

UX 2.0: Any User, Any Time, Any Channel

With the evolution of Web 2.0, the fields of design and usability will continue to merge. Designers will have to be able to easily observe and analyze the user experience without being experts in usability.

INTRODUCTION

“Web 2.0” is the term being used to discuss the ways new technologies are blurring the line between software and the Internet. Software is becoming more “Web-like,” and Web applications and services are becoming more software-like. Though Web 2.0 is difficult to define, as a general concept it encompasses a set of characteristics that are driving this convergence, which include:

- The Web as a universal platform**
 Software is being delivered as a service rather than an installed product, making the Web the universal platform, and freeing people from the restrictions of platforms or operating systems.
- Rapid development**
 Services are being continually updated and improved as people use them and undergo rapid (sometimes hourly) iterations of development.
- Architecture of participation**
 Individuals are easily able to consume and remix data and applications (creating “mashups”) from multiple sources and to contribute their own data and services in an open way that allows remixing by others. Practices like “tagging” – adding metadata to images, pages, or chunks of information – allow people to form associations between information to create individually and collaboratively defined networks across the Web.³

Web 2.0 also involves emerging technologies, such as AJAX, that allow developers and businesses to move “beyond the page metaphor to deliver rich user experiences.”³ And technologies like APIs and RSS mean that users will no longer have their experiences dictated to them, but will instead have as much power to define their own experiences as they are comfortable exercising.

The remixability of content and applications, paired with the rapid speed of development, form the foundation of a collaborative architecture that promises to result in richer user experiences. However, a richer user experience isn’t necessarily a usable experience. In order for Web 2.0 to deliver on its promise, it must provide richer, *usable* experiences.

WEB 2.0: A CONTINUUM OF USER EXPERIENCE

The structured environment of “Web 1.0,” characterized by traditional Web sites where design and content are dictated by the site owner rather than the user, will not be immediately or even entirely replaced by a differently structured environment in Web 2.0. Instead, there will be a continuum of user experience as demonstrated by the diagram on page two. The right end represents the promise of Web 2.0, with users creating structure by combining data and functionality from a variety of sources into a custom environment of their own design.

Although the most tech-savvy users will undoubtedly be the earliest adopters of the emerging technologies in the Web 2.0 environment, the average user is likely to make a slower transition from the familiar structured environment of “Web 1.0” to the self-structured environment of Web 2.0. A key factor driving this transition will be the design of tools that make it easy for the average person to interact with and understand the Web 2.0 environment. Once usable tools are available, the transition will occur more rapidly for the general public.

For this reason, understanding the user experience will be critical for success in the Web 2.0 environment. Organizations will need more agile methods for conducting user experience research because, more than ever, poor user experiences will limit market adoption and quickly open up opportunities that competitors can exploit.

UX 2.0: ANY USER, ANY TIME, ANY CHANNEL

“You can never accurately measure the usability of a software product. When you drag people into a usability lab to watch their behavior, the very act of watching their behavior makes them behave differently.”⁵

As more users move from left to right across the experience continuum, traditional user research methods, such as lab-based testing and reliance upon Web analytics, will no longer be effective or even necessarily feasible. Web 2.0 will require a much more complex user experience research paradigm than ever before – one that is flexible enough to work at any place along the user experience continuum.

LIMITATIONS OF CURRENT UX RESEARCH METHODS

User experience professionals have already discovered that bringing users into a lab and asking them to conduct scripted tasks provides incomplete information about the user experience. Traditional usability testing methods were born out of the installed-software development environment, which had long release cycles. These methods have huge disadvantages that make them unwieldy in the Web 2.0 environment:

- **Time consuming**
A typical lab-based usability study, from recruiting users to completing analysis, can take four to seven weeks.
- **Environment is artificial**
Removing users from their natural work environments and placing them in a foreign environment eliminates all of the factors that would normally influence their experience with a product or Web site.
- **Expensive to conduct**
The total cost of a usability study can be tens of thousands of dollars.
- **Heavy burden on the user**
The effort required for the user, in terms of time, expense, and location places a burden on the user that can be a deterrent to participating.

Additionally, organizations that are currently using Web analytics to measure user experience are already discovering this research method can't give them the complete picture. Web analytics data can reveal when, where, and how the users are navigating a site, but not why. For example, a company using analytics may know what the percentage of visitors is leaving their site, and from

The User Experience Continuum of Web 2.0

STRUCTURED	SEMI-STRUCTURED	UNSTRUCTURED
Creator-supplied content	User-supplied content	Data from many sources
Content-rich	Functionality-rich	Parts for Internet tools
Ex: Mar/Comm sites, blogs, etc.	Ex: Applications, tools, etc.	Ex: XML, feeds, aggregators, services, etc.

(Created by Dan Saffer)⁴

which pages, but not why they left. With this limited view of the user experience, using Web analytics as a user experience research method forces organizations to make guesses about user intent.

OBSERVING USERS IS KEY TO UX RESEARCH IN WEB 2.0

As companies have less control over how users will interact with their product or content, having the opportunity to observe user behavior, both in real-time and asynchronously, will become more critical than ever. Observing users in their natural environments yields more accurate results, answers more questions about the “why” of the user’s behavior, and makes it possible for the entire design team (including developers) to understand where users are running into roadblocks and what their goals and intentions are.

OBSERVATION PROVIDES A MORE COMPLETE AND ACCURATE PICTURE

Research methods that involve direct observation provide more accurate data than methods that rely on users to recall and self-report their behavior. When non-observational research methods like surveys, focus groups and interviews are used to assess the user experience, a variety of factors can affect how accurate participants are in reporting their own behavior^{1,2}:

“Respondents encode and interpret...questions; they place the questions in the context of their general knowledge and their knowledge of the...subject matter; and they gauge the expectations of the interviewer and the social desirability of their answers.”²

Therefore, assessing user experience through direct observation undoubtedly produces more viable results precisely because it eliminates many of the factors that contribute to the inaccuracy of self-reporting methods.

OBSERVATION PUTS THE DESIGN TEAM ON THE SAME PAGE

Observing user testing live or asynchronously on digital video is also critical because it puts designers and product stakeholders on the same page, immediately – there is no denying the results they can see with their own eyes.

This leads to a quicker and more complete buy-in for design changes that need to be made.

A NEW PARADIGM FOR UX RESEARCH 2.0: ANY USER, ANY TIME, ANY CHANNEL

In the rapidly dynamic and increasingly self-structured Web 2.0 environment, it is clear that traditional user experience research methods will be of limited use, and even then only in the most structured areas of the user experience continuum. As more users move into the more self-structured environment of Web 2.0, a new paradigm for user experience research will be required – one that fits with Web 2.0 and can help it deliver on the promise of richer, usable user experiences.

This paradigm must include research methods that allow organizations to capture the experience of any user, any time, and on any channel, and also allow designers to easily observe, record and understand the user experience.

ANY USER

The new paradigm for user experience research must incorporate methods that eliminate the burden on users as they share their experiences. Once target users agree to participate, the process must be effortless. This will enable design teams to observe a wide variety of target users who fall at various points along the experience continuum.

Participation must also be feasible for users from any geographic location. In addition to reducing the burden on users, this kind of accessibility offers huge benefits for organizations, including a dramatic increase in the pool of available participants, more affordable iterative testing, and a more accurate understanding of user behavior in a natural environment.

Research Methods Along the User Experience Continuum

STRUCTURED	SEMI-STRUCTURED	UNSTRUCTURED
<p>Traditional UX Research Studying UX of static site and application design/content</p> <ul style="list-style-type: none"> • On-Site Studies • Moderated • Synchronous/In Person • Not Rapid 		<p>New UX 2.0 Paradigm Studying UX, in context, of structures users create for data.</p> <ul style="list-style-type: none"> • Remote Studies • Unmoderated • Asynchronous • Rapid

ANY TIME

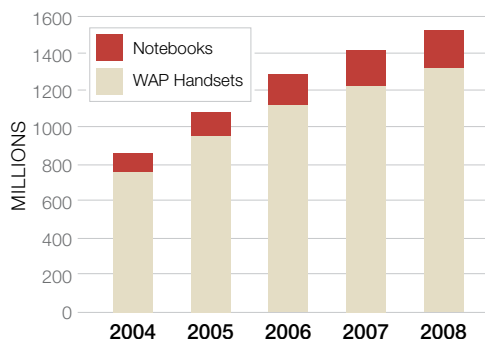
Tools for user experience research in the Web 2.0 environment will require the flexibility to capture the experience whenever the user is interacting with a site or service, especially when that interaction is unmoderated and asynchronous with the researcher’s schedule – even in the middle of the night, and from any time zone.

This requires the ability to capture and store the user experience for on-demand access by design teams whenever they need it. Capturing the user experience when it occurs preserves the context of that interaction. It is this context that provides the greatest insights about how the design can be improved.

ANY CHANNEL

The mobile computing market is growing exponentially each year with smart phones leading the way. No longer tied to a specific platform, Web 2.0 applications and services will be developed to travel seamlessly from server to PC to handheld device.

In this new paradigm, user experience research tools and methods will have to be flexible enough to capture the user experience on any delivery channel – cell phone, PDA, laptop, kiosk, and any operating system. By understanding how users interact across all channels, design teams will be able to create a seamless and familiar user experience.



Sources: T-Mobile, modeled on Credit Suisse First Boston, Mobile Data 2004; Pyramid Research, Global Mobile Chapex Handbook, August 2004

“...companies that succeed will create applications that learn from their users, using an architecture of participation to build a commanding advantage, not just in the software interface, but in the richness of the shared data.” 4

With the development of Morae and UserVue, TechSmith is developing tools that provide designers/developers easier, faster access to user research in order to create richer, usable user experiences that also eliminate the burden on the user to participate.

DESIGN AND USABILITY: A NEW MERGER

Understanding the user experience is more critical than ever for design teams, including developers, as Web 2.0 evolves. To create tools that will enable users to easily manipulate unstructured data, designers must first understand how users will use that data. People are going to use the tools that work best for them, so usable design will “make or break” products faster.

With the evolution of Web 2.0 the fields of design and usability will continue to merge. Designers will have to be able to easily observe and analyze the user experience without being experts in usability. Consequently, user research methods in the new paradigm must place a lighter burden on designers and developers, who will need to observe user interactions with sites and applications – see what users do, not just hear what they say.

This new paradigm must, therefore, eliminate barriers for designers. User experience data collection must be asynchronous and available on-demand, so that designers and developers can return to the data at any time and see just the most important interactions.

To quickly identify the critical interactions from hours of unmoderated recordings, tools for user research will have to evolve to incorporate automated analysis functionality – and have the ability to identify and “chunk” the critical events and data based on the needs of the design team (for example, interaction with a specific feature).

Research methods that hinder the rapid development process will be of no use to Web 2.0 design teams.

CONCLUSION

There are some predictions we can safely make about the Web 2.0 environment, based on its evolution so far. We know that Web 2.0 will lead to the proliferation of Web applications and, con-

sequently, intense competition. Well-designed tools for working with unstructured data will drive the average user’s progress along the experience continuum. Consequently, user observation will be more critical than ever in the research process. Designers will need new methods for observing real users to understand their key needs in order to create usable tools.

In this competitive space, *usable* user experiences will win – leading to adoption, scale and competitive advantage. To create usable user experiences, design teams must be able to understand the context of use from any user, at any time, and through any channel. At the same time, the burden for participants and design teams must be eliminated, making it simple for users to share their true experiences. Design teams must be able to observe these experiences on-demand, either live or asynchronously. It is only in this way that the context of use will enable teams to create usable designs that drive users to realize the promise of Web 2.0.

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