

Workshop Abstract for Interact 2021

Remote Testing with Users – Experiences and Trends

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Abstract. This proposal describes a one-day Interact workshop on remote usability testing. Remote usability testing has been around since the mid-nineties, but the Corona pandemic has boosted the interest in remote working in general and thus also remote testing. The workshop aim is to present and discuss the current state-of-the-art of remote testing methods and identify emerging trends. Subjects that will be discussed include, but are not restricted to: Remote testing methods and platforms; capturing of quantitative as well as qualitative data; moderated, unmoderated and remotely moderated tests; testing of physical products; and remote testing of participants with special needs.

Keywords: Remote testing, usability, user testing, moderated and unmoderated testing.

1 Introduction

Remote usability testing has been around for quite a long time. Early studies were carried out about 25 year ago in the mid-nineties [1] [2] [3] and has since evolved significantly. While the 00'ies witnessed many academic studies and methods, this is particularly evident over the recent decade with the arrival of numerous commercial tools and platforms for automated remote testing. However, the Covid-19 pandemic has put an even greater focus on remote work and the paradigm is more relevant now than ever before.

The basic idea of remote usability testing is that a test person need not be physically present at a test facility in order to perform a usability test. Instead, s/he accesses a product, a service or maybe a prototype via a web browser or an app on a computer or a mobile device. In some cases, a test facilitator may be (remotely) available to guide

the user through the test scenarios, debriefing, etc. This is called supervised remote testing. A more attractive perspective is to carry out the remote test unsupervised. This will in part save manpower and in part make the logistics of the test much easier as the test participant can perform the test any time and place s/he wishes. Unsupervised tests tend to mostly collect quantitative data, whereas supervised tests can capture a larger degree of qualitative data.

1.1 Supervised Remote Testing

Supervised testing is also referred to as synchronous testing, as it requires the test participants and the facilitator to be present at the same time. Supervised testing was described by e.g. Hartson and colleagues in 1995 [4]. They discussed various possibilities for remote usability testing and made a comparison to a lab-based test. 10 years later, Brush et al. investigated differences in the participants' and facilitators' qualitative experience between lab and remote tests [5]. They had assumed that "participants would be more comfortable talking to the facilitator and would find it easier to think aloud and concentrate on tasks in the local condition". Contrary to the assumption, they found that most participants preferred the convenience of the remote testing approach. The findings suggested the remote test participants contributed to the results as much as in the lab-based test [5]. A special case is remotely supervised testing. This could e.g. be when the participant is a with special needs, such as children, persons with physical or cognitive impairments, the elderly, or those not comfortable with the digital solutions surrounding us? In such cases a local "moderator", typically from the participant's household may be recruited to help execute the test.

1.2 Unsupervised Remote Testing

Unsupervised usability testing is also referred to as asynchronous testing, as it does not require the test participants and the facilitator to be present at the same time. Bruun et al [6] compared three different methods in an unsupervised remote testing scenario: user-reported critical incidents; forum-based online reporting and diary-based user reporting in 2009. They found that that the unsupervised testing actually performed significantly worse compared to corresponding lab-based usability tests. However, unsupervised remote testing has gained a large foothold during recent years, due to its ease of deployment and corresponding cost-efficiency.

1.3 Remote Testing Platforms

A number of companies have built platforms to facilitate remote usability testing over the recent decade. One such platform supplier is the Danish company Preely [7]. The platform lets the interaction designer develop prototypes using a variety of tools, such as Sketch, Figma, Invision or Adobe XD [8] [9] [10] [11] and then deploy them for test via the platform. Preely will import and execute the prototype and do all the bookkeeping and logging of user test data etc. for any number of test participants.

Other similar platforms are online services such as: Maze, UserTesting and UseBerry [12] [13] [14]. Similarly, consultancy services, like UserTribe, UserZoom and Look-Back offer supervised remote tests [15] [16] [17]. These platforms are insight-based and qualitative and demands more resources post-test to make the analysis.

1.4 Remote testing of physical products

However, the present state-of-the-art of remote usability testing methods and platforms are restricted to software products. At the present time it is relatively straightforward to distribute software products, but if the product being tested is a physical device or a service, a number of new issues arise. Many have to do with the costs and logistics of distributing and later collecting the test products, but others are directly concerned with the test session itself.

2 Workshop Scope and Aim

The purpose of the workshop is to assess the latest trends within remote usability testing. In particular, to record and review the present state-of-the-art of methods and tools and assess the experiences gained during the COVID-19 pandemic. We will seek to answer the following questions:

- Which new experiences have the COVID-19 situation brought with regard to remote testing?
- Has the greatly increased focus on remote work during the pandemic also brought new ideas and methods to the field of remote testing?
- Have new requirements emerged, to which no solution yet exists?
- Are existing platforms and tools sufficient for the future demands?
- Will remote testing extend from software to physical products?
- How can unsupervised remote testing to a higher degree than now provide qualitative insights?
- Does remote testing cater sufficiently for user groups with special needs – such as children, persons with physical or cognitive impairments, the elderly, or those not comfortable with the digital solutions surrounding us?

The workshop invites papers sharing remote testing experiences as well as position papers bringing up a particular issue or focus. Contributions from industry are particularly welcome. The workshop layout will be a mix of presentations from participants and group and plenary discussions (as described in the organisation document below).

The goal of the workshop will be to achieve an overview of the present state and provide a roadmap for the coming years' advances of remote testing.

3 Workshop organisers

Brief introduction of the organisers:

- **Lars Bo Larsen**, associate professor at Aalborg University, AI and Sound section, the Department of Electronic Systems, where he heads the Humans and Technology research group. His main research and teaching interests are interaction design and user experience research, in particular in industrial contexts. He has participated in numerous national and EU research projects. He worked part time as senior user experience researcher for Bang and Olufsen 2015-2020. Did his first remote usability test in 1997 of a spoken dialogue system with 300+ test participants. All communication with test participants was carried out solely using (snail) mail.
- **Tina Øvad** has a background in Engineering Psychology and a PhD in Information Systems with focus on agile UX. Tina is CXO at Preely and External Lecturer at Aarhus University. She has worked with UX strategy- and processes, product management, and agile transformation in various organizations like Radiometer, Nykredit and Bang & Olufsen, and has taught and supervised in UX, agile UX, etc. at the IT of Copenhagen and Aalborg University.
- **Lene Nielsen**, associate professor at IT university Copenhagen, department of Business IT. Her main research and teaching are in user experience research, in particular personas. Lene Nielsen has worked as a usability consultant. She is heading the TIME (Technology, Innovation, Management and Entrepreneurship) research group. She developed and now teach the specialisation in Service Design Management and Implementation.
- **Marta Lárusdóttir** is an associate professor in the Computer Science Department at Reykjavik University, Iceland. Her main research area has been user centred design, especially focusing on usability and user experience evaluation. Additionally, Marta has focused on studying the integration of the user perspective in agile software development, particularly focusing on studying how user centred activities are integrated in the agile processes Scrum and Kanban. Marta Lárusdóttir is the chair for the CRESS research center at Reykjavik University.

4 Expected outcome

We expect the workshop will identify the current state-of-the-art and trends of remote usability testing. In particular, the workshop will aim to pinpoint the challenges and unresolved problems facing the remote testing paradigm in the future and provide a proposal for a roadmap to address these.

Review process and proceedings:

We aim for 9-12 contributions from participants (see the outlined workshop program below). These will be peer reviewed by the organisers, supplemented with a panel of experts from academia and industry (to be invited, when the workshop is accepted). The papers will form the proceedings of the workshop and will be shared among participants prior to the workshop via the workshop website. The proceedings will be made public after the workshop for those authors who wish so. Prior experiences have shown us, that not all authors are interested in this, as they may have planned other publication channels, or their contribution may be work-in-progress. This will be respected, of course. The organisers will invite the participants who are interested to collaborate to publish a joint paper on the workshop results in a recognised peer-reviewed open access journal.

References (all links visited ultimo January 2021)

1. Castillo, J. C., Hartson, H. R., & Hix, D. (1997). REMOTE USABILITY EVALUATION AT A GLANCE * (Tech. Rep.). doi: 10.1145/286498.286736
2. Hammontree, M. L., Weiler, P., & Nayak, N. P. (1994). Remote usability testing. *Interactions*, 1, 21-25.
3. Hartson, H.R., Castillo, J.C., Kelso, J., Neale, W.C., & Kamler, J. (1996). Remote evaluation: the network as an extension of the usability laboratory. In *Conference on human factors in computing systems - proceedings* (pp. 228–235). New York, New York, USA: ACM Press. doi: 10.1145/238386.238511
4. Dray, Susan & Siegel, David. (2004). Remote possibilities? International usability testing at a distance. *Interactions*. 11. 10-17.
5. Bernheim Brush, A. J., Ames, M., & Davis, J. (2004). A comparison of synchronous remote and local usability studies for an expert interface. *Conference on Human Factors in Computing Systems - Proceedings (April 2015)*, 1179–1182. doi: 10.1145/985921.986018
6. Bruun, A., Gull, P., Hofmeister, L., & Stage, J. (2009). Let your users do the testing: A comparison of three remote asynchronous usability testing methods. In *Conference on human factors in computing systems - proceedings* (pp. 1619–1628). New York and NY: ACM Press. doi:10.1145/1518701.1518948
7. Preely: <https://preely.com>
8. Sketch: <https://www.sketch.com/>
9. Figma: <https://www.figma.com/>
10. InVision: <https://www.invisionapp.com/>
11. Adobe XD: <https://www.adobe.com/products/xd.html>
12. Maze: <https://maze.co/>
13. UserTesting: <https://www.usertesting.com/>
14. UseBerry: <https://www.useberry.com/>
15. UserTribe: <https://usertribe.com/>
16. UserZoom: <https://www.userzoom.com/>
17. LookBack: <https://lookback.io/>

Organisation of the Remote Usability Workshop

Overall, the workshop is planned to have a full-day duration and be a mix of presentations and moderated plenary discussions. We will aim for 9-12 presentations contributed by the workshop participants (split into three 1.5 hour sessions with 15-20 minutes allocated for each presentation and a half hour for discussion).

The workshop will be based on active participation and discussions. Paper presentations will be organised in sessions, where papers are grouped in sets of three to four theme-related papers. The paper sessions will be followed by discussions in smaller groups of the challenges and strategies for remote user testing. The participants will then move into new groups with one representative from each group to give a brief account of what has been discussed in their previous group. Finally the groups will discuss and prioritize future trends and present their ideas on a poster for the other participants. The organisers will contribute with two presentations, which will pose challenges and act as starters to the group sessions described above.

We aim for at least 12 and a maximum of 25 participants, to ensure a workshop atmosphere and informal style, where all have a chance to share viewpoints and engage actively in discussions.

We will be able to run the workshop virtually (or mixed-mode), depending on COVID-19 travel restrictions, etc.

Slot	Duration	Topic	Comments
1	20 minutes	Welcome, introduction, etc.	
2	90 minutes	1. paper session	3-4 papers + discussion
3	90 minutes	2. paper session	3-4 papers + discussion
4	60 minutes	1. plenary session	Intro presentation + plenary discussion
5	90 minutes	3. paper session	3-4 papers + discussion
6	60 minutes	2. plenary session	Intro presentation + plenary discussion
7	15 minutes	Conclusion	Summarising results
8	(unknown)	Workshop dinner	All participants are invited – continue networking etc.

Table 1. Tentative workshop layout. The total duration (without coffee and lunch breaks) is estimated to 6.5 hours

The workshop will be facilitated by the organisers, who are all experienced facilitators and expect to be present at the conference. We will act as presenters and session chairs, moderate the discussions, etc. We will follow up and publish the findings and conclusions reached at the workshop, as outlined above.