

Remote, synchronous user research for international usability: a case study

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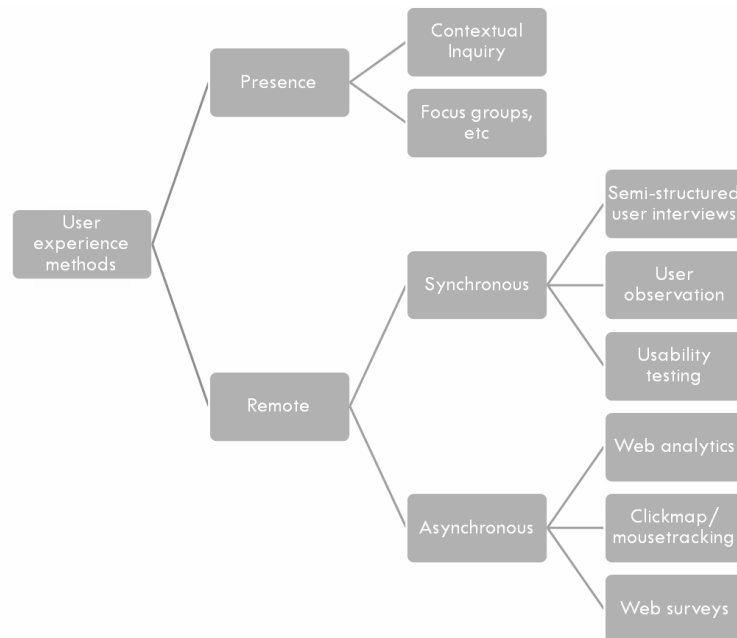
Keywords: Synchronous Remote User Research, Research Methods, International Usability.

Abstract

We present the opportunities, the benefits and the issues of carrying out remote, synchronous user research. Remote research can include semi-structured interviews, user observations and usability testing methods. In this case study, user research complemented the agile development of an online tool with a broad international audience.

Introduction

'Remote user research' protocols refer to enquiries where the user and the facilitator are in different places. Remote user research can fall into two categories, 'synchronous' and 'asynchronous'. In synchronous protocols, a facilitator interacts with a participant who is remote and leads the research activities in real time. In asynchronous protocols, observers do not have access to the participants in real time, and there is no facilitator interacting with them during data collection.



Remote user experience methods

Synchronous methods are enabled by online conferencing tools. Online conferencing tools allow two or more users to share their desktop, open an audio channel, record the video of the sharing session, send files or links via a chat, and much more. Usability practitioners now have a wide choice of online

conferencing tools. The most famous are Web-Ex, GoToMeeting and Yugma, but there are many tools offering similar features on the market.

Many research methods are suitable for remote, synchronous protocols. In literature, usability evaluation is the one most often discussed [1,2,3,4], but there are at least two other suitable methods: semi-structured user interviews and user observations.

Semi-structured user interviews can be used to discover facts and opinions held by actual or potential users of the online service. It is carried out by one interviewer speaking to one informant at a time and requires the preparation of an interview schedule. The interview schedule consists in a set of topics related to product usage. For each topic, one or more interview prompts (how you will ask for the information you need) are required. A qualitative analysis of user interviews allows the facilitator to extract high-level patterns from the user interviews.

User observations can be used to observe how people currently use online services. The user is asked to show how he currently uses the product by doing the tasks "in front" of the facilitator. Observation techniques can be used to learn from task-domain experts, following the 'Master-Apprenticeship' model [5]. The model involves observing and asking questions to the user as if he is the master craftsman and the interviewer is the new apprentice.

The following case study describes how we used a remote, synchronous research protocol to carry out user experience research and evaluation of an online keyword search tool with a broad international audience.

Background

At the beginning of 2008, we were contracted by a small firm to carry out audience research and usability evaluation. The firm specialises in offering keyword research tools that identify, filter and evaluate keywords and phrases for Search Engine Marketing and Optimisation (SEM and SEO). Keywords and phrases can be included in the content of websites to improve their position in natural search listings.

This work presented some unique challenges and opportunities. The firm has been in the keyword research business for about 10 years. At that time, the tool was one of the few available on the market and it was designed by developers for developers. At that time it didn't matter: SEM and SEO was a matter for tech-savvy people only. Over 10 years time, the firm developed new functionalities to respond to market changes. Unfortunately, those features have been bolted-on the existing user interface and this increasingly resulted in a cumbersome and inconsistent user experience where the new features coexisted with the old ones.

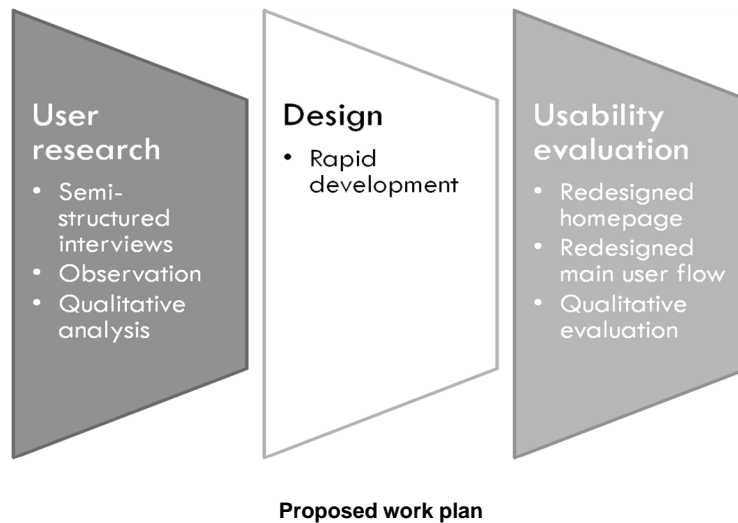
At the same time, their potential audience has changed too. The web advertising market has transitioned from childhood to maturity and increasingly attracts new but less tech-savvy audiences: independent retailers, web agencies, internet start-ups and so on. The business need for the user experience redesign was to cater for the needs of these new audiences, without losing its allure to the old one: SEO and SEM professionals.

With 60% of the firm's customer base is based in the US and 40% in Europe, agile development processes, an aggressive schedule and a tight budget, the project was a unique opportunity for us to employ synchronous remote research protocols.

We proposed a work plan split in two stages:

In the first stage we carried out semi-structured interviews and user observations. The goal was to inform their design activities by (a) selecting a panel of existing and new customers and (b) discover in which way they currently performed Search Engine Marketing (SEM).

In the second stage, we carried out the user experience evaluation. The goal was to gather qualitative feedback and inform the design activities.



1. Remote user research

The first stage required setting up the protocol for the semi-structured user interviews and user observations. For remote testing, it is important to introduce the user observation with a semi-structured interview to build a sense of trust and confidence in the participant.

It took some time to define the interview prompts because SEM is a highly-specialised business with its own domain knowledge and language. We tested the interview prompts a few times to allow the facilitator to become confident in these topics.

The semi-structured interview protocol included:

- Standard demographic questions (age, job, work experience)
- Prompts to discover the keyword research work practices beyond the mere usage of the online tool (How important is keyword research to your business? How would you describe the phases to carry it out? Etc)
- Prompts to identify the keyword research tools employed and their frequency of use.

The user observation protocol prompts the participant to use the online tool as normal, talking out loud about their journey into the tool. When required, we prompted the user to verbalise why they took some actions, explain in their own words the results obtained and the technical jargon displayed on the screen. We concluded the observation with a few questions about the perceived quality of user experience and how they would improve the current tool.

User research sessions were carried out in about 5 working days in the US and Europe and it took about the same time to analyse its results. We transcribed session outcomes, carried out thematic analysis, and identified and visualised common patterns.

User research findings were briefed to the User Experience team composed of one graphic designer, two interface designers, the firm's CEO and the marketing representative. Three video highlights were prepared to show to the team the problems in the user journey.

2. Remote user evaluation

The user experience evaluation took place 4 weeks after the presentation of the user research findings. The team developed a static mock-up of the revised, personalised homepage and a high-fidelity prototype of the keyword research tool.

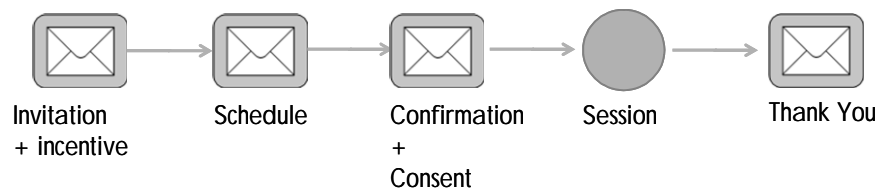
The evaluation protocol fulfils two different goals: (a) gather perceptions and expectations from the homepage and (b) prompt the user to explore the high-fidelity prototype as if they had to carry out an actual keyword research.

Based on the results of the first stage, the aim of the new interface was to be flexible enough to satisfy the needs of the most sophisticated and naïve users (e.g. the SEM professionals vs. the small and independent online retailers).

As planned, the second stage took a total of two weeks. The evaluation findings were presented to the team, who subsequently carried out one additional design iteration.

Preparing remote synchronous research

Besides the definition of the protocol, there are other important preparatory activities, such as writing the invitation to participate and identifying the incentives. The invitation email must clearly state the goals of the Customer Experience Program, its benefits and the incentives to participate; customers must be able to choose between a free-subscription to the service and an Amazon online voucher.



Invitation, scheduling and confirmation emails

After the participant agreed to participate, we scheduled a time slot and forwarded to the participant a confirmation email with the exact timing (in their time zone) and a link to join the session. We found it very useful to include a link to a special 'troubleshooting' page on the online conferencing vendor website that allows the user to check in advance if the system configuration (broadband, computer speed, operative system and browser) is adequate for the session.

As expected, we discovered that making the user share the desktop with the facilitator was not always so immediate. While, in most of the cases, setting up the desktop-sharing session generally required just clicking a unique session link in the invitation (and a minute wait for the machine to configure the program), in some cases technical trouble-shooting was required. In some cases it took up 15 minutes to address the technical issues. It was really useful to test the tool with a few people in advance to identify the most common issues and preparing a list of questions about things that could go wrong. For example, we had issues with the security settings at the user side. In most cases, it was sufficient to restart the browser, but in one case we had to abort the session. Carrying out remote user research involves planning at least an additional 10-20% sessions than the desired target figure to make sure there is enough data to obtain representative results.

If the research requires audio and video recording, it is important to check if the facilitator's machine can handle all the tasks at the same time. It is worthwhile to simulate one or two user sessions to avoid losing precious data with the actual users.

An additional challenge is presented by allowing remote observers. In the same way that a typical usability laboratory setting allows stakeholders to watch from behind the one-way-mirror, online conferencing tools can allow one or more observers. In our case, the Project Manager and the CEO asked to attend to some of the sessions. However, it is important to agree with the stakeholders that they will not be allowed to intervene during the session. If they strongly want to participate, you can advise

them to use an Internet Chat to send the questions to the facilitator, who can decide how and when to ask the question. Research participants can also see when there are other people attending the online conference, and it is therefore important to introduce them and explain that they will not intervene in the session.

Benefits and drawbacks of remote synchronous research

Remote synchronous research protocols will never substitute contextual inquiry and usability testing in-situ. There is a wealth of information that it is not accessible to the remote observer, such as non-verbal and environmental cues. In addition to that, it is not always easy to manage the interpersonal dynamics of the evaluation situation that must be managed across cultural and linguistic barriers and may require different approaches in different countries [6].

However, in our view, remote user research also presents unique opportunities:

1. It doesn't require a research facility. Remote user research can be carried out with a PC and a broadband connection.
2. It decreases travel costs and times, both for the users and the investigators.
3. It can be carried out in the actual context of use: users do not have to travel to a research facility and they can use their own computer, browser and plug-ins instead.
4. It can involve highly specific, time-poor audience segments that can hardly afford to participate to user research otherwise.
5. It allows international user research on a budget. Where no language and cultural barriers come into play, remote user research effectively allows user research across time zones.
6. It also complements the agile iterative development processes that require a quick turnaround of research findings into design input.

To a large extent, the methodologies used in remote user research do not differ from traditional ones. This is a big advantage for user experience professionals that can leverage on their previous experience.

Conclusions

This case study presents the opportunities of carrying out remote, synchronous user research for international studies. Remote research is an extremely appealing proposition for the myriad of fast, innovative, small and medium firms marketing their online services and web applications to an international audience. But it could also be used by large corporate organisations to carry out more frequent user research programs.

Remote synchronous user research can include semi-structured interviews, user observations and usability testing methods. Online conferencing tools are now widely accessible and they offer audio conferencing, desktop sharing, chat and audio and video recording. In this case study, user research complemented the agile development of an online keyword research tool with a broad international audience. The goal of the first stage was to gather the requirements for the user experience redesign. The goal of the second stage was to gather feedback on the interface prototypes. Remote, synchronous user research requires thorough preparation, as traditional research does, but presents additional technical challenges: testing in advance the users' system configuration, having a procedure for technical troubleshooting and involving stakeholders in the research as remote observers. Remote user research will never substitute contextual inquiry and usability testing, but it presents unique opportunities: it doesn't require a research facility, it decreases travel costs and times, it can make it easier to involve specific, time poor audiences and it allows user research across the world.

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