# Remote Studies: An Effective Modern Day Solution for Running Usability Tests

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## ABSTRACT

UPDATED—June 10, 2017. A decade after Andreasen empirically showed the effectiveness of remote usability studies, the feasibility of running such studies has grown exponentially. The magnitude of multimedia communication options has made it so that running traditional studies may effectively prove to be a more expensive and time-consuming endeavor for virtually all traditional WIMP interfaces. This paper will discuss the benefits but also some considerations practitioners should be aware of when utilizing this type of usability test.

## ACM Classification Keywords

H.5.2. Information Interfaces and Presentation (User Interfaces): Graphical user interfaces (GUI), Theory and methods; ; D.2.2 Software Engineering (Design Tools and Techniques): User interfaces, Object-oriented design methods;

## Author Keywords

Usability Studies; Human Computer Interaction; Remote Studies

## INTRODUCTION

As the web continues it advance as an integral part of our everyday life, the requirements on developers and the industry to meet its clients' needs are ever more important to the success of the product. This also has led to expedited turnaround times between conceptualization, implementation, and deployment of features for products. This time frame makes traditional usability studies untenable due to the logistical requirements of recruitment and time requirements to bring in a representative group of users to perform tests on, not to mention the growing distributed nature of companies and their core consumer groups. The old arguments about the necessity of a state of the art usability lab to gather results no longer apply in our hyper connected world, where real time conferencing and capture capabilities are almost ubiquitous. This is why remote usability studies are ever more important for gathering useful

and meaningful insights around the design of an interface and application.

## SUMMARY

By examining the available literature and considering them in the context of modern day multimedia capabilities, I believe it will be clear that remote usability testing will not only net comparable results to traditional lab studies but allow much greater freedom in who they access for their studies. There should be some distinction between remote studies however, as Andreasen [1] pointed out in his work synchronous remote studies and asynchronous ones are significantly different in the results they return. That is why this paper will advocate for synchronous remote studies as the best option for modern day applications.

## THE PROBLEM

As pointed out earlier, the time tables for modern applications has significantly decreased, making the need for quick, yet comprehensive usability studies all the more necessary. On top of this, access to web interfaces can span continents, so what users in New York need might not be the same as what those in Los Angeles do. Thus, any modern usability test around these interfaces need to account for the needs and desires of populations that may not be located near the office.

### Historical Overview

While it might be clichÃI' to say the modern day moves faster than it has in the past (barring some temporal anomaly that is impossible as time is linear and constant) some things do move faster, like the movement of data between two people. Even in 2007 when Andreasen published his paper, personal smartphones were just at the infancy of their existence and high-speed wireless data networks were more concept than everyday life. Fast forward ten years and the amount of data being transferred has grown enormously with people sharing video and live streaming their lives for others to consume. Why this is important is for the context in which remote usability studies are handled. The farther back you go, the more novel the concept of real time remote studies become. While research may have shown the possibility within the context of a well-equipped and specialized lab, conferencing with someone in their own home was for the most part arduous, if not impossible. For such a task, the person would have to have a strong and stable internet connection, a computer capable of handling real time video conferencing, and the software to do

so. While there are a plethora of options now (basically any internet based chat application has some video functionality), the likelihood of someone having that sort of software readily available was unlikely.

### Analysis

Given the historical context, it is easy to see why traditional lab based studies are still thought of as the best option for handling a usability test. To be fair even with modern technology there are issues that arise from running remote studies. Smith states âĂIJIt is not a question of if but rather when technology issues will arise. âĂIJ [4] That is but one of the problems she outlines as recruiting and handling the time difference in remote studies can also be a greater burden for the practitioner. Being prepared also means understanding the difficulties that one might face as no solution entirely removes the hurdles that exist for conducting a test.

## SOLUTION

If it wasn't clear already, this paper is advocating for the advancement of remote usability studies. Now that the infrastructure exists for conducting these experiments reliably, now all that matters is how one chooses to run the test. Using the method explained by Andreasen is still completely reasonable so long as the software used for the desktop capture and teleconferencing is updated to suit the practitioners need. [1]

### Asynchrony

However, there are other options to consider as the feasibility of running other forms of remote studies in which Andreasen found significant differences in have at least been addressed by other studies. Christensen proposed a system called DUE or Distributed Usability Evaluation where the tool itself allowed for an asynchronous interaction that was easily scalable and effective for even novice users. [2] Even now there are web plugins and other utilities that, while not as robust as the system outlined by Christensen, can give useful insights without the burden that a full-scale usability test necessitates.

### Blended

What is more likely to be gaining in popularity though is some form blended practice. Though Andreasen showed that remote usability studies were capable of finding the same issues as a traditional lab based study, other studies have gone on to show the utility of running blended tests. [3] Jewell shows that running multiple different usability tests can offer a greater bounty of insights because of the types of interaction each practice affords.

- Lab Based Studies
  - Useful for task based studies that are commonly used for specific feature testing
- Pre-Session Homework
  - Useful for assessing how well the application addresses a user's needs and process
- Asynchronous User Tests
  - Fast, scalable, and cost-effective method that capitalizes on participants willingness to explore and give critical evaluations of the application

## SUMMARY

So, what usability method should you use? While this paper advocates for remote usability studies it entirely depends on the resources available and the time allotted to run the test. If you are short on time and need some data to help drive a usability issue home then remote testing is perfect, if not your only option. Do you have more time and wanting a greater swath of insights? Then employing a blended methodology is likely the best option for you. Generally speaking, the day of running only lab based usability studies is no longer the best option if practitioners want to understand the users they reach. Remote usability studies and the infrastructure they require are now ubiquitous enough that any excuse not to run them is likely based off dated ideas and precedent rather than what the current era of computing affords.

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