electronic mail, instant messaging, chat rooms, etc. developed rapidly. A new form of collaborative computing known as “computer-mediated communication” that provided means for “informal” exchange of free-form messages, documents, etc., emerged. However, computer-mediated communication technologies were soon found fundamentally inadequate for ordinary cooperative work. CSCW emerged in the 1980s as a research area from the realization that existing computational technologies fell short in the face of the problems of coordinating interdependent work activities involving multiple actors, especially when working under conditions of contingency and uncertainty. (Schmidt, 2016, p.3) CSCW pioneers realized that collaborative computing raised fundamental issues that are all connected to the nature of *cooperative work practices* and that, to be able to contribute to technologies that can be integrated into actual cooperative work practices, it was necessary for researchers to build their designs based on a rich

and sophisticated understanding of such practices. Central to the CSCW research program is an approach to technology development in which ethnographic and other forms of in-depth workplace studies play an essential and proactive role. CSCW research has over the years built a large and rich corpus of workplace studies in a wide range of settings. (Schmidt, 2016, p.3) “More specific to *cooperative work practices*, CSCW researchers are exploring categories of *coordinative practices* (Schmidt, 2016, p.3).” CSCW has developed important elements of the conceptual framework that are required for it to contribute constructively to the development of collaborative technologies (Schmidt, 2016, p.3). An example of this conceptual framework in the domain of remote work is the Distance Matters framework, a landmark framework and research agenda in CSCW that describes the socio-technical conditions inherent in distance work that present challenges for collaboration (Hu et al., 2022, p.1).

Groupware

Figure 1.

CSCW Matrix (Johansen, 1988) (Germain, 2015, p.6)



Groupware refers to the collection of technologies used in Computer-Supported Cooperative Work (CSCW) (Olson & Olson, 2003, p.243). It is a class of computer software that helps members of a group work better together by making it possible for them to easily share information and use that information to more easily support working together (George, 2003, p.509). Also known as collaborative software, groupware refers to "computer-based systems that support groups of people engaged in a common task (goal) and that provide an interface to a shared environment (Kutlu et al., 2021, p.1)." As an aspect of CSCW, "groupware systems are designed to support geographically and temporally distributed work groups or teams for effective

collaboration towards a common goal, solution of a common problem, data sharing, idea generation, conflict resolution, decision making, or system analysis and design (Kutlu et al., 2021, p.1)." A widely referred classification of groupware is the CSCW matrix, which can be credited to Johansen (Johansen, 1988) (Kutlu et al., 2021, p.2). The CSCW matrix is a 2x2 matrix (Kutlu et al., 2021, p.1) that classifies groupware based on time and space dimensions (Pedersen & Konstantinos, 2020, p.3). "The first dimension is concerned with when the interaction occurs, which can take place at the same time (synchronous) or at different times (asynchronous). The second dimension is concerned with the geographical location of the individuals, which can be at the same place (co-located) or at different places (remote/distributed). (Pedersen & Konstantinos, 2020, p.3)" Combining the two dimensions results in four categories: Co-located and synchronous interaction, Remote and synchronous interaction, Co-located and asynchronous interaction, and Remote and asynchronous interaction (Pedersen & Konstantinos, 2020, p.3). Examples of groupware categorized in co-located and synchronous interaction include decision rooms, single display groupware, shared table, wall display, and roomware. Examples of groupware categorized in remote and synchronous interaction include video conferencing, instant messaging, chats/MUDs (Multiuser Dimension)/virtual worlds, shared screens, and multi-user editors. Examples of groupware categorized in co-located and asynchronous interaction include team rooms, large public display, shift work groupware, and project management. Examples of groupware categorized in remote and asynchronous interaction include email, bulletin boards, blogs, asynchronous conferencing, group calendars, workflow, version control, and wikis. (Germain, 2015, p.6)

Computer-mediated communication

Computer-mediated communication, a form of collaborative computing (Schmidt, 2016, p.3) can be categorized into synchronous and asynchronous modes (Hathorn & Ingram, 2002, p.33-34). Synchronous CMC is more like a conversation, such as chats and instant messages, which take place in real-time. This mode is analogous to a telephone call, where all participants must be online simultaneously, and communication occurs instantly. Videoconferencing technology is also an example of synchronous CMC. Asynchronous CMC, on the other hand, refers to technologies that do not require simultaneous interaction and are independent of time and space. Examples of asynchronous CMC are ubiquitous email, mailing lists, newsgroups, and online discussion boards or bulletin boards. (Hathorn & Ingram, 2002, p.34)

Digital Transformation

The advancement of digital tools and platforms has revolutionized communication. The advent of the Internet enabled real-time exchanges through instant messaging and email. Over time, new communication platforms specifically designed to support collaborative work emerged. One such technology is video conferencing tools such as Zoom, Google Meet, and Microsoft Teams that have become indispensable for remote communication, especially during the COVID-19 pandemic. These tools enabled face-to-face interactions across distances, preserving the personal connection during collaboration. Through features such as screen sharing, virtual whiteboards, breakout rooms, virtual backgrounds, and recording

capabilities, video conferencing tools enhance collaboration. Emerging trends such as artificial intelligence (AI) and machine learning (ML) further transform the collaborative power of digital tools. AI, for example, can automate routine tasks, such as note-taking or transcribing meeting minutes, freeing up time for professionals, enabling them to focus on more strategic and innovative aspects of their work. (Abiola et al., 2024, p.68, 69)

Chapter III

Framework of the Study

The Sociocultural Tradition of Communication Theory

This study is framed in the sociocultural tradition of communication, which theorizes communication as “a symbolic process that produces and reproduces shared cultural patterns (Craig, 1999, p.144).” In this lens, “communication explains how social order is created, realized, sustained, and transformed in microlevel interaction processes (Craig, 1999, p.144).” Sociocultural theory is based on the view that “our everyday interactions with others depend on preexisting, shared cultural patterns and social structures, and also reproduce the existing sociocultural order (Craig, 1999, p.144).” According to this theory, the creative process of social interaction, which permits and requires a good deal of improvisation, collectively produces the very social order that makes the interaction possible in the first place (Craig, 1999, p.144-145).

From the sociocultural perspective, problems of communication are theorized as “conflict, alienation, misalignment, and failure of coordination processes (Craig, 1999, p.133).” A scarcity of shared rituals, rules, and expectations among members is believed to cause conflicts, misunderstandings, and difficulties in coordination (Craig, 1999, p.145). Communication problems include “gaps across space (sociocultural diversity and relativity) and across time (sociocultural change), which disable interaction by depleting the stock of shared patterns on which interaction depends (Craig, 1999, p.145).”

Research Questions

This communication research aims to discover how the microlevel interaction processes in online collaboration make the macrolevel phenomenon of telework possible. It was guided by the research questions: “*What practices do teleworkers employ to accomplish the organization? What organizational arrangement is created in telework?*”

Chapter IV

Research Methodology

The research questions: “*What practices do teleworkers employ to accomplish the organization? What organizational arrangement is created in telework?*” were answered using ethnomethodology as a research approach. Ethnomethodology (EM) “is a branch of research that studies people’s tacit, unacknowledged, taken-for-granted resources of social action, their common sense, and their interactional competence (Arminen, 2012, p.1).” Its founder Harold Garfinkel, defines it as studies that “seek to treat practical activities, practical circumstances, and practical sociological reasoning as topics of empirical study, and by paying to the most commonplace activities of daily life the attention usually accorded extraordinary events, seek to learn about them as phenomena in their own right (Garfinkel, 1967, p.1).” Ethnomethodology proposes a bottom-up approach for the constitution of societies and cultures (Arminen, 2012, p.1). It is the “study of social organization and social order (Holstein & Gubrium, 2003, p.3).” It explicates “how members accomplish things to have the character that they do in any given site in the social world (Holstein & Gubrium, 2003, p.4).” “Social order is not given top-down, but something that participants work to achieve (Arminen, 2012, p.1).”

Specifically, the study applied Conversation Analysis (CA), a variant of ethnomethodology that focuses on talk-in-interaction and can also be applied to study online interaction, including online written interaction. Conversation Analysis (CA) is a variant of ethnomethodology that involves the study of practical reasoning as it is put to use in the conduct of spoken interaction (Clayman, 2015, p.206). It is involved in the study of the orders of *talk-in-interaction*, whatever its character or setting (ten Have, 2011g, p.4). CA focuses on the foundational role of talk and interaction for social

action. Its emphasis on studying talk as a way of doing links it to ethnomethodology. (Arminen, 2012, p.3)

When CA began, the availability of audio recording technology made it possible to go beyond the existing practices of gathering data, such as coding and field observation, which were all much more manipulative and researcher dominated than the simple, mechanical recording of natural or non-experimental action. Though audio recordings record talk-in-interaction, it is the activity of transcribing tapes that captures data and allows the listening analyst to put remarks on the data so that it can be later made available to the analyst's audience. Gail Jefferson, Sack's data recovery technician developed a system of transcription that fitted CA's general purpose of sequential analysis. (ten Have, 2011g, p.6)

Since the core interest of CA and EM is the role of technology in interaction, CA can also be applied to study online written interaction which is also technology-mediated. Interest in analyzing online written communication started in the late 1990s and early 2000s. (Meredith, 2019, p.242) "Online written interaction can be seen as the quintessential form of naturally occurring data, as it is considerably less mediated, more 'natural' than recorded and transcribed conversations. In general, analyzing online interaction allows for the analysis of interactions that have been captured with no intervention from the researcher. (Meredith, 2019, p.242)"

This research is situated in the discourse of understanding or interpretive modernism, which seeks the reconciliation of the subject and object as a means to knowledge and their placing in a productive, dialectical tension (Mumby, 1997, p.5). This study also applied an inductive approach, which involved developing emerging themes or categories by studying transcripts repeatedly and considering possible

meanings and how these fitted with developing themes (Thomas, 2006, p.239), to derive results.

The development of this research consisted of four phases: Data Collection, Transcription, Data Analysis, and Generating a Conclusion. These phases were based on the specified stages in the research design of general CA research projects as recommended by Paul ten Have, which are: 1) getting or making recordings of natural interaction, 2) transcribing the tapes, in whole or in part, 3) analyzing selected episodes and 4) reporting the research (ten Have, 2011e, p.3). The activities done in each phase, as applied to this research, are described below.

Data Collection

Data collection for this study was done in December 2023 during the completion of the mini-study submitted for COMM-391. Data collection involved retrieving a Zoom recording of an online collaboration involving teleworkers. This video recording was created on July 27, 2021. In the recording, the researcher, who was based in Quezon City, Philippines, collaborated remotely with customers and vendors located in Mali and India, respectively. The researcher served as the host of the online collaboration and recorded the interaction as part of her technical support duties. The Zoom video recording of the remote session consisted of two parts. The first part was 22 minutes and 3 seconds long while the second was 25 minutes and 30 seconds long. The recording of the remote session had to be done in two parts due to the limitation of the researcher's Basic Zoom subscription, which could only host meetings of up to 40 minutes in length. The first meeting was cut short due to the time limit, so it had to be restarted so that they could continue.

The recording fit CA's preference for recorded conversations, as this approach is more natural and non-experimental, rather than manipulative and researcher-dominated (ten Have, 2011e, p.4) (ten Have, 2011g, p.6). Though the researcher recorded the online interaction, the recording was considered a company digital asset. To utilize the recording for this dissertation, the research adhered to WVI's process for obtaining consent to use WVI digital assets for academic purposes. The permission from WVI's data privacy officer (DPO) and the researcher's supervisor can be found in Appendix A and B.

Transcription

The Zoom video recordings of the remote session were transcribed using Paul ten Have's simplified version of Gail Jefferson's Jeffersonian Transcription System (ten Have, 2011i, p. 4). Paul ten Have adapted his transcription system from the Jeffersonian Transcription System since "Gail Jefferson is considered to be the best transcriber and the final authority on matters of transcription (ten Have, 2011i, p.4)." Transcription started on January 29, 2025, and included transcribing the complete Zoom video recording as well as transcribing the online written interaction found in line 28 of the transcription of the Zoom video recording. The transcripts are discussed by sequence in the Data Analysis section.

The transcripts generated captured and presented the phenomena of interest in written form (ten Have, 2011i, p.4). Each transcript file contained the following information (ten Have, 2011i, p.6-7):

- Time, date, and place of the original recording.
- Letter code or alias/pseudonym of the participants.

- Words as spoken.
- Sounds as uttered.
- Inaudible or incomprehensible sounds or words.
- Spaces/silences.
- Overlapped speech and sounds.
- Pace, stretches, stresses, volume, etc.

The time, date, and place of the original recording could be extracted from the transcript title. For example, the transcript title, 18402620210727Z, indicated a transcript generated from a recording created on July 27, 2021, at 06:40:26 PM using Zoom, and the transcript title, 182620210727TV-P, indicated a transcript generated from a TeamViewer interaction captured on July 27, 2021, at 06:26 PM from the perspective of participant P. The other elements described above were captured in the transcript through the transcript notation used.

Four transcripts resulted from the transcription process. The table below summarizes the transcript name and their descriptions.

Table 3.

Titles of Transcripts Generated

| # | Transcript Title | Description |
|---|------------------|---|
| 1 | 18402620210727Z | Transcription of the first part of the Zoom video recording. Part 1 duration: 0:00:00.000-0:22:03.000. |
| 2 | 19123620210727Z | Transcription of the second part of the Zoom video recording. Part 2 duration: 0:00:00.000-0:25:30.000. |

| | | |
|---|------------------|--|
| 3 | 182620210727TV-P | Transcription of the online written interaction done through TeamViewer chat, found in line 28 of 18402620210727Z at 0:00:56.000 from the perspective of participant, P. |
| 4 | 182620210727TV-H | Transcription of the online written interaction done through TeamViewer chat, found in line 28 of 18402620210727Z at 0:00:56.000 from the perspective of the host, H. |

To transcribe, a table was created in a Word document (ten Have, 2011i, p.26). This table was constructed with six columns labelled as #, TS, TE, L, Transcription, and Description. # represented the line number, which was used to differentiate lines with the same start time. TS represented the start time of the transcription, while TE represented the end time of the transcription. L represented the Letter Code used to identify the participants in the conversation. Letter codes were used to identify the participants to protect their privacy. The Transcription column contained the transcription with notations, while the Description column contained the researcher's remarks or interpretation of the transcription, if there were any. Column labels TS, TE, and L were abbreviated since their contents had fixed length – TS and TE have at most 11 characters and were formatted as h:mm:ss.000 while L had one character, and also to give more space for the Transcription and Description columns.

To transcribe the video recordings of the remote session, each video file was opened using an application called Media Player. While the video was open in Media Player, the "Edit with Clipchamp" option was selected. Microsoft Clipchamp allowed the researcher to capture screenshots of the video recording without the playback

timeline obstructing. It also allowed the researcher to listen to conversation and transcribe it by applying appropriate notations. Aside from transcribing the conversations, screenshots of the changes on the screen were also captured and included in the transcription.

Transcription of the Zoom video recording of the remote session was done manually by the researcher. The researcher played the video files using Microsoft Clipchamp and then took note of the start time and end time of the conversations. To insert changes in the shared screen in the transcription, when the current speaker had not yet completed his turn, the researcher cut the turn in the transcription by using the notation for latching which is represented by an equal sign (“=”) and then added the screenshot of the changed screen in the following line. The researcher took note of the time the screen changed and recorded this as the start (TS) and end (TE) times corresponding the screenshot of the changed screen. To show continuity of the speaker’s turn, the researcher started the transcription in the following line with a latching notation. To reduce the number of pages in the transcription, some screen grabs were removed from the original transcription and replaced with a descriptive text, which was italicized to differentiate it from the speech of speakers. Some lines were also condensed or combined and a comment beginning with Condensed enclosed in square brackets with the affected line numbers specified was added to the comments section. For example, [Condensed lines xxx-xxx], where xxx-xxx are the line numbers.

The Zoom video recording of the remote session was already rich in conversation. By carefully scrutinizing it, an online written interaction was discovered in the recording at TS: 0:00:56.000 or line 28 in the transcription. The Zoom video

recording by itself was sufficient for achieving a deeper understanding of its case to achieve plausibility (Mills et al., 2010).

The online written interaction found in the recording is a valid data set because CA can be applied to the study of online written interaction. The screenshot of the online written interaction showed two versions of the chat conversation. The first was how the chat messages appeared to the host based in the Philippines, and the second was how the chat messages appeared to the customer based in Mali. The timestamps of the two versions were different because of the time difference between the two countries, Philippines and Mali. Also, the version that showed how the chat messages appeared to the host was incomplete. It did not show all the data visible in the version that showed how the chat messages appeared to the customer. To facilitate comparison and analysis of the two versions, the columns of the table recording the transcriptions of the two versions of the chat conversation were changed. Instead of recording the start time and end time, the timestamp appearing in the screen capture corresponding each chat message was recorded instead. The screen grab of the chat conversation was also included at the beginning of the transcription.

This study employed these methods to protect the privacy of participants who agreed to participate in the study :

1. Confined Zoom video recordings of the remote session to restricted, professional audiences (ten Have, 2011e, p.19)
2. Made transcriptions unrecognizable through anonymization (ten Have, 2011e, p.19). Letter codes were used to identify the participants instead of participant names

Since consent to use the remote session recording was obtained from the WVI Data Privacy Officer on March 25, 2025 and the researcher's supervisor on April 8, 2025, the participants in the remote session recording were no longer informed of the

above methods. Using letter codes to protect participants' privacy was mentioned in the request letter sent to the WVI Data Privacy Officer and the researcher's supervisor on March 24, 2025 and March 31, 2025, respectively.

Data Analysis

After data was collected and transcribed, conversation analysis was applied to analyze the transcripts for practices that teleworkers employed to accomplish organizational goals. To analyze the transcripts, the five tools for developing conversation analytic skills, as outlined by Anita Pomerantz and B.J. Fehr (ten Have, 2011a, p. 6), were used as a guide.

Using the five tools for developing conversation analytic skills, as outlined by Anita Pomerantz and B.J. Fehr (ten Have, 2011a, p. 6), the following steps were applied. First, the transcripts were analyzed for sequences. Sequences start with a turn in which one of the participants initiated an action and/or topic that was taken up and responded to by coparticipants. It ends at the location in the interaction where the participants were no longer specifically responding to the prior action and/or topic. A sequence thread may not start with a marked initiative, but may be something that is hinted at. The end of a sequence may also trail off rather than being clearly concluded. (ten Have, 2011a, p. 6) The analysis resulted in the identification of twenty-five sequences. Second, the actions in the sequences were characterized and described on a turn-by-turn basis, producing an actional description of the sequence that considered the relationship between the actions, such as initiatives and responses (ten Have, 2011a, p. 7). Third, the speakers' packaging of actions, including their selection of reference terms, was considered in how it provided certain understandings of the actions performed and the matters discussed. The options for the recipient that were set up by that packaging were also contemplated on (ten Have, 2011a, p. 7). Fourth, how the timing and taking of turns provided for certain understandings of the actions and the matters talked about was reflected on (ten Have, 2011a, p. 7). Lastly,

how the actions were accomplished implicated certain identities, roles, and/or relationships for the interactants were studied (ten Have, 2011a, p. 8).

Steps two to four involved the analytic exploration of the sequences based on the four distinguished but interlocking organizations, which are turn-taking organization, sequence organization, repair organization, and the organization of turn-design (ten Have, 2011a, p.9). Step five involved performing Membership Categorization Analysis (MCA) on the sequences. Below is a description of concepts related to the four types of interactional organization and membership categorization analysis.

Four Types of Interactional Organization

CA focuses on a restricted set of analytically distinguished but interlocking organizations, such as turn-taking organization, sequence organization, repair organization, and the organization of turn-design (ten Have, 2011a, p.9).

Turn-taking Organization

The concept of turn-taking as an organized activity is one of the core ideas of CA. It is based on the fact that in a conversation, there is one and only one person speaking at a time, while speaker change recurs with minimal gap and minimal overlap. This means that parties in a conversation accomplish a conversation on a turn-by-turn basis. (ten Have, 2011a, p.13) Turn-taking organization includes concepts such as transition relevance place (TRP), turn constructional unit (TCU), turn-constructional component, and initial transition relevance place. Transition relevance place (TRP) refers to "the moment in the production of a turn-at-talking in which that turn might be

possibly complete and another speaker might take over (ten Have, 2011b, p.6)." Turn constructional unit (TCU) refers to "the part of an utterance that might be a complete turn, after which another speaker might take over (ten Have, 2011b, p.6)." Turn constructional unit can be equated to the "turn-constructional component" of conversation's turn-taking system which Sacks in his classical paper on turn-taking defines as "the various unit-types with which a speaker may set out to construct a turn that can include sentential, clausal, phrasal and lexical constructions (ten Have, 2011a, p.13)." Initial transition relevance place refers to the first possible completion of a turn-constructional unit (ten Have, 2011a, p.13). Transfer of speakership is coordinated by reference to transition-relevance places, which any unit-type instance will reach (ten Have, 2011a, p.13).

According to Sacks' paper, speaker change can be organized in several ways: a next speaker can be selected by the previous one, a speaker can self-select, or the present speaker can continue speaking. These three options are hierarchically organized: other-selection goes before self-selection, which goes before continuation. Turn size and turn order in the system of conversational turn-taking have properties such as: locally managed (i.e. turn-by-turn), interactionally controlled (i.e. any feature being multilaterally shaped), or partly administered (i.e. by them) depending on "recipient design". Recipient design determines word selection, topic selection, the admissibility and ordering of sequences, the options and obligations for starting and terminating conversations, and so on. Turn-taking is therefore one aspect of conversation where locally sensitive fine tuning takes place, which not only is actively adapted to the particular recipients involved, but in doing so co-

constitutes the parties as participants in this conversation. The units of the turn-taking system are also defined not by some objectively describable set of structural properties, such as grammatical, prosodic, and others, but by their action potential for participants. (ten Have, 2011a, p.14) It is the actional perspective or the ability to do something, be it proposing, requesting, accepting, or showing surprise, that makes a sound or string of sounds into a TCU. Examination of TCUs also includes the gestures, such as a nod or a smile, that go along with it, and other properties of utterances, such as syntactic or intonational, that can contribute to the discernible action completion of participants. (ten Have, 2011a, p.14)

Sequence Organization

Sequence organization is a second core idea in CA that posits that utterances in interactional talk are sequentially organized. The concept of adjacency pair is a major instrument in the analysis of sequential organization. (ten Have, 2011a, p.16) Adjacency pairs (APs) is a term used to call a class of utterance sequences that have the following features: 1) two utterance length, 2) adjacent positioning of component utterances, 3) different speakers producing each utterance, 4) relative ordering of parts (i.e. first pair parts precede second pair parts), and 5) discriminative relations (i.e. the pair type of which a first pair part is a member is relevant to the selection among second pair parts). The component utterances of such sequences are related partially due to a typology in the speakers' production of sequences that operates in two ways: 1) it partitions utterance types into first pair parts and second pair parts and 2) it affiliates a first pair part and a second pair part to form a type,

such as question-answer, greeting-greeting, and offer-acceptance/refusal. "A basic rule of adjacency operation is: given the recognizable production of a first pair part, on its first possible completion its speaker should stop and a next speaker should start and produce a second pair part from the pair type of which the first is recognizably a member (ten Have, 2011h, p.9-10)." Adjacency pairs provide for a *close ordering* of utterances, making them relevant for the creation of specific sequential implications, for limiting what can orderly be done in the next position, and for specific organizational tasks, such as opening or closing a conversation. *Close ordering* is the basic generalized means for assuring the occurrence of some desired end. Two utterances are needed for general organizational tasks because two utterances produced by different speakers can do what one utterance cannot. The adjacently positioned second can show that a speaker understood what a prior speaker aimed at, and that he is willing to go along with that. The occurrence of an adjacently produced second can also inform the first speaker that what he intended was understood or was accepted or not. (ten Have, 2011h, p.9-10) "The two-utterance sequence can be employed as a means of doing and checking some intendedly sequentially implicative occurrence in a way that one-utterance sequence cannot (ten Have, 2011h, p.10)."

A full sequence quite often includes more than just two pair-parts. *Sequence expansion* happens in cases where the second pair part does not occur immediately next to the first pair part. For example, if a new sequence is inserted in one that was just started, such as in the case of a request for clarification or specification. A first question (Q1) can be followed by another question (Q2) before the questioned answers the first question (A1) so the

order of utterances in the sequence becomes Q1, Q2, A2, A1. This is one type of sequence expansion. (ten Have, 2011a, p.16)

Pre-sequence, refers to AP-formatted utterance pairs that function as a preparation for the next pair. A pre-sequence is designed to do preparatory work and to explore whether conditions for a particular *core sequence* are met. A *post-expansion* is a different kind of expansion that can take place after a core sequence is possibly complete. An example of a post-expansion is a third-position acknowledgement or assessment, which often functions as “closing sequence thirds.” Schegloff distinguishes three kinds of expansion in terms of their placement in relation to the core sequence: 1) pre-expansion, which occurs before the first pair-part, 2) insert expansion, which occurs between the first pair-part and second pair-part, and 3) post-expansion, which occurs after the second pair-part.(ten Have, 2011a, p.16-17)

Another sequence structure consists of repetitive cycles of similar sequences, such as question-answer sequences in an interrogation or interview (ten Have, 2011a, p.17). In question and answer sequences in two-party conversations, Sacks explicated the chaining rule, which he wrote as: "A person who has asked a question can talk again, has, as we may put it, 'a reserved right to talk again,' after the one to whom he has addressed the question speaks. And, in using the reserved right he can ask a question. (ten Have, 2011a, p.18)" This rule would allow for an endless repetition of question-answer sequences. The endless series can also be comprised of arguments and counter-arguments or reproaches and defenses. (ten Have, 2011a, p.18) "Sequences, then, are patterns of subsequent actions, where the

'subsequentiality' is not an arbitrary occurrence, but the realization of locally constituted projections, rights, and obligations (ten Have, 2011a, p.18)."

Repair Organization

Repair organization studies instances of *repair*, which are organized ways of dealing with various kinds of trouble in the interaction's progress, such as problems of (mis)hearing or understanding. Repair can be initiated by a complaint such as "I can't hear you," and once initiated, it creates an urgency that can lead to a postponement, or even abandonment of a projected next action. (ten Have, 2011a, p.19) Repair as a sequentially structured phenomenon starts with a *repairable*, which is an utterance that can be reconstituted as the trouble source. Any utterance can be turned into a repairable. (ten Have, 2011a, p.20) A repair initiative initiated by the speaker of the repairable is called a *self-initiated repair*, while a repair initiative initiated by others is called an *other-initiated repair*. The repair itself, if done by the original speaker, is called a *self-repair*, and if done by others, is called an *other-repair*. To initiate self-repair, a speaker can use the transition relevance place (TRP), just after an utterance is completed, or he can cut off the current utterance to restart it, correcting an obvious mistake or using a different expression. Repeating an utterance to correct it is an example of a self-initiated self-repair. (ten Have, 2011a, p.20) Another example of a self-initiated self-repair is "when a turn's recipient reacts to it in a way that demonstrates some kind of misunderstanding, after which the original speaker, recognizing the trouble from the uptake, initiates repair on his or her previous turn, in 'third position', so to speak (ten Have, 2011a, p.20)." Though another speaker prompted the repair, the other person did not explicitly request it, which would

have otherwise made it other-initiated. Instead, the speaker recognized the trouble by himself, based on subtle cues in the recipient's reaction.

Other-initiated repairs are often done in the next turn by a next turn repair initiator (NTRI) and are often done with short items such as 'huh?',' what?', and others (ten Have, 2011a, p.20). Other-initiated repairs allow the original speaker “to self-repair the trouble source by offering a clearly articulated repeat, or by using a different expression, possibly preceded by 'I mean' or something like that (ten Have, 2011a, p.20).” It may also be done with the other speaker offering “a candidate understanding of a target utterance, possibly in a format like 'you mean X?', which the original speaker can then accept, reject, or rephrase (ten Have, 2011a, p.20).” Repair “offers participants an important secondary device for achieving intersubjective understanding (ten Have, 2011a, p.23).”

The Organization of Turn-design

The fourth type of organization, the organization of turn-design does not have an elaborate structured approach in the CA tradition as the previous three have (ten Have, 2011a, p.23). It includes the concept of recipient design, which is also a concept in turn-taking organization. Recipient design refers to the general idea that a speaker builds an utterance in such a way that fits its recipient (ten Have, 2011a, p.24). “In a five-and-a-half-page essay, Sacks and Schegloff discussed two preferences with regard to the organization of reference to persons, one for minimization and one for recipient design (ten Have, 2011a, p.24).” They discussed that though there are many correct ways to refer to a person, the most efficient way is to use a recognitional, such as a

first name (ten Have, 2011a, p.24). However, using a first name to identify a person effectively without needing repair “may require an elaborate analysis of the mutually supposed knowledge of the speaker, the recipient, and the situation (ten Have, 2011a, p.24).” In referring to places or local formulations effectively by name, Schegloff also made the same analysis. He found that aside from the knowledge of the speaker and recipient about a place, an understanding of the current activity is also a factor. (ten Have, 2011a, p.24) For example, “in the context of direction giving, more precise locational indications may be required than for constructing the setting for telling a funny anecdote (ten Have, 2011a, p.24).”

Another concept in the organization of turn-design is *preference organization*, which is supported by the general idea that “1) when alternative actions are open possibilities, one may be ‘preferred’, that is expected and chosen if possible; and 2) the difference between ‘preferred’ and ‘dispreferred’ alternatives is demonstrated in the turn shape chosen for doing one or the other (ten Have, 2011a, p.24).” Turns can be designed to show they are doing the preferred or the dispreferred alternative action (ten Have, 2011a, p.24). “For instance, an invitation projects an acceptance as a preferred response. An accepting utterance will display this status by being quick and direct, no specific ‘account’ being given. A rejection, however, will tend to be delayed, preceded by a ‘formal’ acceptance, more often inferable than directly formulated, and quite often accounted for by giving a reason for it. (ten Have, 2011a, p.24)” A classic study of “preferred/dispreferred turn shapes” talks about two types of shapes. The first, the preferred-action turn shape, is a design that “maximizes the action being performed with them, utilizes

minimization gap between its initiation and prior turn's completion, and contains components that are explicitly stated instances of the action being performed (ten Have, 2011a, p.24)." The second, the dispreferred action turn-shape, "minimizes the occurrence of the actions performed with them, in part utilizing the organization of delays and nonexplicitly stated action components, such as actions other than a conditionally relevant next (ten Have, 2011a, p.24)." This shows that "turns can be 'packaged' or 'formulated' in ways that show their relative 'preference' status (ten Have, 2011a, p.24)."

Two aspects of "preference" have been discussed in CA literature (ten Have, 2011a, p.25). The first refers to turn shapes, as discussed above, which Schegloff calls *practice-based* (ten Have, 2011a, p.25). The second concerns "structural regularities regarding which kinds of alternatives are generally preferred or dispreferred (ten Have, 2011a, p.25)," which Schegloff refers to as *sequence-structure-based* (ten Have, 2011a, p.25). How a turn is designed is a meaningful choice informed by the speaker's knowledge of the situation in general and the participants in particular (ten Have, 2011a, p.25).

Conversation Analysis and Online Interaction

The role of technology in interaction has been a core interest of conversation analysis (CA) and ethnomethodology (EM). Schegloff and Sacks's initial research in CA on telephone calls was an analysis of technologically mediated interaction (Meredith, 2019, p.242) . Interest in analyzing online written communication started in the late 1990s and early 2000s (Meredith, 2019, p.242). Online written interaction can be viewed as the quintessential form of naturally occurring data because it is considerably less mediated and more 'natural' than

recorded and transcribed conversations (Meredith, 2019, p.242). In general, analyzing online interaction allows for the analysis of interactions that have been captured with no intervention from the researcher (Meredith, 2019, p.242).

Studies of online interaction can be categorized into two types: asynchronous interaction and quasi-synchronous interaction (Meredith, 2019, p.242). In an asynchronous interaction, “messages are sent to a server for recipients to access whenever they are next online, such as newsgroups, e-mail, or online forums (Meredith, 2019, p.242).” “In a quasi-synchronous interaction, messages are also constructed separately before being sent, but participants must be online at the same time to be able to view the interaction (Meredith, 2019, p.242).” Research on quasi-synchronous interaction has focused on multiparty chat rooms and one-to-one instant messaging (Meredith, 2019, p.242). As the use of social media has grown and new platforms for interaction have emerged, the distinction between asynchronous and quasi-synchronous interaction has become increasingly blurred (Meredith, 2019, p.242). Studies of online written communication have presented more challenges during conversation analysis because the interaction differs from what we can expect from face-to-face talk (Meredith, 2019, p.242).

Online written interaction has shown broad differences with spoken interaction in terms of the “core organizational features of interaction (Meredith, 2019, p.243),” which involve “1) turn taking, 2) sequence organization, 3) repair, 4) openings, and 5) embodied conduct (Meredith, 2019, p.243).” Turn taking occurs in online written interaction because participants take turns in a sequence, and although some individual posts are lengthy, it is seldom that an online written interaction is a monologue (Meredith, 2019, p.245). Although turn taking occurs in

an online interaction, there is an apparent lack of turn constructional units (TCUs) and a clear mechanism for speaker transition (Meredith, 2019, p.245). First, “participants in an online interaction are not able to monitor turns-in-progress for when they might possibly complete; rather, a writer of a message must complete it and send it in its entirety (Meredith, 2019, p.243).” After a message has been sent, speaker transition to another participant in the interaction is highly possible but cannot be coordinated between participants because after a message has been sent, it is available for any other participant in the interaction to respond to (Meredith, 2019, p.243). “Writers may also choose to post multiple messages in succession, effectively self-selecting to take the next turn (Meredith, 2019, p.243).” “If a number of recipients, or even the original writer and a recipient, choose to self-select to take the next turn, there is no way for them to coordinate who has the rights to the next turn because they cannot see what the other person is writing (Meredith, 2019, p.244).” Some online platforms, such as “WhatsApp and Facebook Messenger, make it possible to see that a co-participant is writing, but there is no way to coordinate who will complete and send their message first (Meredith, 2019, p.244).” Second, “when breaking up their turns, participants may send individual TCUs to the chat, which would effectively form a single turn (Meredith, 2019, p.244).” “Once a turn is sent, the recipient can start responding to those messages individually and may treat them as individual TCUs. On the other hand, a single posted message might be comprised of multiple TCUs, and any one of those might be responded to by a recipient. (Meredith, 2019, p.244)” The concept of TCU becomes unclear because “once a message is posted, there is always the possibility of speaker transition, and the posted message appears as a complete turn (Meredith, 2019, p.244).” For recipients, a message may

appear as one TCU, and they may start responding to this, or they may recognize longer messages as consisting of multiple TCUs and respond to each of these TCUs individually. The concept of TCUs becomes more relevant for recipients than it is for writers (Meredith, 2019, p.243-244). Third, some authors argue that simultaneous talk and overlap are not possible in an online interaction; however, this depends on how these two concepts are defined (Meredith, 2019, p.244). Two messages posted at exactly the same time could be understood as simultaneous talk. Equally, writing messages may overlap. However, these are not accountable as overlaps might be in spoken interaction because two people writing or posting messages simultaneously does not prevent the messages from being understood. The persistence of text on screen means that all messages are available for all participants, even if there were overlaps. Simultaneous talk and overlap may occur in online written interaction, but these are treated very differently by participants online. (Meredith, 2019, p.244) Fourth, turn taking may fail in online written interaction when turns go unanswered, especially in multiparty environments (Meredith, 2019, p.244). “However, if a turn is not responded to, there may be a pursuit of the response (Meredith, 2019, p.244).” Fifth, the existence of longer gaps between turns in online written interaction impacts turn taking. Due to the separation of message construction and sending in online written interaction, the gaps between turns will necessarily be longer than in spoken interaction. Accountability of the length of the gap between turns is also dependent upon the context of the interaction. If the gaps between turns in an interaction have been relatively short, a suddenly longer gap may be deemed an accountable matter. (Meredith, 2019, p.245) “The concepts of turn constructional unit (TCU) and transition relevance place (TRP) have to be reevaluated considering the

affordances of online interaction. TCUs could be argued to be more relevant for the recipient of a message than for the writer. Transition places exist, but these are different to spoken interaction as the turn-in-progress cannot be monitored. Speaker selection may occur, but this may be impacted by the affordances of the medium, in that it is not always successful. (Meredith, 2019, p.245)”

Sequence organization in online written interaction has commonly focused issues of coherence and disrupted turn adjacency. Disrupted turn adjacency occurs “when the first pair-part (FPP) and second pair-part (SPP) of a sequence are not adjacent but instead are interrupted by other threads of the conversation (Meredith, 2019, p.245).” “Disrupted turn adjacency violates the notion of adjacency in interaction meaning that turns cannot necessarily be understood as related to the one immediately prior (Meredith, 2019, p.245).” Disrupted turn adjacency can occur for a number of interactional reasons. First, writers may self-select to take a next turn or “break-up” a turn to take a number of turns consecutively. Because participants cannot monitor each other’s turn, unrelated turns may be sent between a FPP and SPP. Second, recipients often choose to respond to multiple turns in the order in which they were posted. Sending broken up turns in quasi-synchronous interaction causes them to be responded to as a list, which leads to disrupted turn adjacency. (Meredith, 2019, pp. 246) Disrupted adjacency turns can lead to miscommunication, but users have found ways to maintain intersubjectivity. One way is by using the user's name to ensure it is clear who the turns are addressed to. For example, on Twitter, users utilize the “@” symbol to tag other users, making it clear that the message is intended for them. Other practices to maintain coherence online include lexical repetition and lexical substitution. (Meredith, 2019, p. 247) In asynchronous interactions such as online

forums or e-mail, posts may include multiple FPPs, causing some FPPs not to be responded to. To manage disrupted turn adjacency in asynchronous interaction, participants may utilize the ability to quote messages when replying to them. (Meredith, 2019, p. 247) Third, another cause of disrupted turn adjacency is false adjacency pairs that make a turn appear responsive to its prior, but in reality, the SPP was already being constructed when the FPP was posted (Meredith, 2019, p. 247). How a medium presents data may also cause false adjacency pairs to appear. For example, on a Twitter timeline, tweets appear in the order that they were posted, and two tweets that appear adjacent in a timeline are unlikely to be related, even if they seem to be. (Meredith, 2019, p. 248)

Repair occurs in online written interaction, but the function and position of repair differ from spoken interaction. For example, transition space repair cannot happen because there is no real transition space. Instead, participants repair the next opportunity space. (Meredith, 2019, p. 248) "Next-opportunity space repairs can be either self- or other-initiated but are, as with spoken interaction, most commonly self-completed with other-repairs less common. Repairs in online interaction can be used to repair a misspelling or an error of some kind, although this is not their only purpose (Meredith, 2019, p. 249)." Aside from repeating an entire message with the correct spelling so that a repair is understood as correcting a turn, another practice for correcting a turn is to mark corrections with an asterisk (*) to denote repair. This "distinct repair morpheme" is used for both self-repair and other-repair. (Meredith, 2019, p. 249) Repairs in online written communication can also be done through "message construction repair," which is not visible to recipients. Writers can edit their messages before sending them, while they continue to receive a succession of messages from another participant,

causing them to finally send a different message from the first one that they were constructing. The final message that they send has the repaired information. (Meredith, 2019, pp. 249-250) “As with spoken interaction, repair can occur when there is no hearable error, mistake, or fault (Meredith, 2019, pp. 250).” The notable difference with spoken interaction is that in online written interaction, “the recipient of these messages does not have access to the repairs but only to the final message (Meredith, 2019, pp. 250).” This questions the suitability of the term “repair” for edits that occur during message construction because repair rationally refers to repair when it is visible to all participants and so has interactional relevance for all those in the interaction (Meredith, 2019, pp. 250). “The use of the term ‘next-opportunity space repair’ rather than ‘third turn,’ ‘transition space,’ and so on may be a reasonable compromise for managing issues around the position of such repairs. During message construction, participants can utilize the affordances of the medium to ensure that their repairs occur prior to the message being sent. Here, participants are not dealing with troubles that arise in speaking, hearing, or understanding talk; instead, they are addressing problems before they occur in the interaction. (Meredith, 2019, pp. 250)” In this case, a different terminology may be considered to refer to repair work that is completed during message construction, such as “editing,” which is a member’s category for this practice (Meredith, 2019, p. 250).

Opening sequences in online written interaction may be any of the following structures based on early studies about Internet Relay Chat (IRC): “1) an automatic joining event (AJE) was produced by the server to inform the members of a channel and the joining member that they had entered into the channel; 2) the newly joined user may choose to produce Joining Initial Behavior (JIB) that is, they

produce a greeting directed at an individual or collectively to the whole group. Conversely, an existing channel member may direct a Joining Initial Reaction (JIR) to the newly joined user: 3) a response to either a JIB or JIR may be produced thus ratifying the interaction. (Meredith, 2019, p. 251) ” An AJE functions as a basic signal of presence, but it does not guarantee subsequent interaction. The actual greeting chosen by users can be similar to greetings in face-to-face interaction, such as “hello” with some users having a signature greeting, such as always posting in upper case. IRC openings may be impacted by the affordances of the medium, which initiates the AJE but users do not take this as an indication that they need to start the interaction as might be the case with a summons. (Meredith, 2019, p. 251)

“In one-to-one instant messaging programs, an interaction must be initiated by typing a message to their intended recipient, which leads to an electronic summons being sent to inform the recipient that a message is waiting for them (Meredith, 2019, p. 251).” Opening messages sent can be categorized into three types: 1) standard greeting, such as “Hi!”, 2) personalized greeting, such as “babe!”, and 3) topic initiations, such as “fish ate my feeet! (Meredith, 2019, p. 251)” Starting an online written communication through a standard or personalized greeting follows similar rules in spoken interaction. Using topic initiations as an opening post, on the other hand, suggests that in an online written interaction, it is not always necessary to have an opening sequence before reaching the “anchor position” of the interaction. (Meredith, 2019, p. 251) This may be because of the availability of individual names in online interactions, making the identification and recognition sequence unnecessary. This may also be because online, users treat each new segment of the interaction as if they were restarting a conversation after

a lapse, even if there are days between one message and the next. Lastly, this may be due to the persistence of the previous text on screen, with previous messages still available to all users, so users treat the conversation as a continuation rather than a new chat. (Meredith, 2019, p. 251) The relationship between the participants also impacts the opening sequence. In more formal environments, such as online counseling, opening sequences are more often in the form of greetings, welcomes, and occasionally a more formal salutation (Meredith, 2019, p. 251). In an online interaction, the organization of opening sequences are often impacted by the affordances of the medium (Meredith, 2019, pp. 251).

The lack of embodied conduct characterizes online interactions. Because of this drawback, “interlocutors in online interactions have found ways of representing embodied conduct online (Meredith, 2019, p. 252).” One way is through the use of emoticons, “which are combinations of punctuation used to convey facial expressions, developed as early as 1979 to represent the speaker's stance (Meredith, 2019, p. 252) .” Emoticons then evolved into “smilies,” “which are images that convey the same emotions as these emoticons (Meredith, 2019, p. 252).” Now, there is a broader range of “emojis” that indicate a speaker's mood or stance toward a particular part of the interaction (Meredith, 2019, p. 252). From a CA perspective, emoticons are usually understood depending on the sequential and interactional context in which they are used (Meredith, 2019, p. 252). “For example, smilies posted at the start of a turn indicate a stance toward the previous turn, whereas a smiley posted at the end of a turn indicates a stance toward one's own turn, providing information to a recipient on how it should be understood (Meredith, 2019, p. 252).” The use of punctuation is also another paralanguage in

online interaction. Punctuation can be used to indicate the turn's stance or tone (Meredith, 2019, p. 252). For example, a double question mark (??) may indicate surprise or incredulity when asking a question (Meredith, 2019, p. 252). All caps can be used to indicate tone, which may be understood as shouting or excitement (Meredith, 2019, p. 252). Nonstandard spelling may be used to approximate pronunciation and prosody with additional methods for representing laughter (Meredith, 2019, p. 252).

Another method to manage the lack of visual contact in online interaction is through creating virtual bodies or avatars, which are commonly used in online worlds and games. Avatars represent players and players can use their virtual bodies to manage interaction, such as by walking away from an interaction that they no longer want to participate in. (Meredith, 2019, p. 252) If a player is not available to talk, his avatar may shift its gaze to indicate unavailability. Avatars may be treated as participants in the interaction, and turns may even be addressed to them. The increasing multimodality of online communication has made it challenging for CA research. (Meredith, 2019, p. 252)

Studying online interaction, particularly online written interaction, is a challenging field for CA because of its differences from spoken interaction. Some concepts and terminologies in CA no longer apply. It has been suggested that Digital CA, a distinct method for analyzing online interactions, should be established to manage the differences between online interactions and spoken interactions. (Meredith, 2019, p. 253) "Digital CA follows the same methodology as CA but aims to approach online interaction without any preconceived notions (Meredith, 2019, p. 253)."

Membership Categorization Analysis

Membership Categorization Analysis (MCA) is another qualitative sociological approach that is also a part of ethnomethodology. Together with Conversation Analysis, it also focuses on the classic sociological question of “how social order is achieved?” (Fitzgerald & Au-Yeung, 2019, p.1) It studies membership categorization practices such as how social members achieve, use, and orient to membership categories in the process of performing some social action (Fitzgerald & Au-Yeung, 2019, p.1). It has been used to analyze texts and interview responses (ten Have, 2011d, p.8). MCA originated from the early ethnographic and sociological work of Harvey Sacks in the 1960s (Fitzgerald & Au-Yeung, 2019, p.1). It approaches the study of social knowledge-in-action through a set of multilayered categories consisting of sequential categories, membership categories-in-action, and omnirelevant categories and devices (Fitzgerald & Au-Yeung, 2019, pp. 5-8).

In Harvey Sacks' PhD research on calls to a Suicide Prevention Center, in which callers explained their life situation and their feeling that they had no one to turn to, he observed that a large part of the knowledge used, relied on, and displayed in actual interactions was organized in terms of categories of people, either in general terms, such as children, or in relation to the speaker, such as my husband (ten Have, 2011d, p.5). Sacks noted, among other things, that people use person-categories as part of sets of categories, which he referred to as Membership Categorization Devices (MCDs) (ten Have, 2011d, p.5). For instance, within the MCD “gender,” there are two basic categories, “female” and “male” (ten Have, 2011d, p.5). In contrast, within the MCD “age,” there is no fixed number of categories, as their use depends on situational considerations. Sometimes the

categories of old and young suffice, but more often, more subtle differentiations are required. (ten Have, 2011d, p.5-6) “Categories are not just named or implied; they also carry several different associated properties, later referred to as *category predicates*, such as category-bound activities (ten Have, 2011d, p.5-6).” For example, “crying” may be considered bound to the category “baby,” while the activity “picking up (a child)” is typical of the category “mother.” Other kinds of predicates involve properties like rights and responsibilities, specialized knowledge, and competencies. (ten Have, 2011d, p.5-6) Sacks also explicated the “rules of application,” such as the “economy rule,” which states that one category is often sufficient, and the “consistency rule,” which states that once a category from a specific MCD is used, other categories from that device tend to be used as well (ten Have, 2011d, p.6). A subset of MCDs has a “team” or “relational” implication. “Duplicative organization” was a term Sacks used to refer to cases like “the chair opened the meeting, the secretary read the minutes.” He also used the term “standardized relational pair” (SRP) to refer to pairs such as “husband and wife,” “doctor and patient,” and others (ten Have, 2011d, p.6). Membership Categorization Analysis (MCA) provides “a useful entry point for analyzing the social knowledge that people use, expect, and rely on in performing the accountable work of living together (ten Have, 2011d, p.6).”


The preceding paragraphs described concepts related to the four types of interactional organization and membership categorization analysis, which were the methods used to analyze the sequences found in the transcripts. To analyze the sequence descriptions for key codes and sub-themes that answer the research questions, an inductive approach was used

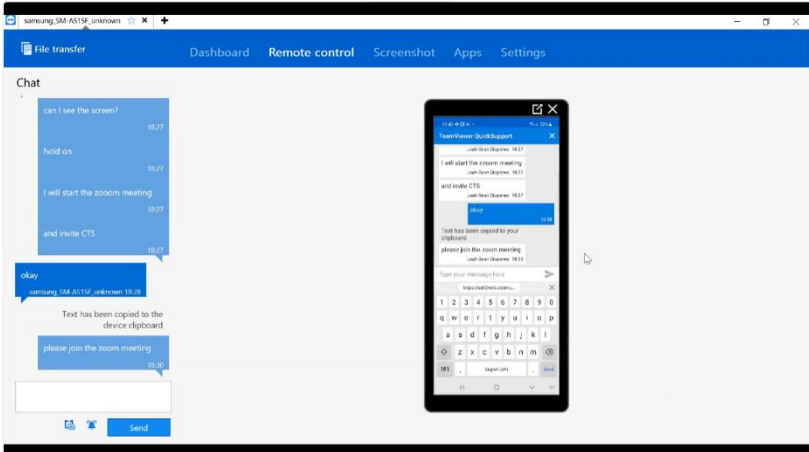
The following paragraphs present the data analysis done on the transcripts organized by sequence. Each sequence description starts with an analytical table that presents the part in the transcript that was analyzed. Actions identified in the sequence descriptions were differentiated from the rest of the text using **bold** font. Each sequence is determined by a sequence number, a title, and the line numbers in the transcript that it includes. The analytical tables contain the title of the transcript from which they were extracted.

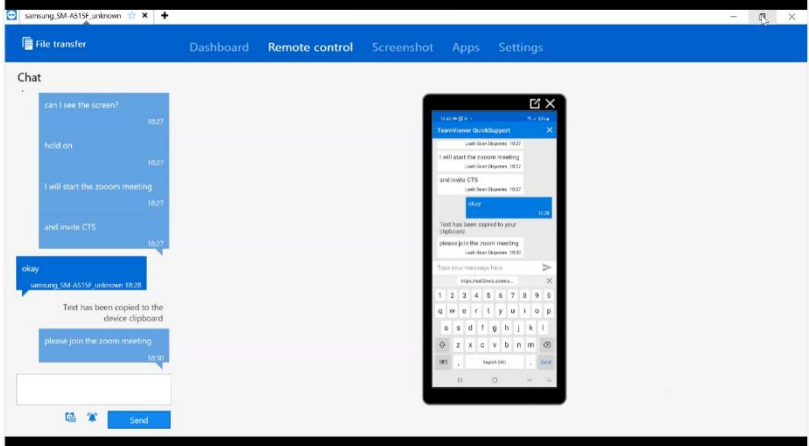
Sequence 1: Start of the meeting (Lines 1 to 11)

Table 4.

Analytical Table of the Sequence 1

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|---|
| # | TS | TE | L | Transcription | Description |
| 1 | 0:00:00.000 | 0:00:00.000 | | <i>(the host's profile picture is visible on screen 0:00:00)</i>  | |
| 2 | 0:00:02.000 | 0:00:20.000 | H | So: hello everyone so I think we are now complete (0.5) ahh from the (0.5) field office we have P and C (0.5) and then from CTS we have B (0.04) D and T so: (0.2) I will now share my screen (0.7) share my screen so that (0.2) uhm= | The host started the meeting by confirming that the group is complete and by stating the participant's names and their work group. She informs that she is sharing her screen. There are pauses and gaps in her speech possibly due to the act of sharing her screen and checking if this is working. |
| 3 | 0:00:20.000 | 0:00:21.000 | | <i>screen turns black between 0:00:20 and 0:00:21</i> | |

| | | | | | | |
|---|-------------|-------------|---|---|--|---|
| 4 | 0:00:20.999 | 0:00:20.999 | H | =you= | | |
| 5 | 0:00:21.000 | 0:00:21.000 | | screen shows the mobile device | | |
| | | | | |  | |
| 6 | 0:00:21.000 | 0:00:28.000 | H | =can see (0.9) the:: (0.6) mobile device A50 (0.5) mobile device (0.3) from (0.08) the °u°ser so= | | |
| 7 | 0:00:26.000 | 0:00:26.000 | | mouse cursor continues to move from 0:00:26 to 0:00:30 | | |
| 8 | 0:00:28.001 | 0:00:29.000 | P | [Yes] (0.6) [I can (0.4) see the:] | | |
| 9 | 0:00:28.060 | 0:00:30.000 | B | [Yes (.) we are able to see] (.) yes | | The mouse starts to move here The other participants confirm that they can see the host's screen |

| | | | | |
|----|-------------|-------------|---|--|
| 10 | 0:00:30.000 | 0:00:30.000 |  <p>The screenshot shows a remote control interface with a blue header bar containing 'File transfer', 'Dashboard', 'Remote control', 'Screenshot', 'Apps', and 'Settings'. Below the header is a 'Chat' window with several messages: 'can i see the screen?' (18:27), 'hold on' (18:27), 'I will start the zoom meeting and invite CTS' (18:27), 'okay' (18:27), 'Text has been copied to the device clipboard' (18:28), and 'please join the zoom meeting' (18:30). A smartphone screen is displayed in the center, showing a Zoom meeting invitation with the same text as the chat messages. The mouse cursor is positioned at the top left of the screen, near the minimize/maximize buttons.</p> | At 0:00:30 the mouse cursor is at the minimize/maximize button at the top left of the screen |
| 11 | 0:00:31.000 | 0:00:32.000 | P Yah (0.7) aw I'm able to: (0.1) see it too | |

The meeting starts with the host **informing everyone that their collaborative group is now complete**. She then proceeds to **introduce the participants and the groups to which they belong**. She **mentions that she will share her screen**, and the other participants confirm that they can see it.

The actions that can be identified from this sequence are:

- Verifying that a quorum has been achieved
- Introducing each participant and the groups to which they belong.
- Verbalizing actions
- Sharing the screen
- Affirming that they can see the screen

a. Verifying that a quorum has been achieved

In this sequence, it can be derived that in an online collaboration setting, an online meeting can officially commence when a quorum has been achieved. Oxford Reference defines quorum as "the number of members whose presence is needed to make proceedings valid ("Quorum," 2025)." In an article by Adam Hayes in Investopedia, he defines a quorum as "the minimum acceptable level of individuals with a vested interest in a company needed to make the proceedings of a meeting valid under the corporate charter (Hayes, 2022)."

In this sequence, it can be extracted that a quorum was achieved when H, the meeting host, said "I think we are now complete" in line 2. She verified her impression by calling out the names of each attendee and the groups that they belong to. In line 2, after saying "I think we are now complete," she continues, "from the (0.5) field office we have P and C (0.5) and then from CTS we have B (0.04) D and T..." From H's statement in line 2, we can infer that in an online collaboration setting, participants

wait for a quorum to be achieved before they start a meeting, and they **begin once a quorum has been achieved**. In an online meeting, similar to a co-located in-person meeting, participants wait for a quorum before they start so they can achieve the purpose of the meeting. Without the key participants in the meeting, the meeting will not produce the desired result. Second, in an online collaboration setting, **someone takes the role of starting the meeting**. In this sequence, the meeting was attended by six people, but it was H who self-selected herself as the speaker and took the turn to start the meeting. H's initiative to start the meeting may have been due to her role in the task. From here, we can draw that in an online collaborative setting, each participant has an assigned role, and they **act according to that role**.

b. Verbalize Actions/Sharing the screen

In line 2, the host mentions that she will share her screen. In an online collaborative setting, teleworkers often verbalize their actions to inform other participants about what will happen next, possibly due to the lack of visual cues in these settings. Before the host shared her screen, only her profile picture was visible onscreen in line 1. The other participants had no information about what she was doing since they could only hear her but not see her. The host may have also verbalized that she would share her screen to compensate for the potential gap that sharing her screen might cause. For example, if screen sharing takes longer than expected, perhaps due to bandwidth issues. She may have mentioned that she will share her screen to preserve the continuity of the meeting, aside from keeping the participants informed.

While mentioning that she will share her screen, there are gaps and pauses in her speech, probably due to the act of sharing her screen while speaking. She

mentions share my screen twice, and in between there is a 0.7s gap. The first time the host mentions share my screen, she may have already started to share her screen. The 0.7s gap may have been due to the distraction of having to share her screen while speaking. After this, she makes a self-repair by repeating share my screen, perhaps to regain her train of thought after being distracted by the action of screen sharing and proceeds to utter “so that (0.2) uhm you can see (0.9) the:: (0.6) mobile device A50 (0.5) mobile device (0.3) from (0.08) the °u°ser [so]” in lines 2 to 6. After the (0.2) pause and the filler “uhm” in line 2, the screen flickers at TS 0:00:20.000 or line 3, indicating a transition, and finally, after uttering “you” in line 4, the screen shows the user interface of the mobile device that the host connected to using the TeamViewer application.

Aside from simply sharing the screen, teleworkers **apply coordinated use of technology** to collaborate. They multitask by speaking while using computing or collaborative technologies. In line 7 or TS 0:00:26.000, the mouse cursor starts to move and continues to move until TE 0:00:30.000 in line 10. The movement of the mouse after the host shared her screen, indicated that while the host was speaking with the attendees in the meeting, she was also moving her mouse possibly from Zoom’s share screen button to TeamViewer application’s minimize/maximize button to adjust the size of the TeamViewer app in her screen, perhaps to give her more control of the TeamViewer app while she uses other running applications in her computer, such as Zoom or to give the online attendees a better view of the TeamViewer app. In line 13 or TS 0:00:34.000, the host minimizes the TeamViewer app.

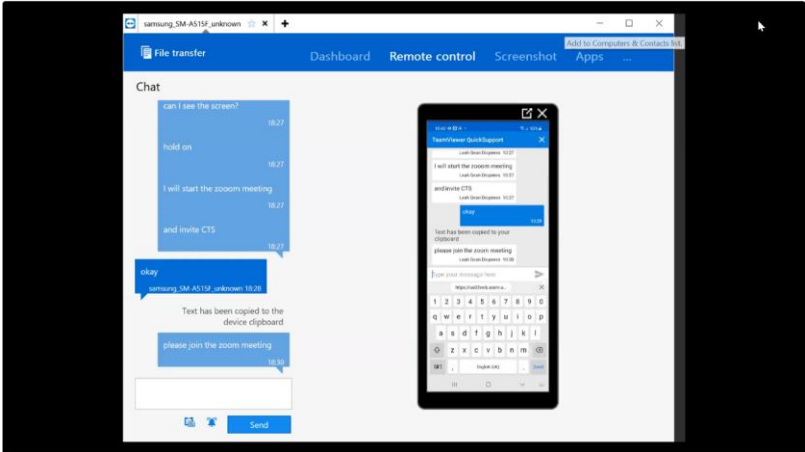
c. Affirming that they can see the screen

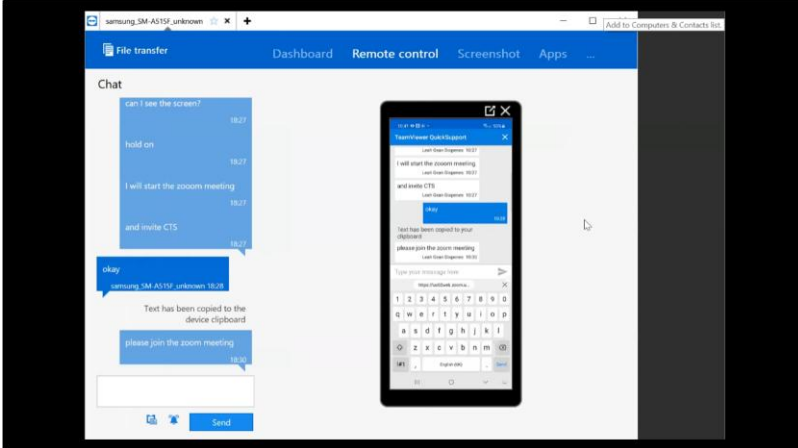
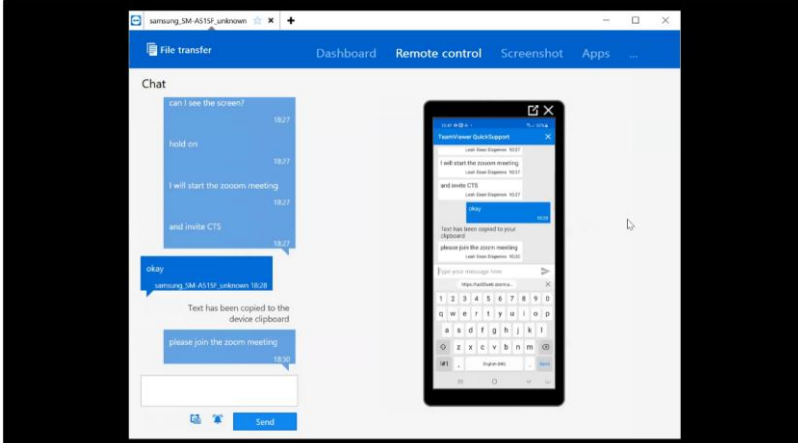
In line 6, the host's utterance of "so" is almost overlapped when P self-selects himself as a speaker when he says "[Yes] (0.6)..." in line 8. P's continued speech of "[I can (0.4) see the:]" is also overlapped when B self-selects herself as a speaker when she says "[Yes (.) we are able to see] (.) yes" in line 9. The host's utterance of "so" in line 6 was interrupted when P and B self-selected themselves as speakers before the host could finish. In lines 2 to 6, the host was not asking the online attendees a question about whether they could see her screen. She was only informing them of what she would do next, now that she had finished introducing the team in line 2. In lines 8 and 9, it may have been the change in what is visible onscreen that prompted P and B to give an affirmation that they can see the screen. Affirming that they can see the screen confirms that they are on the same page or viewing the same object. In an online collaboration setting that uses video, teleworkers **share a common view** to achieve intersubjective understanding. Aside from this, they also **use technology that makes use of their sense of sight and/or hearing**.

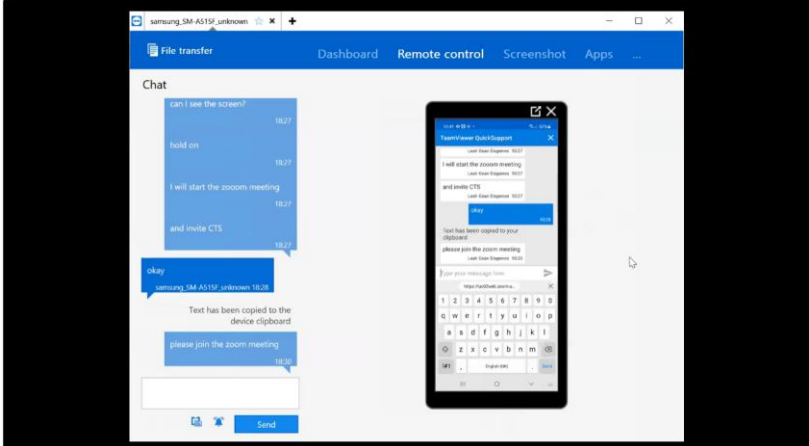
Sequence 2: Next step of the meeting (Lines 12 to 42)

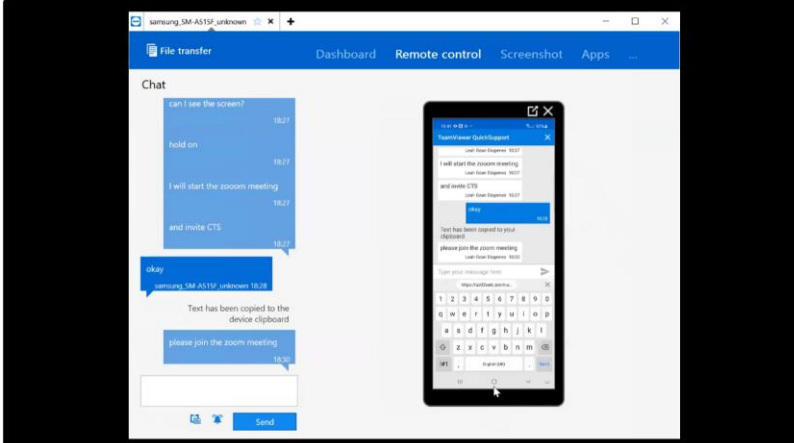

Table 5.

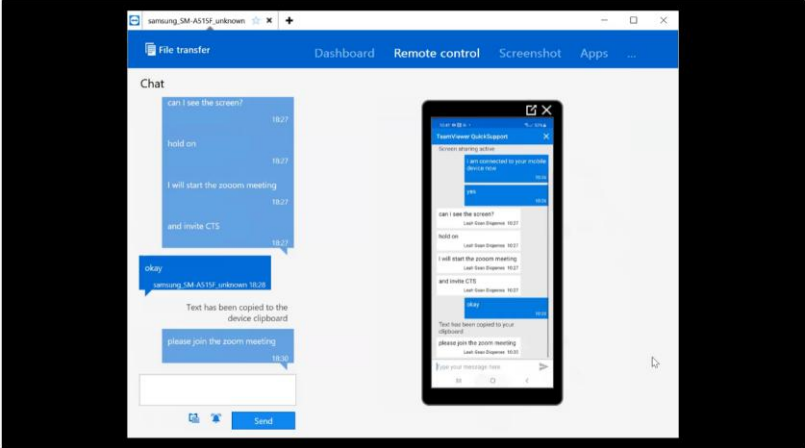
Analytical Table of Sequence 2

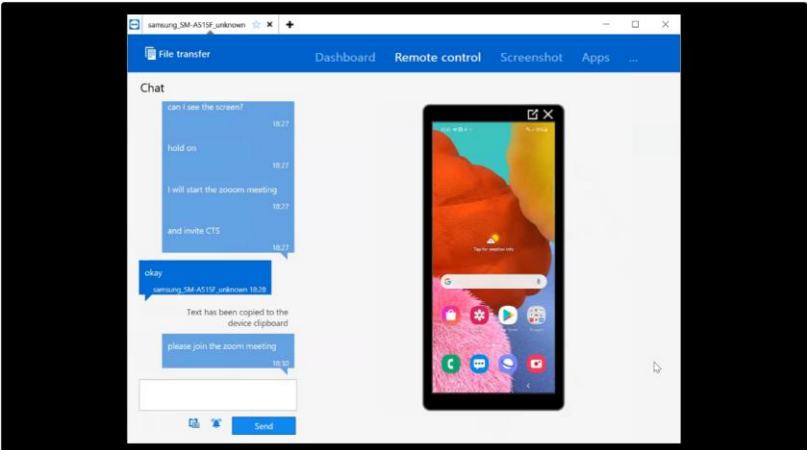
| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|--|
| # | TS | TE | L | Transcription | Description |
| 12 | 0:00:33.000 | 0:00:34.000 | H | Okay (0.1) so::(.)= | The host presses the minimize/maximize button minimizing the screen at 0:00:34 |
| 13 | 0:00:34.000 | 0:00:34.000 | |  | |
| 14 | 0:00:35.000 | 0:00:35.999 | H | =okay (0.1) so right= <i>the center alignment of the teamviewer application changes and moves a little to the left at 0:00:36</i> | The host calls out the CTS team. There is a recognition of the roles that each group carries out. CTS team is seen as the team knowledgeable about the next step. By asking the next step, the host sets the direction of the meeting |
| 15 | 0:00:36.000 | | | | |

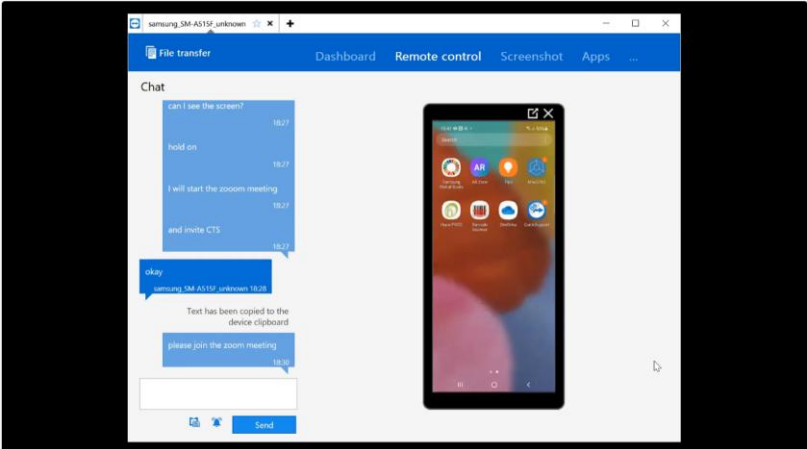
| | | | | | |
|----------|----------------------------|-------------|---|--|---|
| | | | |  | |
| 16 17 | 0:00:36.000 0:00:40.000 | 0:00:40.000 | H | <p>=now uhm (.) °so CTS team° (0.8) a::h (0.8)= <i>the alignment of the teamviewer app moves to the right at 0:00:40</i></p> | |
| 18 | 0:00:41.000 | 0:00:45.000 | H |  <p>=what ca::n (1.0) what will be the next step (0.1) for this? (0.7) Like (0.1) I think I [have]</p> | <p>H initiates a self-repair to carefully construct a question that will drive this meeting after starting the meeting and introducing the participants in line 2</p> |

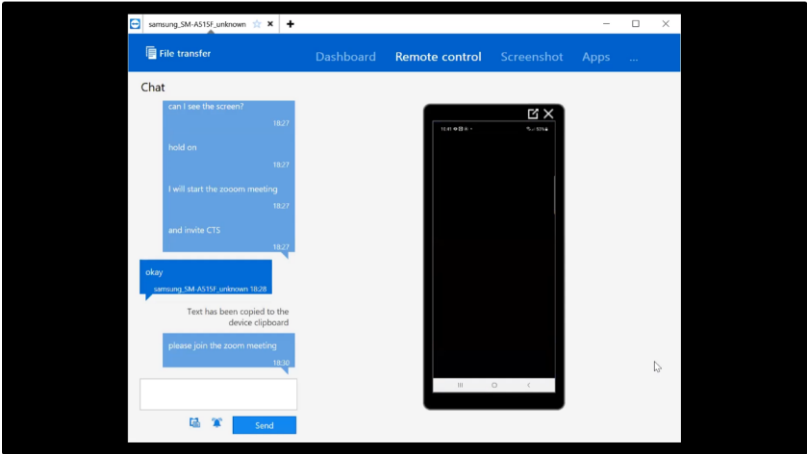
| | | | | | |
|----|-------------|-------------|---|--|---|
| 19 | 0:00:45.000 | 0:00:50.000 | B | <p>[So::] can you? (2.0) Yes (0.6) yes H (0.2) So, can you log in to the application</p> | <p>B who is a part of the CTS team acknowledges and provides guidance by informing H to login the application and show where the user could not see the resolutions</p> |
| 20 | 0:00:50.000 | 0:00:52.000 | | <p><i>the mouse cursor in the screen showing the mobile device moves down to the center button and away to the right from 0:00:50 to 0:00:52</i></p> | <p>Online collaboration is about the use of technological devices to collaborate. H who is facing her computer may have been moving her mouse while the meeting was ongoing</p> |
| 21 | 0:00:50.000 | | |  | |
| 22 | 0:00:50.001 | 0:00:51.000 | B | <p>=and show where (0.3)=</p> | |

| | | | | | |
|----|-------------|-------------|---|--|--|
| 23 | 0:00:51.000 | | |  | |
| 24 | 0:00:51.001 | 0:00:53.000 | B | =user couldn't see the resolutions? | |
| 25 | 0:00:52.000 | | |  | |
| 26 | 0:00:54.000 | 0:00:54.000 | H | [°ok°] | <p>H takes a turn as selected by B when B mentions H's name. H takes this turn by acknowledging "ok". In an online collaboration setting responses have to be verbal due to lack of visibility or visual cues.</p> |

| | | | | | |
|----|-------------|-------------|---|---|--|
| 27 | 0:00:54.000 | 0:00:56.000 | B | [Wha]tever they have mentioned in the incidents= | B continues, “whatever they have mentioned in the incidents..” The mention of incidents indicate that teleworkers aside from meeting online, also collaborate offline using IT Service Management tools. |
| 28 | 0:00:56.000 | 0:00:56.000 | | <p><i>the screen of the mobile device scrolled up at 0:00:56</i></p>  | This indicates movement or preparing the mobile so that it will hide the teamviewer chat and show the mobile app that the team is investigating. Since H mentioned ok in line 26, she may be in control of the mobile device through the teamviewer application installed in her computer, which she is sharing. |
| 29 | 0:00:56.001 | 0:00:56.001 | B | =right? (.)= | B confirms if she is correct that the users mentioned in the incidents where they could not see the resolutions |

| | | | | | |
|----|-------------|-------------|---|--|---|
| 30 | 0:00:56.001 | 0:00:56.001 | | <p><i>the wallpaper of the mobile device is displayed onscreen at 0:00:56.001</i></p>  | <p>H finally hides the teamviewer mobile chat but does not close it so as not to disconnect the mobile</p> |
| 31 | 0:00:56.002 | 0:00:57:500 | B | <p>=So can you go to the (0.5)=</p> | <p>B continues to direct, “So can you go to the (0.5) media tab and show.” The 0.5 pause before uttering media tab indicates careful thought on B’s part as the one giving H directions as a response to her request in line 18</p> |

| | | | | |
|----------|----------------------------|----------------------------|---|--|
| 32 | 0:00:58.000 | | <p><i>the mobile screen transitions to where the mobile application icon can be found at 0:00:58</i></p>  | |
| 33 34 | 0:00:58.000 0:01:01.000 | 0:00:59.000 0:01:03.999 | <p>B =media tab and show? H (1.0) °ok° so ah P will do this si::nce he has=</p> | <p>H takes a turn as selected by B. She accepts H's request in line 31 to 33 but clarified that P will do this since he has the access</p> |

| | | | | | |
|----|-------------|-------------|---|--|--|
| 35 | 0:01:04.000 | 0:01:04.000 | | <p><i>screen turns black at 1:04:00</i></p>  | <p>Screen changing by turning black indicates movement in the mobile. One of the participants with control of the mobile is accessing its installed apps, which could be H or P. H has control because she connected to the mobile through TeamViewer and P has control because the mobile device is physically at his end.</p> |
| 36 | 0:01:04.000 | 0:01:04.750 | H | =the access | <p>Having access here means having the capability to log to the mobile application being investigated. P takes a turn after being selected by H by accepting H's request. The change in the mobile screen indicates that one of the collaborators is operating on it, which could be P since he accepted H's request in line 37 or TS 0:01:04.999. P continues I will go to the hope and show. The self-repair and pauses in his statement may have been due to operating the mobile while speaking.</p> |
| 37 | 0:01:04.999 | 0:01:05.000 | P | Yeah= | |
| 38 | 0:01:05.000 | | | <p><i>the screen shows the mobile application starting as denoted by the circular loading icon or throbber (Oshima et al., 2021, p.1) at 1:05:00</i></p> | |
| 39 | 0:01:05.000 | 0:01:08.000 | P | =I will go I will go to (0.1) to (0.1) to the hope and <u>sho</u> ::w= | |
| 40 | 0:01:08.000 | 0:01:08.000 | | <p><i>the mobile screen transitions to the login screen at 0:01:08.00; a loading login screen is shown first</i></p> | |
| 41 | 0:01:09.000 | 0:01:09.000 | | <p><i>then the editable login screen at 0:01:09.000</i></p> | |
| 42 | 0:01:09.000 | 0:01:09.500 | P | =you the resolution | |

2.1. Talk-in-interaction

In lines 12 to 18, H **sets the direction** of the meeting by directing a question to the CTS team that can be summed up as “what will be the next step of the meeting?” When H asks the question, she appears to select the best question. In line 18, H starts with the utterance “what can” then, after a 1-second pause, she makes a self-repair by rephrasing her question to “what will be the next step for this?” H may have opted to ask her second question instead of the first because she may have perceived this as more direct and more likely to advance the meeting toward the agenda, particularly now that the group has established a common perspective. H also **addresses explicitly the CTS team based on prior knowledge** that, as the vendor, they are the team knowledgeable about the agenda to investigate.

B, who is a member of the CTS team, self-selects herself as a speaker and replies to H’s question by **providing guidance** in lines 19-24, lines 27-29 and lines 31-33. H accepts B’s request to log in the application and show where the user could not see the resolutions by uttering “ok” in line 26 and line 34. However, in line 34, she now clarifies that P will do the task requested by B because he has access. H also shows agreement to B’s request by operating on the mobile while B was speaking. In line 28 or TS: 0:00:56.000, the screen of the mobile device scrolled up, indicating movement. H, who was replying to B in lines 26 and 34, may have been controlling the mobile device to hide the TeamViewer chat that was covering the mobile user interface and navigated to the mobile screen where the icon of the mobile app under investigation was located. This action is illustrated in lines 30 (TS: 0:00:56.001) and 32 (0:00:58.000). The transitioning of the screens in lines 23 (TS: 0:00:51.000), 25 (TS: 0:00:52.000), 28 (TS: 0:00:56.000), 30 (TS:

0:00:56.001) and 32 (TS: 0:00:59.000) show **coordinated use of technology**; however, it was not the speaker who was operating on the technology. B was speaking, but H was operating on the mobile following B's request. The mobile is physically with P, but H was able to operate on it through the TeamViewer app installed on her desktop, which she used to connect to P's mobile. In an online collaboration setting, aside from sharing screens, teleworkers also **share control of computing devices**.

After H mentions that P should be doing B's request, P takes a turn. He affirms H's statement that he should do the task by uttering "Yeah" in line 37 and the statement "I will go to the Hope and show" in line 39. In lines 12-18 (when H sets the direction of the meeting), 19-24, 27-29, 31-33 (when B provides guidance in response to H's question) and 37-41 (when P accepts H's request), it can be drawn that in an online collaboration setting, teleworkers **act according to their role** to achieve order.

Other actions that can be extracted from this sequence are: **using asynchronous collaborative tools to gather more information about a topic** and **complying with security policies** though security is still compromised despite doing this.

a. Using asynchronous collaborative tools

In line 27, B mentions incidents. By this, she is referring to an "incident ticket (Gupta et al., 2008, p.142)" which P's team submitted through an "automated IT Service Management system (Gupta et al., 2008, p.141)" and which contains the details of the issue that the collaboration team is currently discussing. The IT Service Management system can be categorized as an asynchronous

collaborative tool, where interaction occurs at different times, in contrast to the Zoom call or video conference, which is a form of synchronous collaboration where interaction occurs at the same time.

b. Complying with security policies

In lines 34-36, H mentions that P should be doing B's request in lines 19-24, 27-29, and 31-33 because he has access. Access is provided to authorized persons to keep data secure. Teleworkers comply with security policies during online collaboration by respecting colleagues' privacy and access credentials by letting them log in instead of requesting their passwords and logging in as them. Though teleworkers do their best to comply with security policies, having a common view during screen sharing may **unintentionally compromise security**, for example, when a user enters his password while the screen is shared. Although the password is masked, when the user first inputs a letter, the letter is visible for a split second before it is masked. Other viewers still tend to see the user's password.

Figure 2.

Online Written Interaction

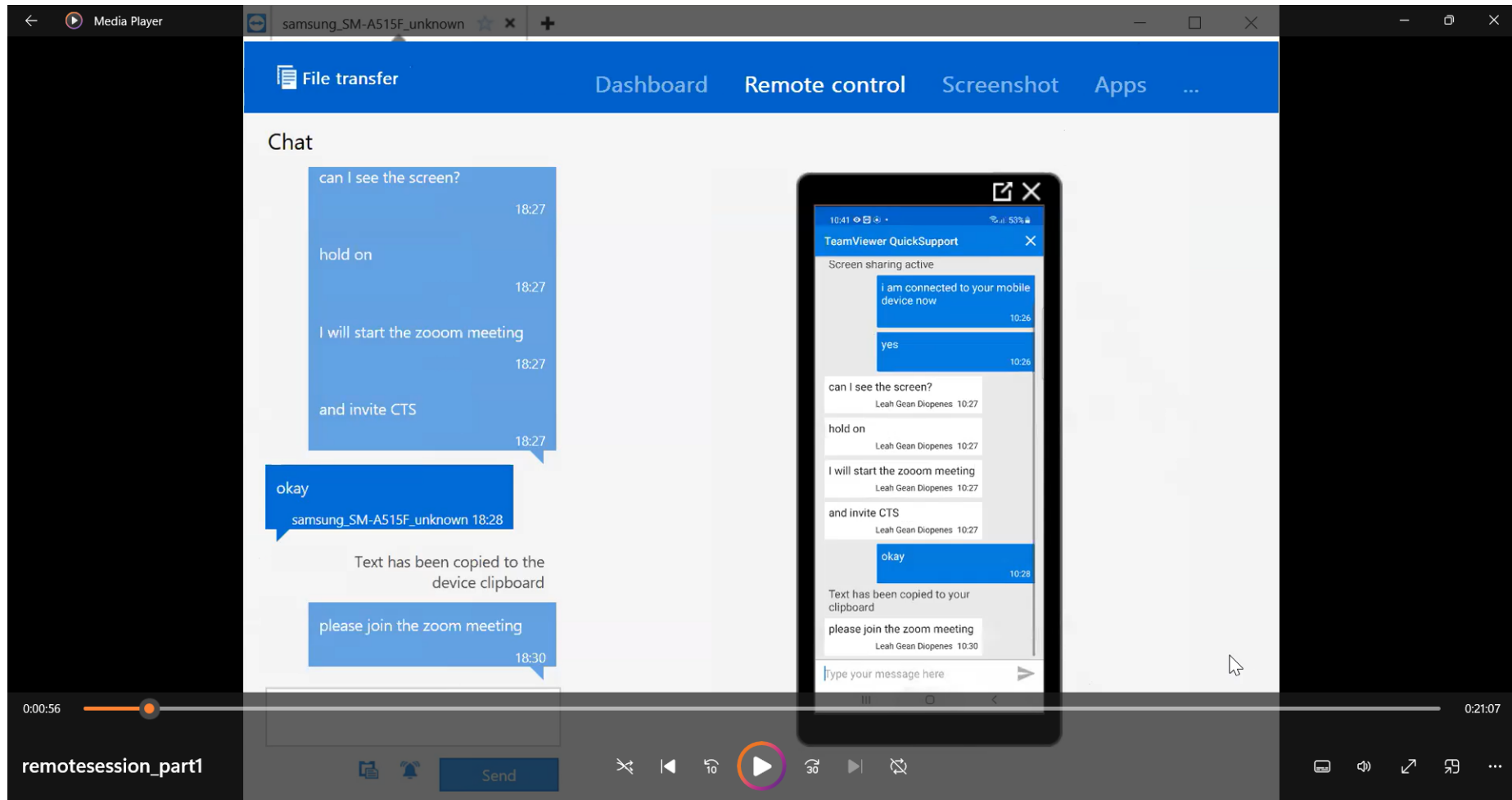


Table 6.

Analytical Table of the Online Written Interaction

| Transcript Title: 182620210727TV-P | | | | |
|------------------------------------|-----------|-------------|--|---|
| Line # | Timestamp | Letter Code | Transcription | Description |
| 1 | | | Screen sharing active | TeamViewer QuickSupport status message informing that the mobile device's screen is now being shared to the remote side or H's side, indicating that a connection has been made. |
| 2 | 10:26 | P | I am connected to your mobile device now | P informs H that he has connected. P statement here is not very accurate . He may have meant that he had accepted or approved H's connection request. Technical precision is not P's strength, given his role as a customer. |
| 3 | 10:26 | P | yes | P gives here an affirmative statement that may have been his reply to H's question in line 4. Maybe the time in P's phone was delayed by a few seconds. When he sent his response to H's question in line 4, the timestamp that appeared for his reply was a time earlier than H's time so it appeared before it. |
| 4 | 10:27 | H | can I see the screen? | The meeting host's registered name in the TeamViewer application appears as the name in her replies. Though the TeamViewer status in line 1 shows Screen sharing active, the shared screen may not have yet loaded completely at H's side, which is why she asked P if she can see the screen. Practice: waiting, seeing the remote screen, which is the purpose of the collaboration The time at H's computer may have been advanced by a few seconds, so her question appeared after P's reply. |
| 5 | 10:27 | H | hold on | Limitation of technology: unsynchronized clocks Practice: waiting |
| 6 | 10:27 | H | I will start the zoom meeting | H requested P to wait or hold on while she started the Zoom meeting |
| 7 | 10:27 | H | and invite CTS | and invited the vendor's team |
| 8 | | | (60.0) | Based on the timestamp, there appears to be a gap of 1 minute before P responded and agreed to H's request that he wait. |
| 9 | 10:28 | P | okay | P agrees to H's request that he wait. Because of the clear time difference, the conversation between H and P in lines 7 and 8 appear in the correct order. |

| | | | | |
|----|-------|---|--|--|
| 10 | | | Text has been copied to your clipboard | TeamViewer QuickSupport status message. This status message may have appeared because P copied something to his mobile device's clipboard, maybe the zoom meeting link because this appears below the "Type your message here chat box" visible in the mobile device's screen as shown in the images in line 5 or 0:00:21, 13 or 0:00:34, 15 or 0:00:36, 17 or 0:00:40, 21 or 0:00:50, 23 or 0:00:51, 25 or 0:00:52, before the screen of the mobile device scrolled up in line 28 or 0:00:56. The status message refers to the clipboard as "your clipboard" indicating the P copied a text to his mobile device's clipboard. |
| 11 | | | (120.0) | Practice: reading application status messages There is a gap of 2 minutes before H takes a turn and invites P to join the Zoom meeting. During the gap, H may have sent the Zoom meeting link to P, and P copied it, which is why the status message in line 10 appeared. |
| 12 | 10:30 | H | please join the zoom meeting | H takes a turn and invites P to join the zoom meeting. Practice: sending out an invite to join the Zoom meeting. |

Transcript Title: 182620210727TV-H

| Line # | Timestamp | Letter Code | Transcription | Description |
|--------|-----------|-------------|-------------------------------|--|
| 1 | | | | This part is not visible in the screenshot |
| 2 | | | | This part is not visible in the screenshot |
| 3 | | | | This part is not visible in the screenshot |
| 4 | 18:27 | H | can I see the screen? | Practice: seeing the remote screen, which is the purpose of the collaboration |
| 5 | 18:27 | H | hold on | Practice: waiting |
| 6 | 18:27 | H | I will start the zoom meeting | H requested P to wait or hold on while she started the Zoom meeting |
| 7 | 18:27 | H | and invite CTS | and invited the vendor's team |
| 8 | | | (60.0) | Based on the timestamp, there appears to be a gap of 1 minute before P responded and agreed to H's request that he wait. |
| 9 | 18:28 | P | okay | P's mobile device name: samsung_SM-A515F_unknown appears for this reply P agrees to H's request that he wait. |

| | | | | |
|----|-------|---|--|---|
| 10 | | | Text has been copied to the device clipboard | TeamViewer desktop application status message. The status message refer to the clipboard as “the device clipboard” indicating that text was copied to the clipboard of the device connected to. |
| 11 | | | (120.0) | Practice: reading application status messages There is a 2-minute gap before H takes a turn and invites P to join the Zoom meeting. During the gap, H may have sent the Zoom meeting link to P, and P copied it, which is why the status message in line 10 appeared. |
| 12 | 18:30 | H | please join the zoom meeting | H takes a turn and invites P to join the Zoom meeting. Practice: sending out an invite to join the Zoom meeting. |

2.2. Online written interaction

In the image in line 28 or TS: 0:00:56.000, the chat conversation between H and P before the online collaboration meeting started can be seen. The transcript of the online written conversation can be found in Table 4. Line 1 started with the status message, "Screen sharing active." P then took a turn and sent H the message, "I am connected to your mobile device now." P's statement might have been inaccurate since it was H, who connected to P's mobile device. Since H was connecting to P's mobile through the TeamViewer application installed in her computer, after she entered the TeamViewer ID of P's mobile, a connection request was sent to P, which he accepted. The status message "Screen sharing active" may have appeared at his end after he accepted H's connection request and enabled screen sharing in his mobile phone. He may have initiated sending the message to test the connection or to inform H that he has accepted her connection request and so their devices have connected. In line 3 at 10:26, P sent the message "yes." This message appears to be his answer to H's question in line 4, "can I see the screen?" The time in P's phone may be behind by a few seconds so when H sent the question "can I see the screen?" and P replied "yes," P's reply appeared before H's question. In line 4, H still asked the question, "can I see the screen?" Though the status message, "Screen sharing active," already appeared at P's installation of TeamViewer QuickSupport on his mobile device, and the chat function in H's installation of TeamViewer Desktop application on her computer, the screen of P's mobile may still have been loading that is why H still had to ask the question. In line 5, H told P, "hold on," and continued with her turn in lines 6 and 7, "I will start the zoom meeting", "and invite CTS." H may have told P to wait since she will still contact CTS and send them an invite. After this, based on the

timestamp visible in HH:mm format, there appeared to be a 1-minute gap before P took his turn and replied “okay” in line 9. In line 10, the status message “Text has been copied to your clipboard” appeared. At H’s end, this status message appeared as “Text has been copied to the device clipboard,” indicating that P copied some text in the mobile device to the device’s clipboard. In the images in lines 5 (TS: 0:00:21.000), 13 (TS: 0:00:34.000), 17 (TS: 0:00:40.000), 21 (TS: 0:00:50.000), and 25 (TS: 0:00:52.000) in the Analytical Tables of Sequence 1 and 2, below “Type your message here” message box is a link that appears to be a Zoom meeting link. It is possible that the P copied the Zoom meeting link to his mobile device’s clipboard, and so the status message “Text has been copied to your clipboard” appeared. After 2 minutes, based on the visible timestamp, H sent P a message, “please join the zoom meeting.” After this, the meeting may have started.

This textual conversation was analyzed, and the following actions were found.

a. Connecting

In line 1, the status “Screen sharing active” implies that a connection has been made. The screen of the device being connected to is now visible on the connector’s screen remotely. The essence of P’s statement in line 2 indicated that a connection has been established between his mobile phone and H’s computer. He may have initiated taking a turn and sending a message to initiate the conversation since the chat was done before the Zoom meeting started. At this point of the online collaboration, TeamViewer chat was his avenue to communicate

with H. He may also have initiated sending a message to verify his connection with H. If H replied, then he is positive that they have connected.

b. Reading onscreen visual cues

Before P initiated a turn and sent H a message in line 2, the status message “Screen sharing active” could be seen in line 1. **P may have read this**, and this informed him that a screen sharing in his device has been activated. To confirm his connection with H, he initiated sending her a message. Ignoring onscreen visual cues in quasi-synchronous communication, such as a status message that a connection has been made, may lead to unnecessary waiting. Learning to read status messages and reacting to these in a timely manner is a proactive work behavior.

In the different versions of the chat conversations, it can be observed that the ID or name of the remote sender can be seen below the chat message that he or she sent. In the chat conversation visible at P’s end, the H’s name appears as Leah Gean Diopenes. In the chat conversation visible at H’s end, P’s name appears as `samsung_SM-A515F_unknown`, which may be the device name of his mobile phone. `samsung_SM-A515F_unknown` is also the session tab name of the remote session. Here, the device name contains the device model, A51.

c. Waiting

In line 4, H asked P if she could see the screen. She may have asked P this question despite the “Screen sharing active” status message because it is possible that the screen of P’s mobile device was not yet appearing at her end, possibly because it was still loading, since the connection had just recently been

established. H had to **wait for the screen of P's mobile device to load completely**. In line 5, H also requested P to hold on because she was still going to contact the vendor's team and start the Zoom meeting. She requested P to **wait for the participants to be complete and for her to start the meeting**. The purpose of waiting was to **achieve synchronization or coordination**. The waiting time was also reasonable, only approximately two minutes, based on the visible timestamp in the chat. Waiting for participants to be complete also means **waiting for a quorum to be achieved**. After two minutes since P affirmed that he would wait by sending an okay message, in line 12, H sent a message to inform P to join the meeting. She may have finished inviting the CTS team and had started the meeting.

d. Using a variety of communication tools to collaborate

It can be observed in P and H's chat conversation that before they started the Zoom meeting, H connected to P's mobile device first using TeamViewer remote connectivity software. They used that chat function to communicate. In line 6, H also said that she will invite CTS. To invite CTS, she may have used another communication platform not indicated in their conversation. In line 7, H said that she will start the Zoom meeting, indicating their use of the Zoom videoconferencing tool.

e. Starting the Zoom meeting

To collaborate virtually, teleworkers meet in a virtual room that can be accessed through a meeting link. Similar to a physical room, the room must be open so that meeting participants can enter. Starting a virtual meeting is similar to

opening a meeting room's door so that the participants can enter. If the virtual meeting is not started and meeting participants click the meeting link, they might receive a message informing them to wait and try again later, or they may receive a message stating that the meeting has not yet started.

f. Inviting meeting participants

In line 7, H mentioned that she will invite CTS. In a virtual meeting, participants must know the meeting link so that they can join the meeting. Inviting meeting participants is a crucial practice in online collaboration because it informs them of the necessary information required to join the meeting, such as the meeting link. Inviting meeting participants can be as simple as sending them the meeting link through chat.

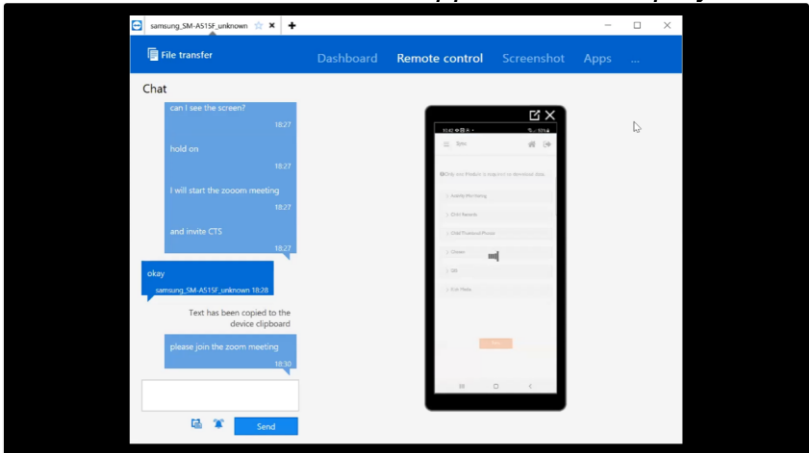
g. Meeting at a common time

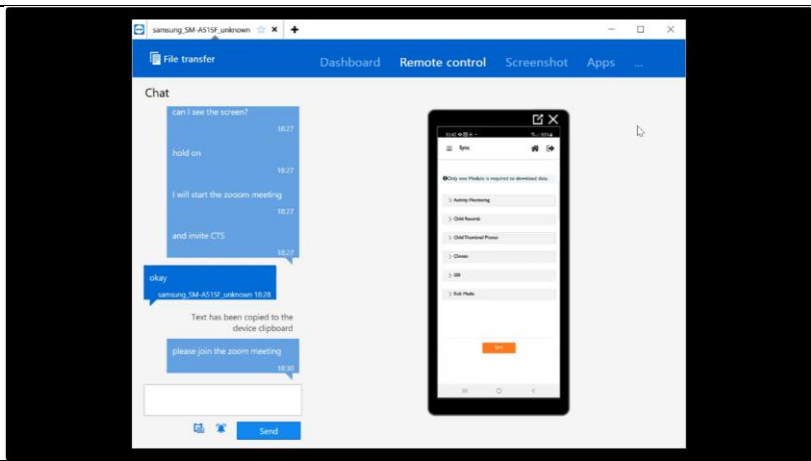
In the two versions of the chat conversation, different timestamps can be observed. At P's view, the times were 10:26, 10:27, 10:28, and 10:30, indicating that it was 10:00 AM in Mali when the online meeting was held. At H's end, the visible times were 18:27, 18:28, and 18:30, indicating that it was 6:00 PM in the Philippines when the meeting was held. Teleworkers from different geographical locations meet at the best time that is convenient for all of them so that they can collaborate effectively. If needed, some teleworkers adjust their working time so that they can collaborate with colleagues from other regions.

Sequence 3: P logs to the application (Lines 43 to 47)

Table 7.

Analytical Table of Sequence 3

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|---|
| # | TS | TE | L | Transcription | Description |
| 43 | 0:01:10.000 | | | <i>The screen shows the P logging into the mobile app from 0:01:10 to 0:01:36 and then going to the module he needs for the demonstration from 0:01:37 to 0:01:47 before speaking again. At 0:01:40, the mobile application loads data. The menus show but are disabled due to loading data. At 0:01:46, after the data finishes loading, the menus are shown editable</i> | For 37 seconds, the online collaborators wait for P to finish logging in and arrive at the module where the problem occurs. |
| 44 | 0:01:12.000 | 0:01:12.000 | | <i>P enters data to the login screen</i> | |
| 45 | 0:01:37.000 | 0:01:37.000 | | <i>The dashboard of the mobile application is displayed</i> | |
| 46 | 0:01:40.000 | 0:01:40.000 | | | |
| | | | |  | |

| | | | | | |
|----|-------------|-------------|--|---|--|
| 47 | 0:01:46.000 | 0:01:46.000 | |  A screenshot of a remote control application window titled "File transfer". The window has a blue header with "File transfer" and navigation options: "Dashboard", "Remote control", "Screenshot", and "Apps". The main content area is split into two parts. On the left is a "Chat" window with a message history: "can I see the screen?" (18:27), "hold on" (18:27), "I will start the zoom meeting and invite CTS" (18:27), "okay" (18:27), "Text has been copied to the device clipboard" (18:28), and "please join the zoom meeting" (18:28). A text input field and a "Send" button are at the bottom of the chat. On the right is a virtual smartphone screen displaying a "File Transfer" dialog box with a "Copy your photos to clipboard" checkbox and a list of folders: "Activity Feeds", "DMs", "DMs Archived", "DMs Archived Photos", "Camera", "SMS", and "SMS Photos". An orange "OK" button is at the bottom of the dialog. | |
|----|-------------|-------------|--|---|--|

In lines 43 to 47, which start at TS: 0:01:10.000 and end at TE: 0:01:46.000, P logs to the mobile application. For 36 seconds, the other participants in the meeting wait for him to finish logging in. In a collaborative setting where screen sharing is used, teleworkers **wait for colleagues to finish a demonstration**. While waiting, they are informed of their colleagues' actions through what they see on the screen. Teleworkers **inform colleagues of the status of their actions through screen sharing**. The information that teleworkers receive through their sense of sight reduces the uncertainty during waiting.

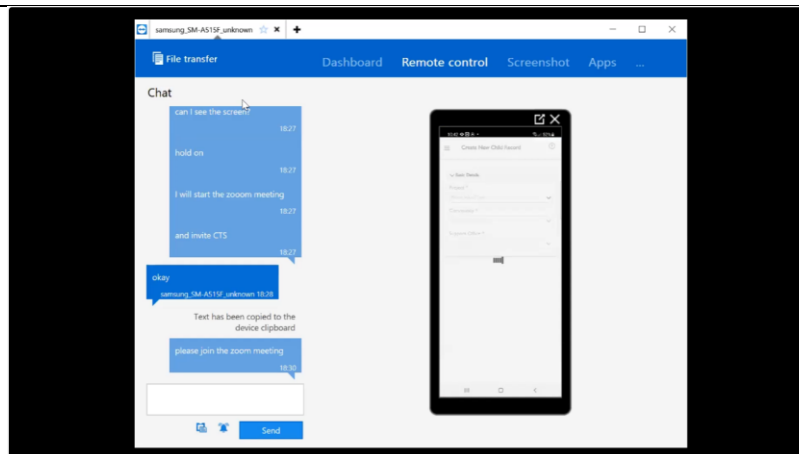
Sequence 4: P demonstrates the issue on video (Lines 48 to 76)

Table 8.

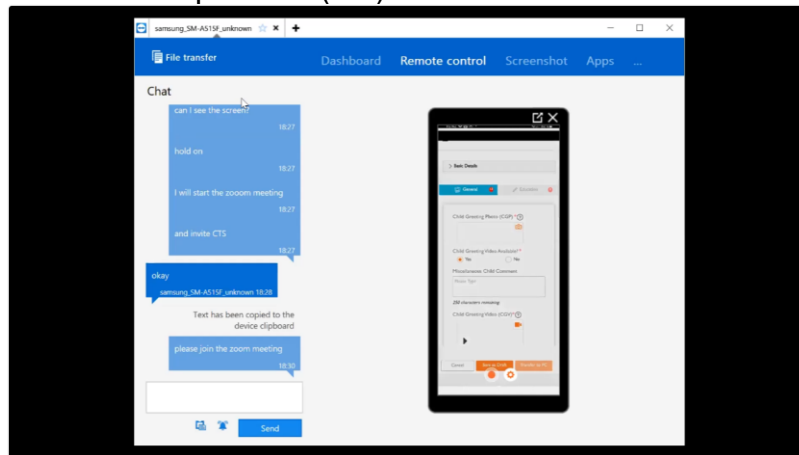
Analytical Table of Sequence 4

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|---|
| # | TS | TE | L | Transcription | Description |
| 48 | 0:01:47.000 | 0:01:48.000 | | A:: for example= | <p>P starts to speak here P self-selects himself as a speaker and starts explaining. In lines 52 to 66, P demonstrates the issue being investigated by describing his actions as he navigates the mobile. In online collaboration, screen sharing directs collaborators to a common view that illustrates the topic of discussion. The shared screen is comparable to a visual aid in offline settings though it is more advanced because it can be the object itself instead of just a still image projected to a white screen. There is technological mediation in online collaboration or online collaboration makes heavy use of technology to make telework possible.</p> |
| 49 | 0:01:48.000 | 0:01:48.000 | | <i>the screen shows the mobile menu opening at 0:01:48</i> | |
| 50 | 0:01:48.000 | 0:01:55.000 | P | =when a:: I would like to (1.2) to add a new a new RC for example (1.9)= | |
| 51 | 0:01:55.000 | 0:01:55.000 | | <i>P selects New Child Record link from the menu</i> | |
| 52 | 0:01:56.900 | 0:01:56.900 | P | =uh:: (4.0)= | |

| | | | |
|----|-------------|-------------|---|
| 53 | 0:01:58.000 | | |
| 54 | 0:02:00.000 | | |
| 55 | 0:02:01.000 | 0:02:03.000 | P |
| 56 | 0:02:04.000 | 0:02:04.000 | P |
| 57 | 0:02:05.000 | 0:02:06.999 | P |
| 58 | 0:02:07.000 | | P |
| 59 | 0:02:11.500 | 0:02:13.000 | P |
| 60 | 0:02:14.000 | 0:02:14.000 | |

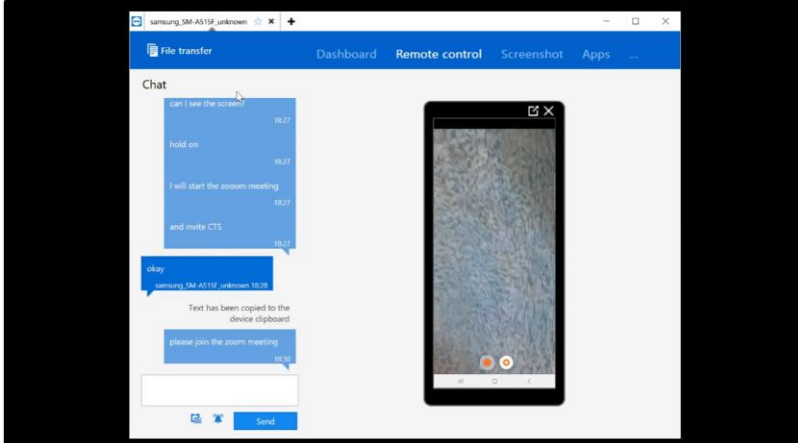



P selects a project form the dropdown
 = <Let me select a>A::P (1.5)=
P selects a community from the dropdown
 = just select an community (5.0)=
P selects a support office from the dropdown
 = oh for example here (2.0)=



The data loads

P toggled the selection for Child Greeting Video Available from No to Yes at 0:02:12.000 to show Child Greeting Video. At 0:02:14.000, the Child Greeting Video is now available, which P clicked to show the video camera

| | | | | | |
|----|-------------|-------------|---|--|--|
| 61 | 0:02:15.000 | 0:02:15.000 | |  | |
| 62 | 0:02:15.999 | 0:02:17.000 | P | =°a(h)::° the resolution (3.5)= | |
| 63 | 0:02:18.000 | 0:02:18.000 | |  | |
| 64 | 0:02:20.500 | 0:02:24.000 | P | =Yes (0.5) I don't know if you can see my screen (3.0) | <p>P initiates a self-initiated repair by confirming from fellow collaborators if they can see his screen. His statement "I don't know if you can see my screen," indicates that he feels it would be...</p> |

| | | | | | |
|----|-------------|-------------|---|---|---|
| 65 | 0:02:27.000 | 0:02:27.000 | | <i>The available resolutions in the opened camera are displayed</i> | helpful at this point where he is showing the available video resolutions in the mobile, if the other collaborators could see his screen. At this point, P was showing a problem. |
| 66 | 0:02:27.500 | 0:02:28.999 | B | Yes we are able to see | B self-selects herself as a speaker and affirms P that she can see his screen. |
| 67 | | | | (2.0) | The pause indicates that the collaborators are checking what is being shown onscreen and analyzing the situation |
| 68 | 0:02:29.000 | 0:02:29.000 | | <i>The available resolutions in the opened camera are displayed</i> | |
| 69 | 0:02:31.000 | 0:02:31.000 | P | Yah | P self-selects himself as a speaker by uttering Yah |
| 70 | 0:02:31.000 | | | (3.0) | A longer pause indicates more time being spent on analysis |
| 71 | 0:02:34.000 | 0:02:35.500 | B | Ah:: just hold on for a moment | B self-selects herself as a speaker and requests P to hold on as she checks the issue |
| 72 | 0:02:35.500 | | | (1.5) | B still analyzing |
| 73 | 0:02:37.000 | 0:02:37.000 | P | ok | P accepts B's request by responding ok |
| 74 | | | | (36.0) | During this 36s long pause, B and the CTS team may have been analyzing the issue, being the group or the team identified by H as knowledgeable of the issue in lines 16-18 |
| 75 | 0:02:38.000 | 0:03:13.000 | | <i>The available resolutions in the opened camera are displayed</i> | [Condensed lines 75-76] |

After P has logged into the mobile application, he proceeds to show the issue. P starts to show the problem in the resolutions available for video in the child module (line 48 or 0:01:47.000).

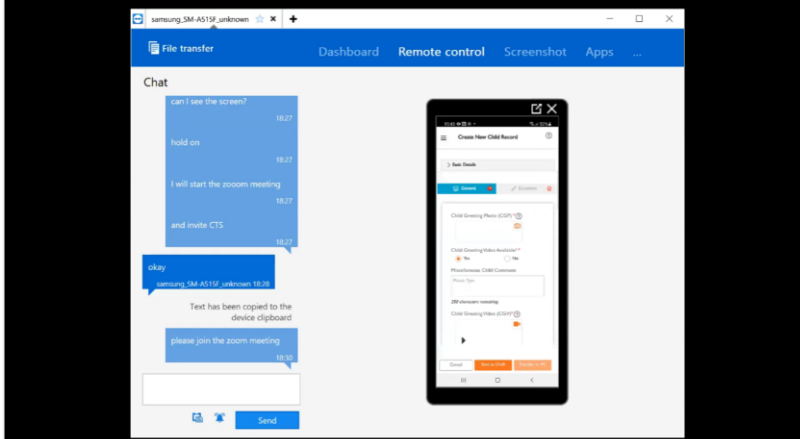
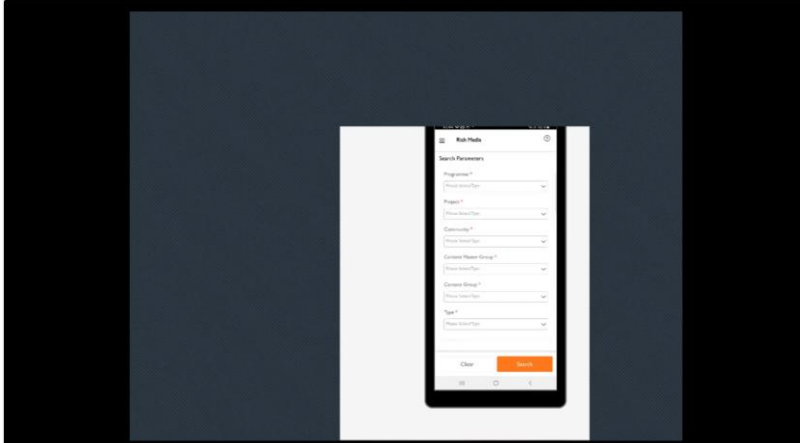
P's demonstration of the issue shows **coordinated use of technology**. P was controlling the mobile while speaking on Zoom. In lines 55 and 57, he verbalizes the actions that he is doing on the mobile. In line 64 or TS: 0:02:20.500, after he showed the resolution of the camera that he accessed, he said, "Yes (0.5) I don't know if you can see my screen," indicating that in an online collaboration setting, participants have to **request verbal confirmation** from other participants to know if they are seeing the same thing or if they have their attention since they do not physically see the other participants faces. The lack of visual cues, such as gestures, facial expressions, and body language, has to be compensated for by verbal confirmation. In line 66 or TS: 0:02:27.500, B self-selects herself as a speaker and affirms P that they can see his screen. In her statement, "Yes we are able to see," by saying we, she was referring to the CTS team. B was also **acting according to her role**. Among the three members of the CTS team, B, D, and T, they may have agreed that B would speak for them.

Sequence 5: B requests P to show the issue in the rich media module (Lines 77 to 106)

Table 9.

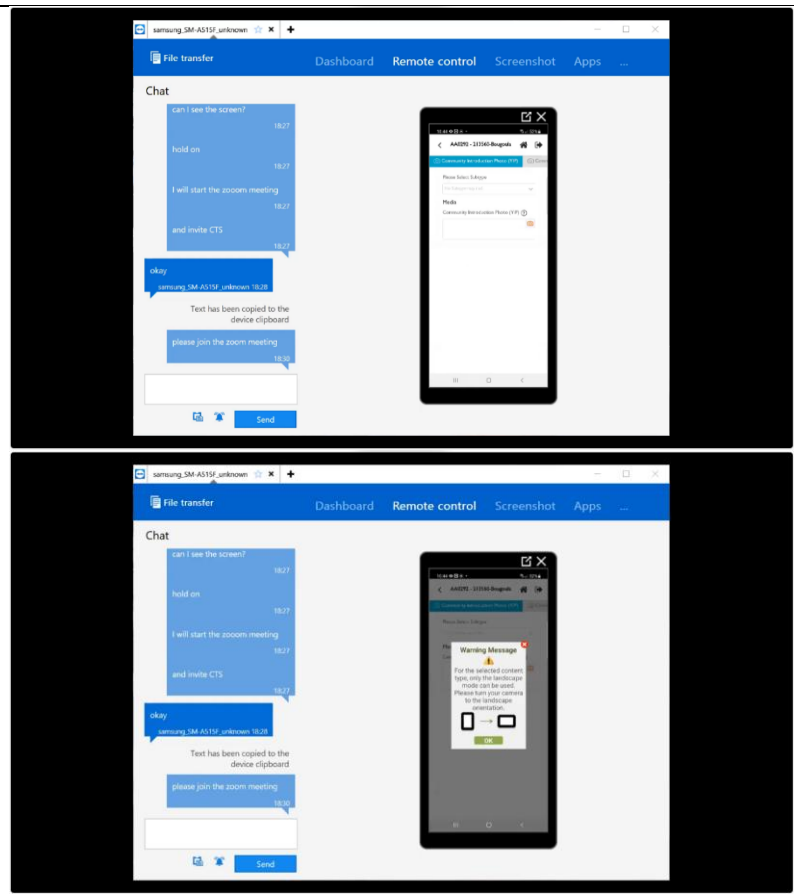
Analytical Table of Sequence 5

| Transcript Title: 18402620210727Z | | | | | |
|--|-------------|-------------|----------|--|--|
| # | TS | TE | L | Transcription | Description |
| 77 | 0:03:13.750 | 0:03:22.000 | B | Ah:: could you please go to rich media (0.5) module and ah show me the resolution ah could you please do that now? | <p>After 36s of analysis, B self-selects herself as a speaker and directs P to go to the rich media tab</p> <p>Lines 77-79 is a repair sequence, Line 77 is the repairable or the trouble source</p> <p>P makes an other-initiated repair by repeating what B requested, which is to go to the rich media tab to confirm if he heard it right.</p> <p>B affirms P's doubts by responding "Yes rich media yes"</p> <p>B, who is the original speaker makes a self-repair of the repairable</p> <p>The collaborators wait for 13.5s for P to arrive at the rich media module. During this period, they can see what P is doing. They are informed of his activities. Uncertainty is reduced by what they can see onscreen.</p> |
| 78 | 0:03:23.000 | 0:03:24.000 | P | Go to the rich media? | |
| 79 | 0:03:25.000 | 0:03:26.000 | B | Yes rich media yes | |
| 80 | 0:03:26.000 | | | (13.5) | |

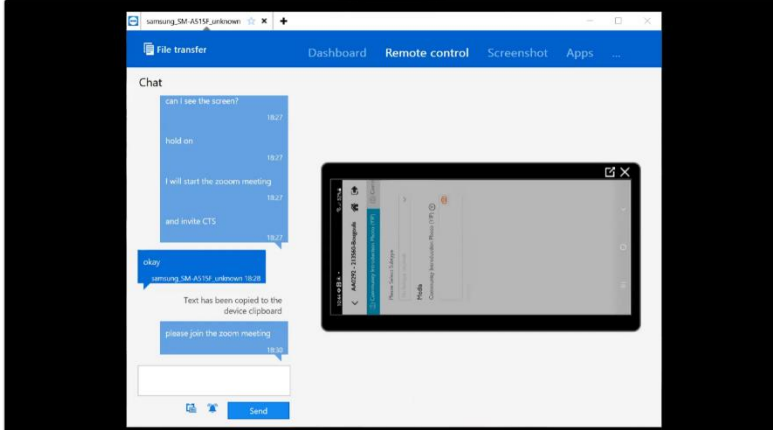
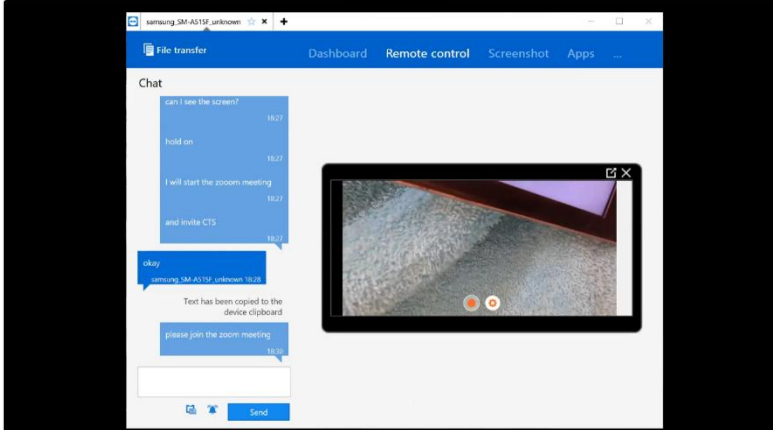
| | | | | | |
|----|-------------|-------------|---|--|--|
| 81 | 0:03:27.000 | 0:03:27.000 | |  | <p>This screen appears when P leaves the video camera resolution. This starts his navigation to the rich media module.</p> |
| 82 | 0:03:31.000 | 0:03:31.000 | | <p><i>The main menu opens</i></p> | |
| 83 | 0:03:34.000 | 0:03:34.000 | | <p><i>The options in the selected menu expands</i></p> | |
| 84 | 0:03:36.000 | 0:03:36.000 | |  | <p>At 0:03:36, the screen only shows a partial view of the TeamViewer app. Only the center screen showing the mobile app being shared is shown. The rest of the application appears covered by a black block, which may be due to a lagging Internet connection.</p> |
| 85 | 0:03:39.500 | 0:03:39.500 | | <p><i>With only a partial view of the TeamViewer app showing, the programme dropdown expands to show options</i></p> | <p>This continues to 0:03:39.500</p> |
| 86 | 0:03:39.500 | 0:03:41.000 | P | <p>A::h may I need to select an (2.0)=</p> | <p>P then describes the steps that he is doing while the screen is shared</p> |

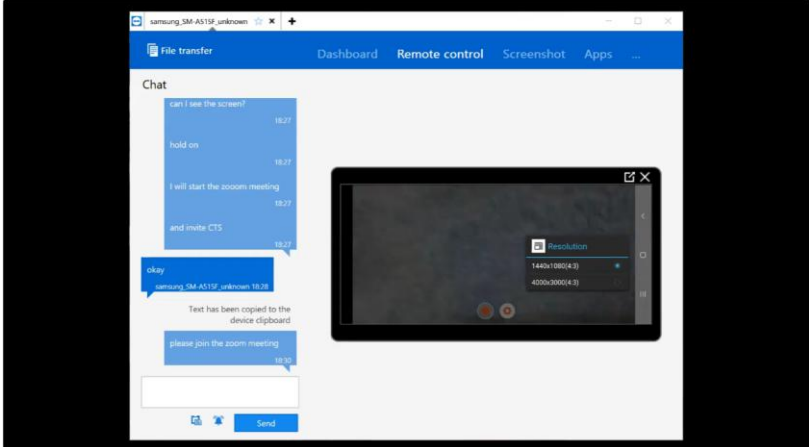
| | | | | | |
|----|-------------|-------------|---|---|--|
| 87 | 0:03:42.000 | 0:03:42.000 | | <i>The complete view of the TeamViewer App is displayed.</i> | |
| | | | | <i>The programme dropdown expands as P selects a programme</i> | |
| 88 | 0:03:44.000 | 0:03:44.000 | | <i>The project dropdown expands as P selects a project</i> | |
| 89 | 0:03:44.000 | 0:03:45.000 | P | =°a°° AP°° ? | |
| 90 | 0:03:45.000 | 0:03:49.000 | B | As any program any project and community also (0.5) °yes° | B interprets this as a question and self-selects herself as a speaker by responding “As any program any project and community also (0.5) yes” What B sees onscreen informs her of what P is doing currently. |
| 91 | 0:03:49.000 | 0:03:49.000 | | <i>The content master group dropdown expands as P selects a programme</i> | P continues to operate on the mobile app, making the necessary selections to produce a result, such as Content Master Group value. |
| 92 | 0:03:50.000 | 0:03:50.000 | | <i>Data loads after P selects a content master group</i> | The data loads based on his selections. Loading is represented by a loader to indicate that the device is working on something. |
| 93 | 0:03:50.500 | 0:03:51.000 | P | ok | P accepts B’s instructions or advice by uttering ok |
| 94 | 0:03:51.000 | 0:03:51.000 | | <i>Data loading finishes. The fields are enabled again.</i> | |
| 95 | 0:03:55.000 | 0:03:55.000 | | <i>Type dropdown expands as P selects a Type</i> | |
| 96 | 0:03:55.000 | 0:03:57.000 | B | can be update ok°(h)° | |
| 97 | 0:03:57.000 | 0:03:57.000 | | <i>P completes his selections</i> | |

| | | |
|----|-------------|-------------|
| 98 | 0:04:01.000 | 0:04:01.000 |
| 99 | 0:04:02.000 | 0:04:02.000 |



P is in Community Introduction Photo (YIP) tab and he clicks the camera icon.

| | | | | | |
|-----|-------------|-------------|--|--|--|
| 100 | 0:04:04.000 | 0:04:04.000 | |  <p>The screenshot shows a remote control interface with a chat window on the left and a screenshot of a mobile device screen on the right. The chat messages are:</p> <ul style="list-style-type: none"> can't see the screen? (18:27) hold on (18:27) I will start the zoom meeting (18:27) and invite CTS (18:27) okay (18:27) samsung SM-A515F unknown 18:28 Text has been copied to the device clipboard please join the zoom meeting (18:28) <p>The screenshot of the mobile device shows a Zoom meeting invitation for 'Prada Community Workshop - Prada (18:28)'.</p> | |
| 101 | 0:04:06.000 | 0:04:06.000 | |  <p>The screenshot shows a remote control interface with a chat window on the left and a screenshot of a mobile device screen on the right. The chat messages are:</p> <ul style="list-style-type: none"> can't see the screen? (18:27) hold on (18:27) I will start the zoom meeting (18:27) and invite CTS (18:27) okay (18:27) samsung SM-A515F unknown 18:28 Text has been copied to the device clipboard please join the zoom meeting (18:28) <p>The screenshot of the mobile device shows a Zoom meeting invitation for 'Prada Community Workshop - Prada (18:28)'.</p> | |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 102 | 0:04:12.000 | 0:04:12.000 | |  | Finally, P arrives at the part where the resolution is shown. |
| 103 | 0:04:12.000 | 0:04:13.000 | P | Can you see it? | P confirms if the other collaborators can see his screen |
| 104 | 0:04:13.000 | 0:04:13.000 | | <i>The available resolutions in the open camera are displayed</i> | |
| 105 | 0:04:13.000 | | | (2.0) | B and the other collaborators are processing the information that they see onscreen |
| 106 | 0:04:15.000 | 0:04:15.000 | B | ok= | B affirms that she can see the screen by uttering ok |

In this sequence, the collaboration team's analysis of the issue goes further. In the previous sequence, B saw and processed the problem P presented about the video resolutions available in the child module. In this sequence, B begins to explore other areas in the mobile application that may be experiencing issues. To begin, she instructs P to go to the rich media module in line 77.

This sequence demonstrates that to create order in an online collaboration, **one member gives the instruction and the other follows**. In line 77, aside from requesting P to go to the rich media module and show her the resolution, B also expressed urgency while maintaining politeness by saying, "could you please do that now?" In this sequence, B acted as the instructor while P acted as the follower. After B gave an instruction in line 77, in the next line, line 78, P made an other-initiated repair by repeating B's request, "Go to the rich media?" This shows that in an online collaboration setting, to follow a member assuming the role of an instructor, the other member first **clarifies any doubts he may have with the instruction**. In line 79, B affirms P that he heard her right by taking a turn and replying, "Yes rich media yes." After getting B's affirmation, for 46s from lines 80 (TS: 0:03:26.000) to line 102 (TS: 0:04:12.000), P navigates to the video resolution in the rich media module just as B instructed. While he is doing this, he inquires from B what selections he should make to produce the results that she wanted. In lines 86 and 89, P asks "A::h may I need to select an (2.0) °a°° AP°°?" B affirms by replying, "As any program any project and community also (0.5) °yes°." Aside from P's actions while controlling the mobile that shows he was following B's instruction to navigate to the rich media module, his utterance, "ok" in line 93, shows that he accepted B's instruction and followed.

This sequence also shows online collaborators' or teleworkers' **coordinated use of technology** and their **use of a common view** by sharing one screen to

collaborate. Here, P was controlling the mobile while speaking, and B was providing guidance, watching P's movements in the mobile application through the shared screen. At the end of the sequence, P asks, "Can you see it?" in line 103. This shows that despite sharing the same screen, teleworkers still need to verbally request affirmation, perhaps due to the invisibility of their colleagues' facial expressions in an online setup. There is a 2s gap between P's question and B's affirmation that she can see the screen. During this gap, B may have been checking what P was showing on the screen before affirming by uttering "ok=" in line 106.

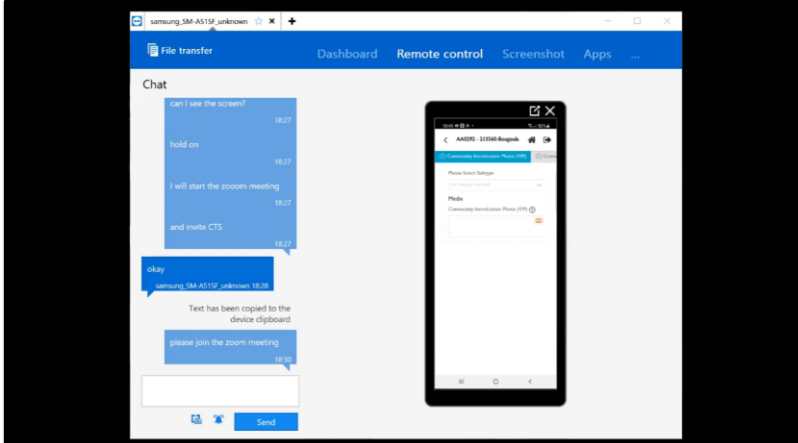
Sequence 6: B requests P to show the issue in the photo section (Lines 107 to 133)

Table 10.

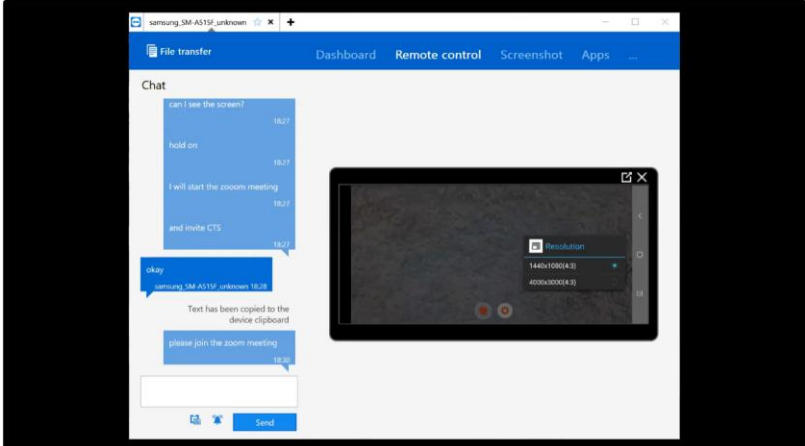
Analytical Table of Sequence 6

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 107 | 0:04:15.000 | 0:04:15.000 | | <i>The available resolutions in the open camera are displayed</i> | |
| 108 | 0:04:16.000 | 0:04:21.000 | B | =so can you go to photo a:: and show the resolution? There also you are facing the issue | B then proceeds to request P to go to photo and show the resolution. Based on B's statement, she means that photo is also another part or area in the mobile application where issue is also occurring. Trouble source (TS1) or Repairable 1 (R1) |
| 109 | 0:04:21.000 | 0:04:21.000 | | <i>The available resolutions in the open camera are displayed</i> | |
| 110 | 0:04:21.000 | | | (2.0) | P processes B's instructions |
| 111 | 0:04:23.000 | 0:04:24.000 | P | Go to the ph- | Other-initiated repair by P to TS1 or R1 / Trouble Source (TS2) or Repairable 2 (R2) P takes a turn by making a repair. He repeats what B is saying to confirm if he understood her instructions, right. |
| 112 | 0:04:24.000 | | | (1.0) | |
| 113 | 0:04:25.000 | 0:04:28.000 | B | Thi::s i::z video capture right? Uh- °[Is this video?] | Other-initiated repair by B to TS2 or R2 B interrupts P by asking P a question. She confirms from P if what is showing is video capture. Here, their roles are... |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 114 | 0:04:27.000 | 0:04:28.000 | P | Y[eah this is video] | <p>reversed, B asks question and P answers in line 114.</p> <p>Other-repair by P to TS2 or R2 P affirms that he is showing video. Since P gave an affirmative reply, B made a self-initiated repair to TS1 or R1 by repeating it. Trouble Source 3 (TS3) or Repairable 3 (R3) Other-repair by P of TS1 or R1 P understands and utters ok overlapping B's self-initiated repair.</p> <p>P prepares to go to photo by uttering "photo." He then operates the mobile to go to the photo camera resolution as requested by B. The screen still shows video capture but the camera is now pointing to another object. The Resolutions shown in 0:04:21 have been hidden. Other-initiated repair by P to TS3 or R3. P asks a question to confirm if he should go to photo in rich media module by asking "always in rich media?" B processes P's question</p> |
| 115 | 0:04:29.000 | 0:04:30.000 | B | A[h ca]= | |
| 116 | 0:04:30.500 | 0:04:30.500 | P | [ok] | |
| 117 | 0:04:30.600 | 0:04:31.000 | B | =n you go to photo? | |
| 118 | 0:04:32.000 | 0:04:33.000 | P | photo::= | |
| 119 | 0:04:34.000 | 0:04:34.000 | | <i>The open camera focuses on another object</i> | |
| 120 | 0:04:34.000 | 0:04:36.000 | P | =always on rich media? | |
| 121 | 0:04:36.000 | | | (3.0) | |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 122 | 0:04:38.000 | 0:04:38.000 | |  | P navigates to Community Introduction Photo (YIP) despite not getting any response to his question. |
| 123 | 0:04:39.000 | 0:04:43.000 | B | Yes in rich media itself (0.5) just go to photo section and just capture it | Self-repair by B to TS or R3 B may have seen the change in the screen and confirms with P that he is in the right place by giving an affirmative response to his question and then adding an instruction “go to photo section and just capture it” |
| 124 | 0:04:44.000 | 0:04:46.000 | P | Yeah this is this is photo this is photo (1.0)= | P affirms that he is in photo When P said this, he may have realized that his reply in line 114 was incorrect |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 125 | 0:04:46.000 | 0:04:46.000 | | | The screen changes to show the camera in photo |
| 126 | 0:04:47.000 | 0:04:48.000 | P | =this is (1.0)= | So he clarifies that he is in YIP community “introductory” photo |
| 127 | 0:04:48.000 | 0:04:48.000 | | | The screen changes to show camera in photo |
| 128 | 0:04:48.750 | 0:04:52.000 | P | =YUP community ah introductory photo (1.0) | During this pause, B may have been processing the data onscreen |
| 129 | 0:04:52.000 | | | | B confirms that she is seeing photo by uttering “ok” and then making ... |
| 130 | 0:04:53.000 | 0:04:55.000 | B | ok YIP ok | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 131 | 0:04:55.000 | 0:04:56.000 | P | YIP yah | <p>a repair of the previous information provided by P, by uttering “YIP ok.” P makes a repair of his previous statement in line 126 to 128 by uttering the correct term, “YIP”</p> <p>During this 13.750 second pause, P has navigated to the resolutions of the mobile app’s photo camera in YIP in the rich media module. The online collaborators, particularly B may have been processing the information shown.</p> |
| 132 | 0:04:56.000 | | | (13.750) | |
| 133 | 0:04:58.000 | 0:05:09.750 | |  <p>The screenshot shows a remote control interface with a chat window on the left and a resolution selection screen on the right. The chat window contains the following messages:</p> <ul style="list-style-type: none"> can i see the screen? 18:27 hold on 18:27 I will start the zoom meeting 18:27 and invite CTS 18:27 okay 18:28 Text has been copied to the device clipboard please join the zoom meeting 18:28 <p>The resolution selection screen shows a list of resolutions:</p> <ul style="list-style-type: none"> Resolution 1440x1080(4.5) 4000x3000(4.5) | |

In Sequences 4 and 5, P showed the issue in the video resolution in the child module (line 60 or TS: 0:02:14.000) and the camera resolution in Community Introduction Photo (YIP) (line 98 or TS: 0:04:01.000 and line 99 or TS: 0:04:02.000) in the rich media module, respectively. In this sequence, B instructs P to check the photo camera of the mobile app, which seems to be a repetition of what P has already done in Sequence 5, but P still follows and only makes a repair later after he has verified that what they are looking at onscreen are the resolutions of a photo camera.

In line 108, B **gives an instruction**, “so can you go to photo a:: and show the resolution? There also you are facing the issue.” Lines 107-133 is a repair sequence. Line 108 is the first repairable. This is the cause of P’s confusion. P makes a repair by repeating what B said, “Go to the ph-” in line 111, but stops midway and pauses for 1s. B makes a repair of P’s silence by taking a turn and asking “Thi::s i::z video capture right? Uh- °[Is this video?]°” in line 113. In line 114, instead of making a repair, P affirms that they are looking at the resolution of a video camera. B repeats her instruction in 115 and 117, unaware of her mistake, and P continues to accept B’s instructions by uttering “ok” in line 116. In line 120, he even confirms whether he should check the photo camera in the rich media module. It was only after he exited the photo camera and found Community Introduction Photo (YIP) tab selected (line 122 or TS: 0:04:38.000) that he was able to confirm that all along they were checking the photo camera of the mobile app in the rich media module.

This sequence shows that despite the assistance of technology such as screen sharing, teleworkers can still create disorder by **giving instructions that are too broad** or by **not clarifying the specifics of an instruction**. In line 77 in Sequence 5, B only says “Ah:: could you please go to rich media (0.5) module and ah show me the resolution ah could you please do that now?” Her instructions do not specify where in

the rich media module P should go, whether in the video resolution or the photo resolution. She may have **assumed** that P would go to the video resolution in the rich media module, since prior to Sequence 5, in Sequence 4, P showed the problem with the video resolution in the child module. In line 78, when P clarifies B's instruction, he merely asks "Go to the rich media?" but does not ask where in the rich media module, whether in the video resolution or the photo resolution, he should go. In line 79, B also just confirms that she needs P to go to the rich media module, but did not specify where. From lines 80 to 105, P follows B's instructions and goes to the rich media module, but fails to remember if he selected video resolution or photo resolution. When B requests him to go to photo in line 108, P is not able to explain immediately that he is currently accessing the photo camera resolution in the rich media module. In line 111, his speech shows hesitation that can be interpreted as doubt. Again, when B confirms with him if he is currently showing the video resolution in the rich media module in line 113, he merely affirms in line 114 instead of correcting B. So, B repeats her instruction in lines 115 and 117, which P accepts in line 116. It is only in line 124, perhaps due to exiting the camera module and verifying in the mobile screen that he has selected Community Introduction Photo (YIP) (line 122 or TS: 0:04:38.000) that P realizes that all along he has been showing the photo resolution and so he says "Yeah this is this is photo this is photo (1.0) this is (1.0) YUP community ah introductory photo."

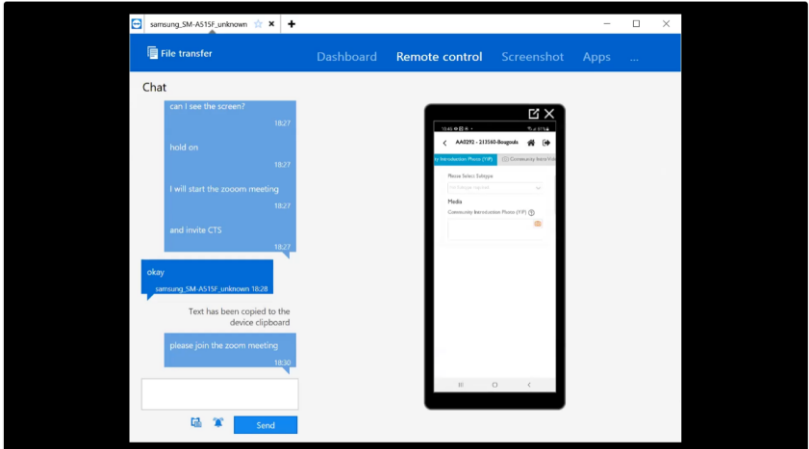
Although B's instructions in line 108 created disorder or confusion, the teleworkers were able to maintain order and recover by **supporting one another**. P continued to follow B's instruction until he noticed on the mobile screen that he was in the Community Introduction Photo (YIP) tab (line 122 or TS: 0:04:38.000), and so he was able to correct B's impression that they were viewing video resolution.

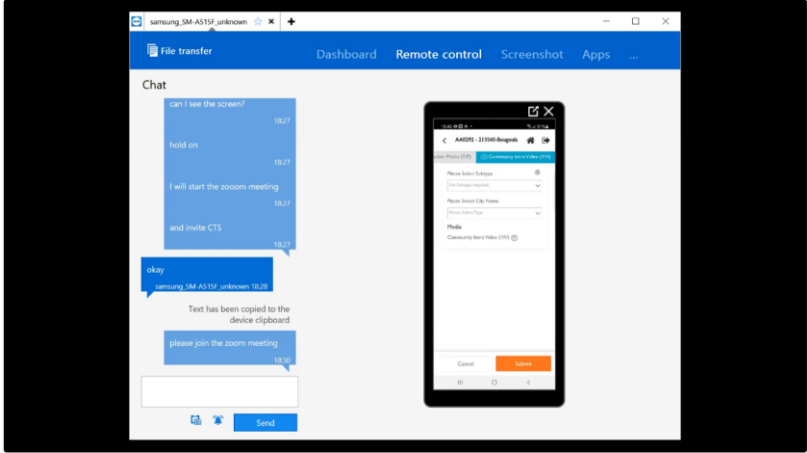
Teleworkers' **lack of attentiveness** during screen sharing or online collaboration can cause disorder. Technology may have also helped reduce the confusion between photo and video by providing a clear distinction between the photo and video user interface. In line 130, B accepts that they are looking at the photo resolution with her statement, "ok YIP ok."

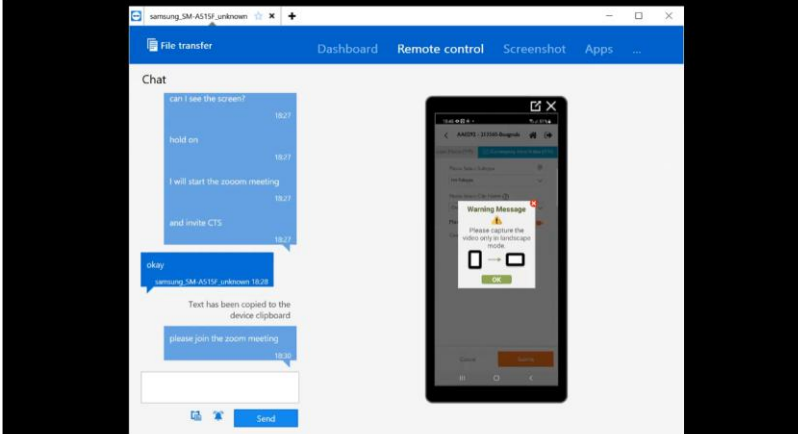
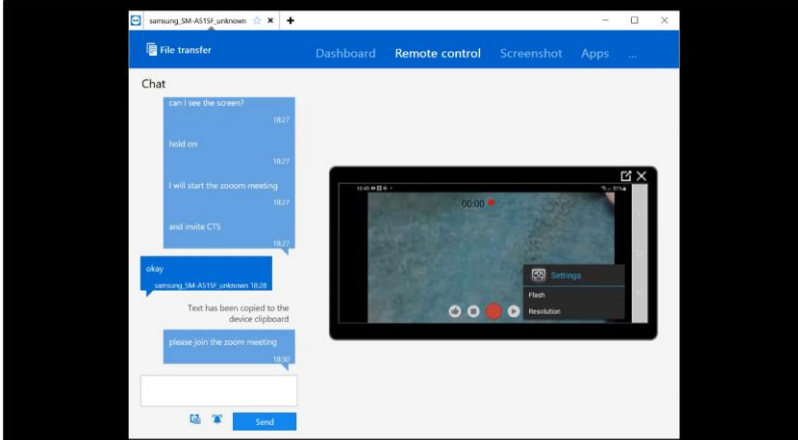
Sequence 7: B requests P to go to the video section (Lines 134 to 152)

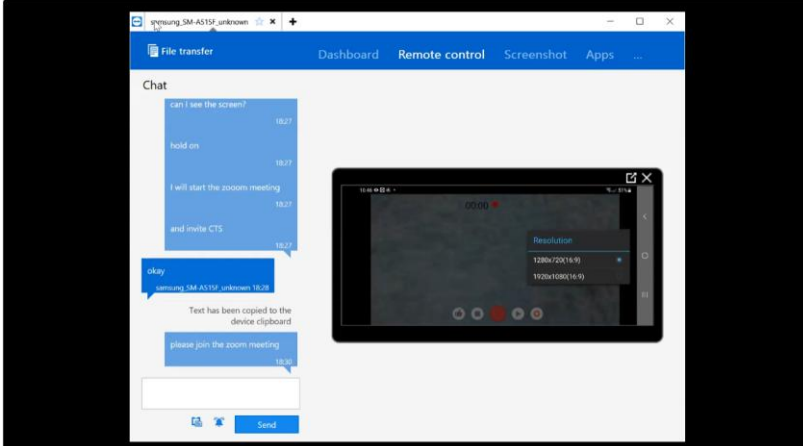
Table 11.

Analytical Table of Sequence 7

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 134 | 0:05:09.750 | 0:05:11.000 | B | Then can you go to video section? | After the 13s pause, B self-selects herself as a speaker and takes a turn by giving P an instruction, “Then can you go to video section?” |
| 135 | 0:05:10.000 | 0:05:10.000 | | <i>The available resolutions in the open camera are displayed</i> | |
| 136 | 0:05:12.000 | 0:05:12.000 | P | ok | P affirms that he will do the instruction by uttering ok. |
| 137 | 0:05:12.500 | 0:05:14.000 | B | This photos two three | B utters something about photos |
| 138 | 0:05:14.500 | 0:05:16.000 | P | This is photo::= | P who has not moved away from YIP yet, affirms that what B is seeing is photo. |
| 139 | 0:05:16.000 | 0:05:16.000 | |  | The screen still shows YIP tab as active. |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 140 | 0:05:16.000 | 0:05:21.000 | P | =let me go to community update- community introductory video | P informs the collaborators that he will go to community introductory video. He utters “community update” but initiates a self-repair by repeating “community” and following it with “introductory video” |
| 141 | 0:05:21.000 | | | (2.0) | The 2 second pause may have been spent by P to navigate to Community Intro Video (YIV) as he mentioned in line 140 |
| 142 | 0:05:21.000 | 0:05:21.000 | | | The screen now shows Community Intro Video (YIV) tab as active in the mobile app. From 0:05:21 to 0:05:39, or for 18 seconds, P navigates to resolutions in YIV video camera. |
| | | | |  | |
| 143 | 0:05:23.000 | 0:05:23.000 | | <i>The Please select Subtype dropdown expands as P selects a subtype</i> | |
| 144 | 0:05:23.000 | 0:05:28.000 | P | °aa::(h) ok challenga° (10.0) | P vocalizes the option that he will select in Please Select Clip Name dropdown |
| 145 | 0:05:26.000 | 0:05:26.000 | | <i>The Please Select Clip Name dropdown expands as P selects a Clip Name</i> | The screen shows P making a selection |
| 146 | 0:05:29.000 | 0:05:29.000 | | <i>P completes his selections</i> | The screen shows that P has made a selection |

| | | | | | |
|-----|-------------|-------------|---|---|---|
| 147 | 0:05:30.000 | 0:05:30.000 | |  | The screen shows that P has activated the video camera |
| 148 | 0:05:34.000 | 0:05:34.000 | |  | The screen shows P accessing video camera settings with two options Flash and Resolution. |
| 149 | 0:05:38.000 | 0:05:40.000 | P | Can- can you see it? | P confirms with the collaborators if they can see the resolutions available for video. |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 150 | 0:05:39.000 | 0:05:39.000 | |  <p>The screenshot shows a remote control application window titled 'samsung SM-A510F_unknown'. It has a blue header with 'File transfer', 'Dashboard', 'Remote control', 'Screenshot', and 'Apps'. Below the header is a 'Chat' window with several messages: 'can I see the screen?' (18:27), 'hold on' (18:27), 'I will start the zoom meeting' (18:27), 'and invite CT5' (18:27), 'okay' (18:27), 'samsung SM-A510F_unknown 18:28', 'Text has been copied to the device clipboard', and 'please join the zoom meeting' (18:28). A 'Send' button is at the bottom of the chat. To the right of the chat is a 'Resolution' menu with options '1280x720(16:9)' and '1920x1080(16:9)'. The background shows a tablet screen with a Zoom meeting interface.</p> | <p>The screen shows that P has selected Resolution since the Resolutions available for the video capture are now showing</p> |
| 151 | 0:05:39.000 | | | (2.0) | <p>During this pause, the collaborators are processing</p> |
| 152 | 0:05:42.000 | 0:05:46.000 | B | <p>ok(h) <so what is the device model A50> or <A51?></p> | <p>B breaks the silence and asks P what is the device model of the mobile that he is showing onscreen</p> |

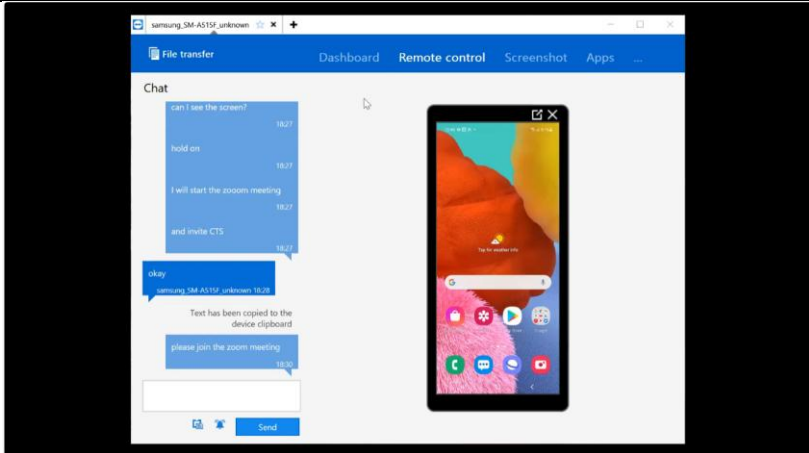
In Sequence 6, it was clarified that they were already seeing the resolution of the photo camera in Community Introduction Photo (YIP) in the rich media module. B continues to explore the rich media module by requesting P to go to video. In line 134, B gives the instruction “Then can you go to video section?” P and B maintain order in their interaction by continuing to act as follower and instructor, respectively. P navigates the mobile following B’s instruction to open the mobile app video camera. P **verbalizes his actions**, such as in line 140, where he says “=let me go to community update- community introductory video”, perhaps to inform B and the rest of the collaboration team of what he will do next, to let them know what to expect. He also **verbally requests confirmation** in line 149, where he says, “Can- can you see it?”. B confirms that she can see by affirming in line 152 with her utterance of “ok(h)...” before proceeding to ask for the device model.

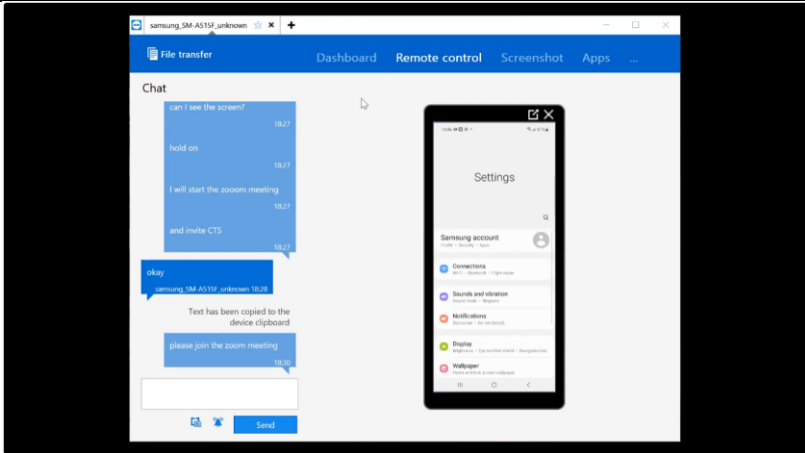
Sequence 8: B asks the device model (Lines 152 to 186)

Table 12.

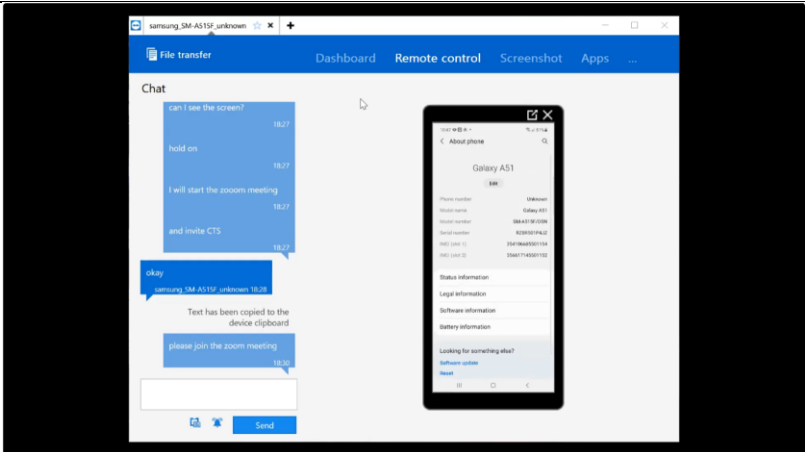
Analytical Table of Sequence 8

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|--|
| # | TS | TE | L | Transcription | Description |
| 152 | 0:05:42.000 | 0:05:46.000 | B | ok(h) <so what is the device model A50> or <A51?> | B breaks the silence and asks P what is the device model of the mobile that he is showing onscreen |
| 153 | 0:05:46.000 | | | (2.0) | During this pause, P processes B's question |
| 154 | 0:05:48.000 | 0:05:48.000 | P | please? | P makes a repair by asking "Please?" which could mean "I beg your pardon?" |
| 155 | 0:05:49.000 | 0:05:54.000 | B | °ah-° what is this device model? Its A50 Samsung A50 or A51? | B makes a repair by repeating her question, "what is the device model, is it A50 or A51" |
| 156 | 0:05:54.000 | | | (3.0) | During this gap, P processes B's question |
| 157 | 0:05:57.000 | 0:06:01.000 | P | a(h):: let- A50 I think let me (5.0)= | P replies A50 but he seems unsure and makes a repair |
| 158 | 0:06:05.000 | 0:06:05.000 | | <i>P minimizes or hides the mobile application</i> | |
| 159 | 0:06:05.500 | 0:06:08.000 | P | Where can I- where can I verify it? (1.0) | |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 160 | 0:06:06.000 | 0:06:06.000 | |  | The screen of the mobile phone appears |
| 161 | 0:06:09.000 | 0:06:10.000 | B | Can you go to settings | |
| 162 | 0:06:10.000 | 0:06:10.000 | | <i>A set of icons is displayed in the mobile screen</i> | This is the next screen that appeared after P swiped left on the mobile screen to search for Settings |
| 163 | 0:06:11.000 | 0:06:11.000 | P | Setting= | |
| 164 | 0:06:11.000 | 0:06:11.000 | | <i>A set of icons is displayed in the mobile screen</i> | P swiped left again on the mobile screen and this set of icons appeared |
| 165 | 0:06:12.000 | 0:06:12.000 | P | =o::k (6.0) | |
| 166 | 0:06:12.000 | 0:06:12.000 | | <i>A set of icons is displayed in the mobile screen</i> | P swiped left again on the mobile screen and this set of icons appeared |
| 167 | 0:06:13.000 | 0:06:13.000 | | <i>A set of icons including Settings appears</i> | P has found the Setting icon and selected it |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 168 | 0:06:14.000 | 0:06:14.000 | |  | The settings screen appeared after P selected the setting icon |
| 169 | 0:06:18.000 | 0:06:19.000 | P | Yah I am (2.0) | |
| 170 | 0:06:19.000 | 0:06:19.000 | | <i>The settings screen appears</i> | |
| 171 | 0:06:21.000 | 0:06:21.000 | B | °A(h)° | |
| 172 | 0:06:22.000 | 0:06:24.000 | C | °Now go down go down° (2.0) | |
| 173 | 0:06:26.000 | 0:06:26.000 | | <i>The lower portion of the settings screen is shown</i> | |
| 174 | 0:06:26.000 | 0:06:26.000 | P | Down? (6.0) | |
| 175 | 0:06:31.000 | 0:06:31.000 | | <i>The lower portion of the settings screen is shown as P continues to scroll down</i> | |
| 176 | 0:06:32.000 | 0:06:32.400 | C | Go down | |
| 177 | 0:06:32.500 | 0:06:33.000 | P | About phone? | |
| 178 | 0:06:33.000 | 0:06:33.000 | | <i>About phone is now visible</i> | |
| 179 | 0:06:33.000 | 0:06:33.000 | C | Yes | |
| 180 | 0:06:33.500 | 0:06:34.500 | B | About phone yes | |
| 181 | 0:06:35.000 | 0:06:35.000 | | <i>The rectangle area surrounding About phone options changes to a dark color when P selects it</i> | |
| 182 | 0:06:35.500 | 0:06:36.000 | P | Ok | |

P scrolls down on the settings screen

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 183 | 0:06:36.000 | 0:06:36.000 | |  <p>The screenshot shows a remote control application window with a blue header containing 'File transfer', 'Dashboard', 'Remote control', 'Screenshot', and 'Apps'. Below the header is a 'Chat' window with a conversation. The messages are: 'can I see the screen?' (18:27), 'hold on' (18:27), 'I will start the zooms meeting and invite CTS' (18:27), 'okay' (18:27), 'Text has been copied to the device clipboard', and 'please join the zoom meeting' (18:30). To the right of the chat is a smartphone screen displaying the 'About phone' settings for a 'Galaxy A51'. The phone number is 04444444444, the model name is Galaxy A51, the model number is SM-A515F/DS, the serial number is K28019142, the IMEI (IMEI 1) is 3541844001104, and the IMEI (IMEI 2) is 3541844001102. Below this information are sections for 'Status information', 'Legal information', 'Software information', and 'Battery information'. At the bottom of the phone screen, it says 'Looking for something else?' and 'Software update'.</p> | <p>About phone information appears showing the phone model.</p> |
| 184 | 0:06:37.000 | 0:06:38.000 | P | Yah its A51 | |
| 185 | 0:06:38.100 | 0:06:39.999 | B | A51 ok | |
| 186 | 0:06:40.000 | 0:06:40.000 | P | yah (5.0) | |

In this sequence, B asks the device model of the mobile device that they are checking, and together the team checks the device's model. The sequence starts in line 152 when, after affirming the information that P showed in Sequence 7, B proceeds to ask for the device model. In line 152, B asks, "ok(h) <so what is the device model A50> or <A51?>" P makes a repair by asking "please?" in line 154. B clarifies by repeating her question, "ah-° what is this device model? Its A50 Samsung A50 or A51?" in line 155. After a three-second pause, P replies "a(h):: let- A50 I think let me (5.0)=" in line 157. In line 158 or TS: 0:06:05.000, P closes the mobile app but realizes that he does not know where to check for the device model, and so he asks for help in line 159 by asking, "Where can I- where can I verify it?" After a one-second pause, B replies in line 161, "Can you go to settings?" Here, B and P still **act as instructor and follower**, respectively. P accepts B's instruction and goes to Settings on the mobile phone (lines 162 to 168). In line 169, P informs that he is in the mobile phone's Settings screen by announcing, "Yah I am." After a two-second pause, B replies, "A(h)°" in line 171, perhaps thinking where P should go next in Settings to know the phone's device model. C, P's colleague, who was also in the call, takes a turn by giving P instructions on how to find the phone's device model. In line 172, he says "°Now go down go down°." After a two-second pause, P makes a repair by asking, "Down?" in line 174. After a five-second pause, C repeats his instruction "Go down" in line 176. In line 177, P asks "About phone?" to confirm if he should select the About phone option that he is seeing in Settings. In lines 179 and 180, C and B successively confirm that P is correct. P accepts C and B's instruction, selecting About phone in line 181 or TS: 0:06:35.000 and then uttering "Ok" almost simultaneously at 0:06:35.500 in line 182. In line 183 or TS: 0:06:36.000, it is seen that P has found the phone's device model.

In line 184, he announces to everyone in the call, “Yah it's A51.” In line 185, B accepts the information provided by P by saying “A51 ok.”

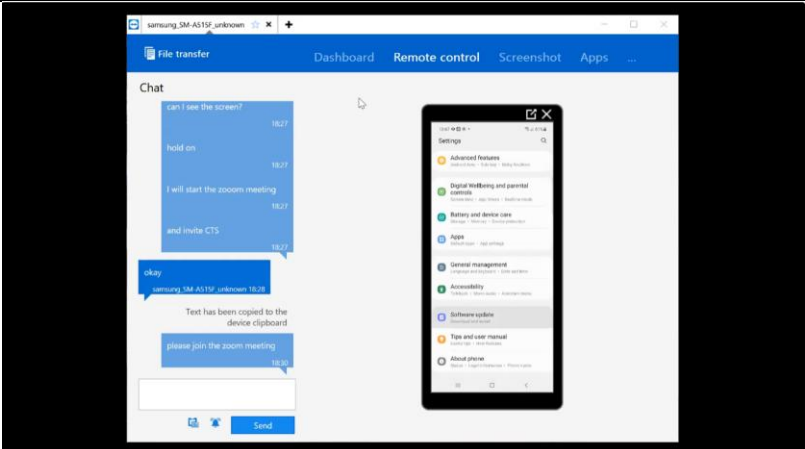
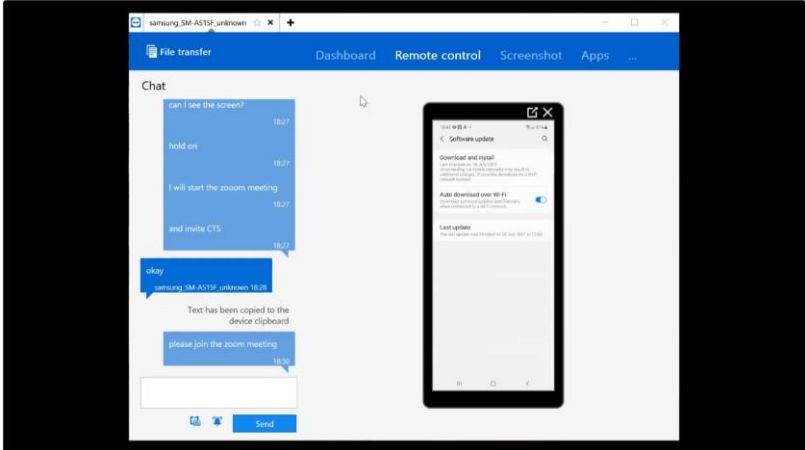
In this sequence, the advantage of using **screen sharing** is evident. Through the information that they could see onscreen, other collaborators were able to see where P was on the mobile phone. P’s **verbalization of his actions provided timing**. By saying “Yah I am,” in line 169, he was able to get the attention of his colleagues to inform them that he is in Settings and ready for the next instruction. In line 172, while B was still thinking of what to say next to P, C self-selected himself as a speaker and took a turn by instructing P to go down. From Sequences 4 to 7, the conversation was mostly between P and B; other participants in the online collaboration merely observed or listened. In this sequence, C took the initiative to participate in the conversation with no one selecting him as a speaker. This shows that the combination of screen sharing and voice technology in an online collaborative setting keeps participants informed of the status of a conversation. This sequence also shows that teleworkers apply **coordinated use of technology** to collaborate. In the conversation, P was operating on the mobile while speaking on the call. The other participants, such as B and C, were attentively listening to the call and also observing the shared screen while also speaking to respond to P.

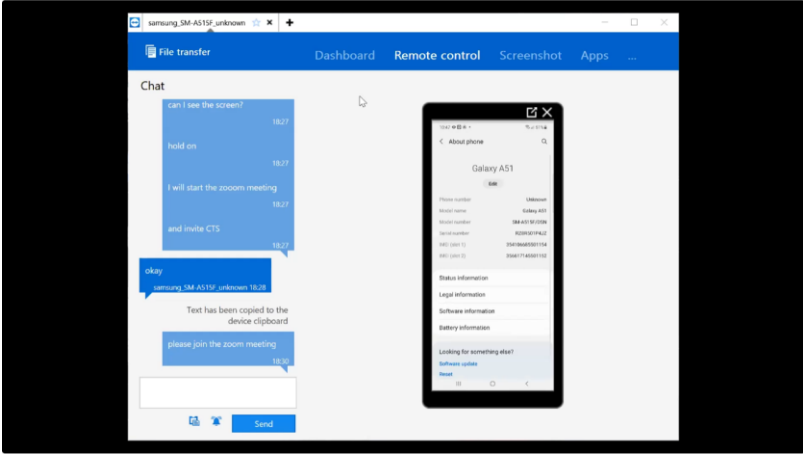
Sequence 9: B asks the android model (Lines 187 to 210)

Table 13.

Analytical Table of Sequence 9

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|-------------------------------|
| # | TS | TE | L | Transcription | Description |
| 187 | 0:06:45.000 | 0:06:56.000 | B | Actually we have tested in A50 because in the incident its mentioned like A50 device so we have tested in A50- ok- so what is the Andro::id ah model? Can you come back? (2.0) | P scrolls down in About Phone |
| 188 | 0:06:56.000 | 0:06:56.000 | | <i>About phone screen is displayed</i> | |
| 189 | 0:06:58.000 | 0:06:58.000 | | <i>The lower portion of the about phone screen is displayed</i> | |
| 190 | 0:06:58.000 | 0:06:58.000 | P | Back? | |
| 191 | 0:06:59.750 | 0:07:00.000 | B | Ah | |
| 192 | 0:07:00.000 | 0:07:00.000 | | <i>The square area surrounding the back button "<" in the lower portion of the About Phone screen changes to a darker color when P selects it to exit About Phone</i> | |
| 193 | 0:07:01.000 | 0:07:01.000 | | <i>The settings menu is shown again</i> | |
| 194 | 0:07:01.000 | 0:07:04.000 | B | Software information software info- software update (3.0) | |

| | | | | |
|-----|-------------|-------------|---|---|
| 195 | 0:07:05.000 | 0:07:05.000 | |  |
| 196 | 0:07:06.000 | 0:07:06.000 | |  |
| 197 | 0:07:08.000 | 0:07:11.000 | B | a no previous screen. Can you come back? |
| 198 | 0:07:10.000 | 0:07:10.000 | | <i>The square area surrounding the back button "<" in the Software update screen changes to a darker color when P selects it</i> |
| 199 | 0:07:11.000 | 0:07:11.000 | | <i>The settings screen is show again</i> |
| 200 | 0:07:11.500 | 0:07:12.000 | P | °umhmm° |
| 201 | 0:07:13.000 | 0:07:14.000 | B | A about phone |

| | | | | |
|-----|-------------|-------------|---|--|
| 202 | 0:07:15.000 | 0:07:15.000 | | <i>The rectangle area surrounding About Phone changes to a darker color when P selects it</i> |
| 203 | 0:07:15.000 | 0:07:16.000 | P | °About [phone familiar°] |
| 204 | 0:07:15.500 | 0:07:16.500 | B | [Go to about phone] (1.0) |
| 205 | 0:07:17.000 | 0:07:17.000 | | |
| | | | |  |
| 206 | 0:07:18.000 | 0:07:19.000 | B | Software information |
| 207 | 0:07:19.000 | 0:07:19.000 | | <i>The rectangle area surrounding Software information changes to a darker color when P selects it</i> |
| 208 | 0:07:21.000 | 0:07:21.000 | | <i>The Software Information screen appears</i> |
| 209 | 0:07:21.000 | 0:07:23.000 | B | It's android 11 ok |
| 210 | 0:07:23.100 | 0:07:24.000 | P | Eleven yah (2.0) |

In Sequence 8, the team together confirmed the phone's device model. In this sequence, B asked for the Android version of the device that they were checking. After a five-second pause since P affirmed that the device model that they were checking was an A51 through his utterance of "yah" in line 186, B was the first to break the silence. During the five-second pause, the team may have been processing the data that they just found and thinking about what should be done next. B self-selects herself as a speaker and takes the turn after the five-second pause. Here, B is **acting based on her role** as part of the CTS team, the vendor, whom the collaborative group looks up to as the experts on the issue, since they are the developers of the mobile application. In line 187, B starts with the statement "Actually we have tested in A50 because in the incident its mentioned like A50 device so we have tested in A50- ok-." Here, she provides that team with a background that they have tested in an A50 device because this is the device specified in the incident. As explained in Sequence 2, by saying incident, B is referring to an "incident ticket (Gupta et al., 2008, p.142)" which P's team submitted through an "automated IT Service Management system (Gupta et al., 2008, p.141)." The incident ticket contains the details of the issue that the collaboration team is currently discussing. This shows that when teleworkers collaborate, they use a **combination of synchronous and asynchronous collaborative software**. The Zoom call is an example of a synchronous interaction, while posting and reading comments in an automated IT Service Management system is an example of an asynchronous interaction. B then proceeds to ask, "so what is the Andro::id ah model? Can you come back?" Here, she is asking P, who is holding the mobile phone being investigated, for its device model and giving him the instruction to move out of the About phone screen. In line 190, P confirms B's instruction by asking, "Back?" B responds by guiding P to go to Software Information in lines 191 to 208.

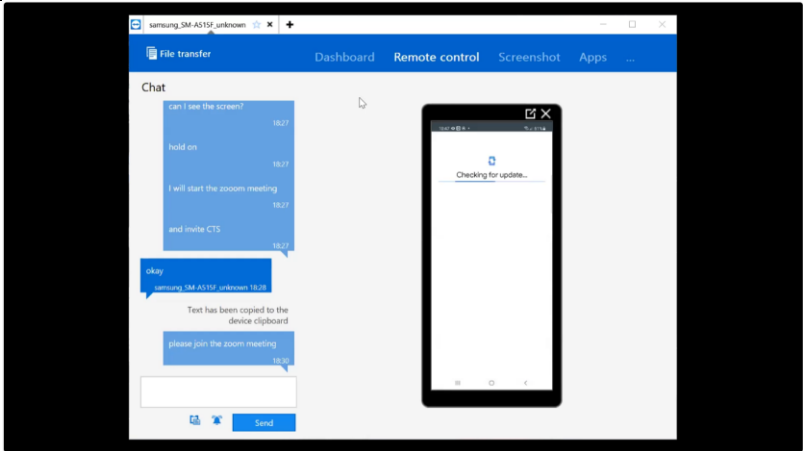
When B requested P, “Can you come back?” in line 187, she may have just wanted to check the previous screen. It turns out that P was already in the correct screen when B made her request in line 187 and just needed to select the Software Information option to see the Android version. This sequence shows that to collaborate, teleworkers **share a common screen** where one with access can freely move while the others observe. To see something onscreen that needs manipulation of the object being shared, those with no control have to **request the one who has control to manipulate the shared object** to produce what they need to see onscreen. In this sequence, P has access to the mobile device because the phone was physically with him. The screen of P’s mobile device was shared by H in the video call using Zoom’s share screen function. She did this by sharing the user interface of the TeamViewer desktop application installed on her computer, which had established a connection to the TeamViewer mobile application installed on P’s phone. The connection of the two TeamViewer applications allowed the screen of P’s mobile device to be seen remotely. This view was multiplied through Zoom’s share screen feature. H and P share control of the P’s mobile phone, but the other collaborators, such as B, D, T, and C, have no control of P’s phone. They can only view it while they are in the call through Zoom’s share screen function. In an online collaboration setting, access is also determined by the capability of the technology used. Online collaborators **make use of technology that will allow them to have access to an object being shared**. Without this technology, an online participant will have no or limited access to an object and will have to rely on another participant who has access. In line 209, B was able to find out through the shared screen that the Android version of P’s mobile device was an Android 11. In line 209, she verbally declares, “It’s android 11 ok.” In line 210, P agrees to this with his affirmative statement, “Eleven yah.”

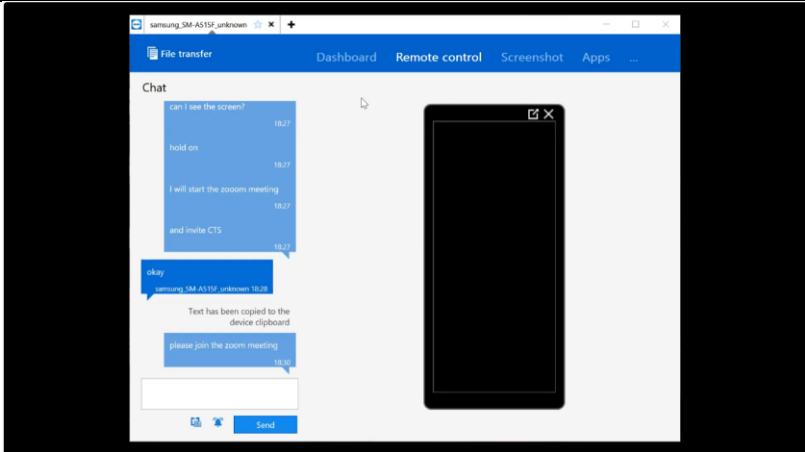
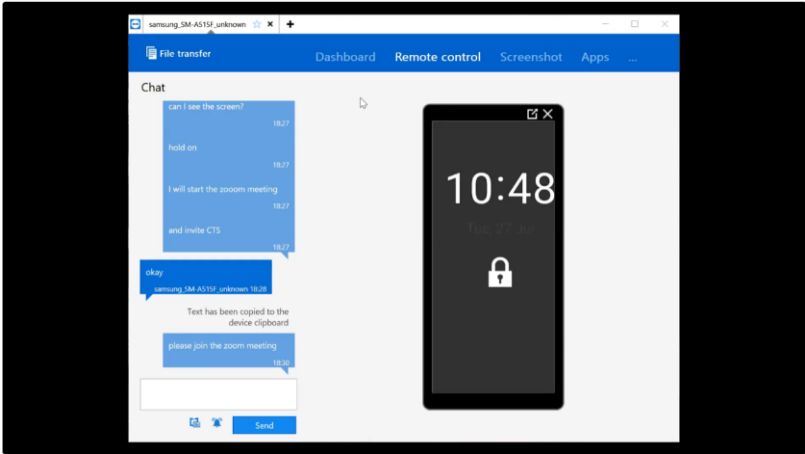
Sequence 10: B asks for another device (Lines 211 to 245)

Table 14.

Analytical Table of Sequence 10

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|-------------|
| # | TS | TE | L | Transcription | Description |
| 211 | 0:07:26.000 | 0:07:26.000 | B | So= | |
| 212 | 0:07:27.000 | 0:07:27.000 | |  | |
| 213 | 0:07:27.000 | 0:07:27.999 | B | =we are supporting= | |

| | | | | |
|-----|-------------|-------------|---|---|
| 214 | 0:07:28.000 | 0:07:28.000 | |  |
| 215 | 0:07:28.000 | 0:07:29.000 | B | =up to android 10 9 and 10= |
| 216 | 0:07:30.000 | 0:07:30.000 | | <i>The Software information screen is shown again</i> |
| 217 | 0:07:30.000 | 0:07:47.000 | B | =so we are- a:: no a:: please don't do update. So right now we are checking with S a:: for Android 11 support because right now we don't have any devices to test in Android 11. (1.0) a:: do we have any another a1 devi- a51 model with Android 10? (2.0) |
| 218 | 0:07:49.000 | 0:07:54.000 | P | °a(h)::° let me try let me check. I have two other one. (3.0) |
| 219 | 0:07:54.000 | 0:07:57.000 | | <i>sound of plastic rustling</i> |
| 220 | 0:07:57.000 | 0:07:57.000 | B | ok(h) |
| 221 | 0:07:58.000 | 0:07:59.000 | P | I have two other one here.= |

| | | | | |
|-----|-------------|-------------|---|---|
| 222 | 0:08:00.000 | 0:08:00.000 | |  |
| 223 | 0:08:00.000 | 0:08:03.000 | P | =I will try to (0.5) see about (2.0) |
| 224 | 0:08:05.000 | 0:08:05.000 | |  |
| 225 | 0:08:05.000 | | | (13.0) |
| 226 | 0:08:09.000 | | | <i>clicking sound and start of noise in the background like TV or radio in a foreign language</i> |
| 227 | 0:08:11.000 | 0:08:11.000 | | <i>dropping sound</i> |
| 228 | 0:08:14.000 | 0:08:15.000 | | <i>start of rustling plastic sound</i> |
| 229 | | | | <i>The mobile screen saver showing the time is displayed</i> |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 230 | 0:08:15.000 | 0:08:16.000 | | <i>footsteps</i> | |
| 231 | 0:08:18.000 | 0:08:19.000 | P | Please wait few minitees (2.0) | |
| 232 | 0:08:20.000 | 0:08:21.000 | | <i>rustling sound</i> | |
| 233 | 0:08:21.000 | 0:08:22.000 | B | Yeah sure °yeah sure° (24.0) | |
| 234 | 0:08:25.000 | 0:08:25.000 | | <i>The time in the mobile screen saver moves to the center</i> | |
| 235 | 0:08:35.000 | 0:08:35.000 | | <i>The time in the mobile screen saver moves to the right</i> | |
| 236 | 0:08:45.000 | 0:08:45.000 | | <i>The time in the mobile screen saver moves to the left</i> | |
| 237 | 0:08:46.000 | 0:08:51.000 | P | A:: I have one- one A fi::fty here (2.0) | |
| 238 | 0:08:53.000 | 0:08:54.999 | B | Yes, could you login in A50 de= | |
| 239 | 0:08:55.000 | 0:08:55.000 | | <i>The time in the mobile screen saver moves a little to the right</i> | |
| 240 | 0:08:55.000 | 0:08:57.000 | B | =vice and <u>show</u> me the screen again (2.0) | |
| 241 | 0:08:59.000 | 0:09:05.000 | P | A:: maybe I need to (0.75) to install (0.25) TeamViewer on it (2.0) | |
| 242 | 0:09:05.000 | 0:09:05.000 | | <i>The time in the mobile screen saver moves to the right</i> | |
| 243 | 0:09:07.000 | 0:09:09.000 | P | Yeah because there is no TeamViewer on it (5.0) | |
| 244 | 0:09:14.000 | 0:09:16.000 | B | ok(h) ok(h) we'll waits (1.0) | |
| 245 | 0:09:17.000 | 0:09:20.000 | P | ok, thank you for waiting ahehehe (240.0) | |

In Sequence 9, the team confirmed that the Android version of the mobile device that they are checking is Android 11. After a two-second pause in line 210, B self-selects herself as a speaker and takes a turn. She explains that they are only supporting Android 9 and 10. In line 217, her explanation is cut off when she sees a “Checking for update” prompt in the shared screen (line 214 or TS: 0:07:28.000). She tells P, “please don’t do update. So right now we are checking with S a:: for Android 11 support because right now we don’t have any devices to test on Android 11. (1.0) a::” This line shows that during interaction in an online collaborative set-up, teleworkers can **share tacit knowledge**, which is knowledge that cannot be easily shared by words or documents, and are better shared through the interaction of individuals through joint activities or face-to-face discussion (Yang & Wu, 2008, p.1130). Through screen sharing, B was able to detect unnecessary or unhelpful activities that P’s team might do while the issue that they are investigating remains unresolved. In her statement in line 217, B stopped P from doing a software update since they are still checking Android 11 support with S, who was not in the call. By doing this, she stopped P from possibly causing further issues since she explained before in lines 211, 213, and 215 that their mobile application only supports Android 9 and 10. She also informed the team of their limitation that they have not yet tested on Android 11 because they have no available device with this Android version. In line 217, she proceeded to ask P, “do we have any another a1 devi- a51 model with Android 10?” After a two second pause, in line 218, P replies, “°a(h)::° let me try let me check. I have two other one,” and begins to search or check for the other mobile phones. While P checks the other phones, in line 219, background noise, possibly from the objects P is moving while searching for the phones, can be heard. These noises show that during online collaboration, when teleworkers **leave their mic on**, even background noises

from their end can be heard. In this scenario, the sounds confirm that P was busy checking for the phones as he said he would do in line 218.

After a 3-second pause since P spoke in line 218, B replies in line 220 by uttering, “ok(h).” In line 221, P comes back to the call and takes a turn by saying, “I have two other one here. I will try to (0.5) see about,” in lines 221 and 223. P then leaves his mic on as he checks the two other phones he has at hand. During the 13-second gap from line 224 at TE: 0:08:05.000 to line 231 at 0:08:18.000, background noises from P’s end can be heard, and then in line 231, P goes back to the call and says “Please wait few minitees.” In line 232, for one second, more background noises could be heard at P’s end. In line 233, B replies, “Yeah sure °yeah sure°” P goes away from the call for 24.0s but leaves his mic on. During this gap, background noises can be heard from his end, and in line 237, he returns with news about his search. P takes a turn and says “A:: I have one- one A fi::fty here.” After a two-second gap, B replies “Yes, could you login in A50 device and show me the screen again,” in lines 238 and 240. After a two-second pause, P replied, “A:: maybe I need to (0.75) to install (0.25) TeamViewer on it,” in line 241 and in line 243, he continues “Yeah because there is no TeamViewer on it.” After a 5-second pause, B replies, “ok(h) ok(h) we’ll waits.” To which P replies, “ok, thank you for waiting ahehehe” in line 245.

From the remaining lines in the sequence, it can be derived that teleworkers **spend a significant amount of time waiting for co-collaborators to prepare information that they need to get work done.** Line 223 at TE: 0:08:03.000 to line 231 at TS: 0:08:18.000 and line 233 at TE: 0:08:22.000 to line 236 at TS: 0:08:46.000 were spent on waiting for P to prepare the other phones that B was requesting to see. In lines 233 and 244, B expresses her willingness to wait. In line 233, B responded “Yeah sure °yeah sure°,” after P said in line 244, “Please wait few minitees.” In line

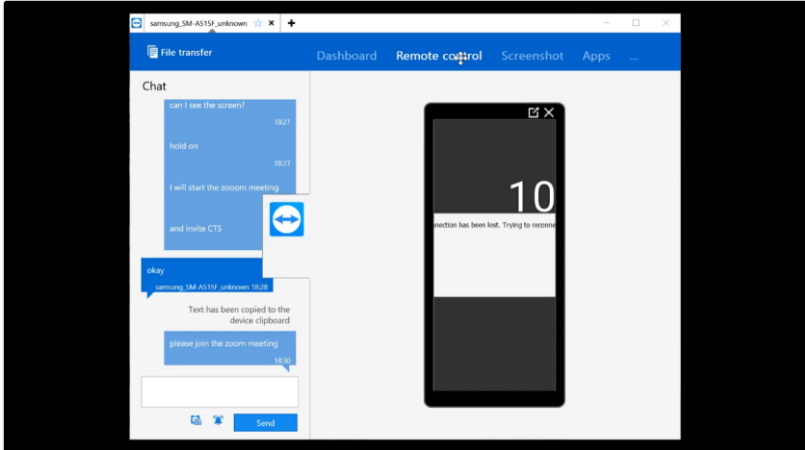
244, B expresses willingness to wait by saying “ok(h) ok(h) we’ll waits” after a 5-second gap since P said “A.: maybe I need to (0.75) to install (0.25) TeamViewer on it Yeah because there is no TeamViewer on it” in lines 241 and 243. Teleworkers have to wait since they cannot accomplish work without complete information.

Aside from waiting, **teleworkers also need technology to collaborate**. In lines 238 to 240, B requests P to log in to the A50 mobile device he just located. B specifically requested that he show the screen of this device in line 240. After a two-second pause, P replies in lines 241 and 243 “A.: maybe I need to (0.75) to install (0.25) TeamViewer on it” and “Yeah because there is no TeamViewer on it.” Based on P’s reply, we can infer that for him to do B’s request to share the screen of the A50 mobile device he has to install TeamViewer application in it.

Sequence 11: Waiting for P to install TeamViewer on the other device (Lines 246 to 269)

Table 15.

Analytical Table of Sequence 11

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|--|
| # | TS | TE | L | Transcription | Description |
| 246 | 0:09:20.000 | 0:09:47.000 | | <i>background sounds could be heard</i> | Connection has been lost. Trying to reconnect message appears. |
| 247 | 0:09:26.000 | 0:09:27.000 | | <i>phone notification sound</i> | |
| 248 | 0:09:28.000 | 0:09:28.000 | | <i>The time in the mobile screen saver moves to the right</i> | |
| 249 | 0:09:33.000 | 0:09:33.000 | |  | |
| 250 | 0:09:48.000 | 0:09:48.000 | | <i>background sounds muted</i> | P may have muted his microphone [Condensed lines 251-267] Phone screensaver is displayed while waiting |
| 251 | 0:09:53.000 | 0:13:05.000 | | <i>The mobile screen saver is displayed and changes by moving to left, right or center of the screen every 10 seconds. Occasionally, "A Connection has been lost. Trying to reconnect again" message appears covering the screen display of the mobile phone also being displayed</i> | |


| | | | | | |
|-----|-------------|-------------|--|--|--|
| 268 | 0:13:07.000 | 0:13:07.000 | |  | P's profile picture replaces the visible screensaver |
| 269 | 0:13:19.000 | 0:13:19.000 | | <i>faint clicking sound, possibly from H unmuting her mic</i> | |

From line 245 or TE: 0:09:20.000 to line 270: TS: 0:13:20.000, or for 4 minutes, P was away to install TeamViewer on the other mobile devices that they have at their end. However, he was still logged in the Zoom call. He had not yet left the online meeting and was expected by his colleagues to return to the call. In line 244, B had expressed her willingness to wait through her statement, “ok(h) ok(h) we’ll waits” and P was aware that the other participants in the online collaboration meeting were waiting for him through his response in line 245, “ok, thank you for waiting ahehehe.” From this scenario, we can derive that teleworkers can **physically step away from an online meeting, but their account remains logged in the online meeting**. P’s stepping away from the online meeting with the knowledge of the other participants in the meeting is similar to physically leaving the meeting room in a face-to-face set-up to get mobile devices in another room, for example. In this sequence, it can also be observed that from line 245 at TE: 0:09:20.000 to line 250 at TS: 0:09:48.000, background sounds from P’s end could be heard, and from line 250 at TE: 0:09:48.000 to line 270: TS: 0:13:20.000, these background sounds were muted. In an online collaboration meeting, teleworkers have the option of **leaving their mic on or muting it** to control the sounds that can be heard from their end. Some microphones if switched on, pick-up background sound so aside from the speaker, other noises in the speaker’s surroundings can be heard in the video conferencing session. If microphones are switched off, there is total suppression of sounds that can be heard from the speaker’s end.

Sequence 12: H confirms the TeamViewer ID of the other device and informs everyone to rejoin the meeting (Lines 270 to 273)

Table 16.

Analytical Table of Sequence 12

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|------------------------------|
| # | TS | TE | L | Transcription | Description |
| 270 | 0:13:20.000 | 0:13:20.999 | H | a:: Hello?=  | H starts speaking at 0:13:20 |
| 271 | 0:13:21.000 | 0:13:21.000 | | | |
| 272 | 0:13:21.000 | 0:13:34.00 | H | =Hello P (0.5) u(h)m when you already have the new (0.2) teamviewer id (0.2) please share this (2.0) so that u::hm I can proceed to sharing the screen again (417.0) | |
| 273 | 0:13:35.000 | 0:13:35.000 | H | <i>faint clicking sound, possibly H muting her microphone</i> | |

After a pause of 4 minutes waiting for P to install TeamViewer on the other mobile devices, H takes a turn and breaks the silence in line 270. In line 272, she requests P to share the TeamViewer ID if he already has it. Before H takes a turn in line 270, in lines 267 and 268, a change in the shared screen can be observed. In line 267 or TS: 0:13:05.000, the shared screen shows the TeamViewer desktop application showing the user interface of the previous mobile device. In 268 or TS: 0:13:07.000, this is replaced with a participant's profile picture, which is possibly P's. H, who was sharing the screen, may have **stopped screen sharing** so instead of the user interface of TeamViewer showing in the video call screen, another participant's profile picture, possibly P's, appeared since P was the last speaker in line 245. H started speaking in line 270. Simultaneously, the video call screen displayed her profile picture as shown in line 271 since she was the active speaker. In line 272 H continues speaking, "a:: Hello? Hello P (0.5) u(h)m when you already have the new (0.2) TeamViewer ID (0.2) please share this (2.0) so that u::hm I can proceed to sharing the screen again." P, who may not have returned, did not respond to H. The team waited for another 6 minutes and 56 seconds, from line 273 at TE: 0:13:35.000 to line 275 at TS: 0:20:31.000, before P returned.

In line 272, H was requesting from P the TeamViewer ID, which, according to her, she needs so that she can share her screen again. The TeamViewer ID is a credential that users have to input in a TeamViewer application installed on their end so that they can connect to a remote device, which in this case, are the mobile devices at P's end. This shows that to collaborate, teleworkers make **use of remote connectivity software** so that they can have access to remote devices. Aside from this, teleworkers **request or obtain authorization credentials** to connect.

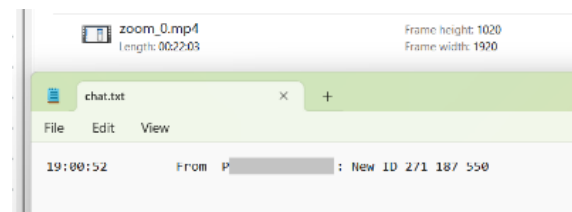
Sequence 13: P returns to the meeting (Lines 274 to 327)

Table 17.

Analytical Table of Sequence 13

| Transcript Title: 18402620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|--|
| # | TS | TE | L | Transcription | Description |
| 274 | 0:20:31.000 | 0:20:31.000 | | <i>P's profile picture appears</i> | <p>P starts speaking 0:20:31.000 to inform of his presence Sequence 275-286 is a repair sequence. Line 275 can be marked as the start of the repairable or trouble source. P was away for almost 10 minutes and had just returned. In line 250 or 0:09:48.000 his sound was muted. He had just unmuted here. The gap may have been due to H needing to unmute so that she can be heard. H acknowledges P's presence The screen shows H's profile picture when she speaks H continues P as the original speaker makes a self-initiated repair in lines 280 and 282 B with her utterance thinks about what to reply</p> |
| 275 | 0:20:31.000 | 0:20:35.000 | P | Hi colleague. (3.0) I think I am back to you | |
| 276 | | | | (1.0) | |
| 277 | 0:20:36.000 | 0:20:36.000 | H | Yes= | |
| 278 | 0:20:37.000 | 0:20:37.000 | | <i>H's profile picture appears</i> | |
| 279 | 0:20:37.000 | 0:20:38.000 | H | =hello yah yes | |
| 280 | 0:20:38.000 | 0:20:39.000 | P | yah [can you]= | |
| 281 | 0:20:38.500 | 0:20:38.750 | B | [°ahm°] | |
| 282 | 0:20:39.000 | 0:20:39.999 | P | =hear me? | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 283 | 0:20:40.000 | 0:20:40.999 | H | Yes yes I can hear you | H, who was not the original speaker, makes an other-repair by affirming with P that she can hear him P acknowledges H's reply |
| 284 | 0:20:41.000 | 0:20:41.000 | P | Yah= | |
| 285 | 0:20:41.000 | 0:20:41.000 | | <i>P's profile picture appears</i> | |
| 286 | 0:20:42.000 | 0:20:47.000 | P | =I am back to youa:: with a:: A ea:: an A50 | |
| 287 | 0:20:47.100 | 0:20:48.000 | H | ok so= | |
| 288 | 0:20:49.000 | 0:20:49.000 | | <i>H's profile picture appears</i> | |
| 289 | 0:20:48.000 | 0:20:50.000 | H | =yeah this is the new [°id°]? | |
| 290 | 0:20:49.750 | 0:20:52.000 | P | [yeah] I've just sent the the:: the= | |
| 291 | 0:20:52.000 | 0:20:52.000 | | <i>P's profile picture appears</i> | |
| 292 | 0:20:52.100 | 0:20:55.000 | P | =new id for you so that you can connect to it | |
| 293 | 0:20:55.500 | 0:20:56.000 | H | ok= | |
| 294 | 0:20:56.000 | 0:20:56.000 | | <i>H's profile picture appears</i> | |
| 295 | 0:20:56.000 | 0:21:19.000 | H | =so however uhm a:: le- just as a- am my my sorry my account for zoom is only basic so I already have here the- a:: more on a prompt or an alert that this meeting will end in ten minutes so is it ok if I st- a:: restart the meeting so we'll have more time (1.0) a:: more time | |
| 296 | 0:21:19.100 | 0:21:20.000 | P | to restart= | |
| 297 | 0:21:20.000 | 0:21:20.000 | | <i>P's profile picture appears</i> | |
| 298 | 0:21:20.100 | 0:21:20.999 | P | =[restart] the meeting | |
| 299 | 0:21:20.100 | 0:21:23.000 | H | [yeah] Yeah I'll stop this meeting= | |
| 300 | 0:21:23.000 | 0:21:23.000 | | <i>H's profile picture appears</i> | |



| | | | | |
|-----|-------------|-------------|---|--|
| 301 | 0:21:23.000 | 0:21:32.000 | H | =and you have to like everyone you have to jump in back the meeting again like just click the link to join. I will st- I will just [stop]- |
| 302 | 0:21:32.000 | 0:21:32.999 | P | [are you] are you going= |
| 303 | 0:21:32.000 | 0:21:32.000 | | <i>P's profile picture appears</i> |
| 304 | 0:21:32.999 | 0:21:34.000 | P | =to send a new ll- link? |
| 305 | 0:21:35.000 | 0:21:35.000 | H | ahm= |
| 306 | 0:21:35.000 | 0:21:35.000 | | <i>H's profile picture appears</i> |
| 307 | 0:21:35.100 | 0:21:38.000 | H | =I think there's no need to it will be the same link |
| 308 | 0:21:38.100 | 0:21:40.000 | P | ah the same link. ok [°got it°] |
| 309 | 0:21:39.000 | 0:21:39.000 | | <i>P's profile picture appears</i> |
| 310 | 0:21:40.000 | 0:21:41.000 | H | [°yeah°] the same link. So I will just stop the meeting= |
| 311 | 0:21:42.000 | 0:21:42.000 | | <i>H's profile picture appears</i> |
| 312 | 0:21:42.000 | 0:21:42.999 | H | =[and]= |
| 313 | 0:21:42.100 | 0:21:42.999 | P | [ok] |
| 314 | 0:21:43.00 | 0:21:46.999 | H | =[I] will just start it again and all you have to do is to click the link and I will just= |
| 315 | 0:21:47.000 | 0:21:47.999 | H | =[admit] everyone back= |
| 316 | 0:21:47.100 | 0:21:47.500 | P | [°ok°] |
| 317 | 0:21:48.000 | 0:21:51.000 | H | =so ahm:: so [CTS] team, can you do this as well? |
| 318 | 0:21:49.000 | 0:21:49.000 | P | [°ok°] |
| 319 | 0:21:49.000 | | | (1.0) |
| 320 | 0:21:52.000 | 0:21:52.000 | P | Yeah |
| 321 | 0:21:53.000 | 0:21:53.000 | | <i>P's profile picture appears</i> |
| 322 | 0:21:53.000 | 0:21:54.000 | B | Yes, we'll rejoin. Yes. |
| 323 | 0:21:54.100 | 0:21:55.000 | H | °So:: so ok°= |
| 324 | 0:21:55.000 | 0:21:55.000 | | <i>H's profile picture appears</i> |
| 325 | 0:21:55.000 | 0:21:58.000 | H | =so, ok. I will now end the meeting. Ok and then I'll start= |
| 326 | 0:21:59.000 | 0:21:59.000 | | <i>P's profile picture appears</i> |
| 327 | 0:21:59.000 | 0:22:01.000 | H | =and then just join back. ok (2.0) |

In this sequence, P returns to the meeting after being gone for 11 minutes and 11 seconds from line 245 at TE: 0:09:20.000 to line 275 at TS: 0:20:31.000. To make his presence known, P takes a turn and says “Hi colleague. (3.0) I think I am back to you” in line 275. After a one-second pause, H responds “Yes hello yah yes” in lines 277-279. The one-second pause may be due to the time taken by H to unmute her mic, which she had muted while waiting for P to return. P continues in lines 280 and 282, “yah [can you] hear me?” H affirms that she can hear in line 283 and so P continues in lines 284 and 286, “Yah I am back to youa:: with a:: A ea:: an A50.” H takes a turn in lines 287 and 289, “ok so yeah this is the new [°id°]?” Before H can finish, P also takes a turn overlapping H’s last word, id when he says “[yeah] I’ve just sent the the:: the new id for you so that you can connect to it,” in lines 290 and 292. H responds in lines 293 and 295, “ok so however uhm a:: le- just as a- am my my sorry my account for zoom is only basic so I already have here the- a:: more on a prompt or an alert that this meeting will end in ten minutes so is it ok if I st- a:: restart the meeting so we’ll have more time (1.0) a:: more time.”

In this sequence, the following actions can be identified. The first is **verbalizing actions**. P was away for 11 minutes and 11 seconds. To make his presence known to the other collaborators, P had to **unmute his mic** and verbally inform them that he is back in line 275. He also had to confirm if they could hear him in lines 280 and 282. Although H had replied to P in lines 277 and 279, P may have just asked if they could hear him in lines 280 and 282 to **test the quality of his sound**, to confirm if he was speaking loud enough, or if he was audible enough. In lines 287 and 289, H asks P if this is the new TeamViewer ID. P replies to this in lines 290 and 292, “[yeah] I’ve just sent the the:: the new id for you so that you can connect to it.” This shows that teleworkers **share remote connectivity credentials** such as TeamViewer ID, so that

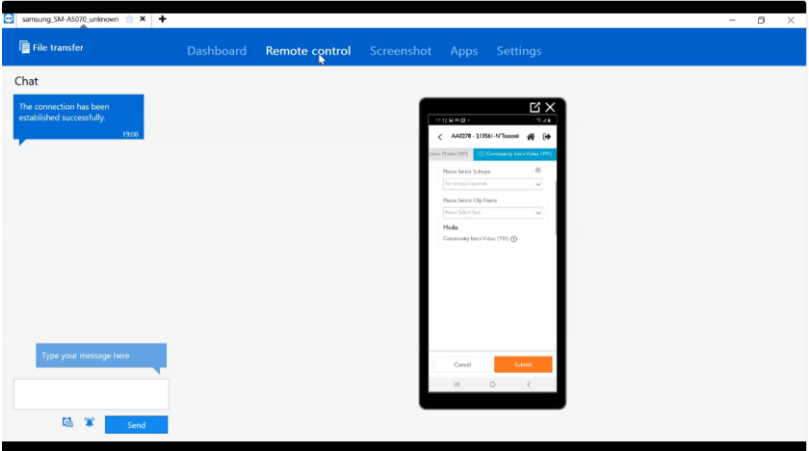
they can connect to each other's workspaces. In this case, so that H can connect to P's mobile device. In their conversation about the TeamViewer ID, both H and P did not mention the exact ID verbally. It may be too long or composed of a bunch of numbers that can better be recalled if sent as text. Here, we can derive that to collaborate, teleworkers **use a combination of synchronous or asynchronous collaboration tools, or they use communication tools that are best suited for the situation**. For example, the group collaborated through a Zoom video call since the video call is more suited for fluid conversations. However, to send the TeamViewer ID, P used Zoom chat as evidenced in the Zoom chat transcript. Aside from sharing remote connectivity credentials, teleworkers also **meet at a common link** so that they can collaborate. In line 295, H explains that her Zoom account is only basic and that she is seeing a prompt informing her that their meeting will end in 10 minutes. She has to restart the meeting so that they can continue. In line 295, she says "so however uhm a:: le- just as a- am my my sorry my account for zoom is only basic so I already have here the- a:: more on a prompt or an alert that this meeting will end in ten minutes so is it ok if I st- a:: restart the meeting so we'll have more time (1.0) a:: more time." H continues in lines 299 and 301, "[yeah] Yeah I'll stop this meeting and you have to like everyone you have to jump in back the meeting again like just click the link to join. I will st- I will just [stop]-" In lines 299 and 301, H instructs the current meeting participants to click the link and join so that they can get back into the meeting that will end soon. In lines 302 and 304, P asks "[are you] are you going to send a new ll- link?" In lines 305 and 307, H replies. She starts with the filler "ahm," possibly thinking if she still needs to create a new link or not and then finally she replies, "I think there's no need to it will be the same link." In lines 308 to 327, the collaboration group agrees to meet on the same link. This shows that to collaborate, teleworkers **agree to meet on**

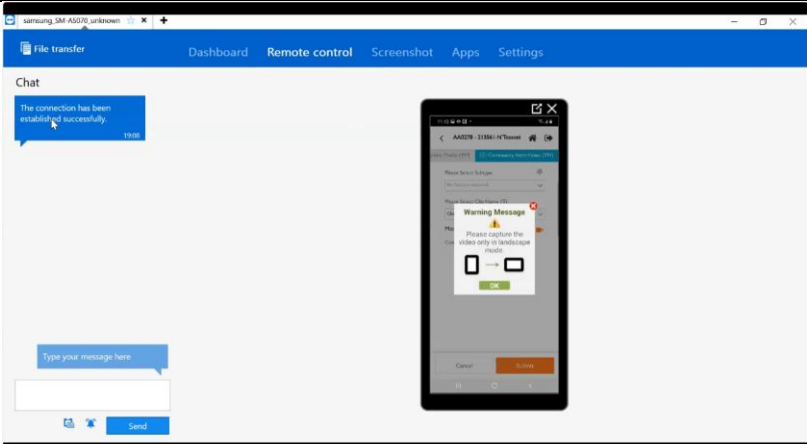
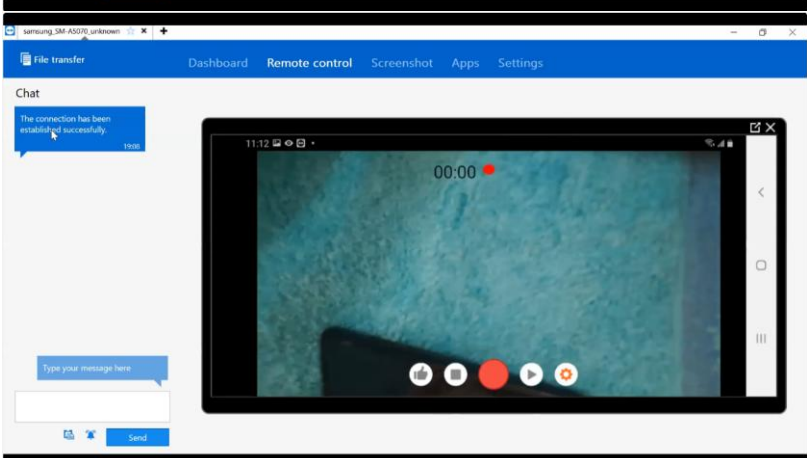
a common link, or should be informed of the correct meeting link, or else they will not be able to join a meeting. In a face-to-face set-up, the meeting link is comparable to a meeting room. Not knowing the meeting link is similar to not knowing the venue of the meeting. If in a face-to-face meeting, participants have to be aware of the location of the meeting to join; in an online meeting, participants have to be aware of the meeting link. Another practice that can be extracted from this sequence is **reading onscreen visual cues**. H knew that their current meeting was about to end because of a prompt that she saw onscreen. If H had disregarded this prompt, the meeting would have just ended without the participants knowing that they needed to click the meeting link again to resume. By reading onscreen visual cues, H was able to inform the meeting participants ahead of time of what to do if their ongoing meeting suddenly ended, so that they could resume. Lastly, in this sequence, it can be seen that teleworkers are limited by the type of subscription that they have on the technology that they use. In line 295, H mentions that her Zoom account is only basic and that she is seeing a prompt informing her that the current meeting will end in 10 minutes. In this scenario, the continuity of the collaborative group's meeting was limited by the capability of H's Zoom account. Since her account was only Basic, it could only host a meeting up to 40 minutes (Zoom, 2025). If a meeting that it hosts exceeds 40 minutes, H will need to restart the meeting so that it can continue.

Sequence 14: P and B verify the video and photo resolutions in the second mobile device (Lines 328 to 422)

Table 18.

Analytical Table of Sequence 14

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|--|
| # | TS | TE | L | Transcription | Description |
| 328 | 0:00:00.000 | | | (2.0) | |
| 329 | 0:00:02.000 | 0:00:02.000 | P |  | Community Intro Video (YIV) tab is selected. |
| 330 | 0:00:03.000 | 0:00:05.000 | | <i>Some background noise can be heard</i> | [Condensed lines 330-333] |
| 334 | 0:00:06.000 | 0:00:07.000 | | <i>The Please Select Clip Name drop down expands as P selects a Clip Name and collapses and shows the selected clip name after P selected a value</i> | [Condensed lines 334-335] |

| | | | | |
|-----|-------------|-------------|--|---------------------------|
| 336 | 0:00:09.000 | 0:00:09.000 |  | P opens the video camera |
| 337 | 0:00:10.000 | 0:00:10.000 |  | The video camera opens. |
| 338 | 0:00:10.000 | 0:00:16.000 | <p><i>Someone making an uhmhmmhmm sound can be heard, possibly C. People speaking in the background, possibly at P's end</i></p> | [Condensed lines 338-339] |

| | | |
|-----|-------------|-------------|
| 340 | 0:00:16.000 | 0:00:16.000 |
| 341 | 0:00:16.000 | 0:00:16.999 |
| 342 | 0:00:22.000 | 0:00:22.000 |
| 343 | 0:00:22.000 | 0:00:23.000 |
| 344 | 0:00:23.000 | 0:00:23.000 |
| 345 | 0:00:23.000 | 0:00:24.000 |

P

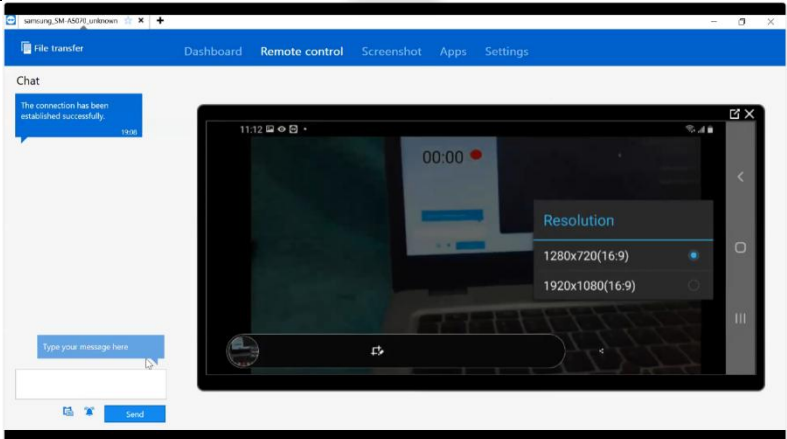
B Can you see it? (5.1)
The available resolutions in the open camera appears

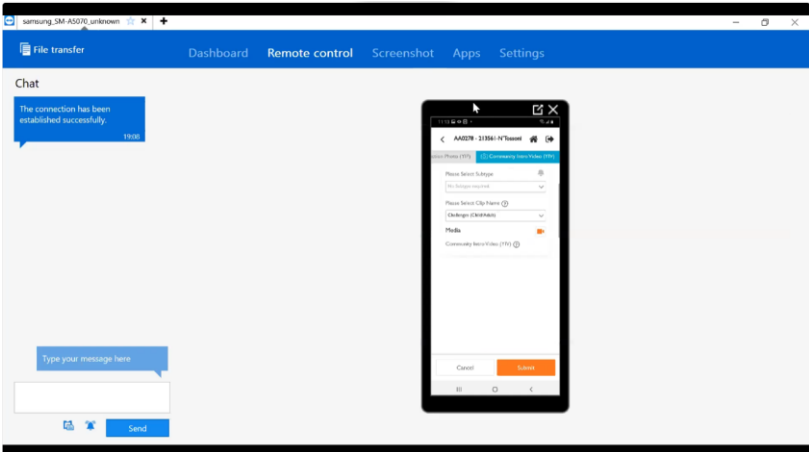
B Ah, yes. ah, just a=

B =moment (9.0)

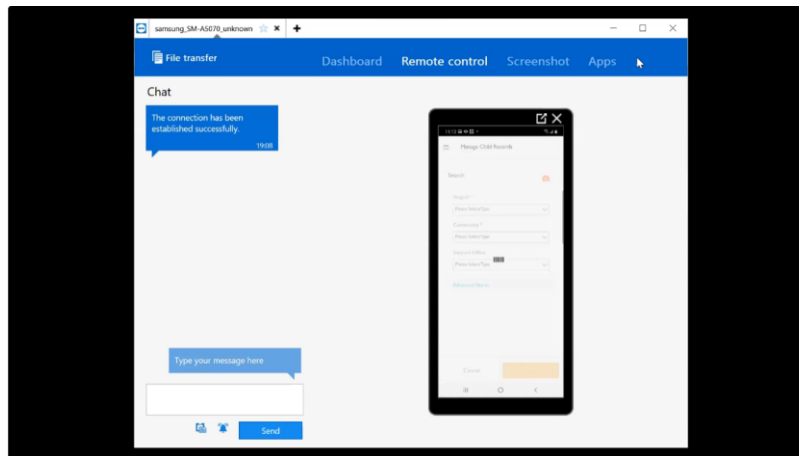
P shows the available resolutions in the video camera.

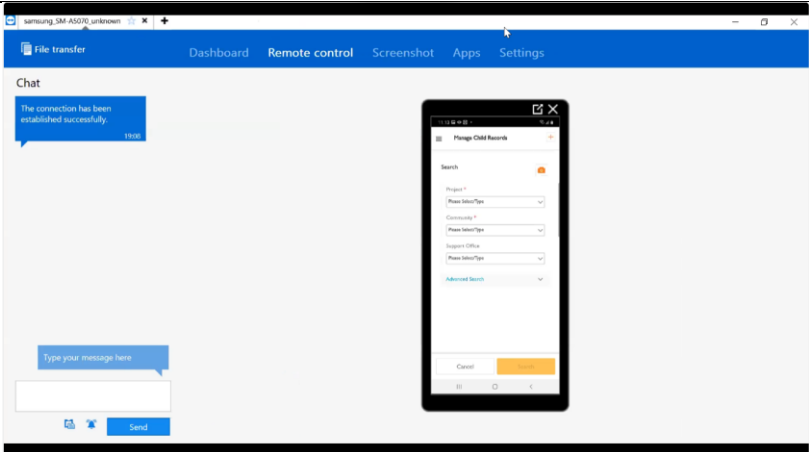
P taking a screenshot

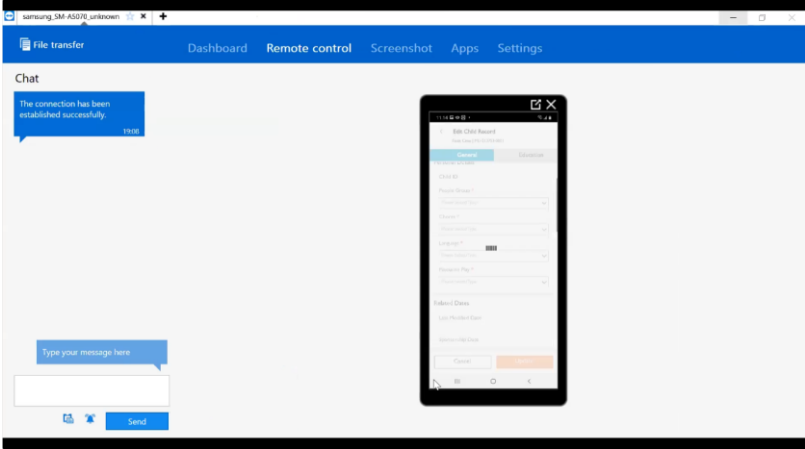
| | | | | | |
|-----|-------------|-------------|---|---|---|
| 346 | 0:00:25.000 | 0:00:25.000 | |  | A screenshot was captured |
| 347 | 0:00:33.000 | 0:00:33.000 | | <i>The available resolutions in the open camera continues to display</i> | |
| 348 | 0:00:33.000 | 0:00:34.000 | P | This is fine? (1.0) | |
| 349 | 0:00:35.000 | 0:00:39.000 | B | Ah yes. This is fine. Can you take screenshot of this also? | |
| 350 | 0:00:40.000 | 0:00:42.000 | P | Yah, this is alrudy been done (3.0) | |
| 351 | 0:00:45.000 | 0:00:47.000 | P | [I will already] [taken screen]shots (1.0) | After P spoke here, some background noises could be heard. Sounded like someone was speaking on the background, or the news on a television or radio was on |
| 352 | 0:00:45.000 | 0:00:46.000 | B | [okayh] [can you-] | |
| 353 | 0:00:48.000 | 0:00:51.000 | B | Ok so can you go to Manage Child Screen (2.0) | |
| 354 | 0:00:52.000 | 0:00:52.000 | | <i>The available resolutions in the open camera are displayed</i> | |
| 355 | 0:00:53.000 | 0:00:53.000 | P | Uh= | |
| 356 | 0:00:53.000 | 0:00:53.000 | | <i>The available resolutions are hidden and the object being pointed to by the open camera is visible</i> | |
| 357 | 0:00:53.000 | 0:00:54.000 | P | =where? | Sounded like someone was speaking in the background when P spoke. |
| 358 | 0:00:55.000 | 0:00:55.000 | B | Manage Child= | |

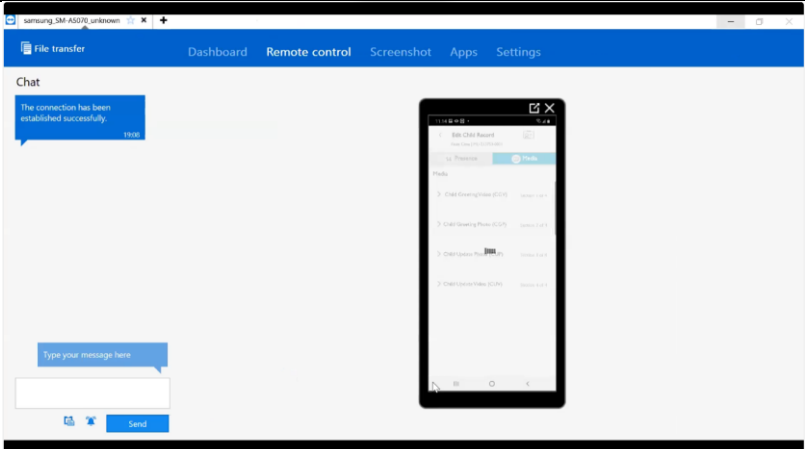
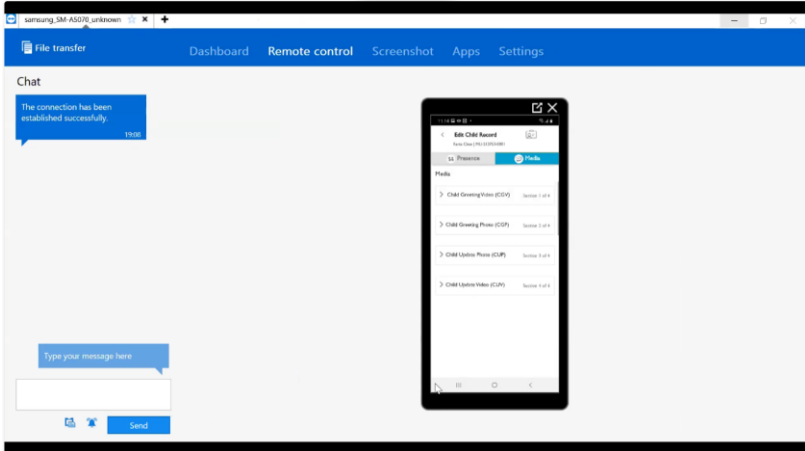
| | | | | | |
|-----|-------------|-------------|---|--|--|
| 359 | 0:00:56.000 | 0:00:56.000 | | <i>The screen changes to portrait orientation as P exits the video camera</i> | |
| 360 | 0:00:56.750 | 0:00:56.750 | |  | |
| 361 | 0:00:57.000 | 0:01:00.000 | B | Can you go out? Child record. Can you go to menu? | Line 361 to 366 is a repair sequence, Line 361 marks the start of the repairable or trouble source There is minimal background noise when B speaks and her voice is loud and clear in the recording There is a gap of 4 seconds before P replies Background noises, possibly coming from P's end, can be heard. Noises such as an adult voice speaking, air being blown into the microphone, a squishing sound, and a child's voice that sounded like he was playing and loudly counting could be heard |
| 362 | 0:01:00.000 | | | (4.0) | |
| 363 | 0:01:04.000 | 0:01:04.000 | P | Ok | Child's voice and the faint sound of an adult speaking could be heard |

| | | | | | | | | | |
|-----|-------------|-------------|---|---|--|--|--|--|---|
| 364 | 0:01:04.000 | | | (5.0) | | | | | |
| 365 | 0:01:09.000 | 0:01:10.000 | P | Did you say manage child record? | | | | | There is a gap of 5 seconds Background noises such as air being blown into the microphone, an adult voice speaking and a child playing and counting loudly could be heard P makes an other-initiated repair after 5 seconds |
| 366 | 0:01:11.000 | 0:01:12.000 | B | Yes, manage child record. | | | | | Background noises continue B being the original speaker, makes a self-repair When B speaks there is no background noise |
| 367 | 0:01:12.000 | | | (1.0) | | | | | |
| 368 | 0:01:13.100 | 0:01:13.100 | | <i>The menu opens from the left side of the mobile screen</i> | | | | | P selects Manage Child Record from the menu |
| 369 | 0:01:13.500 | 0:01:13.500 | | | | | | | The data loads after P selects Manage Child Record |
| | | | | | | | | | |
| 370 | 0:01:13.750 | 0:01:14.000 | P | ok | | | | | P acknowledges that his question has been clarified When P speaks, there is sound of air being blown into the microphone |
| 371 | 0:01:14.000 | 0:01:14.000 | | <i>Fields remain uneditable as the data continues to load</i> | | | | | |

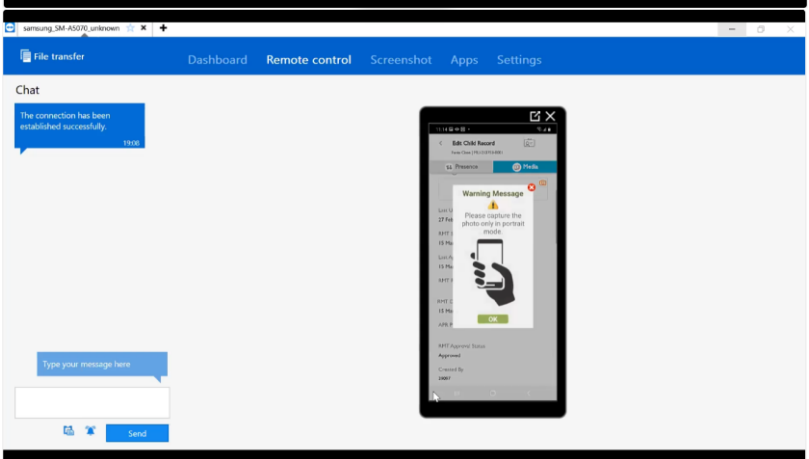
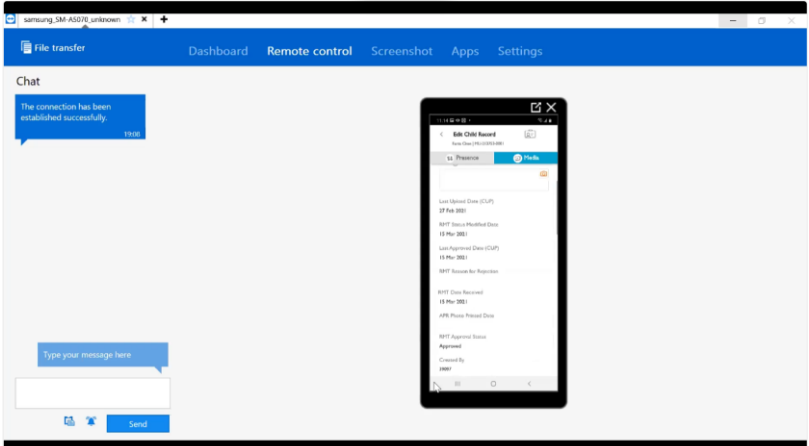


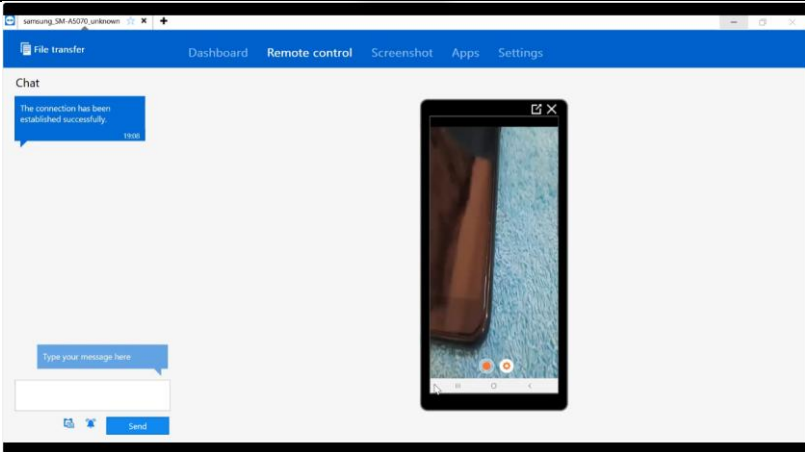
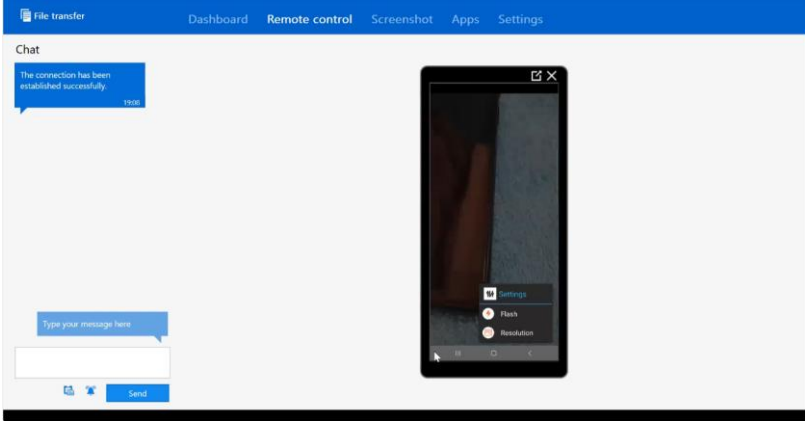
| | | | | | |
|-----|-------------|-------------|---|--|---|
| 372 | 0:01:15.000 | 0:01:15.000 | |  | |
| 373 | 0:01:17.000 | 0:01:21.999 | B | Can you select any of the uh sponsor or available child? | <p>Light background noise can be heard, but may be coming from P's end When P speaks, there is the sound of air being blown into his microphone</p> <p>[Condensed lines 377-378]</p> <p>[Condensed lines 380-385]</p> |
| 374 | 0:01:21.000 | 0:01:21.000 | P | [°ok°] | |
| 375 | 0:01:22.000 | 0:01:22.000 | | <i>The project dropdown expands as P selects a project</i> | |
| 376 | 0:01:22.000 | 0:01:23.000 | P | Ok, no problem. (2.5) | |
| 377 | 0:01:24.000 | 0:01:25.000 | | <i>The other options in the project dropdown appear as P scrolls down to find a project</i> | |
| 379 | 0:01:25.500 | 0:01:26.000 | P | Let me take (9.5) | |
| 380 | 0:01:27.000 | 0:01:33.000 | | <i>The other options in the project dropdown appear as P scrolls down to find a project. P selects a project and the resulting child records appear.</i> | |
| 386 | 0:01:35.500 | 0:01:37.000 | P | Yeah this is eh= | |

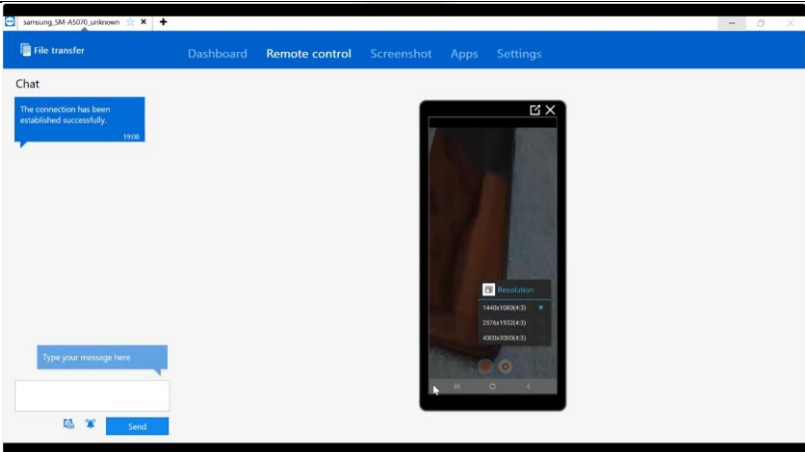
| | | | | | |
|-----|-------------|-------------|---|---|---|
| 387 | 0:01:37.001 | 0:01:37.001 | |  | The data of the selected child loads. A loader is visible onscreen and all visible fields are not editable |
| 388 | 0:01:37.001 | 0:01:38.000 | P | =available child (4.0) | <p>[Condensed lines 389-391] P selects through each tab of the child profile</p> <p>[Condensed lines 392-394] [Condensed lines 395-396] P selects through each tab of the child profile</p> |
| 389 | 0:01:37.750 | 0:01:42.000 | | <i>Data of the selected child is now visible. P traverses through the horizontal tabs in the mobile application</i> | |
| 392 | 0:01:42.000 | 0:01:44.000 | P | Do:: do I need to go to::= | |
| 395 | 0:01:44.000 | 0:01:45.000 | | <i>Data of the selected child is now visible. P continues to traverse through the horizontal tabs in the mobile application</i> | |
| 397 | 0:01:45.000 | 0:01:46.000 | B | media[:: tab] | |
| 398 | 0:01:46.000 | 0:01:46.000 | P | =[media]? | |

| | | | | | |
|-----|-------------|-------------|---|---|---|
| 399 | 0:01:46.000 | 0:01:46.000 | |  | After selecting the Media tab, the data loads |
| 400 | 0:01:46.500 | 0:01:47.000 | B | Yes, media tab. (1.0) | |
| 401 | 0:01:47.000 | 0:01:47.000 | |  | The media tab is selected |
| 402 | 0:01:48.000 | 0:01:55.000 | P | O:kay↓ (2.0) a::h which one? CGP or CGV? or C::UV? | |
| 403 | 0:01:56.000 | 0:02:01.000 | B | a::h [e::h] Anything is fine. a::h CGP, can you pick? (5.5) | |
| 404 | 0:01:56.250 | 0:01:56.250 | P | C::[UP] | |
| 405 | 0:02:01.750 | 0:02:01.750 | | <i>The Media tab is selected</i> | |
| 406 | 0:02:03.000 | 0:02:03.000 | | <i>The Child Greeting Video (CGV) section is expanded</i> | |
| 407 | 0:02:05.000 | 0:02:05.000 | | <i>The lower portion of the CGV section is shown</i> | |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 408 | 0:02:06:500 | 0:02:07.000 | P | CGP= | |
| 409 | 0:02:07.000 | 0:02:07.000 | | <i>The Child Greeting Photo (CGP) section is now visible</i> | |
| 410 | 0:02:07.000 | 0:02:07.000 | P | =ok | |
| 411 | 0:02:08.000 | 0:02:08.000 | | <i>The other sections Child Update Photo (CUP) and Child Update Video (CUV) are also visible aside from Child Greeting Photo (CGP)</i> | |
| 412 | 0:02:08.000 | 0:02:10.000 | P | Let me go to CGP (6.0) | |
| 413 | 0:02:10.000 | 0:02:10.000 | | | The camera icon in Child Greeting Photo (CGP) section is shown |
| 414 | 0:02:13.000 | 0:02:13.000 | | | The photo camera is opened |



| | | | | |
|-----|-------------|-------------|---|------------------------------------|
| 415 | 0:02:15.000 | 0:02:15.000 |  | The open photo camera is displayed |
| 416 | 0:02:16.000 | 0:02:16.500 | P | |
| 417 | 0:02:17.500 | 0:02:18.000 | B | The resolution? (1.0) |
| 418 | 0:02:21.000 | 0:02:21.000 | B | Yes, resolution (3.0) |
| 419 | 0:02:22.000 | 0:02:22.000 | P | °ok° (4.0) |
| | | |  | |

| | | | | |
|-----|-------------|-------------|--|--|
| 420 | 0:02:23.000 | 0:02:23.000 |  | |
| 421 | 0:02:25.000 | 0:02:30.000 | P Yah, I it's the same (1.0) the same thing we have seen | |
| 422 | 0:02:33.000 | 0:02:34.000 | B ok (6.0) | |

In this sequence, the collaborators have joined the meeting again and are now checking the resolutions on the second mobile device. For sixteen seconds, the participants waited for P to show the resolution on the second mobile device. During this sixteen second gap background noises could be heard, possibly from P's end. In line 341, P takes a turn and asks the collaborators, "Can you see it?". Though the shared screen shows the available resolutions in the second mobile device, P has to **verbally ask the question to get the attention of the other collaborators** so that they can focus on what he is showing onscreen. B affirms in lines 343 and 345 that she can see the screen and asks P for a moment, perhaps so that she can check the resolutions being shown onscreen. In line 344 or TS: 0:00:23.000 and line 346 or TS: 0:00:25.000, the screen changes as P takes a screenshot while waiting for B or giving B a moment. This shows that during online collaboration, teleworkers **multitask**. They do operations on their computing devices while waiting for their colleagues to analyze or process information. When B requests P to take a screenshot of the resolution being shown onscreen in line 349 by saying, "Ah yes. This is fine. Can you take screenshot of this also?", P replies in line 350 and 351 that this has already been done.

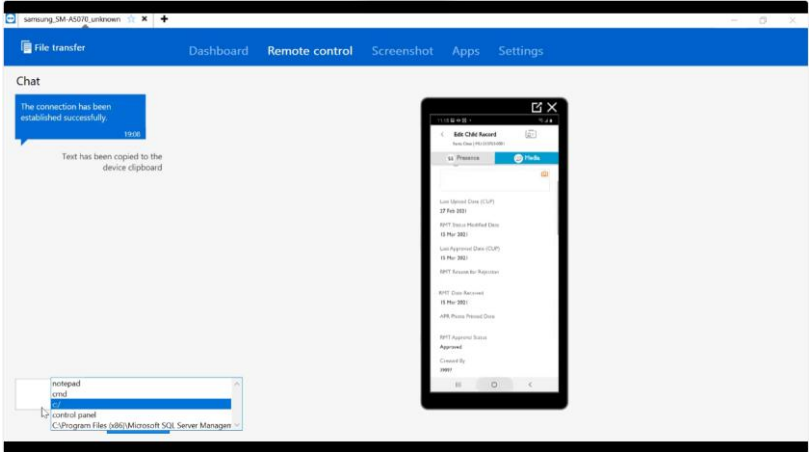
In line 353, B requests P to go to Manage Child Screen, "Ok so can you go to Manage Child Screen." In lines 355-357, P makes a repair by clarifying with B, "Uh where?" **Teleworkers are very dependent on technology**. Though the sound in the recording taken at H's computer seems clear, at P's end during the actual meeting, the sound may have been different. Sounds that teleworkers receive at their end may be affected by the headset or speakers that they are using, and also by the quality of their connectivity. It is not reflected in their conversation why P had to clarify with B what she was saying, but in lines 358 to 363, they were able to sort this out. In lines 358, B repeated the module where she wanted P to go, "Manage Child=" and then

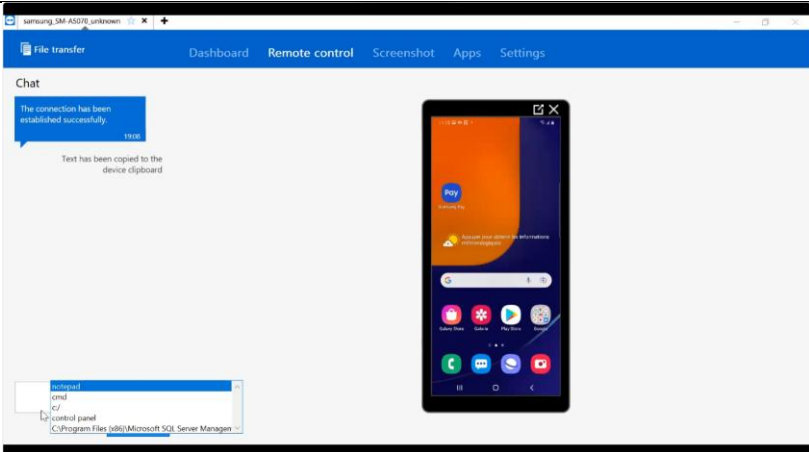
continued in line 361 by giving P directions on how to get there, “Can you go out? Child record. Can you go to menu?”. P affirms that he received the instructions by uttering “Ok” in line 363 after a 4-second gap. After a 5-second gap, in line 365, P requests clarification again, “Did you say manage child record?”. B replies in line 366, “Yes, manage child record.” Here we can see that to maintain order, teleworkers **ask for clarification or make an other-initiated repair** for requests that they cannot hear clearly. When asked for clarification, they **do not just repeat their request or what they just said**, but also **give directions on how to fulfill their request**. In the remaining lines, B and P maintain order by **keeping an instructor/follower relationship**. B, having no control over the mobile, tells P what other modules she needs to see or inspect so that P, who has control over the mobile device, can go there while she observes onscreen. For example, in line 353, she tells P, “Ok so can you go to manage child screen” and in line 373, she requests P, “Can you select any of the uh sponsor or availabl[e c]hild?” P responds accordingly to B, acting based on his role as a field office user. For example, in lines 374 and 376, he eagerly and politely replies to B’s request in line 373, “[°ok°] Ok, no problem.” P, who looks up to B, being a vendor, also asks her for guidance. For example, in lines 392, 394, and 398, he asks B, “Do:: do I need to go to:: [media]?” and in line 402, he asks B, “O:kay↓ (2.0) a::h which one? CGP or CGV? or C::UV?” B also responds accordingly to P’s questions, acting based on her role as a member of the vendor’s team. In this sequence, P also **verbally describes his actions**. For example, in lines 379, 386 and 388, he says, “Le::t me:: take e::h this is eh available child” and in line 412, he says “Let me go to CGP.” P does this to inform the team of his actions, perhaps so that they can call his attention if he goes off track.

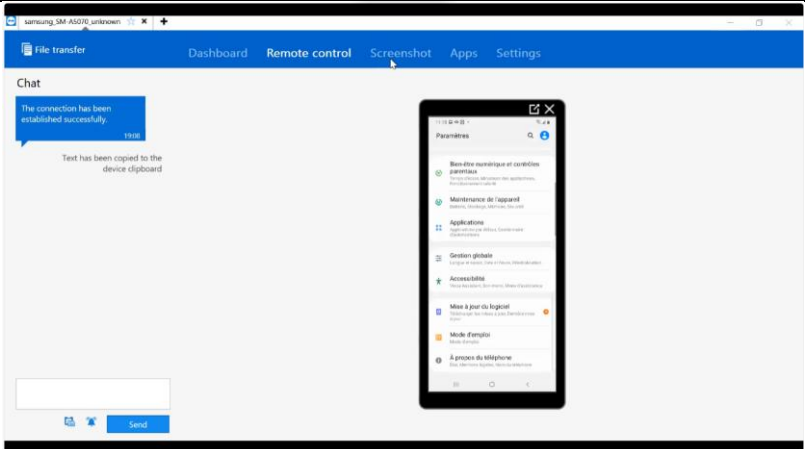
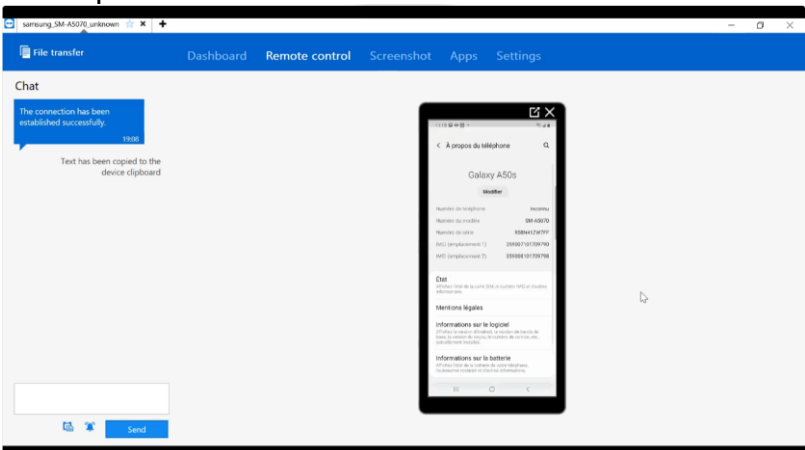
Sequence 15: B requests P to check the device model and Android version (Lines 423 to 452)

Table 19.

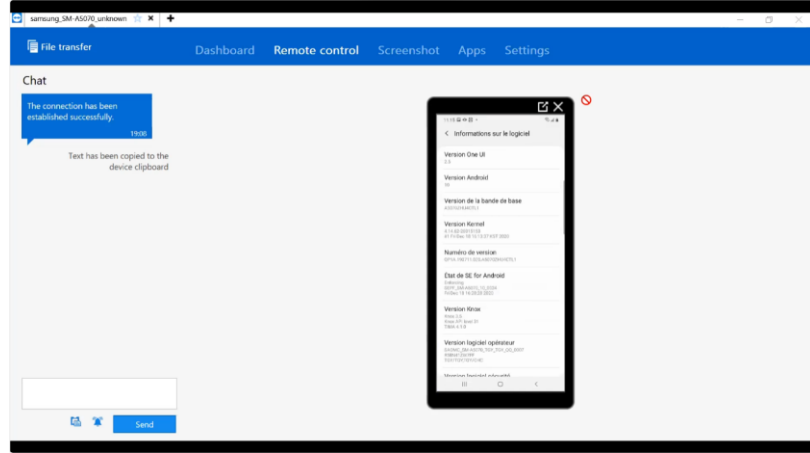
Analytical Table of Sequence 15

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|-------------|
| # | TS | TE | L | Transcription | Description |
| 423 | 0:02:40.000 | 0:02:48.000 | B | A::h can you go to uh settings sc::reen and show me the device models A50 we need tos- check the- a::h= | |
| 424 | 0:02:48.000 | 0:02:48.000 | |  | |
| 425 | 0:02:48.100 | 0:02:49.000 | P | °ok° | |

| | | | | | |
|-----|-------------|-------------|---|---|---|
| 426 | 0:02:49.000 | 0:02:49.000 | |  | P minimizes the mobile application show the mobile screen |
| 427 | 0:02:49.100 | 0:02:50.000 | B | =device names | |
| 428 | 0:02:50.000 | 0:02:51.000 | | <i>The next set of icons in the mobile screen are displayed</i> | [Condensed lines 428-429] |
| 430 | 0:02:51.000 | 0:02:51.500 | P | uhmm= | P swipes on the mobile twice to move to the next screen |
| 431 | 0:02:51.000 | 0:02:51.000 | | <i>The next set of icons in the mobile screen are displayed</i> | |
| 432 | 0:02:51.501 | 0:02:52.000 | P | =Setting? | |
| 433 | 0:02:52.000 | 0:02:52.000 | | <i>The next set of icons in the mobile screen are displayed. Settings icon is visible</i> | P swipes on the mobile to move to the next screen |
| 434 | 0:02:53.000 | 0:02:54.000 | B | Yes, settings. (2.0) | |
| 435 | 0:02:54.000 | 0:02:54.000 | | <i>The next set of icons in the mobile screen are displayed. Settings icon is visible</i> | P selects Settings |

| | | | | | |
|-----|-------------|-------------|---|---|------------------------------------|
| 436 | 0:02:55.000 | 0:02:55.000 | |  | Settings screen is shown in French |
| 437 | 0:02:56.000 | 0:02:57.000 | P | About phone? | |
| 438 | 0:02:57.000 | 0:02:57.000 | |  | P selected About Phone |
| 439 | 0:03:00.000 | 0:03:00.000 | | <i>About phone screen is displayed</i> | |
| 440 | 0:03:00.000 | 0:03:01.000 | B | A50? Yes. | |
| 441 | 0:03:01.000 | 0:03:01.000 | | <i>About phone screen is displayed</i> | |
| 442 | 0:03:02.000 | 0:03:02.999 | P | °uhmhhh° | P selects software information |
| 443 | 0:03:03.000 | 0:03:04.000 | | <i>The Software information screen is displayed</i> | [Condensed lines 443-444] |
| 445 | 0:03:04.000 | 0:03:06.850 | B | [What does the do- android version] 10. o[k] | |

| | | | | | |
|-----|-------------|-------------|---|---|---------------------------|
| 446 | 0:03:04.100 | 0:03:07.000 | P | [The android version is 10] (2.0) [yah] | |
| 447 | 0:03:08.000 | 0:03:20.000 | B | (13.0) <i>The Software information screen is displayed</i> | [Condensed lines 447-448] |
| 449 | 0:03:20.000 | 0:03:20.000 | | ok (33.0) | |
| 450 | 0:03:21.000 | 0:03:21.000 | | | |
| 451 | 0:03:26.000 | 0:03:53.000 | | <i>The Software information screen is displayed</i> | [Condensed lines 451-452] |

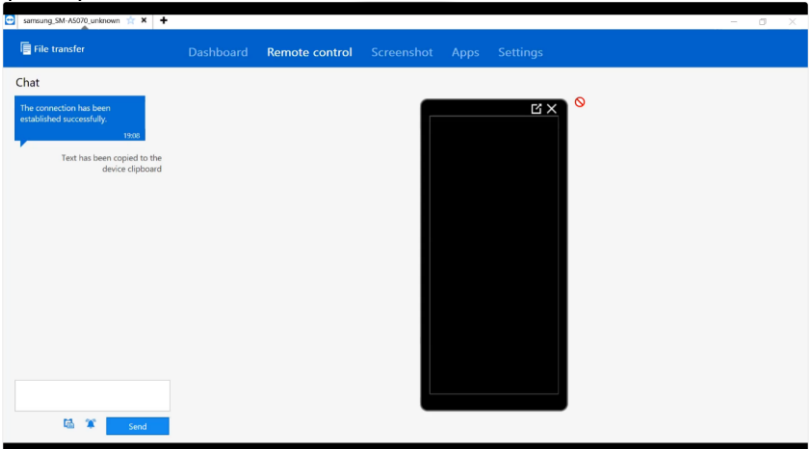


In this sequence, B requests P to go to settings so that they can check the device model and Android version. After a 6-second pause since B affirmed that she has seen the resolution being checked in the last sequence, Sequence 14, B takes a turn and starts this new sequence. In lines 423 and 427, B requests P, “A::h can you go to uh settings sc::reen and show me the device models A50 we need tos- check the- a::h device names.” P accepts this request by uttering “ok” in line 425. Here, B and P **continue their instructor/follower or requestor/requestee relationship** to maintain order. B acts as an instructor because of her role as a part of the vendor’s team. In this scenario, the vendor is being looked up to as experts, being the developer of the mobile application being investigated. P, who is a field office user, is the customer or the user seeking advice from the vendor, and so he acts as a follower. B also acts as a requestor since she has no access to P’s mobile device. She has to request P to act on the mobile device on her behalf. P has access to this device since, as a field office user, they are the designated users of this mobile device, making them the authorized users. The team is checking live data, so only authorized persons should have access to this data. B’s team, the vendor, are outsiders. They are only allowed to view data with the knowledge of an authorized user.

Sequence 16: B requests P to hold on (Lines 453 to 473)

Table 20.

Analytical Table of Sequence 16

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 453 | 0:03:53.000 | 0:03:54.000 | B | Just hold [on]for a moment | |
| 454 | 0:03:53.750 | 0:03:53.750 | P | [°hello°] | |
| 455 | 0:03:55.000 | 0:03:56.000 | B | Ha- yeah just hold on for a moment | |
| 456 | 0:03:57.000 | 0:03:57.000 | P | H? (3.0) | |
| 457 | 0:04:00.000 | 0:04:01.750 | B | A::h just hold on for a minute yes | |
| 458 | 0:04:02.000 | 0:04:04.000 | P | °Ah ok↓. I will be waiting.° (17.0) | Ends at 0:04:04.000; faint background noise of what sounds like news reporting on television can be heard |
| 459 | 0:04:04.000 | 0:04:04.000 | | <i>The Software information screen is displayed</i> | |
| 460 | 0:04:21.000 | 0:04:21.000 | P | <i>(saying something in a low voice in a foreign language)</i> (74.0) | P could be overheard saying something quick in a low voice in a foreign language |
| 461 | 0:04:22.000 | 0:04:22.000 | |  | The screen changes to black. This may be the phone's screen saver |

| | | | | |
|-----|-------------|-------------|--|----------------------|
| 462 | 0:04:22.000 | | <i>background noise is audible, sound of tv and a child can be heard</i> | Starting 0:04:28.000 |
| 463 | 0:04:28.000 | 0:04:28.000 | <i>The mobile phone's screen saver showing time appears</i> | |
| 464 | 0:04:28.000 | 0:04:28.000 | <i>background sounds are muted</i> | |
| 465 | 0:04:29.000 | 0:04:29.000 | <i>The mobile phone's screen saver showing time appears</i> | |
| 466 | 0:04:38.000 | 0:04:38.000 | <i>The screen saver moves to the right</i> | |
| 467 | 0:04:48.000 | 0:04:48.000 | <i>The screen saver moves to the left</i> | |
| 468 | 0:04:58.000 | 0:04:58.000 | <i>The screen saver moves to the right</i> | |
| 469 | 0:05:09.000 | 0:05:09.000 | <i>The screen saver moves to the center. The complete time is visible.</i> | |
| 470 | 0:05:18.000 | 0:05:18.000 | <i>The screen saver moves to the left</i> | |
| 471 | 0:05:28.000 | 0:05:28.000 | <i>The screen saver moves to the right</i> | |
| 472 | 0:05:34.000 | 0:05:34.000 | <i>The same screen saver is displayed</i> | |
| 473 | 0:05:34.000 | 0:05:34.000 | <i>a speaker unmutes</i> | |

In this sequence, B requests P to hold. After a 33-second pause from line 449 or TE: 0:03:20.000 to line 453 or TS: 0:03:53.000, in line 453, B takes a turn by making a request, “Just hold [on]for a moment.” P replies with a faint, “[°hello°]” in line 454. B repeats her request in line 455, “Ha- yeah just hold on for a moment.” P asks a question in line 456 that seems to sound like the host’s name. “H?” he asks. After a three-second pause, B clarifies again, “A::h just hold on for a minute yes” in line 457. In line 458, P accepts the request by saying, “°Ah ok↓. I will be waiting.°” B may have requested P to hold so that she can analyze or discuss with D and T the information that they have just collected.

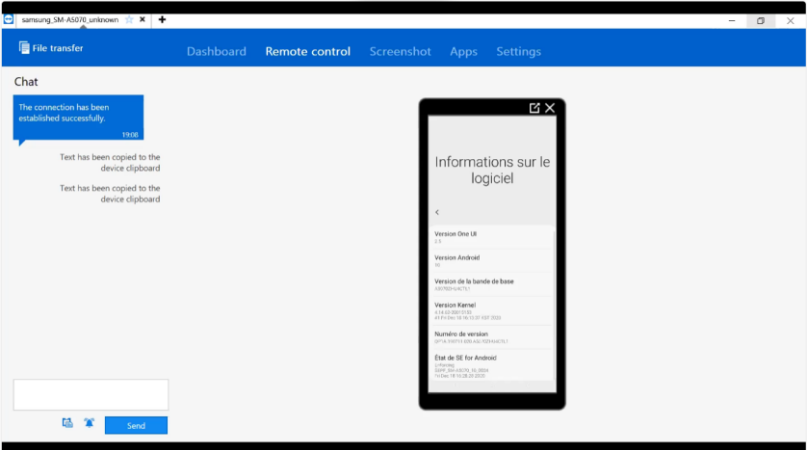
In this sequence, we can derive that in a collaborative setting, **acceptance of a request is affected by how well the requestee can hear the requestor**. When B took a turn in line 453 to request P to hold, P seemed unprepared for it and responded with a soft “[°hello°]” sounding far away. B had to repeat her request three times before P could understand and accept it. After P accepted B’s request by saying, “°Ah ok↓. I will be waiting.°” in line 458, a 17-second gap followed from line 458 at TE: 0:04:04.000 to line 460 at TS: 0:04:21.000. During this gap, background noises of what seemed like a news report on television could be heard. In line 460 or TS: 0:04:21.000, P says something in a foreign language, possibly one of their native African languages or French, which is the working language in Mali (Baker & Clark, 2025). Here, we can draw that in an online collaborative set-up consisting of participants from different regions, the participants **use a common language**, such as English, to converse and to achieve understanding. In this video conference, the participants were from three different regions. H, the host, was joining from the Philippines. B, D, and T, members from the vendor’s team, were joining from India, and P and C, the field office users, were joining from Mali. Coming from diverse backgrounds, the collaboration team had

to use a language common to all of them, such as English, to achieve understanding. After P said something in a foreign language in line 460 or TS: 0:04:21.000, background sounds continued to be heard, but in line 464 or TS: 0:04:28.000, these sounds were muted. From here, we can draw that in an online collaboration set-up, teleworkers have the option to **mute their microphones when waiting** to prevent unnecessary sounds from their end from being heard. After P muted his mic in line 464 or TS: 0:04:28.000, there was a 67-second period of silence from line 464 at TE: 0:04:28.000 to line 474 at TS: 0:05:35.000.

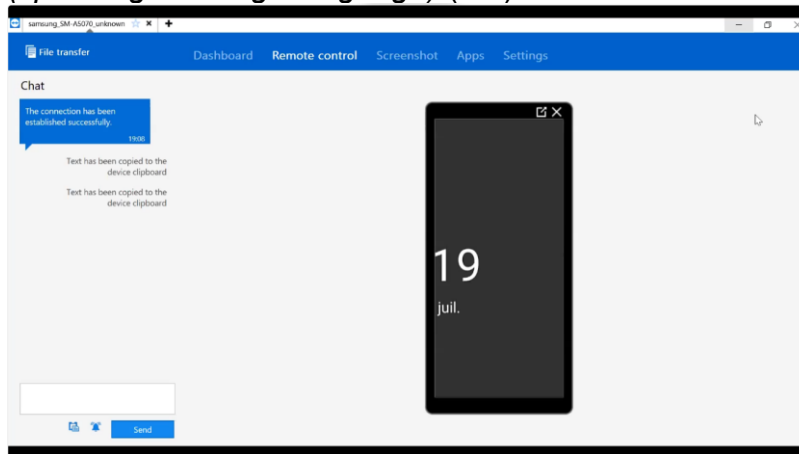
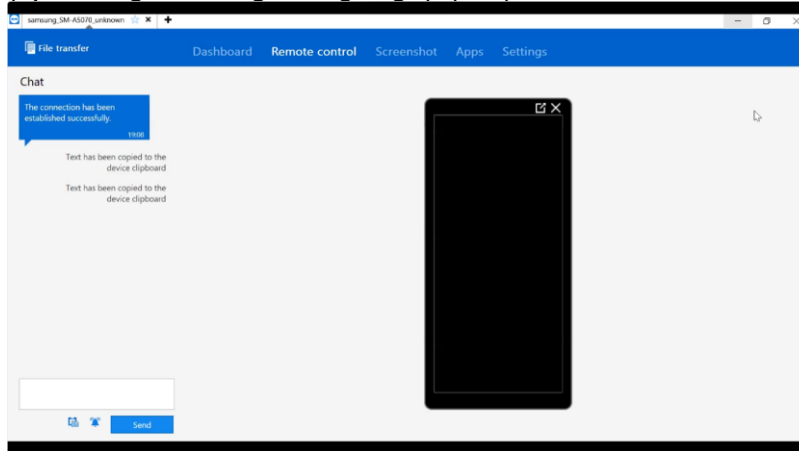
Sequence 17: B asks for another device model but receives no response from P (Lines 474 to 518)

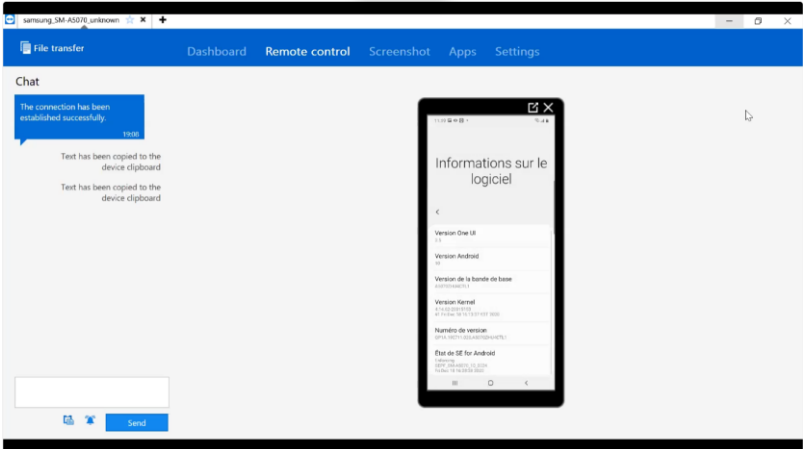
Table 21.

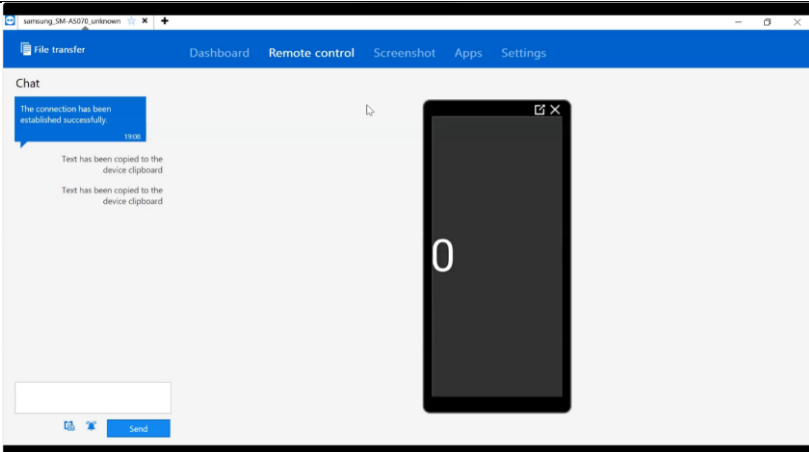
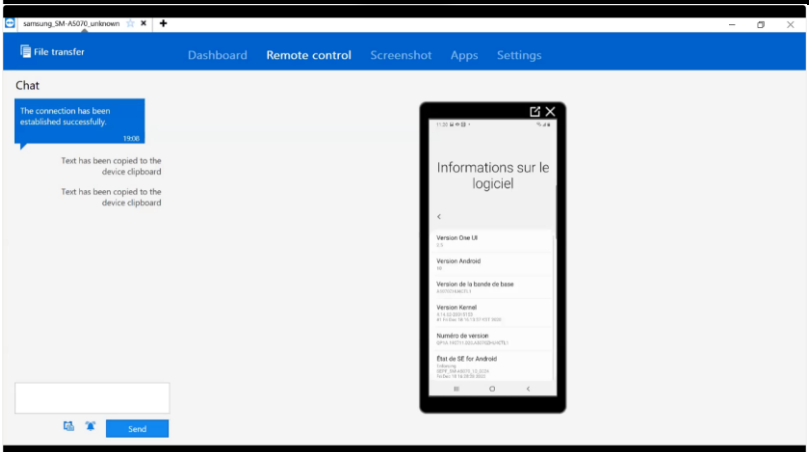
Analytical Table of Sequence 17

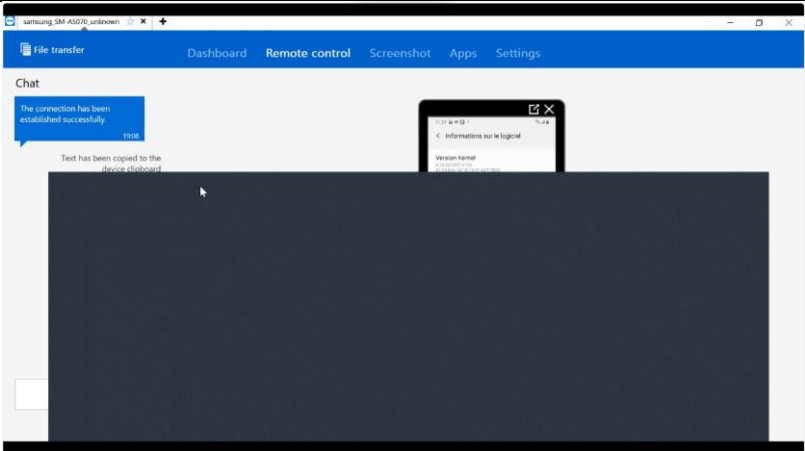

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|-----------------------------------|
| # | TS | TE | L | Transcription | Description |
| 474 | 0:05:35.000 | 0:05:39.000 | B | Ah sorry if you don't mind. Do you have any other device model? a:h= | |
| 475 | 0:05:39.000 | 0:05:39.000 | |  | |
| 476 | 0:05:39.000 | 0:05:44.000 | B | =in your hand? apart from A51 and A50s. This model is A50s (5.0) | |
| 477 | 0:05:45.000 | 0:05:45.000 | | <i>The software information screen is visible</i> | |
| 478 | 0:05:49.000 | 0:05:50.000 | | <i>(we nan jou) speaking in a low voice in a foreign language (6.0)</i> | C may have unmuted P's microphone |
| 479 | 0:05:56.000 | 0:05:56.000 | | <i>The software information screen is visible</i> | |
| 480 | 0:05:56.000 | 0:05:59.000 | C | Halu? (3.0) halu? (8.5) | |
| 481 | 0:06:01.000 | 0:06:01.000 | | <i>The lower portion of the software information screen is visible</i> | |

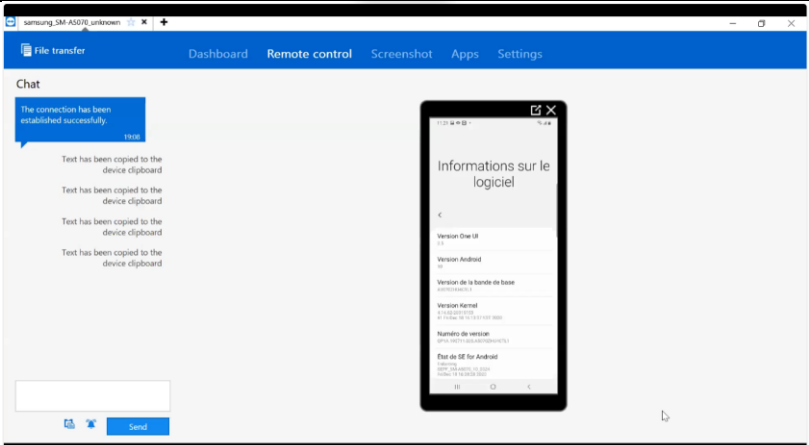
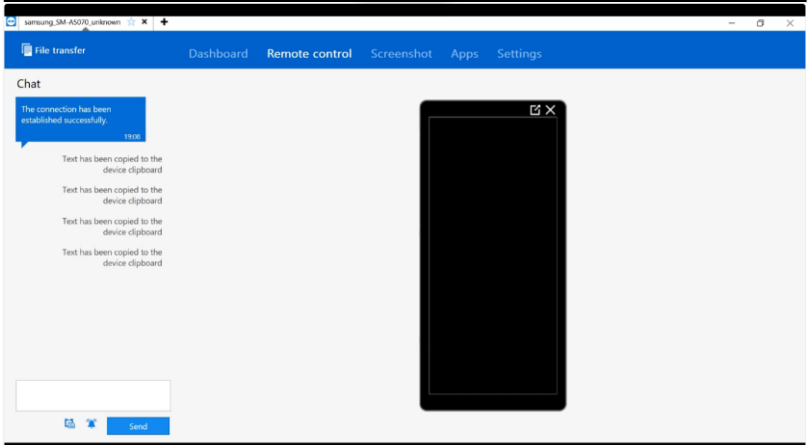
| | | | | | |
|-----|-------------|-------------|---|--|--|
| 482 | 0:06:07.500 | 0:06:08.000 | C | uh huh | |
| 483 | 0:06:09.000 | 0:06:09.000 | | <i>The top of the software information screen is visible</i> | |
| 484 | 0:06:16.000 | 0:06:17.500 | C | <i>(speaking in foreign language) (4.0)</i> | |
| 485 | 0:06:21.500 | 0:06:24.000 | C | <i>(speaking in foreign language) (5.5)</i> | |
| 486 | 0:06:29.500 | 0:06:30.000 | C | °O ok° (3.0) | |
| 487 | 0:06:33.000 | 0:06:38.000 | C | <i>(speaking in foreign language) (2.0)</i> | |
| 488 | 0:06:39.000 | 0:06:39.000 | | | The visible mobile screen changes to black |
| 489 | 0:06:40.000 | 0:06:45.000 | C | <i>(speaking in foreign language) (6.0)</i> | |
| 490 | 0:06:45.000 | 0:06:45.000 | | | The mobile's screen saver is activated |



| | | | | | | |
|-----|-------------|-------------|---|---|--|--|
| 491 | 0:06:51.000 | 0:06:51.500 | C | Ok (2.0) | | |
| 492 | 0:06:53.500 | 0:06:54.000 | C | °uhhmm° (9.0) | | |
| 493 | 0:06:55.000 | 0:06:55.000 | | |  | Software information screen is visible |
| 494 | 0:06:55.500 | 0:07:03.000 | | <i>background noise</i> | | |
| 495 | 0:07:03.000 | 0:07:03.000 | | <i>The software information screen is visible</i> | | |
| 496 | 0:07:03.000 | 0:07:04.000 | C | <i>(Indiscernible sound) What do you mean? (1.5)</i> | | |
| 497 | 0:07:05.500 | 0:07:06.000 | P | <i>(speaks in foreign language) (0.5)</i> | | P seemed to have returned because he can be heard speaking in another language |
| 498 | 0:07:06.500 | 0:07:07.000 | C | Ye::ah (226.0) | | |
| 499 | 0:07:07.000 | 0:07:14.000 | | <i>sound of television in the background</i> | | |
| 500 | 0:07:14.000 | 0:07:17.000 | | <i>silence</i> | | |
| 501 | 0:07:17.000 | 0:07:33.000 | | <i>Continued silence of 16 seconds while mouse moved to the top left of the screen and explored the menus in teamviewer until it stopped at the minimize button</i> | | It sounds like P muted his mic because background noises at his end ceased to be heard |
| 502 | 0:07:33.000 | 0:07:51.000 | | <i>Continued silence of 18 seconds until screensaver in mobile appeared and mouse moved to the left</i> | | H may have been moving her mouse, possibly to check if TeamViewer had hung. |

| | | | | |
|-----|-------------|-------------|---|--|
| 503 | 0:07:51.000 | 0:07:51.000 |  | The mobile's screen saver is activated |
| 504 | 0:08:02.000 | 0:08:02.000 |  | The software information screen is visible |
| 505 | 0:08:30.000 | 0:08:35.000 | <p><i>The Software information screen is visible</i></p> | [Condensed lines 505-507] |

| | | | | |
|-----|-------------|-------------|---|--|
| 508 | 0:08:43.125 | 0:08:43.125 |  | The screen is covered by a dark gray patch indicating a possible problem with the connection |
| 509 | 0:08:46.000 | 0:09:04.000 | <p><i>A dark gray patch covers a portion of the bottom of the visible mobile screen</i></p> | [Condensed lines 509-512] |
| 513 | 0:09:10.500 | 0:09:10.500 |  | P's profile picture appears |

| | | | | |
|-----|-------------|-------------|--|---|
| 514 | 0:09:17.000 | 0:09:17.000 |  <p>The screenshot shows a web-based remote control interface. At the top, there is a navigation bar with 'File transfer', 'Dashboard', 'Remote control', 'Screenshot', 'Apps', and 'Settings'. Below this is a 'Chat' section with a message: 'The connection has been established successfully.' followed by four messages: 'Text has been copied to the device clipboard'. On the right, a mobile device screen is displayed, showing a page titled 'Informations sur le logiciel' with fields for 'Version One UI', 'Version Android', 'Version de la bande de base', 'Version Kernel', 'Numero de version', and 'Etat de SE for Android'.</p> | The Software information screen appears |
| 515 | 0:10:03.000 | 0:10:03.000 |  <p>This screenshot is identical to the previous one, but the mobile device screen is now completely black, indicating that the screen saver or a black screen has been activated.</p> | The visible mobile screen turns black |
| 516 | 0:10:07.750 | 0:10:07.750 | <p><i>The Software information screen is visible</i></p> | |
| 517 | 0:10:43.500 | 0:10:43.500 | <p><i>The visible mobile screen turns black</i></p> | |
| 518 | 0:10:48.000 | 0:10:53.000 | <p><i>The mobile's screen saver is visible</i></p> | |

After being on mute for one minute and thirty-three seconds from line 457 at TE: 0:04:01.750 to line 474 at TS: 0:05:35.000, since requesting P to hold on, B returns and takes a turn. She asks P in lines 474 and 476, "Ah sorry if you don't mind. Do you have any other device model? a::h in your hand? apart from A51 and A50s. This model is A50s." After five seconds, since B has spoken, someone speaking in a foreign language can be heard, and then after six seconds, C starts speaking, "Halu? (3.0) halu?" giving the impression that he cannot hear B. After this, C continues to speak at the other end. He appears to be speaking to someone else, not B. In line 497 or TS: 0:07:05.500, P can be heard speaking in a foreign language, indicating that he is back. However, he does not inform in the call, so the team continues to wait. Since P was last heard speaking in line 497 at TE: 0:07:06.000, the team continued waiting for 3 minutes and 47 seconds from line 497 at TE: 0:07:06.000 to line 520 at 0:10:53.000. This shows that in an online collaboration meeting, when meeting participants cannot see each other, **verbally informing participants of one's presence or temporary absence** is important. If P had informed the meeting participants that he was back, the group would have resumed the meeting earlier.

Sequence 18: P returns and B confirms with him if he was checking another device (Lines 519 to 556)

Table 22.

Analytical Table of Sequence 18

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|-------------|
| # | TS | TE | L | Transcription | Description |
| 519 | 0:10:53.000 | 0:10:58.000 | | <i>The mobile's screen saver is visible</i> | |
| 520 | 0:10:53.000 | 0:10:54.000 | B | °ah° hello? (2.0) | |
| 521 | 0:10:56.000 | 0:10:57.000 | H | °ah° <hello yes?> | |
| 522 | 0:10:58.000 | 0:10:58.000 | | <i>The mobile's screen saver is visible</i> | |
| 523 | 0:10:58.000 | 0:11:00.000 | B | So:: are you trying to a::hh= | |
| 524 | 0:11:00.000 | 0:11:07.000 | | <i>background noise – person speaking in foreign language</i> | |
| 525 | 0:11:00.000 | 0:11:02.000 | B | =check in some other device? (2.0) | |
| 526 | 0:11:04.000 | 0:11:05.000 | P | Hello? (2.0) | |
| 527 | 0:11:07.000 | 0:11:08.000 | B | Halo? | |
| 528 | 0:11:07.000 | 0:11:07.000 | | <i>The mobile's screen saver is visible</i> | |
| 529 | 0:11:08.100 | 0:11:08.500 | P | Yah | |
| 530 | 0:11:10.000 | 0:11:17.500 | B | So, so a- are you going to check in another- any other device a- if you don't mind do you have any other device apart from the A50= | |
| 531 | 0:11:17.500 | 0:11:18.000 | | <i>The mobile's screen saver is visible</i> | |
| 532 | 0:11:17.500 | 0:11:18.000 | B | =and A51? | |
| 533 | 0:11:19.000 | 0:11:24.500 | P | Ah, another de°vice°↓ (2.0) A:::h (3.5)= | |
| 534 | 0:11:28.000 | 0:11:28.000 | | <i>The mobile's screen saver is visible</i> | |
| 535 | 0:11:28.000 | 0:11:37.999 | P | =so (6.0) yeah we have a °la°st one. This is a:: an= | |
| 536 | 0:11:38.000 | 0:11:38.000 | | <i>The mobile's screen saver is visible</i> | |
| 537 | 0:11:38.000 | 0:11:39.000 | P | =A51 (1.5) | |
| 538 | 0:11:41.500 | 0:11:48.000 | B | So we have tested in A51 and A50s right? So we have- do you have any other device= | |
| 539 | 0:11:48.000 | 0:11:48.000 | | <i>The mobile's screen saver is visible</i> | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 540 | 0:11:48.000 | 0:11:50.000 | B | =a::h just to reproduce this issue again? | |
| 541 | 0:11:51.000 | 0:11:56.000 | P | Yah I have e::h an A ah A:: 8 yeah (1.0) | |
| 542 | 0:11:57.000 | 0:11:57.999 | B | A= | |
| 543 | 0:11:58.000 | 0:11:58.000 | | <i>The mobile's screen saver is visible</i> | |
| 544 | 0:11:58.000 | 0:11:59.000 | B | =8 ok (4.0) | |
| 545 | 0:12:03.000 | 0:12:06.000 | B | a- a::h- is it possible to connect that now? | |
| 546 | 0:12:07.000 | 0:12:08.000 | P | Yah. That's possible | |
| 547 | 0:12:08.000 | 0:12:08.000 | | <i>The mobile's screen saver is visible</i> | |
| 548 | 0:12:09.000 | 0:12:09.999 | B | Ok ok | |
| 549 | 0:12:10.000 | 0:12:11.000 | P | Please wait just some minutees | |
| 550 | 0:12:12.000 | 0:12:12.000 | B | Ok (27.0) | |
| 551 | 0:12:14.000 | 0:12:14.000 | | <i>muting sound</i> | |
| 552 | 0:12:17.000 | 0:12:35.000 | | <i>faint background noises could be heard again; like sound of a person speaking from a distant television or radio</i> | There was a clicking sound possibly due to the muting of someone's mic because after the clicking sound was silence. However, here faint background sounds could be heard again. |
| 553 | 0:12:19.000 | 0:12:19.000 | | <i>The mobile's screen saver is visible</i> | |
| 554 | 0:12:28.000 | 0:12:28.000 | | <i>The mobile's screen saver is visible</i> | |
| 555 | 0:12:35.000 | 0:12:38.000 | | <i>audible voice speaking in a foreign language</i> | |
| 556 | 0:12:38.000 | 0:12:38.000 | | <i>The mobile's screen saver is visible</i> | |

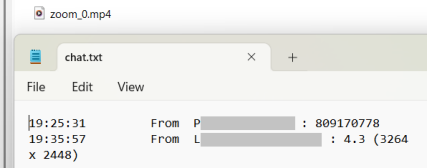
After several minutes of waiting, B breaks the silence and takes a turn. In line 520, she says “°ah° hello?”. After a two-second gap, H replies, “°ah° <hello yes?>” in line 521. B continues, “So:: are you trying to a::hh check in some other device?” in lines 523 and 525. After a 2-second gap, P joins the call. In line 526, he says, “Hello?” B replies in line 527, “Halo?”. B then proceeds to ask P if he has another device at his end apart from the devices that they have just checked in lines 530 at 532. After some clarification from B in lines 538 and 540, P confirms that he has an A8. In line 541, P replies, “Yah I have e::h an A ah A:: 8 yeah.” In line 545, B asks, “a- a::h- is it possible to connect that now?” P accepts her request by replying, “Yah. That’s possible,” in line 546. In line 549, P requests, “Please wait just some minutes,” which B accepts by saying, “Ok” in line 550.

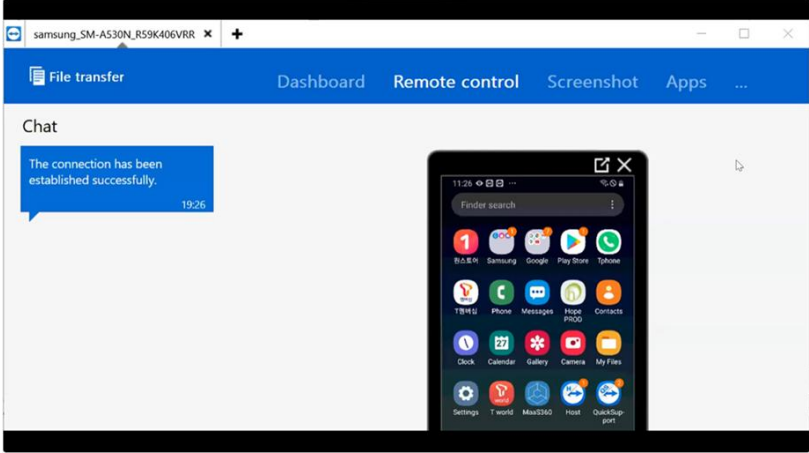
This sequence demonstrates the importance of **verbally informing online meeting participants of one’s presence**. Before this sequence, there was a long period of waiting. Since B inquired from P in lines 474 and 476 in Sequence 17 if he had any other device model at hand apart from the devices they had just checked, a gap of 5 minutes and 9 seconds occurred before any participant said anything relevant in the meeting. B broke the silence by taking a turn and uttering, “°ah° hello?” in line 520 at TS: 0:10:53.000. This sequence also shows that to collaborate online, participants **connect to each other’s workspaces**. In line 545, B inquired from P if it was possible to connect to his other mobile device, which they had not yet checked. From the conversation in this sequence, we can also derive that connecting to another person’s workspace takes time. In line 549, P requested B to wait for some minutes, perhaps to prepare his device for connection.

Sequence 19: H connects to the third device (Lines 557 to 580)

Table 23.

Analytical Table of Sequence 19

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 557 | 0:12:39.000 | 0:12:44.000 | P | A:::h. I'm going to send you the id in the chat (3.0) |  |
| 558 | 0:12:47.000 | 0:12:49.000 | H | °chat?° ok. (12.0) | |
| 559 | 0:12:48.000 | 0:12:48.000 | | <i>The mobile's screen saver is visible</i> | |
| 560 | 0:12:58.000 | 0:12:58.000 | | <i>The mobile's screen saver is visible</i> | |
| 561 | 0:13:01.00 | 0:13:05.000 | H | °So:: yeah <so I will end> (1.0) this session (1.0) remote se[ssion°] | |
| 562 | 0:13:05:000 | 0:13:05.000 | P | [Yeah]= | |
| 563 | 0:13:05.000 | 0:13:05.000 | | <i>H's profile picture is visible</i> | |
| 564 | 0:13:05.250 | 0:13:05.250 | | <i>P's profile picture is visible</i> | |
| 565 | 0:13:05.250 | 0:13:08.000 | P | =ee- ee- can you please try to connect to it? (8.0) | |
| 566 | 0:13:15.000 | 0:13:15.000 | | <i>audible cellphone chime</i> | |
| 567 | 0:13:16.000 | 0:13:17.000 | P | ↑Hello?↑ | |
| 568 | 0:13:18.000 | 0:13:18.000 | | <i>H's profile picture is visible</i> | |
| 569 | 0:13:18.000 | 0:13:21.000 | H | ↓Yes? yeah I'm connecting (1.0) to [your]↓= | |
| 570 | 0:13:20.500 | 0:13:21.000 | P | [ok] | |
| 571 | 0:13:21.000 | 0:13:21.000 | | <i>P's profile picture is visible</i> | |
| 572 | 0:13:21.000 | 0:13:24.000 | H | =computer. <Ah to yo:ur:>remo- ah<to the mobile.> (1.0) | |
| 573 | 0:13:24.000 | 0:13:24.000 | | <i>H's profile picture is visible</i> | |
| 574 | 0:13:25.000 | 0:13:29.500 | H | So:: I think I am connecting but- (1.0) screen is not yet sho[wing]. | |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 575 | 0:13:28.000 | 0:13:29.999 | P | [But] but= | |
| 576 | 0:13:30.000 | 0:13:30.000 | | <i>P's profile picture is visible</i> | |
| 577 | 0:13:29.999 | 0:13:33.000 | P | =let me tell you that as- °as° the guide- <the field guide says> that= | |
| 578 | 0:13:34.000 | 0:13:34.000 | | |  |
| 579 | 0:13:34.000 | 0:13:35.000 | P | =<the resolution> of this one is ok (1.5) | |
| 580 | 0:13:35.000 | 0:13:35.000 | | <i>The screen of the third mobile phone is visible. Only top half of the mobile phone is visible</i> | |

The screen of the third mobile phone is visible. Only top half of the mobile phone is visible

After twenty-seven seconds of waiting from line 550 at TE: 0:12.12.000 to line 557 at TS: 0:12:39.000, P takes a turn and says “A::h. I’m going to send you the id in the chat.” H responds after three seconds by saying, “°chat?° ok” in line 558. After 12 seconds, she also adds “°So:: yeah <so I will end> (1.0) this session (1.0) remote se[ssion°]” in line 561. P affirms H’s request by uttering “Yeah” in line 562. In line 565, P requests H to connect to his mobile device by saying, “=ee- ee- can you please try to connect to it?” After 8 seconds of not hearing from H, P makes a follow-up in line 567. “↑Hello?↑” he says. To this, H replies “↓Yes? yeah I’m connecting (1.0) to [your]↓ computer. <Ah to your>remo-<ah to the mobile.>” in lines 569 and 572. She also adds in line 574, “So:: I think I am connecting but- (1.0) screen is not yet sho[wing].” Finally, in line 578 or TS: 0:13:34.000, the shared screen changes to the user interface of the new mobile device, signifying that a connection has been made.

The conversation in this sequence shows that to collaborate online, teleworkers **share information**. In this scenario, they want to **share the same view** of the user interface of a mobile device. To make the sharing of a common view possible, they have to **make a connection**. This connection is made possible by inputting some credentials, such as a TeamViewer ID. From the conversation in this sequence, it can also be derived that teleworkers **use appropriate communication tools** for sharing numeric information, such as a TeamViewer ID. In this scenario, they used Zoom chat instead of verbally dictating the ID in the Zoom call. The conversation in this sequence also shows that **verbal follow-up** is beneficial in an online meeting, where participants cannot see what each is doing. In line 567, a simple “↑Hello?↑” from P prompted H to provide the status of connecting to his mobile device, reducing P’s uncertainty of what was going on. In line 561, H also says that she will end this remote session. By saying remote session, she meant the connection to the previous device. Although connection

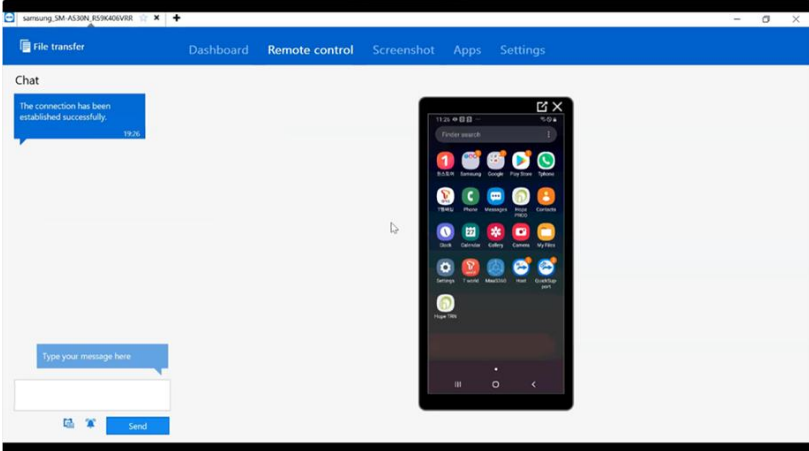
to multiple devices is allowed by TeamViewer, H opted to end the current connection so that she could create another, probably to conserve bandwidth as multiple connections can slow down a computer's performance. By this, we can draw that during an online collaboration, teleworkers **apply techniques that they believe can help them to conserve bandwidth.**

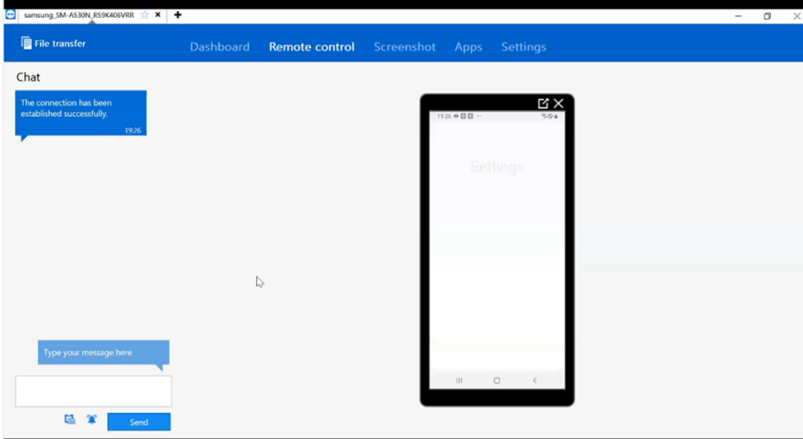
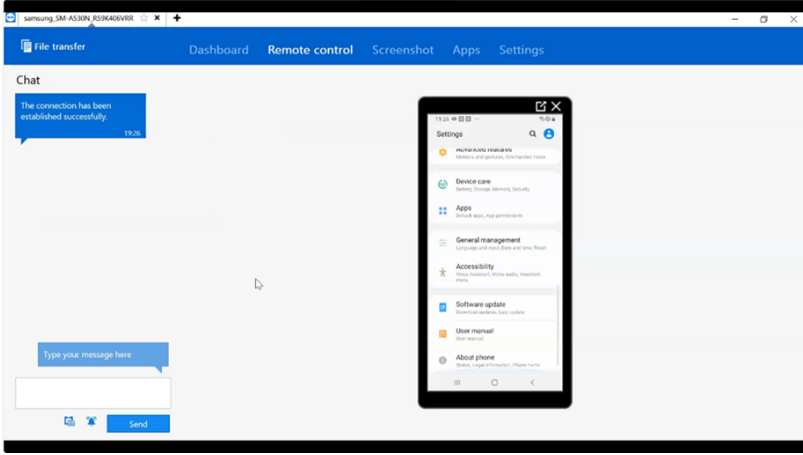
In lines 575, 577 and 679, P says, “[But] but let me tell you that as- °as° the guide- <the field guide says> that <the resolution> of this one is ok.” Here, we can draw that in an online collaboration setting, teleworkers **refer to offline documents, such as field guides, to back up their claims in their conversation.**

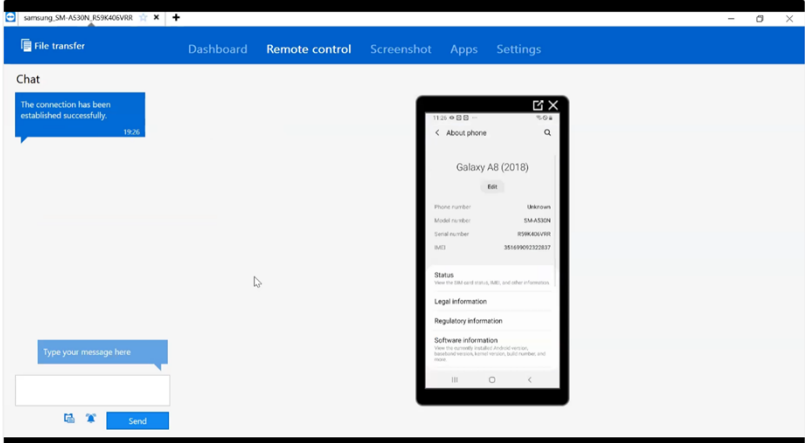
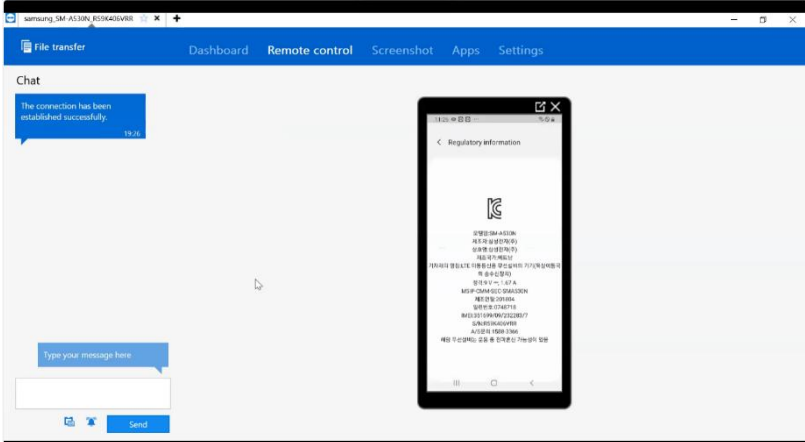
Sequence 20: P verifies the Android version of the third device (Lines 581 to 606)

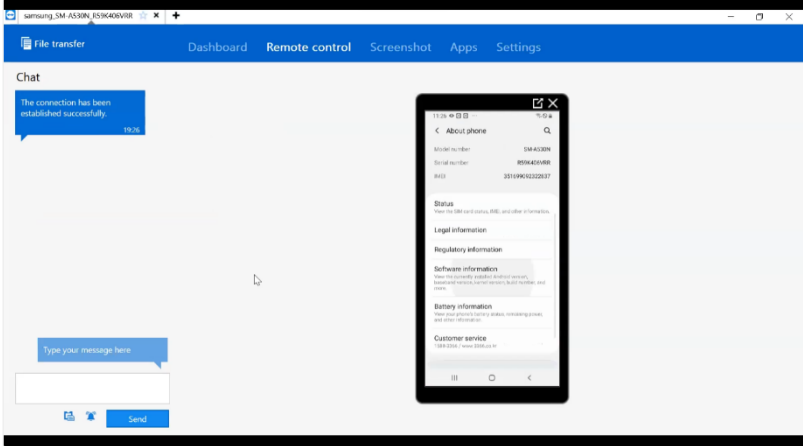
Table 24.

Analytical Table of Sequence 20

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 581 | 0:13:36.500 | 0:13:36.500 | H | Yeah= | The screen of the third mobile phone is visible. The full screen is visible |
| 582 | 0:13:37.000 | 0:13:37.000 | |  | |
| 583 | 0:13:37.000 | 0:13:40.000 | H | =<so- so> this is A50 A50 on Android 10? (2.0) | |
| 584 | 0:13:42.000 | 0:13:48.000 | P | Uhh:: let us- let us- I think its And- Android 9 something like- something like= | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 585 | 0:13:48.000 | 0:13:48.000 | |  | Settings screen is loading to display |
| 586 | 0:13:48.000 | 0:13:49.000 | P | =let me- let us= | |
| 587 | 0:13:50.000 | 0:13:50.000 | |  | The options in the Settings screen are visible |
| 588 | 0:13:50.000 | 0:13:50.500 | P | =verify together (5.5) | |

| | | | | |
|-----|-------------|-------------|--|--|
| 589 | 0:13:51.000 | 0:13:51.000 |  | About Phone screen is visible |
| 590 | 0:13:52.000 | 0:13:53.000 | <p><i>The lower portion of the About phone screen is visible and Regulatory information option is selected</i></p> | [Condensed lines 590-591] |
| 592 | 0:13:54.000 | 0:13:54.000 |  | |
| 593 | 0:13:55.000 | 0:13:55.000 | <p><i>The About phone screen is visible</i></p> | About phone screen becomes visible after P selects the back button |
| 594 | 0:13:56.000 | 0:13:56.000 | P Yah= | |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 595 | 0:13:56.000 | 0:13:56.000 | |  | Software information is selected |
| 596 | 0:13:56.100 | 0:13:57.000 | P | This is 9 (2.5) | |
| 597 | 0:13:59.500 | 0:14:02.000 | H | Android- Android 9 and this is A50? (3.0) | Line 597 to 606 is a repair sequence. Line 597 is the repairable or trouble source. In line 597 H states the incorrect device model. This marks the start of the repairable or trouble source. Since her statement is a question, she also makes a self-initiated repair, asking if the device with Android 9 is an A50? |
| 598 | 0:14:03.000 | 0:14:04.000 | | <i>Child shouting in the background in a foreign language</i> | |
| 599 | 0:14:05.000 | 0:14:10.000 | P | <This is not A50↑.> <u>This is an [A8↑.]</u> | [Condensed lines 599-603] P makes an other-repair by explaining that the device is not an A50 but an A8 |
| 604 | 0:14:09.000 | 0:14:14.000 | | <i>[(a child's shouting or talking can be heard in the background)]</i> | |
| 605 | 0:14:10.000 | 0:14:11.000 | H | [°A8. ok.°] | H accepts P's clarification |
| 606 | 0:14:12.000 | 0:14:12.000 | P | [Yah] (2.0) | P acknowledges H's acceptance |

This sequence is started by H's question to P in lines 581 and 583, "Yeah <so-so> this is A50 A50 on Android 10?" P is unsure of how to reply. In lines 584, 586, and 588, he replies, "Uhh:: let us- let us- I think its And- Android 9 something like-something like that let me- let us verify together." From this conversation, we can extract that screen sharing in an online collaboration allows team members to **verify information together**. In lines 589 to 593 or TS: 0:13:51.000 to TE: 0:13:55.000, we can see P operating the device toward where its Android version can be found. H observes while P is doing this, and in lines 594 and 596, P confirms that the android version of the mobile is 9. After a two and a half-second pause, H takes a turn and asks about the device model, "Android- Android 9 and this is A50?" in line 597. After a three-second pause, P replies in lines 599, 601, and 603, "<This is not A50↑.> This is an [A8↑.]" H accepts P's reply by saying, "[°A8. ok.°]" in line 605. P affirms by saying, "[Yah]" in line 606.

Sequence 21: H asks about the resolution of the third device (Lines 607 to 640)

Table 25.

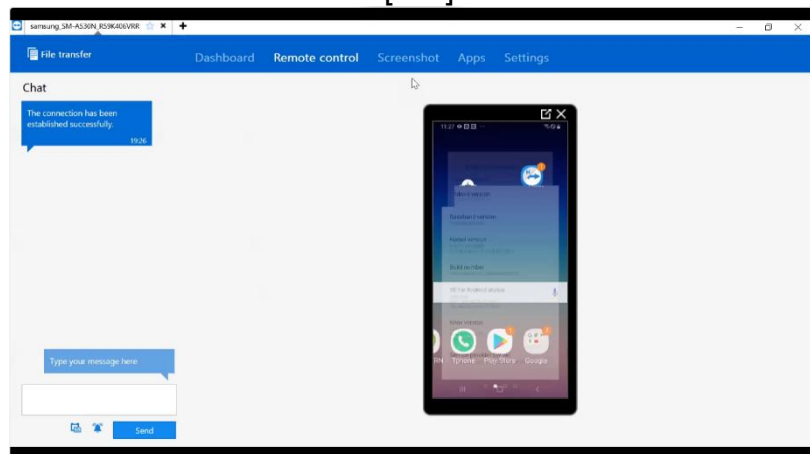
Analytical Table of Sequence 21

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 607 | 0:14:14.000 | 0:14:17.000 | H | Ah, is the resolution- () ah:: () correct? | H asks if the resolution in A8 is correct P does not answer H's question with a statement but answers it with another question. There seems to be hesitation from P to answer H's question. He may have hesitated because he needed more guidance to answer H's question. He may have needed clarification if H just wanted him to answer her question with a Yes or a No based on his observation or if she wanted him to show the available resolutions on the mobile device so that she can see for herself. H is unsure of her reply. |
| 608 | 0:14:18.000 | 0:14:19.000 | P | ldz- do I need to go to hope? (2.0) | |
| 609 | 0:14:21.000 | 0:14:21.999 | H | Yeah, <I think so> | B joins the conversation to clarify P's inquiry. In terms of sound quality for P, this is the repairable or trouble source P makes an other-initiated repair |
| 610 | 0:14:22.000 | 0:14:23.000 | P | and <to show you the resolution?> (4.0) | |
| 611 | 0:14:27.000 | 0:14:27.999 | B | [Ah, yes]= | |
| 612 | 0:14:27.000 | 0:14:27.000 | P | [hello?] | B makes a self-repair as the original speaker by clarifying. |
| 613 | 0:14:27.999 | 0:14:28.000 | B | =please. | |
| 614 | 0:14:28.000 | 0:14:28.000 | | <i>The Software information screen is visible</i> | |
| 615 | 0:14:28.000 | 0:14:30.000 | B | Yes, yes, you need to go to hope= | |

616 0:14:30.000 0:14:30.000
 617 0:14:30.100 0:14:32.000
 618 0:14:32.000 0:14:32.000

B

*The Software information screen is visible
 =and show the resolution. [Yes]*



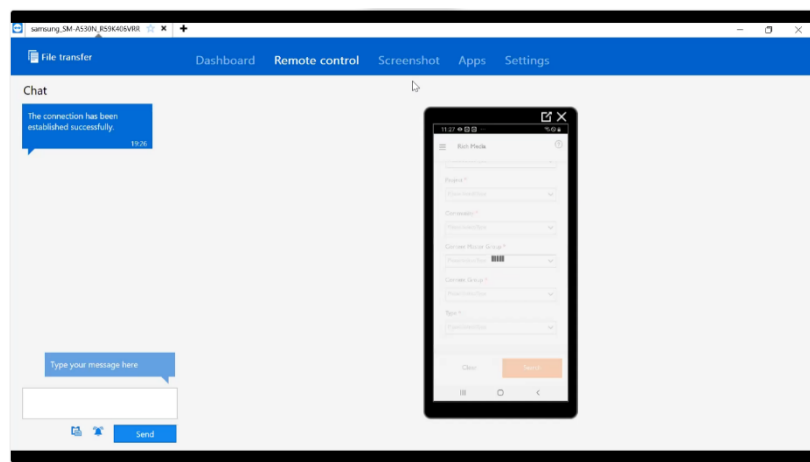
619 0:14:32.000 0:14:32.000
 620 0:14:34.000 0:15:10.000

P

[Ok] (70.5)

*P logs into the mobile application and background noises
 such a keyboard strokes and faint sounds of a person
 speaking could be heard from this end.*

628 0:15:12.000 0:15:12.000



P hides Settings screen

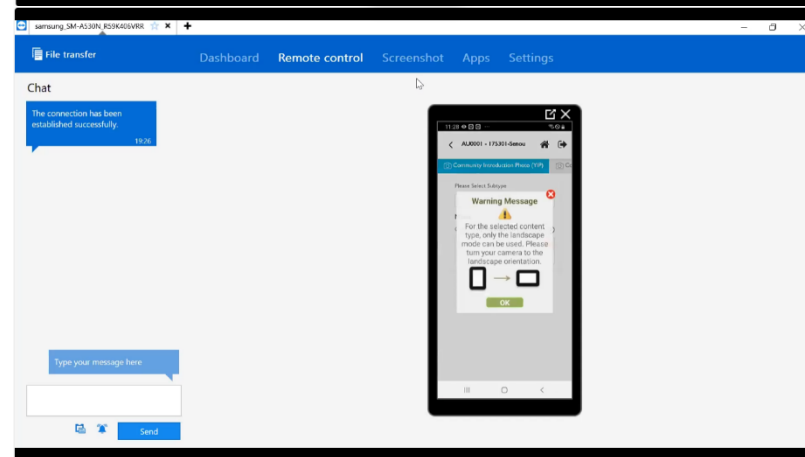
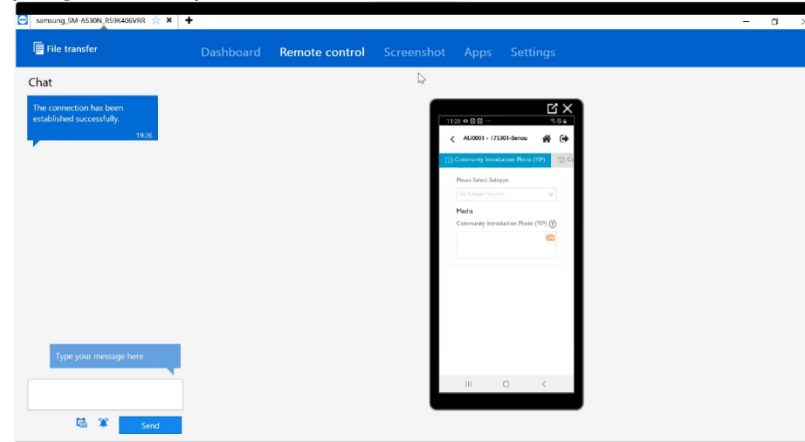
P agrees
 [Condensed lines 620-627]
 After logging in, P proceeds to select an
 option from the mobile application's
 menu.
 P selected Rich Media from the menu.
 The Rich Media screen loaded

629 0:15:14.000 0:15:14.000

637 0:15:35.000 0:15:35.000

638 0:15:37.000 0:15:37.000

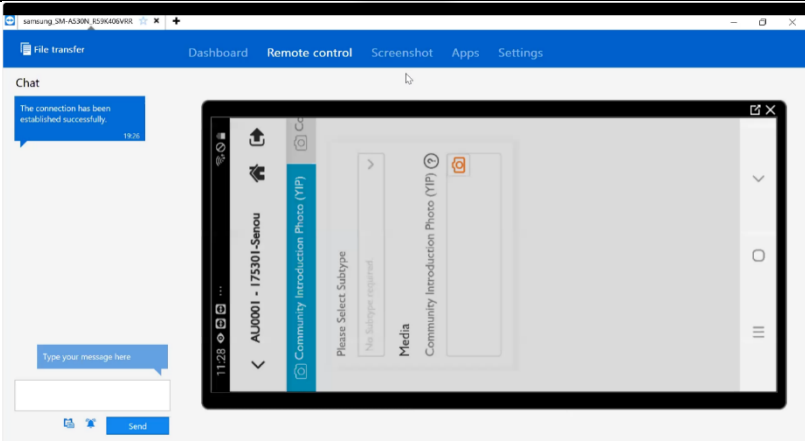
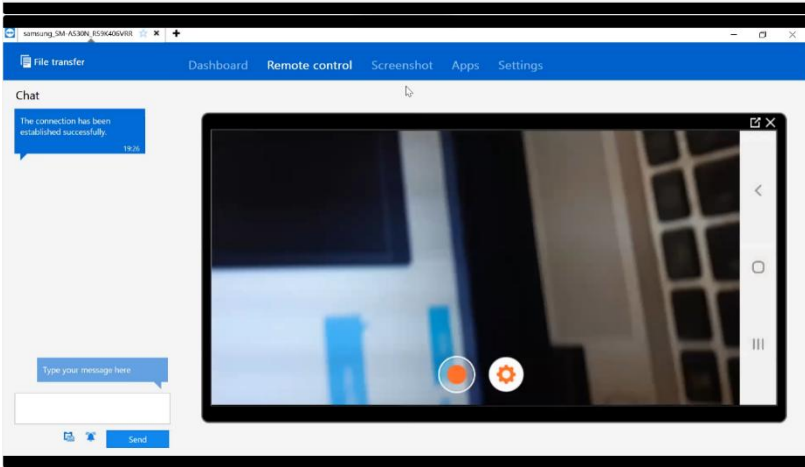
The Rich Media screen is now editable. P selects a programme, presses Search and the data loads



[Condensed lines 629-636]

Community Introduction Photo (YIP)

P opens the photo camera

| | | | | |
|-----|-------------|-------------|---|---|
| 639 | 0:15:38.000 | 0:15:38.000 |  | The screen changes in orientation to show the open camera |
| 640 | 0:15:40.000 | 0:15:40.000 |  | The open camera is displayed |

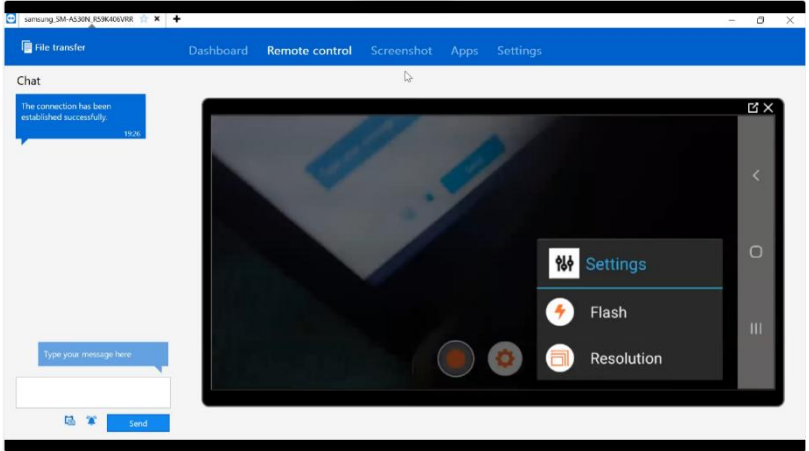
The conversation in this sequence starts with H asking if the resolution on the mobile device that they are checking is correct. In line 607, H asks, “Ah, is the resolution- () ah:: () correct?” P answered H’s question with another question instead of a statement. P replied, “Idz- do I need to go to hope? and <to show you the resolution?> (4.0)” in lines 608 and 610. This may be because, in lines 575, 577 and 579, he has been explaining to H that based on the information in the field guide, the resolution in the third device is correct. H replies, “Yeah, <I think so>” in line 609. After a 4-second pause, B joins the conversation and clarifies that P should login to the mobile application. She replies “[Ah, yes] please” in lines 611 and 613. In lines 615 and 617, she continues, “Yes, yes, you need to go to hope and show the resolution. [Yes].” In line 619, P accepts B’s request by uttering “[°Ok°].” For 70.5 seconds, from line 619 at TE: 0:14:32.000 to line 641 at TS: 0:15:42.500, the collaborators wait and observe as P goes to the resolution in the third device.

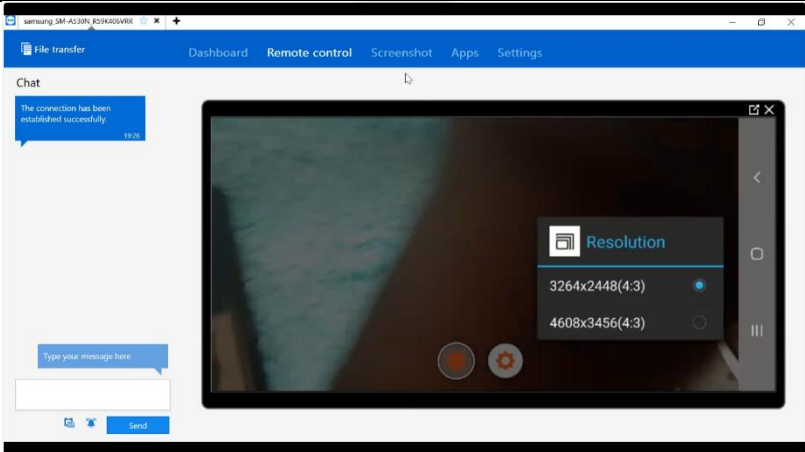
From this conversation, we can infer that teleworkers **ask questions to catch up with the conversation**, as seen in H's statement in line 607. Teleworkers also **support each other** if the cause is valid. In lines 611, 613, 615, and 617, B, similar to H, requested P to show the resolution on the third mobile device that they are connected to. This is because, in this online collaboration meeting, they were verifying the resolutions on different devices, and they have not yet seen the resolution on the third mobile device to confirm its correctness.

Sequence 22: P shows the resolution in the third device (Lines 641 to 699)

Table 26.

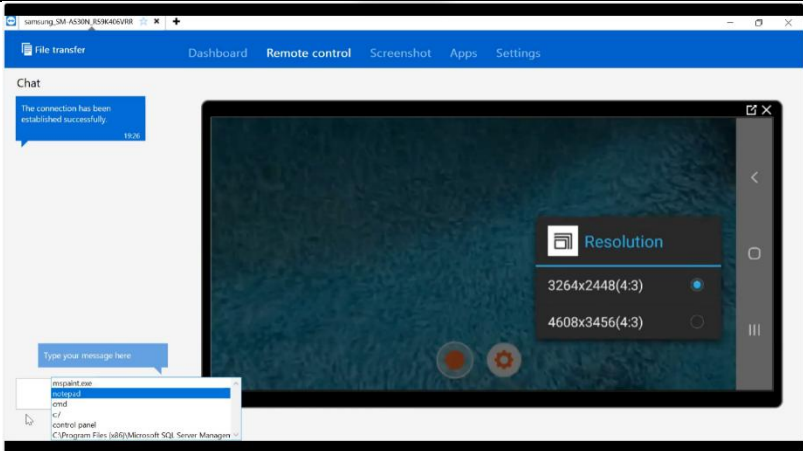
Analytical Table of Sequence 22

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|-------------|
| # | TS | TE | L | Transcription | Description |
| 641 | 0:15:42.500 | 0:14:43:500 | P | Can you see the resolution= | |
| 642 | 0:15:43.000 | 0:15:43.000 | |  <p>The screenshot shows a remote control interface with a blue header bar containing 'File transfer', 'Dashboard', 'Remote control', 'Screenshot', 'Apps', and 'Settings'. Below the header is a 'Chat' window with a message: 'The connection has been established successfully'. To the right of the chat is a settings menu with options for 'Settings', 'Flash', and 'Resolution'. The 'Resolution' option is highlighted.</p> | |
| 643 | 0:15:43.000 | 0:15:44.000 | P | =here? (4.0) | |
| 644 | 0:15:44.000 | 0:15:44.000 | | <i>Flash and Resolution options are displayed</i> | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 645 | 0:15:45.000 | 0:15:45.000 | |  | |
| 646 | 0:15:48.000 | 0:15:50.000 | H | So, this is for photo? (1.0) | |
| 647 | 0:15:51.000 | 0:15:52.000 | P | This is for photo. | |
| 648 | 0:15:53.000 | 0:16:01.000 | H | So, I can see the:- res-. Its <3 2-> 3 2 6 4 by 2 4 4 8. That's correct? That is the:: recommended? | |
| 649 | 0:16:02.500 | 0:16:07.000 | P | Yeah, <e- e- e- according to the- the field guide this one is the one> (.) which is recommended. | |
| 650 | 0:16:08.500 | 0:16:15.000 | H | So, it is showing? ↑I <think I was also able to see this> in your- the A50- A51? | Repair sequence: Lines 650 - 652 Marks the start of the repairable or trouble source. Sound problem R1 (sound) |
| 651 | 0:16:16.000 | 0:16:18.000 | P | I'm not hearing you very well. | P makes an other-initiated repair stating that he cannot hear H very well OIR1 |
| 652 | 0:16:18.100 | 0:16:28.000 | H | The other- the second phone that you checked. I also saw this. [So is it the- the android version (0.1) <that's causing> (0.1) <the resolution?>] (2.0) | H makes a self-repair by repeating her statement so that it can be understood SR1 |
| 653 | 0:16:23.000 | 0:16:30.000 | | [child's voice can be heard in the background] | This is also the repairable or trouble source to B's statement in line 654 R2 (error in understanding) |

| | | | | | |
|-----|-------------|-------------|---|---|---|
| 654 | 0:16:30.000 | 0:16:37.000 | B | Ah, these two resolutions which are not ah shown in the A50 and A51 right? This is something different right? (2.0) | B makes other-initiated repair to correct H's wrong information by asking for confirmation that the resolutions were not shown in A50 and A51 OIR2 This is also a repairable or trouble source. R3 (sound) |
| 655 | 0:16:39.000 | 0:16:39.000 | P | Please? (2.0) | P makes an other-initiated repair to B's statement OIR3 |
| 656 | 0:16:41.000 | 0:16:47.000 | B | Ah these resolutions are not same as we have seen in the A50 and A51 (0.1), [right?] | B makes a self-repair by repeating her question SR3 |
| 657 | 0:16:47.000 | 0:16:48.000 | P | [Yah,] they are different (1.0) | SR3 was effective P answers B's question in line 654 P's answer is also an other-repair to H's statement in line 652 originally stated in line 650 OR2 |
| 658 | 0:16:49.000 | 0:16:50.000 | B | °o::k° (0.5) | B acknowledges P's answer |
| 659 | 0:16:50.500 | 0:16:52.000 | P | Yeah, they are totally different | P continues To H, this statement is the repairable or trouble source R4 (error in understanding) |
| 660 | 0:16:53.000 | 0:16:59.000 | H | <Yeah, but-> I thought <I saw this> in the A50- <the second phone> that you showed earlier when you checked photos | H makes an other-initiated repair to P's statement in line 659 OIR4 H's statement is the repairable or trouble source to P's other-initiated repair in line 661 R5 (sound) |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 661 | 0:17:01.000 | 0:17:01.000 | P | Please? | P makes an other-initiated repair to clarify H's question in line 660 OIR5 |
| 662 | 0:17:01.100 | 0:17:11.000 | H | You had three- three resolutions. 1 2 daw ah 1 2 4 8 8 by (0.1) and then this one 3 2 6 4 by 2 4 4 [8] (2.0) | H makes a self-repair by repeating her statement SR5 This is the repairable or trouble source to P's statement in line 667 R6 (sound) |
| 663 | 0:17:11.000 | 0:17:11.000 | | <i>[Man speaks in the background in foreign language]</i> | |
| 664 | 0:17:12.500 | 0:17:18.500 | H | Three resolutions were showing (0.1) in the- the second phone that you checked (0.1) that was- what was the second= | H continues with her self-repair |
| 665 | 0:17:18.500 | 0:17:19.000 | H | = <i>[phone]</i> | |
| 666 | 0:17:18.500 | 0:17:19.000 | P | <i>[dali]</i> (3.0) | |
| 667 | 0:17:21.500 | 0:17:30.000 | P | I'm sorry becooz I'm not hearing you very well. (0.1) The- the voice is- (0.1) is a little bit- it's not high at all | P makes an other-initiated repair to H's statement in line 662 and line 664 OIR6 |
| 668 | 0:17:30.000 | 0:17:33.000 | H | ok, the second phone- the second mobile- that you checked (1.0)= | H makes a self-repair by repeating her statement and asking more detailed questions (lines 668-669 and line 671) to clarify the model SR6 |
| 669 | 0:17:34.000 | 0:17:34.000 | H | = <i>[what-]</i> | |
| 670 | 0:17:34.000 | 0:17:36.000 | P | <i>[Yeah,]</i> the second one we checked? | |
| 671 | 0:17:36.000 | 0:17:40.000 | H | Ehh, that was- what was the model of that? The second one that you checked? | |
| 672 | 0:17:42.000 | 0:17:44.000 | P | The <i>[second we checked]</i> we- we- had three= | P's answer to H's question in lines 668-669 and line 671 |
| 673 | 0:17:42.100 | 0:17:43.000 | B | <i>[The A50s]</i> | |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 674 | 0:17:44.000 | 0:17:44.000 | |  | The available resolutions are displayed |
| 675 | 0:17:44.000 | 0:17:47.000 | P | =three resolutions three different resolutions | |
| 676 | 0:17:46.000 | 0:17:46.000 | | <i>The available resolutions are displayed</i> | |
| 677 | 0:17:47.000 | 0:17:50.000 | H | Yah, but its including this 3 2 6 4 (1.0) | H's follow-up question |
| 678 | 0:17:51.000 | 0:17:51.000 | H | [°This°] | |
| 679 | 0:17:51.000 | 0:17:54.000 | P | [No] ah:: I did not see this one (2.0) | P's self-repair to H's other-initiated repair in line 660 if line 659, spoken by P, is considered a repairable or trouble source. SR4 |
| 680 | 0:17:56.000 | 0:17:58.500 | H | So- (0.1) you had three resolutions- | |
| 681 | 0:17:59.000 | 0:18:01.000 | P | We can check it again. The phone is here with me | |
| 682 | 0:18:01.100 | 0:18:04.000 | H | ↓°That's right.° ↓It's- That was A51, the second phone?↓ (3.0) | |
| 683 | 0:18:07.000 | 0:18:10.000 | H | A:: what was the model of the second? (1.0) | |
| 684 | 0:18:11.000 | 0:18:15.000 | P | The second is ah:: an A (1.0) A50 | |
| 685 | 0:18:16.500 | 0:18:17.000 | H | A50 | |
| 686 | 0:18:17.000 | 0:18:19.000 | P | The first one was [an A51]= | |
| 687 | 0:18:17.500 | 0:18:18.000 | B | [ah:: wha::ts]- | |
| 688 | 0:18:19.000 | 0:18:25.000 | P | The second was an A50 and this iz and A8. | |

| | | | | |
|-----|-------------|-------------|---|--|
| 689 | 0:18:26.000 | 0:18:34.000 | B | Ah actually se::cond one is A50yes. We need to mention s also because model will be different. A50 and A50s (2.0) |
| 690 | 0:18:36.000 | 0:18:36.000 | P | °Uhmhmm° (2.0) |
| 691 | 0:18:37.000 | 0:18:42.500 | B | So second one is A50s. First one is A51 and third one is A8. |
| 692 | 0:18:43.000 | 0:18:43.000 | P | Yah |
| 693 | 0:18:44.000 | 0:18:44.000 | B | <i>(makes an undecipherable sound)</i> (4.5) |
| 694 | 0:18:48.500 | 0:18:55.000 | P | Ah:: e- a- Do I need to share the- the guide with you so that you can see what is mentioned in the guide? (2.0) |
| 695 | 0:18:57.000 | 0:19:00.000 | B | Ah no. We understand the issue. Ah:: its [it's]= |
| 696 | 0:19:00.000 | 0:19:00.000 | P | [°ok°] |
| 697 | 0:19:00.000 | 0:19:05.000 | B | =mainly based on the device model and the supported camera resolutions= |
| 698 | 0:19:06.000 | 0:19:06.000 | P | °ok° |
| 699 | 0:19:06.000 | 0:19:39.000 | B | =Ah along with the- a- Android versions. So these three are the combinations uh:: for the resolutions which are being shown up. So we'll try to reproduce from our end and (0.1) if we couldn't reproduce we'll reach out to S uh:: (0.1) and ask for the device model which we have tested today (0.1) and then try to reproduce the issue in the new devices because in A50 we couldn't reproduce it (0.1) and uh::- its purely based on the device mo::del supported resolutions and the android version which is being installed in the device (3.5) |

After logging into the mobile application and going to the photo camera (lines 637 or TS: 0:15:35.000 to lines 640 or TE: 0:15:40.000) on the third device, P starts this sequence by asking, “Can you see the resolution here?” in lines 641 and 643. Here, the team discusses the resolutions that they see. In line 650, H claims that she also saw the resolutions being shown now in the other devices. She said, “So, it is showing? 1l <think I was also able to see this> in your- the A50- A51?” P replies by saying, “I’m not hearing you very well.” in line 651. And so, in line 652, H clarifies, “The other- the second phone that you checked. I also saw this. [So is it the- the android version (0.1) <that’s causing> (0.1) <the resolution?>] (2.0).” After a 2-second gap, B steps in the conversation and replies in line 654, “Ah, these two resolutions which are not ah shown in the A50 and A51 right? This is something different right?” After 2.0 seconds, P speaks up by asking “Please?” (line 655). It appears that he cannot hear even B very well. So B repeats, what she just said in line 656, “Ah these resolutions are not same as we have seen in the A50 and A51 (0.1), [right?]” P replies, “[Yah,] they are different” in line 657. In lines 654 to 659, B and P agree that the resolutions that they are seeing now in the third mobile device are different from the resolutions they previously saw in the other two mobile devices that they have checked. In line 660, H continues with her claim that she thought she saw these resolutions in the second phone that P checked earlier. She said “<Yeah, but-> I thought <I saw this> in the A50- <the second phone> that you showed earlier when you checked photos.” P could not hear her very well and replied, “Please?” in line 661. H repeats in line 662 that she thought she saw the 3264 by 2448 resolution. She says, “You had three- three resolutions. 1 2 daw ah 1 2 4 8 8 by (0.1) and then this one 3 2 6 4 by 2 4 4 [8].” In lines 664 to 692, B and P clarify with H that the first phone that they checked was an A51, the second was an A50s, and the current or third one is an A8. In line 694, P asks

if he needs to share the field guide by asking, “Ah:: e- a- Do I need to share the- the guide with you so that you can see what is mentioned in the guide?” B declines this request by saying “no” and that they understand the issue in lines 695 and 697. In line 699, B further explains the actions that they will take on their end to resolve the issue.

In this conversation, these actions can be identified. First, **making repairs**. P seemed not to hear H and B very well and was requesting them to repeat what they were saying in lines 651, 655, and 661. Online collaboration settings can be very **dependent on technology**. The setup of a participant’s microphone or the availability of a good headset can affect the quality of the sound an online meeting participant can receive. P seems to be using his laptop’s built-in microphone, which catches the background noises from his end. Second, in an online meeting, some participants whose level of involvement is not as engaged as the others may need to **catch up on the topic**. For example, in lines 668, 669, 671, and 683, H was asking questions to clarify the mobile devices P and B were checking in the earlier parts of the online collaboration meeting. In lines 650, 652, and 660, H claims that she saw the resolutions found in the third phone on the other devices that P checked. This shows that in an online meeting, **participants have different ways of participating**. H’s statements in lines 650, 652, and 660 claimed that there was no problem because the correct resolution was also visible on the other phones. P contradicts this by saying, “[No] ah:: I did not see this one” in line 679. P, as the customer, **acted according to his role**. Since his group was the one experiencing the issue, he did his best to provide all the information needed from their end that could help resolve it. In line 681, he expressed willingness to check the other phone again by saying, “We can check it again. The phone is here with me.” In line 694, he also expressed his willingness to share the guide when he said, “Ah:: e- a- Do I need to share the- the guide with you

so that you can see what is mentioned in the guide?” B, as a member of the vendor, **acted according to her role** and reassured the team that they understood the issue. In lines 695, 697, and 699, she says, “Ah no. We understand the issue. Ah:: [it's] mainly based on the device model and the supported camera resolutions Ah along with the- a- Android versions. So these three are the combinations uh:: for the resolutions which are being shown up. So we'll try to reproduce from our end and (0.1) if we couldn't reproduce we'll reach out to S uh:: (0.1) and ask for the device model which we have tested today (0.1) and then try to reproduce the issue in the new devices because in A50 we couldn't reproduce it (0.1) and uh::- its purely based on the device mo::del supported resolutions and the android version which is being installed in the device.”

Sequence 23: H requests P to share screenshots (Lines 700 to 735)

Table 27.

Analytical Table of Sequence 23

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---|
| # | TS | TE | L | Transcription | Description |
| 700 | 0:19:42.500 | 0:19:54.000 | H | °°wha- ok ahm::°° †so uhm P, can you send a screenshot of the resolutions for each device? (0.1) just for documentation (0.1) aw I know we= | <p>[Condensed lines 705-706]</p> <p>Repair sequence: lines 705 to 713</p> <p>Repairable/Trouble Source: H's statements in lines 705, lines 708 to 709 Other-Initiated Repair: P's statements in line 707, line 710, and line 711 Self-Repair by H being the original speaker: line 712</p> <p>H's instruction in lines 705 to 706, lines 708 to 709 is the repairable or trouble source P makes an other-initiated repair</p> |
| 701 | 0:19:54.000 | 0:19:55.000 | H | = [had-] = | |
| 702 | 0:19:54.000 | 0:19:55.000 | B | [So=] | |
| 703 | 0:19:55.000 | 0:19:56.000 | H | =°°°this meeting°°° but ahm-= | |
| 704 | 0:19:57.000 | 0:19:58.000 | B | A- a- | |
| 705 | 0:19:57.000 | 0:20:08.400 | H | =°°more on°° †its recorded but can you:: also send-°°like°° a screenshot of all (0.1) of each device that we checked today. (2.0) Just so that= | |
| 707 | 0:20:08.400 | 0:20:08.999 | P | [Please?] | |
| 708 | 0:20:08.400 | 0:20:08.999 | H | = [we are] = | |
| 709 | 0:20:09.000 | 0:20:09.500 | H | = [sure] | |

| | | | | | |
|-----|-------------|-------------|---|--|--|
| 710 | 0:20:09.400 | 0:20:10.000 | P | [Please?] (2.0) | P makes a second other-initiated repair P makes a third other-initiated repair H as the original speaker makes a self-repair by answering P's third other-initiated repair |
| 711 | 0:20:12.000 | 0:20:17.500 | P | Do you need I send you the- the- screenshot of each devices? | |
| 712 | 0:20:18.000 | 0:20:20.000 | H | Yah, yah, yes [like ah]= | |
| 713 | 0:20:19.500 | 0:20:20.000 | P | [ok] | |
| 714 | 0:20:20.000 | 0:20:30.000 | H | =↓first its ah it's A fif- ah A51↑ Android 11 and then the resolutions for photo, resolutions for video and then= | |
| 715 | 0:20:30.000 | 0:20:31.000 | H | =A[50]= | |
| 716 | 0:20:30.000 | 0:20:30.000 | P | [Yah]= | |
| 717 | 0:20:31.000 | 0:20:34.999 | H | =Android10, <resolutions for photo>, <then video> and then= | |
| 718 | 0:20:35.000 | 0:20:35.500 | H | =[A8]= | |
| 719 | 0:20:35.300 | 0:20:35.500 | P | =[ok] | |
| 720 | 0:20:35.500 | 0:20:38.000 | H | =Android 9 <resolutions for photo and video.> | |
| 721 | 0:20:38.500 | 0:20:39.500 | P | Yah, no problem. I will do it. (1.5) | |
| 722 | 0:20:41.000 | 0:20:47.000 | H | °ok° (1.0) So, do you think that will help ah:: CTS? ehe (slight laughter) sorry, if we request him for- (0.1) those= | |
| 723 | 0:20:47.000 | 0:20:49.000 | H | =screenshots? [Just]-= | |
| 724 | 0:20:49.000 | 0:20:49.000 | P | [°ok°] | |
| 725 | 0:20:49.500 | 0:20:50.000 | B | [Ah, yes]= | |
| 726 | 0:20:51.000 | 0:20:51.500 | H | =we know [that]= | |
| 727 | 0:20:51.500 | 0:20:53.000 | B | =[Yes, this will help bep]= | |
| 728 | 0:20:51.500 | 0:20:52.000 | H | =[what we have checked-] | |
| 729 | 0:20:53.000 | 0:20:55.000 | B | This, this will help us. Yes (2.0) | |
| 730 | 0:20:57.000 | 0:20:57.000 | H | °ok° (1.0) | |
| 731 | 0:20:58.000 | 0:20:59.500 | P | Okay, no problem. (8.5) | |
| 732 | 0:21:08.000 | 0:21:10.000 | P | What else do you- do- do you need? (1.0) | |
| 733 | 0:21:11.000 | 0:21:21.000 | B | Ah, we are ok with the informations <whatever we got in this call.> We'll try to ah- reproduce with the devices which we have- (1.0) and we'll proceed. Yes. | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 734 | 0:21:23.000 | 0:21:23.000 | P | °ok° (6.0) | |
| 735 | 0:21:29.000 | 0:21:35.000 | B | A- ah, that's all from our side, H, yes. (1.0) <Thank you for your time and thank you for scheduling this meeting.> | |

H starts this sequence by requesting P to send a screenshot of the resolutions of each device that they checked for documentation. In lines 700, 701, 703, 705, 706, 708, and 709, she says “^{oo}wha- ok ahm::^{oo} ↑so uhm P, can you send a screenshot of the resolutions for each device? (0.1) just for documentation (0.1) aw I know we [had-]^{ooo}this meeting^{ooo} but ahm- ^{oo}more on^{oo} ↑its recorded but can you:: also send- ^{oo}like^{oo} a screenshot of all (0.1) of each device that we checked today. (2.0) Just so [that] we are [sure].” P makes a repair in lines 707 and 710 by asking, “[Please?].” In 711, he clarifies, “Do you need I send you the- the- screenshot of each devices?” H affirms her request by saying, “Yah, yah, yes [like ah]” in line 712, and she continues to provide instructions in lines 714, 715, 717, 718, and 720 with her statement, “↓first its ah it’s A fif- ah A51↑ Android 11 and then the resolutions for photo, resolutions for video and [then] A50 Android10, <resolutions for photo>, <then video> and then [A8] Android 9 <resolutions for photo and video.>.” After some clarification in lines 707, 710, and 711, P accepts H’s request by affirming in lines 713, 716, 719, and 721. In line 721, P expresses willingness to send the screenshots by saying, “Yah, no problem. I will do it.” In line 729, B confirms that the screenshot will help their team resolve the issue in her statement, “This, this will help us. Yes.”

In the conversation in this sequence, the actions that can be identified are **making an other-initiated repair**. Similar to the last sequence, P seems to have trouble hearing H, so he makes a repair with statements such as “Please” in lines 707 and 710, and also by clarifying if he needs to send screenshots for each device in line 711. These statements show that teleworkers resolve communication breakdowns caused by technology by **making other-initiated verbal repairs**. Lines 707 and 710, also show that **teleworkers' acceptance of requests depends on how well they can hear the requestor**. Second, in this sequence, we can draw that teleworkers

maintain order by **acting according to their role**. H, as the host, suggested that P send screenshots to document the information that they had discussed in the online collaboration meeting. In H's statement in lines 700, 701, 703, 705, 706, 708, and 709, H mentioned that the meeting is recorded but proceeded to request P for screenshots. The reason that H provided was so that they could be sure that they have the information that they need at hand. The practice that can be extracted here is **preferring quicker ways to find or access data**. Though their meeting was recorded, viewing a specific screenshot was quicker than having to replay an entire meeting recording. Having a quicker way to see data provided more assurance that the investigators would see the correct data. P, as the customer experiencing the issue, did his best to provide all that was needed from his end for their problem to be resolved. Aside from accepting H's request to send screenshots of the devices at his end that they have checked, in line 732, P also self-selects himself as a speaker and initiates asking, "What else do you- do- do you need?" B, as the vendor, continued to assure the group that they are in control of the issue and that the issue will be resolved. In lines 725, 727 and 729, B supports H's request that P send screenshots by affirming that this will help their team resolve the issue. In lines 733 and 735, B heads to closing the discussion by saying that they have all the information that they need and by thanking H for setting up the meeting.

Sequence 24: The team makes final discussions (Lines 736 to 748)

Table 28.

Analytical Table of Sequence 24

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|--|-------------|
| # | TS | TE | L | Transcription | Description |
| 736 | 0:21:36.000 | 0:21:50:000 | H | °ok° So:: ah <so more on> ah just based on looking at it now, it's, it's really A50- the the device° †that has the issue? It's a limitation of the device or you can't tell now, you have to check it at your end? (2.5) | |
| 737 | 0:21:52.500 | 0:22:32.000 | B | Ah::, actually, ah:: right now we have four to five device models like A50 J7 ah:: next and few devices which we have for our testing purpose so we'll try to check all the resolutions whatever ah ah those are getting listed in each devices and try to ah check with the resolutions whatever we have seen today like A51 A50s and A8 right? So we'll just compare it with the resolutions which we got in the devices which we have tested and if we could reproduce we'll try to fix it otherwise we'll ah drop a mail to S and ask him for new devices. | |
| 738 | 0:22:32.100 | 0:22:32.400 | H | °ok, [so]° | |
| 739 | 0:22:32.400 | 0:22:33:000 | B | [Is] that fine H? | |
| 740 | 0:22:33:100 | 0:22:37.000 | H | Yes. ah so its not the Android version [that's]= | |
| 741 | 0:22:36.500 | 0:22:37.000 | P | [ok] | |
| 742 | 0:22:37.000 | 0:22:37.500 | H | causing? | |
| 743 | 0:22:37.500 | 0:22:42.500 | B | eh it's- it's combination of android version and device ah configuration. | |
| 744 | 0:22:43.100 | 0:22:53.999 | H | Ok, because the first one was A51 Android 11 so you could not see the correct- the resolution. So it the 3 2 6 6 by | |

| | | | | | |
|-----|-------------|-------------|---|---|--|
| 745 | 0:22:54.000 | 0:22:58.000 | H | 4 8 9 9 resolution (1.5) so, I think [its] | |
| 746 | 0:22:58.000 | 0:23:39.000 | B | [Yes, actually] ah in first-first device A51 we could see 2 2 resolutions. In photo, ah we could see two and in video, we could see two but in the second model which we have tested in A8 A50s, right? So there we could see three resolutions for photo. So:: ah, its purely based on the camera as well as the android because ah we got you incidents saying (0.1) while capturing photos or videos app is getting crashed so that is because of android 11. So everything is actually combination. (0.5) We'll to reproduce in the devices which we have ah for our testing (0.1) if not we'll drop a mail today itself. | |
| 747 | 0:23:39.100 | 0:22:54.000 | H | <Ok because>ah::right now (0.1) we are still working from home so the device that I have is J6 (1.0) J6 and E50 (1.0) so I don't have A51 (0.5) and A50. | |
| 748 | 0:23:54.000 | 0:23:55.000 | B | Ok, ok. | |

This sequence starts in line 736 with H asking a follow-up question to B, “ok° So:: ah <so more on> ah just based on looking at it now, it’s, it’s really A50- the the device° †that has the issue? It’s a limitation of the device or you can’t tell now, you have to check it at your end? (2.5).” Here, H asks B for more information about the issue. In line 737, B replies, “Ah::, actually, ah:: right now we have four to five device models like A50 J7 ah:: next and few devices which we have for our testing purpose so we’ll try to check all the resolutions whatever ah ah those are getting listed in each devices and try to ah check with the resolutions whatever we have seen today like A51 A50s and A8 right? So we’ll just compare it with the resolutions which we got in the devices which we have tested and if we could reproduce we’ll try to fix it otherwise we’ll ah drop a mail to S and ask him for new devices.”

In the conversation in this sequence, it can be extracted that teleworkers **act according to their role**. H, who is the host, was not in a hurry to end the meeting. Instead, she asked a follow-up question to get more information from B, perhaps to get more assurance on what B’s team would do to resolve the issue. B clearly provided details on what they would do next. In B’s reply in line 737, B mentions dropping a mail to S, who was not in the meeting. In line 746, B also mentions dropping a mail today if they cannot reproduce the issue from their end. From B’s statements, we can draw that teleworkers **use a variety of communication tools to communicate**. Aside from video conferencing, they also use email to communicate offline. In line 739, B also asks “[Is] that fine, H?” to **confirm with H if she was fine with the process that she was suggesting** in her reply. Lines 740 to 747 show that teleworkers **take advantage of video conferencing to discuss issues freely**. In line 747, H mentions that they are still working from home, and so she cannot help B’s team, the CTS team, in testing the A50 devices with the issue. In an online collaboration set-up, borrowing resources

is not as easy as in a co-located set-up. To get hold of resources, these have to be transported to the remote location, unlike in a co-located set-up, where a worker can just go where the resource is to get hold of it or borrow it. In the last line of B's statement in line 737, "...otherwise we'll ah drop a mail to S and ask him for new devices," she explains that if the devices experiencing the issue at the customer's end are not available at their end, they will have to send S an email to request him to send them new devices similar to the devices that are at P's end.

Sequence 25: The team ends the meeting (Lines 749 to 776)

Table 29.

Analytical Table of Sequence 25

| Transcript Title: 19123620210727Z | | | | | |
|-----------------------------------|-------------|-------------|---|---|---------------------|
| # | TS | TE | L | Transcription | Description |
| 749 | 0:23:56.000 | 0:24:17.000 | H | So:: a::m- ok so:: so for now we will end this meeting. So eh you will still- ah CTS will still try to replicate the issue using the devices that they have at hand <and then> ahm for the field office ah so P can we just ask for the screenshots. I will update the incident- the incident of= | P closes the camera |
| 750 | 0:24:17.000 | 0:24:17.000 | | <i>The screen changes to portrait orientation</i> | |
| 751 | 0:24:17.000 | 0:24:19.000 | H | =our action items | |
| 752 | 0:24:19.000 | 0:24:19.000 | | <i>The screen of the mobile device is displayed</i> | |
| 753 | 0:24:20.000 | 0:24:27.000 | B | Ye- yes please update the incident even we have ah updated the screenshot which we have tested in A50= | |
| 754 | 0:24:27.000 | 0:24:27.000 | | <i>The next set of icons available in the mobile device are displayed</i> | |
| 755 | 0:24:27.000 | 0:24:41.000 | B | =so we'll we'll ah update the ah incidents with the more screenshots in other device models which we are testing (0.5) ah then we'll drop a mail to S (0.1) for asking new device if we couldn't reproduce. | |
| 756 | 0:24:41.000 | 0:24:41.000 | | <i>Settings screen is visible</i> | |
| 757 | 0:24:41.500 | 0:24:42.000 | H | Okay, yah= | |
| 758 | 0:24:43.000 | 0:24:43.000 | | <i>The area around About Phone option in settings changes to a darker shade of gray to indicate that it is being selected</i> | |
| 759 | 0:24:42.000 | 0:24:43.000 | H | okay | |
| 760 | 0:24:43.500 | 0:23:44.000 | B | Yah | |

| | | | | | |
|-----|-------------|-------------|---|--|---|
| 761 | 0:24:44.000 | 0:24:44.000 | | <i>The About phone screen is displayed with Software information option showing at the bottom</i> | |
| 762 | 0:24:44.000 | 0:24:47.000 | H | So P- are you-? Is that ok? So= | |
| 763 | 0:24:48.000 | 0:24:48.000 | | <i>The Software information screen is visible</i> | Software information was selected |
| 764 | 0:24:47.000 | 0:24:54.500 | H | <I think you-> already agreed to sending the screenshot <so I will just update the incident> (1.0) and [then-] | |
| 765 | 0:24:54.500 | 0:25:00.000 | P | [Yeah], its ok for me (1.0) Yah just after this call I will send you the the different screenshots | |
| 766 | 0:25:01.000 | 0:25:05.500 | H | Okays yeah so yes <I will update the incident also> and then you can [reply] | |
| 767 | 0:25:05.000 | 0:25:05.000 | | <i>The Software information screen is visible</i> | |
| 768 | 0:25:05.000 | 0:25:06.000 | P | [No] problem | |
| 769 | 0:25:07.000 | 0:25:11.000 | H | Okay so thank you everyone. Thanks everyone. So we will now end this call. (2.0) | |
| 770 | 0:25:13.000 | 0:25:15.000 | P | Thank you. Thank you for your time. Thank you for your sup[port] | |
| 771 | 0:25:15.000 | 0:25:17.000 | B | [Yah] thank you everyone yah thank you | |
| 772 | 0:25:18.000 | 0:25:19.000 | H | Bye (0.1) bye | |
| 773 | 0:25:20.000 | 0:25:20.000 | B | Bye | |
| 774 | 0:25:21.000 | 0:25:21.000 | P | Byebye (9.0) | |
| 775 | 0:25:24.000 | 0:25:24.000 | | <i>H's profile picture is displayed onscreen</i> | H stops screen sharing. The remaining 6 seconds may have been used to stop the recording. The recording ends at TS: 0:25:30:000/TE: 0:25:30:000 in line 776 |
| 776 | 0:25:30.000 | 0:25:30.000 | | <i>End of the recording</i> | |

This sequence starts with H taking a turn and making a statement in lines 749 and 751, “So:: a::m- ok so:: so for now we will end this meeting. So eh you will still- ah CTS will still try to replicate the issue using the devices that they have at hand <and then> ahm for the field office ah so P can we just ask for the screenshots. I will update the incident- the incident of our action items.” In this statement, we can draw that in an online collaboration, teleworkers end a meeting by **summarizing their action items**. In her statement, H mentions that CTS or B’s team will still try to replicate the issue, and P will send screenshots. She also mentions incidents. By this, she means an “incident ticket (Gupta et al., 2008, p.142)” that P’s team submitted through an “automated IT Service Management system (Gupta et al., 2008, p.141)” to document the issue they reported. In an online collaboration, teleworkers **do not limit themselves to synchronous collaboration**. They also **make use of asynchronous written collaboration tools**, which they can access and update at different times to document or to keep track of the progress of their work. In line 755, B also mentions about updating incidents, “so we’ll we’ll ah update the ah incidents with the more screenshots in other device models which we are testing (0.5) ah then we’ll drop a mail to S (0.1) for asking new device if we couldn’t reproduce.” In line 766, H also says to P, “Okays yeah so yes <I will update the incident also> and then you can [reply].” From these statements, we can extract that the online collaborators, B, P, and H, **share access over the incident**. Each of them can view and update it. To end an online collaboration meeting, teleworkers also **agree on action items**. In line 753, B agrees with H’s suggestion that she update the incident with her statement, “Ye- yes please update the incident even we have ah updated the screenshot which we have tested in A50=.” In line 762 and 764, H confirms with P if he is ok with sending the screenshots in her statement, “So P- are you-? Is that ok? So <I think yous-> already agreed to

sending the screenshot <so I will just update the incident> (1.0) and [then-]...” In line 765, P replies to H’s statement by agreeing, “[Yeah], its ok for me (1.0) Yah just after this call I will send you the the different screenshots.” From this sequence, it can also be extracted that similar to a face-to-face meeting, **it is the moderator or the meeting host who decides to end a meeting**. In lines 733 and 735 in Sequence 23, B already expresses that her team has all the information that they need. By thanking H for scheduling the meeting, she implies that the meeting can now be ended. However, being the moderator, H extracted more information from B, and then finally, when all was clear, in line 769, formally declared that the meeting could be ended. H may not have ended the meeting after B suggested that it could already be ended since she may have wanted to resolve the issue during the online collaboration call. However, some issues take time to resolve. The online video conference was only a way to get the team synchronized so that they would view the same data, having different mobile devices with different models and Android versions at each of their ends. The synchronous online meeting gave them an understanding of what to check and also systematically informed them of their differences that were preventing them from resolving the issue. From here, it can be extracted that to cause work to be done, **teleworkers complement synchronous methods with asynchronous methods and vice versa**. For example, in the video call, it can be drawn that their actual work will begin after it, when they separate. As they agreed, they will record the progress of their work in the incident. The online synchronous video conferencing ended with the participants thanking each other and saying goodbye.

The actions discovered from the sequence descriptions were grouped into collective practices. The collective practices were then categorized based on whether they were also applicable to face-to-face work settings or only to virtual settings. Determining the work setting a collective practice was applicable to, whether face-to-face and virtual or only virtual, depended on the context of its corresponding action, as it was described in the sequence description. To make sense of the practices applicable only to online settings, these were discussed based on their occurrence in each virtual meeting phase: pre-meeting, beginning of the meeting, middle of the meeting, and end of the meeting. The practices applicable only to virtual settings were finally categorized into six key practices.

Table 30: Action, Collective Practice, Same with face-to-face and Meeting Phase Mapping present the categorization of the actions identified based on the collective practice associated with them, if they were actions also done in face-to-face meetings or not, and the meeting phase on which they occurred. In the Media column in Table 30, RS refers to Remote Session and OWI, refers to Online Written Interaction. Lastly, Table 31: Collective Practice, and Main Practice Mapping present the collective practices and the corresponding key practices that they were categorized into.

Table 30.

Action, Collective Practice, Same with face-to-face and Meeting Phase Mapping

| # | Media | Sequence | Action | Order | Collective Practice | Same with face-to-face | Phase |
|---|-------|----------|--|-------|--------------------------------|------------------------|--------------------------|
| 1 | RS | 1 | Verifying that a quorum has been achieved - informing everyone that their collaborative group is now complete | 1 | Performing moderating tasks | Y | Beginning of the Meeting |
| 2 | RS | 1 | Introducing each participant and the groups to which they belong. | 2 | Performing moderating tasks | Y | Beginning of the Meeting |
| 3 | RS | 1 | wait for a quorum to be achieved | 3 | Performing moderating tasks | Y | Beginning of the Meeting |
| 4 | RS | 1 | begin once a quorum has been achieved | 4 | Performing moderating tasks | Y | Beginning of the Meeting |
| 5 | RS | 1 | someone takes the role of starting the meeting | 5 | Performing moderating tasks | Y | Beginning of the Meeting |
| 6 | RS | 1 | act according to assigned role | 6 | Acting according to one's role | Y | Beginning of the Meeting |

| | | | | | | | |
|----|----|---|---|----|--|---|--------------------------|
| 7 | RS | 1 | Verbalizing actions - Describing what one would do next to provide continuity in one's speech or to fill-in gaps | 7 | Applying coordinated use of technology | N | Beginning of the Meeting |
| 8 | RS | 1 | Sharing the screen | 8 | Screen sharing | N | Beginning of the Meeting |
| 9 | RS | 1 | apply coordinated use of technology | 9 | Applying coordinated use of technology | N | Beginning of the Meeting |
| 10 | RS | 1 | Affirming that they can see the screen | 10 | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Beginning of the Meeting |
| 11 | RS | 1 | share a common view | 11 | Screen sharing | N | Beginning of the Meeting |
| 12 | RS | 1 | use technology that makes use of their sense of sight and/or hearing | 12 | Using appropriate tools and technology | N | Beginning of the Meeting |
| 13 | RS | 2 | sets the direction | | Performing moderating tasks | Y | Middle of the Meeting |
| 14 | RS | 2 | addresses explicitly the CTS team based on prior knowledge | | Performing moderating tasks | Y | Middle of the Meeting |

| | | | | | | | |
|----|-----|---|---|---|---|---|-----------------------|
| 15 | RS | 2 | providing guidance | | Acting according to one's role | Y | Middle of the Meeting |
| 16 | RS | 2 | coordinated use of technology | | Applying coordinated use of technology | N | Middle of the Meeting |
| 17 | RS | 2 | share control of computing devices | | Sharing access | N | Middle of the Meeting |
| 18 | RS | 2 | act according to their role | | Acting according to one's role | Y | Middle of the Meeting |
| 19 | RS | 2 | using asynchronous collaborative tools to gather more information about a topic | | Using appropriate tools and technology | N | Middle of the Meeting |
| 20 | RS | 2 | complying with security policies | | Complying with data privacy and information security policies | N | Middle of the Meeting |
| 21 | RS | 2 | unintentionally compromise security when sharing information | | Compromising security | N | Middle of the Meeting |
| 22 | OWI | 2 | Connecting | 1 | Connecting | N | Pre-meeting |
| 23 | OWI | 2 | wait for the screen of P's mobile device to load completely | 3 | Synchronizing/Coordinating | N | Pre-meeting |
| 24 | OWI | 2 | wait for the participants to be complete and for her to start the meeting | 4 | Synchronizing/Coordinating | Y | Pre-meeting |

| | | | | | | | |
|----|-----|---|--|---|---|---|-----------------------|
| 25 | OWI | 2 | synchronize/coordinate | 4 | Synchronizing/Coordinating | Y | Pre-meeting |
| 26 | OWI | 2 | waiting for a quorum to be achieved | 4 | Synchronizing/Coordinating | Y | Pre-meeting |
| 27 | OWI | 2 | Reading onscreen visual cues | 2 | Reading onscreen visual cues or status messages | N | Pre-meeting |
| 28 | OWI | 2 | Using a variety of communication tools to collaborate | 5 | Using appropriate tools and technology | N | Pre-meeting |
| 29 | OWI | 2 | Starting the Zoom meeting | 6 | Starting a synchronous meeting | N | Pre-meeting |
| 30 | OWI | 2 | Inviting meeting participants | 7 | Inviting meeting participants | N | Pre-meeting |
| 31 | OWI | 2 | Meeting at a common time between different geographical locations/Set a common time | 8 | Synchronizing/Coordinating | N | Pre-meeting |
| 32 | RS | 3 | wait for colleagues to finish a demonstration | | Synchronizing/Coordinating | Y | Middle of the Meeting |
| 33 | RS | 3 | Screen sharing inform colleagues of the status of their actions through Screen sharing | | Screen sharing | N | Middle of the Meeting |
| 34 | RS | 4 | coordinated use of technology | | Applying coordinated use of technology | N | Middle of the Meeting |

| | | | | | | |
|----|----|---|---|--|---|-----------------------|
| 35 | RS | 4 | request verbal confirmation | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Middle of the Meeting |
| 36 | RS | 4 | acting according to her role | Acting according to one's role | Y | Middle of the Meeting |
| 37 | RS | 5 | one member gives the instruction and the other follows | Acting according to one's role | Y | Middle of the Meeting |
| 38 | RS | 5 | clarifies any doubts he may have with the instruction | Making clarifications | Y | Middle of the Meeting |
| 39 | RS | 5 | coordinated use of technology | Applying coordinated use of technology | N | Middle of the Meeting |
| 40 | RS | 5 | use of a common view | Screen sharing | N | Middle of the Meeting |
| 41 | RS | 6 | gives an instruction | Acting according to one's role | Y | Middle of the Meeting |
| 42 | RS | 6 | giving instructions that are too broad/not clarifying the specifics of an instruction | Providing unclear instructions | Y | Middle of the Meeting |
| 43 | RS | 6 | assumed | Assuming | Y | Middle of the Meeting |
| 44 | RS | 6 | supporting one another | Acting according to one's role | Y | Middle of the Meeting |

| | | | | | | | |
|----|----|---|--|--|--|---|-----------------------|
| 45 | RS | 6 | lack of attentiveness | | Not paying attention | Y | Middle of the Meeting |
| 46 | RS | 7 | verbalizes his actions (Describing what one would do next to provide continuity in one's speech or to fill-in gaps) | | Presenting | Y | Middle of the Meeting |
| 47 | RS | 7 | verbally requests confirmation | | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Middle of the Meeting |
| 48 | RS | 8 | act as instructor and follower | | Acting according to one's role | Y | Middle of the Meeting |
| 49 | RS | 8 | Screen sharing | | Screen sharing | N | Middle of the Meeting |
| 50 | RS | 8 | verbalization of his actions provided timing | | Sharing information | N | Middle of the Meeting |
| 51 | RS | 8 | coordinated use of technology | | Applying coordinated use of technology | N | Middle of the Meeting |
| 52 | RS | 9 | acting based on her role | | Acting according to one's role | Y | Middle of the Meeting |

| | | | | | | |
|----|----|----|--|--|---|-----------------------|
| 53 | RS | 9 | combination of synchronous and asynchronous collaborative software | Using appropriate tools and technology | N | Middle of the Meeting |
| 54 | RS | 9 | share a common screen | Screen sharing | N | Middle of the Meeting |
| 55 | RS | 9 | request the one who has control to manipulate the shared object | Acting according to one's role | Y | Middle of the Meeting |
| 56 | RS | 9 | make use of technology that will allow them to have access to an object being shared | Using appropriate tools and technology | N | Middle of the Meeting |
| 57 | RS | 10 | share tacit knowledge | Sharing information | N | Middle of the Meeting |
| 58 | RS | 10 | leave their mic on | Failing to control technology | N | Middle of the Meeting |
| 59 | RS | 10 | spend a significant amount of time waiting for co-collaborators to prepare information that they need to get work done | Synchronizing/Coordinating | Y | Middle of the Meeting |
| 60 | RS | 10 | use technology to collaborate | Using appropriate tools and technology | N | Middle of the Meeting |

| | | | | | | | |
|----|----|----|---|--|--|---|-----------------------|
| 61 | RS | 11 | physically step away from an online meeting, but their account remains logged | | Temporarily leaving a meeting | N | Middle of the Meeting |
| 62 | RS | 11 | leaving their mic on or muting it | | Controlling technology | N | Middle of the Meeting |
| 63 | RS | 12 | - control sounds stopped Screen sharing | | Controlling technology | N | Middle of the Meeting |
| 64 | RS | 12 | use of remote connectivity software | | Using appropriate tools and technology | N | Middle of the Meeting |
| 65 | RS | 12 | request or obtain authorization credentials | | Sharing information | N | Middle of the Meeting |
| 66 | RS | 13 | unmute mic to inform of one's presence | | Applying coordinated use of technology | N | Middle of the Meeting |
| 67 | RS | 13 | test the quality of his sound | | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Middle of the Meeting |
| 68 | RS | 13 | share remote connectivity credentials | | Sharing information | N | Middle of the Meeting |

| | | | | | | | |
|----|----|----|--|--|--|---|-----------------------|
| 69 | RS | 13 | use a combination of synchronous or asynchronous collaboration tools, or they use communication tools that are best suited for the situation | | Using appropriate tools and technology | N | Middle of the Meeting |
| 70 | RS | 13 | meet at a common link | | Joining a meeting | N | Middle of the Meeting |
| 71 | RS | 13 | agree to meet on a common link | | Synchronizing/Coordinating | N | Middle of the Meeting |
| 72 | RS | 13 | informing of the correct meeting link | | Sharing information | N | Middle of the Meeting |
| 73 | RS | 13 | reading onscreen visual cues | | Reading onscreen visual cues or status messages | N | Middle of the Meeting |
| 74 | RS | 14 | verbally ask the question to get the attention of the other collaborators | | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Middle of the Meeting |
| 75 | RS | 14 | multitask -to be more efficient while waiting | | Multitasking while waiting | Y | Middle of the Meeting |

| | | | | | | |
|----|----|----|---|--|---|-----------------------|
| 76 | RS | 14 | Teleworkers are very dependent on technology | Using appropriate tools and technology | N | Middle of the Meeting |
| 77 | RS | 14 | ask for clarification or make an other-initiated repair | Making clarifications | Y | Middle of the Meeting |
| 78 | RS | 14 | do not just repeat their request or what they just said/give directions on how to fulfill their request | Acting according to one's role | Y | Middle of the Meeting |
| 79 | RS | 14 | keeping an instructor/follower relationship | Acting according to one's role | Y | Middle of the Meeting |
| 80 | RS | 14 | verbally describes his actions (Describing what one would do next to provide continuity in one's speech or to fill-in gaps) | Presenting | Y | Middle of the Meeting |
| 81 | RS | 15 | continue their instructor/follower or requestor/requestee relationship | Acting according to one's role | Y | Middle of the Meeting |

| | | | | | | | |
|----|----|----|--|--|--|---|-----------------------|
| 82 | RS | 16 | acceptance of a request is affected by how well the requestee can hear the requestor | | Initiating repair | N | Middle of the Meeting |
| 83 | RS | 16 | use a common language | | Using a common language | Y | Middle of the Meeting |
| 84 | RS | 16 | mute their microphones when waiting | | Controlling technology | N | Middle of the Meeting |
| 85 | RS | 17 | verbally informing participants of one's presence or temporary absence (Sharing information) | | Synchronizing/Coordinating | N | Middle of the Meeting |
| 86 | RS | 18 | verbally informing online meeting participants of one's presence (Sharing information) | | Synchronizing/Coordinating | N | Middle of the Meeting |
| 87 | RS | 18 | connect to each other's workspaces | | Connecting | N | Middle of the Meeting |
| 88 | RS | 19 | share information | | Sharing information | N | Middle of the Meeting |
| 89 | RS | 19 | share the same view | | Screen sharing | N | Middle of the Meeting |
| 90 | RS | 19 | make a connection | | Connecting | N | Middle of the Meeting |
| 91 | RS | 19 | use appropriate communication tools | | Using appropriate tools and technology | N | Middle of the Meeting |

| | | | | | | | |
|-----|----|----|---|--|---|---|-----------------------|
| 92 | RS | 19 | verbal follow-up | | Sharing information | N | Middle of the Meeting |
| 93 | RS | 19 | apply techniques that they believe can help them to conserve bandwidth | | Applying efficient technology-related work techniques | N | Middle of the Meeting |
| 94 | RS | 19 | refer to offline documents, such as field guides, to back up their claims in their conversation | | Referring to credible sources | Y | Middle of the Meeting |
| 95 | RS | 20 | verify information together | | Collaborating | N | Middle of the Meeting |
| 96 | RS | 21 | ask questions to catch up with the conversation | | Making clarifications | Y | Middle of the Meeting |
| 97 | RS | 21 | support each other | | Acting according to one's role | Y | Middle of the Meeting |
| 98 | RS | 22 | making repairs - technology-dependent breakdowns | | Initiating repair | N | Middle of the Meeting |
| 99 | RS | 22 | catch up on the topic | | Making clarifications | Y | Middle of the Meeting |
| 100 | RS | 22 | participate according to their role | | Acting according to one's role | Y | Middle of the Meeting |
| 101 | RS | 23 | making an other-initiated repair | | Initiating repair | N | Middle of the Meeting |

| | | | | | | | |
|-----|----|----|---|--|--|---|-----------------------|
| 102 | RS | 23 | making other-initiated verbal repairs | | Initiating repair | N | Middle of the Meeting |
| 103 | RS | 23 | acting according to their role | | Acting according to one's role | Y | Middle of the Meeting |
| 104 | RS | 23 | preferring quicker ways to find or access data | | Using appropriate tools and technology | N | Middle of the Meeting |
| 105 | RS | 24 | act according to their role | | Acting according to one's role | Y | Middle of the Meeting |
| 106 | RS | 24 | use a variety of communication tools to communicate | | Using appropriate tools and technology | N | Middle of the Meeting |
| 107 | RS | 24 | confirm with H if she was fine with the process that she was suggesting | | Agreeing on matters | Y | Middle of the Meeting |
| 108 | RS | 24 | take advantage of video conferencing to discuss issues freely | | Sharing information | N | Middle of the Meeting |
| 109 | RS | 25 | summarizing their action items | | Wrapping up (agreeing on action items, summarizing action items) | Y | End of the Meeting |

| | | | | | | | |
|-----|----|----|---|--|--|---|--------------------|
| 110 | RS | 25 | do not limit themselves to synchronous collaboration/make use of asynchronous and written collaboration | | Using appropriate tools and technology | N | End of the Meeting |
| 111 | RS | 25 | share access over the incident | | Sharing access | N | End of the Meeting |
| 112 | RS | 25 | agree on action items | | Wrapping up (agreeing on action items, summarizing action items) | Y | End of the Meeting |
| 113 | RS | 25 | it is the moderator or the meeting host who decides to end a meeting | | Acting according to one's role | Y | End of the Meeting |
| 114 | RS | 25 | teleworkers complement synchronous methods with asynchronous methods and vice versa | | Using appropriate tools and technology | N | End of the Meeting |

Table 31.

Collective Practice, and Main Practice Mapping

| # | Collective Practice | Same with face-to-face | Main Practice |
|----|--|------------------------|---|
| 1 | Connecting | N | Connecting |
| 2 | Synchronizing/Coordinating | N | Synchronizing/Coordinating |
| 3 | Screen sharing | N | Sharing information |
| 4 | Request acknowledgement that screen is visible or sound is audible/Acknowledging that screen is visible or sound is audible was received | N | Sharing information |
| 5 | Sharing access | N | Sharing information |
| 6 | Inviting meeting participants | N | Sharing information |
| 7 | Sharing information | N | Sharing information |
| 8 | Applying coordinated use of technology | N | Using digital technologies |
| 9 | Using appropriate tools and technology | N | Using digital technologies |
| 10 | Reading onscreen visual cues or status messages | N | Using digital technologies |
| 11 | Starting a synchronous meeting | N | Using digital technologies |
| 12 | Failing to control technology | N | Using digital technologies |
| 13 | Temporarily leaving a meeting | N | Using digital technologies |
| 14 | Controlling technology | N | Using digital technologies |
| 15 | Joining a meeting | N | Using digital technologies |
| 16 | Applying efficient technology-related work techniques | N | Using digital technologies |
| 17 | Collaborating | N | Using digital technologies |
| 18 | Initiating repair | N | Initiating Repair |
| 19 | Complying with data privacy and information security policies | N | Complying with data privacy and information security policies |

| | | | |
|----|--|---|---|
| 20 | Compromising security | N | Complying with data privacy and information security policies |
| 21 | Performing moderating tasks | Y | N/A |
| 22 | Acting according to one's role | Y | N/A |
| 23 | Synchronizing/Coordinating | Y | N/A |
| 24 | Making clarifications | Y | N/A |
| 25 | Providing unclear instructions | Y | N/A |
| 26 | Assuming | Y | N/A |
| 27 | Not paying attention | Y | N/A |
| 28 | Presenting | Y | N/A |
| 29 | Multitasking while waiting | Y | N/A |
| 30 | Using a common language | Y | N/A |
| 31 | Referring to credible sources | Y | N/A |
| 32 | Agreeing on matters | Y | N/A |
| 33 | Wrapping up (agreeing on action items, summarizing action items) | Y | N/A |

Generating a Conclusion

After Data Analysis, the research findings were summarized, and a conclusion was drawn. The conclusion was a statement that summarized the general observation of what had been seen (ten Have, 2011a, p.9).

Chapter V

Results and Discussion

Analysis of the twenty-five sequences resulted in discovering 114 actions or practices performed by teleworkers during online collaboration. Analysis of these 114 actions resulted in discovering 33 collective practices, which could be categorized into two groups. The first group involved collaborative practices that are also performed in face-to-face collaboration, such as performing moderating tasks, acting according to one's role to achieve a shared goal, synchronizing/coordinating, making clarifications, presenting, multitasking while waiting, using a common language, referring to credible sources, agreeing on matters, and wrapping up by agreeing on action items or summarizing action items. Also, included in this group are actions such as providing unclear instructions, assuming and not paying attention that can cause communication breakdowns, such as conflict, alienation, misalignment or coordination failure.

The second group of practices involved collaborative practices that are specifically applicable to online collaboration. Since the focus of this research is online collaboration, discussion will focus on the second group of collaborative practices. These practices emerged due to the online and digital nature of online collaboration.

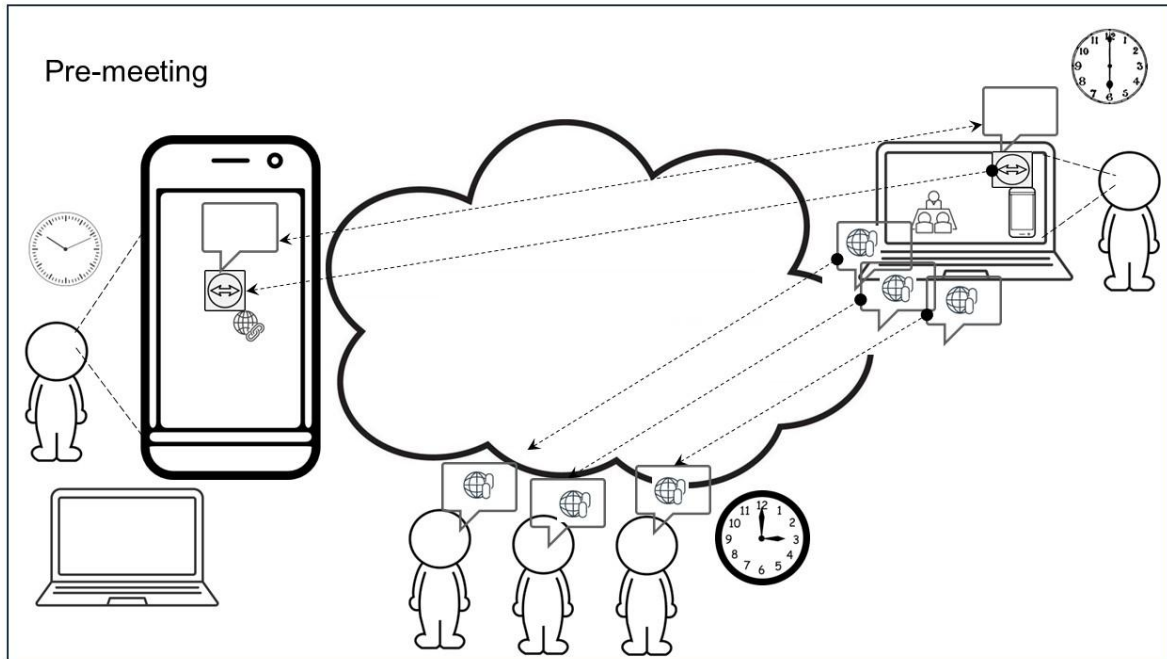
Practices of Teleworkers

In the next sections, the online collaborative practices of teleworkers will be presented based on how they occurred in the synchronous collaboration meeting, which was the dataset used in this research.

Pre-meeting

Figure 3.

Pre-meeting Illustration



Before the virtual meeting started, the host and the customer prepared the environment that they would investigate during the online collaboration. The host connected to the customer's mobile phone using a remote connectivity software application. The customer confirmed that the host had connected to his mobile by reading the status message presented in the quick support application installed in his mobile. After this, the host had to wait for the customer's mobile device's screen to load at her end through the remote connectivity application's screen. Perhaps after the host had confirmed that she could see the customer's mobile screen, she started the synchronous meeting and invited the vendor to it. She also requested the customer to wait and invited him to join the synchronous meeting last. The sequence of the host's actions demonstrated taken-for-granted practices

for achieving synchronization and coordination. The host initiated the synchronous meeting and then invited the participants, ensuring the meeting was active when they joined. She also ensured that all crucial participants were present, as a quorum was necessary to achieve the goal of their online collaboration. Their interaction demonstrates that teleworkers use a variety of communication tools to collaborate. The host connected to the customer's mobile application using a remote connectivity software and started the synchronous meeting to meet with all participants. From their interaction, it can also be inferred that the participants agreed to meet at a common time since they come from different geographical locations.

In this sequence, practices distinct in an online collaboration set-up were identified, and these practices were:

Connecting to a remote device

To prepare the environment that they would investigate, the host connected to the customer's mobile device using a remote connectivity software application. To achieve a connection, the customer provided the host with remote connectivity credentials, which she used to validly connect to the customer's mobile device. Connecting to a remote device was enabled through the handshake of remote connectivity applications installed at both ends of the connection, the connecting device and the remote device. For successful connection to take place, the connecting device must provide valid connectivity credentials. Also, the connecting device and the remote device must be connected to the Internet. Since online collaboration depends on the quality of Internet connection, glitches during connection such as slow loading

of shared screens could not be avoided. Troubles such as these were compensated for by the host by waiting for the customer's screen to load at her end.

Communicating through quasi-synchronous interaction

Before the synchronous call was established, the host and the customer communicated through quasi-synchronous communication. They used the chat function in the TeamViewer application, which enabled them to communicate instantly and just in time so that they could prepare and synchronize for the synchronous Zoom call.

Reading onscreen visual cues or status messages

Online collaboration utilizes online collaborative tools and remote connectivity applications. These tools are designed to show status messages that show various types of information such as connection status. As users of online collaborative tools and remote connectivity applications, teleworkers learn how to read status messages or the onscreen visual cues of these applications. These statuses are very helpful in providing information in the absence of synchronous communication with other teleworkers. For example, without the host letting the customer know that she had connected to his mobile device, the customer learned about the successful connection through the status message in the quick support application installed in his mobile device.

Meeting at a common time

Though online collaboration bridges participants from different geographical locations, their differing time zones can still be a challenge when collaborating virtually. Since participants of the online collaboration were from different time zones and geographical locations, it can be inferred from the timestamps in the transcription of the online written interaction that they agreed to meet at a common time so that they could synchronize and coordinate.

Starting and joining a synchronous meeting

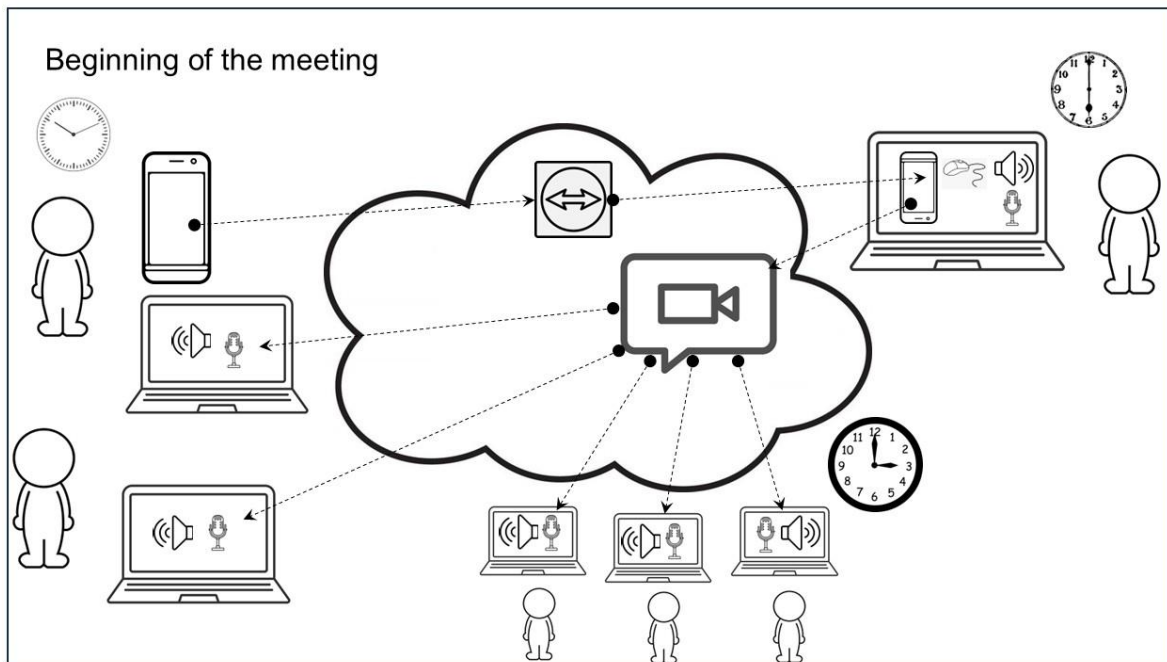
An online collaboration can be through a synchronous meeting, which enables a more natural conversation. Starting a synchronous meeting is akin to opening a meeting room in a face-to-face collaboration, allowing participants to come in and join. In the dataset used, starting a synchronous meeting involved clicking a start button from the host application to activate the meeting. So that participants could join, they were informed of the meeting link, which is comparable to the meeting venue in a face-to-face engagement. To join the virtual meeting, participants accessed or clicked the meeting link. Other necessary details, such as the meeting schedule, were also included in the meeting invite sent to the participants. Accessing the virtual meeting link is comparable to stepping into a physical meeting room. In the dataset used, starting the meeting was an action reserved for the meeting host, who also created the meeting. Joining the meeting was an action available for all other invited participants and was unnecessary for the host who joined the meeting by starting it.

Beginning of the meeting

The synchronous meeting began when all key participants were already present. The host started with a greeting and then announced that their group was complete. By her statement, it can be inferred that she verified that a quorum had been achieved before officially starting the meeting. She then proceeded to introduce the participants and groups to which they belong, to establish roles and context. She then proceeded to share her screen. While the host shared her screen, gaps could be observed from her speech perhaps due to simultaneously sharing her screen while also speaking. From this observation, it can be inferred that teleworkers apply coordinated use of technology in an online collaboration meeting. When her screen was shared, the other participants affirmed that they could see her screen without being directly asked. In an online collaboration set-up, communication is enabled through technology that uses participants' sense of sight and hearing. Participants could react based on what they could hear and see.

Figure 4.

Beginning of the Meeting Illustration



The practices distinct in online collaboration during the beginning of the meeting were the following:

Screen sharing

Screen sharing, which is enabled through online collaboration tools, is a common practice in online collaboration. In face-to-face setup, this is comparable to projecting the screen so that co-located participants can have the same view of the presentation. Screen sharing was also observed in the pre-meeting phase when the host connected to the customer's mobile device. The customer's mobile device's screen was visible remotely to the host. At the beginning of the meeting, this was the view that she (the host) shared to the other collaborators. Screen sharing enables information sharing in a

distributed set-up, enabling intersubjective understanding among distributed participants.

Applying coordinated use of technology

Because virtual meeting participants utilize online collaboration tools to communicate, technology is always present in their interaction. They have to coordinate the functions that they do to control technology such as sharing the screen or muting/unmuting and others, with speaking, listening or viewing so that they can communicate naturally.

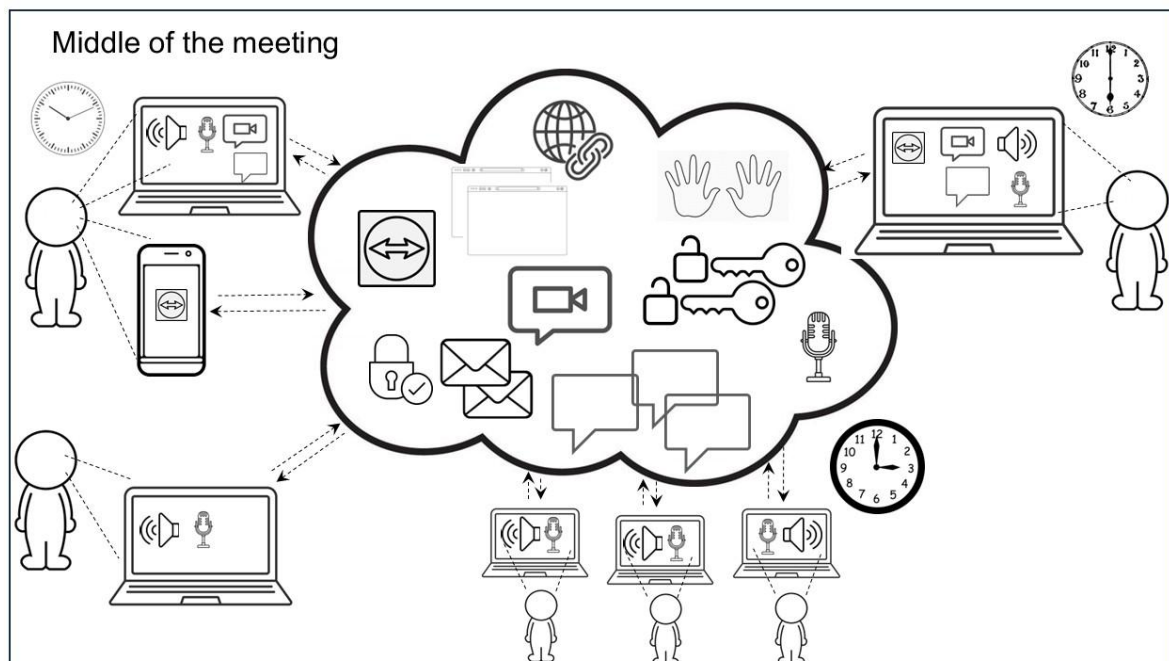
Middle of the Meeting

The purpose of the online collaboration was for the collaborative group to gain a shared understanding of the problem that the customer was experiencing with the recommended camera resolution. The customer's challenge was that he could not see the recommended camera resolution for photo and video in the photo and video cameras of the mobile application that he was using to accomplish work. Through the online collaboration meeting, the vendor's team witnessed for themselves the problem that the user was experiencing in his assigned mobile devices. Online collaboration was needed since the mobile devices available at the vendor's end was not the same as the mobile devices present at the customer's end. Their mobile devices varied by model and Android version so achieving the same combination while offline was a challenge. Given the constraints of the COVID-19 pandemic at that time, online collaboration helped in presenting to the vendor the problem.

The meeting progressed with the participants checking three mobile devices available at the customer's end. The first was an A51 mobile device, the second was an A50s mobile device and the last was an A8 mobile device. Checking the mobile devices involved checking the resolutions visible in the photo and video cameras in the affected mobile application installed in the mobile devices. The participants' conversation involved navigating through the mobile devices to check the corresponding phone models and Android versions. Each time the participants checked one of the customer's available mobile devices, the host had to connect to it using TeamViewer so that she could share the mobile device's screen to the other participants in the online collaboration.

Figure 5.

Middle of the Meeting Illustration



The practices distinct to online collaboration during the middle of the meeting involved the following:

Screen Sharing

One capability of online collaboration tools is the ability to share another participant's screen. Screen sharing enables information sharing. Coupled with audio and voice technology, screen sharing enables a virtual environment that mimics a co-located setting. Information is directly visible and could be discussed with ease.

Connecting/Sharing information

Screen sharing in an online collaborative set-up is enabled by connecting. Staying connected to the Internet is a crucial factor in online collaboration. Participants connect by using online collaboration tools or by using remote connectivity software that requires stable Internet connection. Connecting requires submitting connectivity credentials, which when validated enables the connection to proceed. Connectivity credentials can be in the form of IDs for remote connectivity applications or meeting links for virtual meetings. Remote connectivity IDs inform the remote device that a connecting user has been given permission by the owner to connect to his device. Virtual meeting links, on the other hand, are comparable to physical meeting venues. For connection to take place, connectivity credentials must be shared by the remote user to the connecting user. Connecting requires information sharing, however, since the information being shared gives authority to connect, it must be shared cautiously and only to authorized users to avoid unauthorized connections. After a connection has been established, more information sharing can take place. In virtual meetings, natural conversations can occur enabling the sharing of tacit knowledge. Quasi-synchronous and

asynchronous communication enables sharing of information in written form. Screen sharing enables sharing of information visually facilitating co-orientation. Due to lack of visual cues in online collaboration, sharing information about one's absence or presence is crucial. For example, if virtual meeting participants had been away temporarily, sharing information that they have returned can prevent misalignment or coordination failure.

Sharing Access

Aside from enabling the sharing of information, connecting also enables shared access. Online collaboration tools and remote connectivity tools enable participants not only to view information from a remote workstation but also to access it and make modifications.

Collaborating

Connecting enables online collaboration by enabling information sharing and shared access.

Applying coordinated use of technology

Because online collaboration is enabled through the use of online collaboration tools or remote connectivity applications, teleworkers have to coordinate human processes such as speaking, listening and viewing with the functions of these applications such as maximizing/minimizing screens, muting/unmuting, screens sharing and others. They have to do these functions while performing human processes to enable a natural and smooth collaboration.

Controlling technology

Teleworkers have to control technology so that it will work for them. For example, to regulate sound, they have to use the mute/unmute button. They also have to pay attention to status messages or visual cues that the online collaboration tools present. Failing to control technology can cause communication breakdowns. For example, failing to mute in an online meeting can cause unnecessary background noises to be heard or failing to react timely to status messages informing that the meeting will soon end can abruptly disrupt an ongoing synchronous meeting.

Using appropriate tools and technologies

Teleworkers choose from a variety of online collaboration tools or remote connectivity applications. They have to choose the tool or application that will work best for their purpose. In the dataset, the teleworkers used a combination of synchronous and asynchronous tools and used the most appropriate one or the most efficient one based on the task that they intend to accomplish. In this context, appropriate tools and technologies refer to solutions that are most suitable or most efficient for accomplishing work.

Applying efficient technology-related work techniques

Teleworkers apply work techniques such as conserving bandwidth that is applicable only in the online set-up because the resource being conserved is specific to the virtual setting. The face-to-face set-up may apply the same concept when conserving co-located resources.

Reading onscreen visual cues or status messages

Reading onscreen visual cues or status messages is specific to online collaboration tools or remote connectivity applications used during virtual collaboration.

Request acknowledgement that screen is visible or sound is audible /Acknowledging that screen is visible and sound is audible

In the dataset, a common practice by the teleworkers was getting confirmation from the other participants if they could see the visual information that they were sharing or if they could hear what they were saying. This practice is specific in an online set-up that uses screen sharing or a synchronous voice call. In response, the other participant being asked confirms whether they could see the screen or not or if they could hear the other participant well or not.

Synchronizing/Coordinating

Synchronizing or coordinating was also practiced in the online set-up. Due to the lack of visual cues, participants have to verbally inform other participants of their presence to inform them that they have returned after being away. They also have to inform other participants of what they are doing at their end so that they can achieve timing and coordination during the discussion.

Initiating repair

Initiating repair was a common practice in the dataset during sound troubles. Other participants often had to repeat what they were saying when

one participant initiated a repair by informing them that he could not hear the sound very well. Initiating repair was one way to fix communication breakdowns due to technological failures, such as sound failure.

Complying with data privacy and information security policies

The ability to share more information to a wider audience in an online set-up has generated new data privacy issues that did not exist before in the face-to-face set-up. To regulate these issues, new data privacy and information policies applicable in the virtual world were implemented. Teleworkers comply with these policies. When teleworkers fail to comply with data privacy and information security policies, they compromise security introducing cybersecurity risks.

Starting and joining a synchronous meeting

In the dataset, starting the synchronous meeting was an action for the meeting host, which she accomplished by clicking the start button in the application hosting the meeting. Starting a synchronous meeting is comparable to opening a meeting room in a co-located face-to-face set-up so that participants can come in. In the dataset, the online synchronous meeting was started so that the other participants could join. The other participants joined by clicking the same meeting link.

Temporarily being away from a synchronous meeting

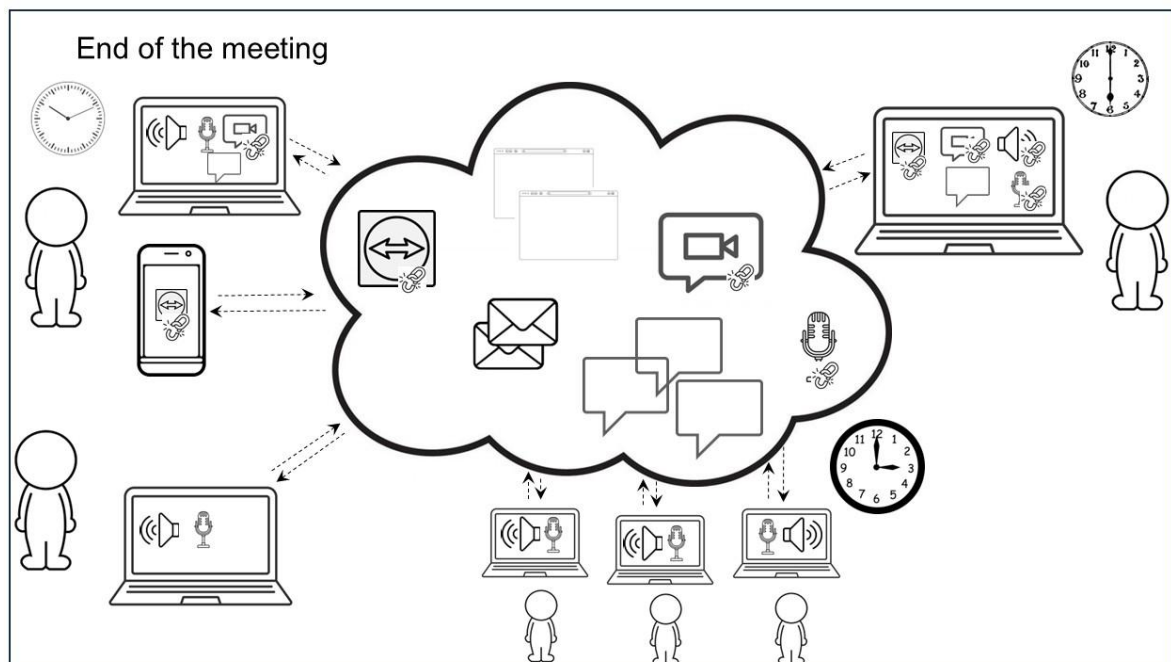
In an online collaborative set-up, temporarily being away from a meeting can be hidden from other participants especially if the absent participant's camera is switched off. A person may physically be away from a

meeting, but his online persona is still present or logged in the synchronous meeting. He still appears among the list of participants in the synchronous meeting but in reality, he has moved away from his desk and is not paying attention to the meeting. In a face-to-face setup, being away from a meeting cannot be concealed. Other participants will know that a person is away because he is not physically present in the meeting room. In an online collaborative meeting, informing other participants of one's temporary absence and one's return is crucial due to the lack of visual cues. Failure to inform of one's temporary absence or return can lead to failure in coordination and misalignment.

End of the meeting

Figure 6.

End of the Meeting Illustration



The practices observed at the end of the meeting that were distinct to online collaboration were same as the virtual practices observed at the middle of the meeting. These practices include:

Using appropriate tools and technologies

In the dataset, to end the meeting, the teleworkers discussed about the work that they will do after the virtual meeting ended, using asynchronous collaboration tools, such as an “automated IT Service Management system (Gupta et al., 2008, p.141).” They discussed updating the involved “incident ticket (Gupta et al., 2008, p.142)” about their findings and action items agreed upon during the online collaboration meeting. They also discussed sending email updates. The synchronous collaboration tool was only one way to collaborate. To accomplish work, teleworkers use a variety of communication tools to collaborate including those that enable them to share information asynchronously. In this context, appropriate tools and technologies refer to solutions that are the most effective or most suitable for accomplishing work.

Sharing access

To share information in a timely manner, the teleworkers have shared access on the “incident ticket (Gupta et al., 2008, p.142)”. The host, the vendor and the client could view and update it.

Leaving and ending a meeting

Leaving a synchronous meeting involves a function that would allow a participant to terminate their presence in the meeting. In an online

collaboration set-up, this may require pressing the leave button to signify intent to exit the virtual meeting room. In a face-to-face setup, pressing the leave button is comparable to physically exiting the meeting room. Leaving a meeting is not the same as ending the meeting. Leaving a meeting involves exiting the meeting room, but the meeting may still be in progress. Ending the meeting involves permanently finishing the meeting. In a synchronous online collaboration, this may involve pressing an end button to signify intent to stop the meeting. In a face-to-face set-up, ending the meeting involves adjourning the meeting, sending participants away, and closing the meeting room. Physically closing the meeting room in a co-located meeting is comparable to pressing the end button in the application hosting the synchronous online meeting to end it virtually. In the dataset, leaving the meeting was an action available to all meeting participants, while ending a meeting was an action reserved for the meeting host, who had access to start or end the meeting.

Proposed Organizational Arrangement of Telework

The online collaborative practices of teleworkers can be summarized into six key practices:

Connecting

Being online is one important aspect of online collaboration. A virtual worker must be connected to the Internet to accomplish online collaboration. The digital platforms that enable online collaboration require an Internet connection, so first and foremost, teleworkers connect to the Internet to collaborate virtually. Once online,

teleworkers can establish other connections, such as connecting to remote devices or their colleagues' workspaces. They also need to connect to share information, such as through screen sharing. Connecting can also be achieved by sharing remote connectivity credentials or meeting links.

Synchronizing/Coordinating

Before teleworkers connect to collaborate, for example, connect to a remote device, or connect to a virtual meeting, they synchronize and coordinate beforehand. One of the challenges of online collaboration is the different time zones of the collaborators, especially if they are geographically dispersed. If sharing the same time zone, not being co-located may be a challenge. Distractions and other hindrances brought about by time and location differences can be compensated for by synchronizing and coordinating. Teleworkers synchronize by agreeing on a common time to meet. To synchronize and coordinate, they also use quasi-synchronous communication, such as instant chat messages, to communicate instantaneously and conveniently prior to a synchronous meeting. Through instant quasi-synchronous communication, teleworkers also share information required to accomplish a synchronous meeting, such as meeting links and other credentials. Teleworkers plan for online collaborative activities by synchronizing and coordinating. In an ongoing online collaboration, teleworkers also synchronize and coordinate when they wait for data to load. They cannot proceed without the necessary data for collaboration. The delay due to technological limitations may be a slight inconvenience, but the waiting time required is necessary to ensure the accuracy of information. Teleworkers also synchronize and coordinate by sharing information about their presence or absence

in an online collaboration. Sharing about the status of their online presence is crucial in preventing communications breakdown, such as conflict, alienation, misalignment, and coordination failure.

Sharing information

Once connected, teleworkers can share different sorts of information. They can share visual information through screen sharing. Through screen sharing, they can achieve co-orientation and intersubjective understanding. They can also share tacit knowledge through synchronous or asynchronous communication. Synchronous meetings enable natural conversations and screen sharing, by simulating a co-located work setting, facilitates knowledge sharing.

Aside from knowledge and information, online collaboration also enables shared access. Asynchronous digital platforms, such as an “automated IT Service Management system (Gupta et al., 2008, p.141)”, allow users to share asynchronous view of real-time data. “Incident tickets (Gupta et al., 2008, p.142)” in an “automated IT Service Management system (Gupta et al., 2008, p.141)” can be updated in real time and can be viewed by teleworkers at different times. They share access to “incident tickets (Gupta et al., 2008, p.142)”, enabling instant information sharing.

Aside from facilitating shared access, online collaboration tools also allow remote access to remote devices. Remote access not only permits teleworkers to view data in remote devices, but it also allows them to manipulate the device as if they had it with them. The capabilities of online collaboration tools are numerous, enabling teleworkers to extend their practices and activities.

Sharing information also includes sending meeting invites containing meeting links to participants. It also involves acknowledging that the shared screen is visible or

that the audio is audible. Sharing information includes responding to stimuli sent digitally. Sharing information also affects synchronization and coordination.

Using digital technologies

Teleworkers use digital technologies in several ways. First, they apply coordinated use of technology. Coordinated use of technology means that they simultaneously control technology while exercising human functions. For example, they coordinate muting and unmuting in a synchronous video conference call with speaking. They coordinate maximizing and minimizing an application on their computers while sharing their screen and speaking in a synchronous video call. The more that teleworkers are able to coordinate technology use with human functions, the more natural their conversation becomes. Second, teleworkers exercise appropriate use of digital tools and technologies. The functions that digital technologies are capable of are numerous. All of these functions allow teleworkers to communicate; however, some functions are more appropriate for some purposes. For example, to share long numeric IDs, teleworkers may choose to send this information as an instant message instead of dictating it over a voice call. Third, teleworkers read onscreen visual cues and status messages. The more they understand the onscreen visual cues and status messages in the online collaboration tools that they use, the more adept they become at that application. Fourth, teleworkers control technology. They practice muting and unmuting as necessary, for example. They can start or end a meeting voluntarily, and others. Failure to control technology can result in “communication breakdowns such as conflict, alienation, misalignment, and coordination failure (Craig, 1999, p.133).” Fifth, teleworkers use digital technologies to collaborate. They use digital technologies to start a meeting, join a meeting, send an instant message,

connect to a remote device, send an email, and others. Sixth, teleworkers apply efficient technology-related work techniques such as conserving bandwidth. Bandwidth is a resource specific to cloud-based digital technologies.

Initiating Repair

Digital technologies may encounter hiccups, such as inaudible sound or unnecessary background noise, resulting in communication breakdowns. To remedy faulty situations, teleworkers initiate repair. They make utterances requesting the repair of a trouble source. For example, they may utter words and phrases such as “Please?” or “I am sorry, I am not hearing you very well” to initiate repair. Second, teleworkers may initiate repair by being self-conscious. They may utter phrases such as “Can you see my screen?” or “I do not know if you can see my screen,” to request colleagues to confirm if they can see the screen being shared. Teleworkers may initiate repair by requesting acknowledgement from their virtual colleagues if the screen is visible or if the sound is audible.

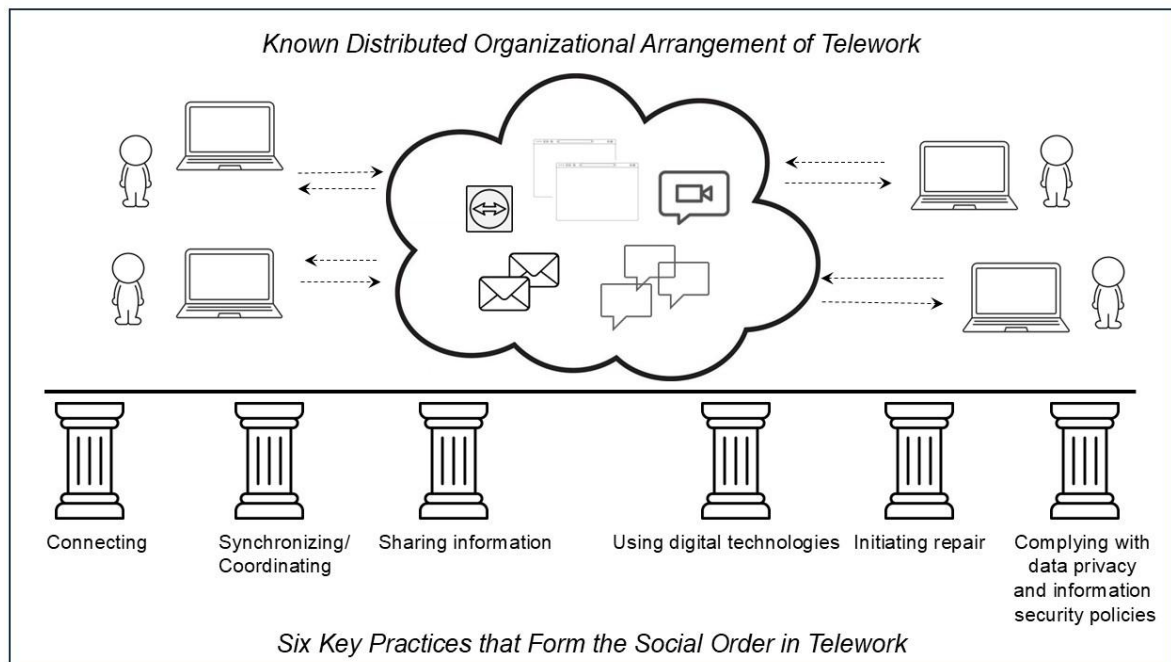
Complying with data privacy and information security policies

The digital realm has made information sharing faster and easier, generating new data privacy and information security issues that did not exist before in the face-to-face work setting. Teleworkers practice security awareness and comply with data privacy and information security policies to prevent exposing their organization to cybersecurity risks and to protect their own data and reputation. They observe practices, such as keeping their passwords private.

With these six key practices, online collaboration enables telework. Through these six practices, the known distributed organizational arrangement of telework, which consists of digital collaboration tools over the cloud and simulates a co-located work set-up, was enhanced by grounding it on these six practices that form the social order in telework. Below is an illustration of the proposed organizational arrangement of telework.

Figure 7.

The Basic Telework Set-up



This illustration represents the basic telework set-up. It explains how social order is formed during telework and symbolically represents how online collaboration or the communication process is constituted for the purpose of accomplishing telework. The six key practices for accomplishing telework are represented as pillars on which the known distributed organizational arrangement of telework is founded on.

These six pillars are the enablers of seamless telework without the presence of communication breakdowns. A deterioration of any of the pillars can lead to communication problems such as “conflict, alienation, misalignment and coordination failure (Craig, 1999, p.133).” These practices support and sustain the communication process in telework.

Chapter VI

Summary, Conclusions, and Recommendations

Summary

This study examined how online collaboration enables telework. Its research questions were: "*What practices do teleworkers employ to accomplish the organization? What organizational arrangement is created in telework?*" To answer these research questions, the study framed its investigation within the sociocultural tradition of communication theory and employed ethnomethodology, specifically conversation analysis, as its methodology. Its data included a Zoom video recording of a remote session conducted by teleworkers on July 27, 2021. The pre-recorded Zoom video recording of the remote session fit CA's preference for recorded conversations, which are more natural and non-experimental, rather than manipulative and researcher-dominated (ten Have, 2011e, p.4) (ten Have, 2011g, p.6). The data collected were then transcribed using Paul ten Have's simplified version of the Jeffersonian transcription (ten Have, 2011i, p. 4). A transcription of an online written interaction displayed in the shared screen of the remote session recording was also included in the dataset. Sequences were identified in the transcriptions, and these sequences were analyzed using the four distinguished but interlocking organizations and Membership Categorization Analysis (MCA). The four distinguished but interlocking organizations consist of turn-taking organization, sequence organization, repair organization, and the organization of turn-design (ten Have, 2011a, p.9). Analysis of the sequences resulted in identifying 114 actions, which could be grouped into 33 collective practices. The 33 collective practices were further categorized into

practices also practiced in face-to-face work settings and practices applicable only to virtual settings. Since the focus of this study was online collaboration, the study concentrated on the second group of practices, consisting of 20 collective practices applicable only to virtual work. To make sense of these 20 collective practices, they were discussed based on how they were practiced before the online collaboration meeting, at the beginning of the meeting, in the middle of the meeting, and at the end of the meeting. Further analysis of the 20 practices resulted in discovering 6 key practices that teleworkers do to accomplish organizational goals. Based on these findings, the organizational arrangement formed in telework was conceptualized.

Conclusion

This research found that online collaboration makes telework possible through six key practices performed by teleworkers, which consist of: connecting, synchronizing/coordinating, sharing information, using digital technologies, initiating repair, and complying with data privacy and information security policies. By performing these practices, teleworkers accomplish organizational goals in a cloud-based virtual work setting. Connecting is fundamental since online collaboration requires an Internet connection. Once connected to the Internet, other connections, such as connecting to remote devices or synchronous meetings, become possible. Synchronizing or coordinating is necessary to overcome the challenges brought about by time differences and the absence of co-location. Synchronizing or coordinating also prevents coordination problems. Sharing information encompasses a range of activities, including screen sharing, tacit knowledge exchange, access to resources,

remote connectivity credentials, meeting links, feedback provision, and open communication. Using digital technologies involves the proper and efficient use of digital technologies to accomplish online collaboration. Initiating repair involves compensating for technological breakdowns. Lastly, complying with data privacy and information security policies involves keeping the virtual environment secure and free from security risks. These six key practices serve as pillars to the known distributed organizational arrangement of telework. By executing these practices, teleworkers prevent communication breakdowns theorized in the sociocultural tradition, such as “conflict, alienation, misalignment, and coordination failure (Craig, 1999, p.133),” enabling the accomplishment of telework.

Recommendations

One of the key contributions of this research is the discovery of the six key online collaborative practices that enable telework. These findings can serve as input to future studies on online collaboration and telework. This study recommends further research and theorizing on the six key online collaborative practices that enable telework and on the topics of online collaboration and telework in general. First, it suggests the exploration of different lenses to study various aspects of online collaboration and telework. It suggests the use of the critical lens, for example, to examine how conflicting points of view are resolved during online collaboration as a higher level of study on the practice of initiating repair. Second, it also recommends the study of emerging technologies that can enhance online collaboration and telework such as artificial intelligence (AI), machine language (ML), augmented reality (AR) and virtual reality (VR), particularly on the aspect on how these can be used as vehicles to

constitute the communication process. Third, it recommends the exploration of digital conversation analysis (CA) that involves the study of online written interaction. Digital CA is a challenging research methodology because this is relatively newer than CA that involves researcher transcription of audio or video recorded interactions. Digital CA is relatively unestablished and the differences of online written interaction with spoken interaction make analysis using this method challenging. Fourth, it also recommends the exploration of digital practices such as using virtual background for organizational identity, survey polling, attaching files, using icons, recording meetings and using AI-generated transcriptions in a communication study. Fifth, it recommends that future studies be directed into the enhancement of the six key practices identified in this study. These studies may investigate aspects such as policy building and effective training. Lastly, this study also recommends the investigation and problematization of digital etiquette and how this can constitute the communication process. Digital etiquette did not surface from the results of the study because the application of etiquette in the dataset used was categorized as also occurring in face-to-face settings. Further exploration may be done on this subject using more or heterogenous datasets.

The decision to implement a teleworking arrangement remains at the employer's discretion and is driven by organizational outcomes. On the practical end, this study recommends that employers and employees work together in implementing practices that enable productive and successful telework.

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APPENDICES

Appendix A. Data Privacy Officer Approval and Request Letter Sent

From: ██████████ ██████
Sent: Tuesday, 25 March 2025 9:28 am
To: ██████████ ██████████ ██████████ ██████
Cc: Leah Gean Diopenes
Subject: RE: [REQUEST FOR APPROVAL] - Use Zoom Video Recording for Academic/Research Purposes

Thanks, ██████.

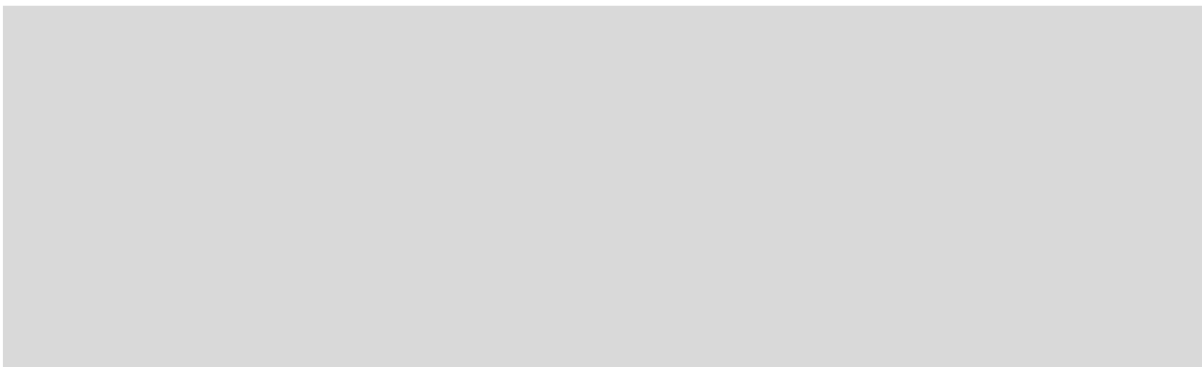
Hi @██████████, this will serve as my approval for Leah to use the Zoom call recording based on the Service Now ticket given that there is no data risk for ██████ ██████.

Best regards,
██████



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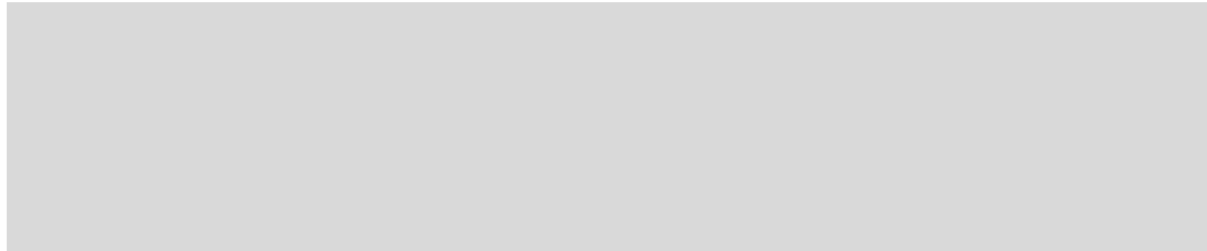
▶ [██](#) 🌐 Manila, Philippines, GMT +8



From: ██████████ ██████████ <[██](#)>
Sent: Monday, 24 March 2025 8:14 pm
To: ██████████ ██████████ <[██](#)>; ██████████ ██████████ <[██](#)>
Cc: Leah Gean Diopenes <[██](#)>
Subject: Re: [REQUEST FOR APPROVAL] - Use Zoom Video Recording for Academic/Research Purposes

Hi ██████████,

Phone: +66 9 0000 0000 | E-mail: leah@leahdiopenes.com | GMT+8 | Web: www.leahdiopenes.com



This transmission is intended for the sole use of the individual and entity to whom it is addressed, and may contain information that is confidential and may not be disclosed under applicable law. You are hereby notified that any dissemination, distribution or duplication of this transmission by someone other than the intended addressee or its designated agent is strictly prohibited. If you have received this communication in error, please notify us immediately by return email and delete the original message. Thank you. This disclaimer may not be removed for any purpose.

From: Leah Gean Diopenes <leah@leahdiopenes.com>
Sent: Monday, 24 March 2025 11:28 am
To: leah@leahdiopenes.com <leah@leahdiopenes.com>
Subject: [REQUEST FOR APPROVAL] - Use Zoom Video Recording for Academic/Research Purposes

Good day leah@leahdiopenes.com,

As we discussed in MStTeams last Friday, March 21, 2025, I am sending you this email to request your consent to use a Zoom call recording of the support that I did for Service Now ticket: INC0751003 on July 27, 2021, as data for my dissertation. In the attached pdf file are the details of my request.

Your response or guidance to this request will be appreciated.

Best Regards,

Leah Gean Diopenes

leah@leahdiopenes.com | leahdiopenes.com | leah@leahdiopenes.com | leahdiopenes.com

leahdiopenes.com | leahdiopenes.com IT

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mobile: +66 9 0000 0000 | email: leah@leahdiopenes.com | GMT+8 | www.leahdiopenes.com



Data Source: Video Recording

<https://wvi.box.com/s/jf554qxtip3b9fay03bjgbqdbermhq6s>

Transcription: Remote Session Transcription – Part 1

https://docs.google.com/document/d/1rJyglg-PxPvZniJfndnFoEzsSLK3_SgG/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true

Transcription: Remote Session Transcription – Part 2

<https://docs.google.com/document/d/1BI1BdqKqBPiz5G9FrpIpPLSW4M1Xxlx/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true>

Transcription: Remote Session Transcription – Part 3

<https://docs.google.com/document/d/1TAIPUV84OtbLrBXWyAm4ZdWxCxnZnt3v/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true>

Your response to this request will be appreciated.

Regards,

Leah Gean Diopenes

Data Source: Video Recording

<https://wvi.box.com/s/jf554qxtip3b9fay03bjgbqdbermhq6s>

Processed Data: Remote Session Transcription – Part 1

https://docs.google.com/document/d/1rJyglg-PxPvZniJfndnFoEzsSLK3_SgG/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true

Processed Data: Remote Session Transcription – Part 2

<https://docs.google.com/document/d/1BI1BdqKqBPiz5G9FrplpPLSW4M1Xxlx/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true>

Processed Data: Remote Session Transcription – Part 3

<https://docs.google.com/document/d/1TAIPUV84OtbLrBXWyAm4ZdWxCxnZnt3v/edit?usp=sharing&oid=110961550668042438475&rtpof=true&sd=true>