

# Website Usability or the WWW as Practice

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## Abstract

*Since the Web popularized computing technology by means of its usability it became a continuous effort and unique competence to ensure its persisting usability and value. The tutorial provides different perspectives from which to improve and evaluate the quality of websites: the dynamics of projects and the continuants of usability in respect to functionality, content and design. Common evaluation techniques are being performed. The idea is to advance participants reaching their goals online.*

## 1. In the beginning

In the beginning was its usability. Unlike other paradigms of human-computer interaction the World Wide Web does not count as a major technological innovation. The transmission protocols and distributed file systems needed, even the idea of rhizomatic linking and hypertext technology existed long before. Ease and value of use – the browser for the users, html for the developers - turned the WWW in the early 90s into the pop star of the lonely planet; and they promoted the widespread use, development and funding of computing technology around the globe. First in academic circles, then as a widespread cultural practice in the worlds of business and leisure a new information layer was textured onto the world – 3 billion pages within the first 2000 days. New artificial forms of communication and teleactivity were established, a new navigational space was discovered by construction. New conventions settled. Only ten years after the development of the first graphical web browsers we will look at these practices and conventions and explore their potentials.

The tutorial addresses professionals concerned with the design, evaluation or improvement of web-based applications or information sites. Cuauhtemoc Rivera, PhD student from the Universidad de Chile will assist the lectures and exercises. No advanced technical knowledge or usability testing experience is assumed on behalf of

participants. The goal is to teach significant design factors that affect users' success in finding information on a Website and using web applications. Lectures and small group exercises are complemented by numerous examples from the instructors working experiences as well as best practices.

## 2. Basics

Initially some general characteristics of the Web are presented: its modular, discrete and nonhierarchical organization and hyperlinking as its unique way to organize and access information. A basic understanding of the web's technological and socio-cultural infrastructure is necessary to explicate the conditions of the possibilities in which website usability efforts may operate. We will show how these efforts define a critical success factor for web projects and how investment into usability may be justified using measures of inversion rates and Return of Investment.

To ensure a common understanding of the tutorial's objectives basic definitions of usability, usefulness, user experience, usability engineering and Human-Computer Interaction are provided. We will also show how methodologically structured approaches to gain and evaluate empirical data on usability and users' experiences enable design teams to raise and solve usability issues in order to increase the value of Websites. Ending the introductory part we will present and critically discuss usability principles and heuristics. We will show how they may be applied through review and collection and prioritization with respect to the project goals. Participants then start their own short heuristic evaluation of selected websites.

## 3. A Project Perspective

A critical success factor for any product is how it is being developed and introduced and how future users are integrated into or at least represented within the developmental process. From a project perspective the first

step is to establish and agree upon clearly and precise formulated project goals. In a user-centered web-project these goals have to be translated into usability goals.

Usability goals are based on user profiling and an analysis of the main tasks, as well as on general business goals. Alternative or additional resources for their formulation may include marketing information, competitive analysis, technical support groups, or just informed opinion. Specific qualitative and quantitative goals, defining minimal acceptable user performance and satisfaction criteria based on a subset of high-priority qualitative goals, are defined and prioritized. These usability goals focus later design efforts and provide criteria for iterative usability evaluation. Usability goals drive the evaluation process as evaluation criteria as well as the design process.

In order to project a website into the sublime yet navigable web space a project team is being set up. Like usability goals project where you are traveling, the process setup defines who is traveling, doing what and how. Typical roles (like concept, design and development), activities, artifacts (like style guides, content collection documents, information architectures or prototypes) and workflows (like design and implementation) are shown. Finishing this part of the tutorial participants define usability goals for a project they are or might be working on. These will serve as a personal reference for the further presentations.

## 4. Disciplinary Perspectives

Showing best practices and examples, we take different perspectives at the practice of simplicity on the Web. They are based on three categories or competencies involved in web projects: functionality, content and design.

Regarding functionalities the scope of has to be defined and managed throughout the project. Functionality basically depends on the business goals. What is it that you want to deliver online – a whole new business, reorganization, an additional client service, an information resource or simply a re-mediated representation of yourself (as a person, organization, brand or government)?

Best practices of usable designs of basic functionalities like news, search, contact or different forms of user participation are shown. In order to deliver valuable services for its visitors flexible and efficient administration and management of its content are obligatory. Ease of use on behalf of administrators and content managers may reduce maintenance cost and increase job satisfaction.

Up to now most travellers of the Web are inquiring information. If the content does not satisfy any other website is just one URL away. Therefore the right selection and creation of content is key on the Web. Unlike the title “Copy and Error Messages” hints the possibilities of the medium are missed, when content providers just transfer

available content to a new format. Writing for the Web is a craft and an art on its own like writing a newspaper article, a popular comic for the masses or a novel for the distinguished reader. Proper linking and a clearly structured information architecture enable the user to orient herself on the site building a clear mental model of its content and functionality structure.

Tied to the strategic intent branding makes abstract business and product ideas in the digital economy tangible, attractive and desirable. A coherent brand can lead all communication efforts and yields a starting point for design. Composites or comps show the Look-and-Feel or corporate identity of the sites owner. Derived from the user profiles mood boards may be used to visualize the mood of the users interacting with the site. Best practices in formatting, use of contrast and color, visual layout and design of interactive elements, icons and forms provide readability, transparency and means of orientation.

## 5. Evaluation

In the tutorials final section we will discuss some structured low-cost techniques to anticipate users’ experiences and their potential problems in interacting with website. Heuristic evaluation as a minimalist approach was already introduced.

Cognitive walkthroughs start from representative user tasks and a list of the correct actions required completing these tasks on the website. Examining each individual step in the correct action sequence a believable story is generated about why the prospective user would choose that action. Evaluating these stories early insights into potential usability problems and design solutions may be gained.

Finally paper prototyping, a fast and inexpensive method of usability testing with paper support, is introduced. It aims to identify problems before they are coded, to enhance creativity and to get users and other stakeholders involved in the design process. Using paper prototypes participants get the chance to perform their own usability testing.

## 6. Conclusions

As people, their habits, preferences and technologies change, so does the Web. The Web was born from its usability and throughout its diversification usability efforts remained to ensure its growth and success.

How much has cinema developed throughout the 20th century, how much have the cultures of the printing press developed from Gutenberg to the Turing Galaxy? With the feasible and widespread use of a technology its history is not ended. New paradigms in the Web are yet to come. Its potential users will decide what sites will mark a difference in the web of tomorrow.