Obigo AB Position Paper for the W3C "Mobile Web Initiative" Workshop

Abstract

The mobile user experience is different from the fixed user experience. Mobile devices and networks are still more limited than fixed devices and networks. Yet, compared to fixed Web access, mobile Web access also gives enhanced possibilities, for example location dependent services.

A mobile browser must be able to:

- Render Web sites adapted to mobile devices.
- Make the best effort to render any Web site.

The former gives the most user-friendly experience and makes it possible to provide services with "mobile specific features".

The content author should be responsible for the adaptation and the differentiation between fixed and mobile content. However, the goal is to avoid a differentiation between the fixed and the mobile Web. The markup should, to the greatest extent possible, be the same for fixed and mobile devices. A possible solution is to use different style sheets to adapt content to the mobile or desktop device.

Introduction

The main topic of this W3C workshop is to discuss how to make Web access from a mobile device as simple, easy and convenient as Web access from a desktop device. To achieve this goal, we first have to identify the differences between desktop Web access and mobile Web access. Mobile terminals and mobile networks are continuously being improved. However, mobile Web access is still more "limited" than desktop Web access and this will continue to be valid, at least for the foreseeable future. Furthermore, mobile Web access gives other possibilities than desktop Web access and users must be able to take advantage of these "mobile specific features".

It is important to discuss, during this workshop, how we should take the differences between the fixed and the mobile Web into consideration, without splitting the Web into separate fixed and mobile domains.

The mobile user experience

Which are the use cases for the mobile Web and how is the mobile user experience different from the fixed user experience? Some examples are given below:

- Compared to users of desktop devices, mobile users more often download media such as ring signals, images, games, themes etc, than use pure browsing services.
- As a mobile device is carried around, often "always on", the user is "always reachable". This opens up for push-like services, for example, push of "teasing content", and for chat-services.
- Mobile users do not tend to "surf around" to the same extent as users of desktop devices. A limited number of sites are accessed and portals are more important for the mobile Web than for the fixed Web.
- Mobile services are more "transaction oriented" than services for fixed access. For example, a mobile timetable service does not deliver a complete timetable. Instead, the service responds to a direct request such as "when does my next train leave?".
- Mobile Web access gives enhanced possibilities compared to fixed Web access, for example:
  - Location dependent services.
  - Services that access local device functionality, for example telephony functionality, or the local smart card (SIM, USIM).
  - Services that access other mobile applications, such as messaging services and phonebook services. There must be a seamless integration between different mobile applications.

Strategy

As described above, the mobile Web user experience is different from the fixed Web user experience. So how can we enable the Web to be made as seamless, uncomplicated and reliable an experience on mobile devices as it is on desktop devices? And how can we enable mobile browsing to take off?

The problems with the mobile Web can be divided into two main areas:

- Devices:
  - Small devices with limited screen: Difficulties to display content that is optimized for a desktop computer display.
  - Keypad: Demanding to enter alphabetic characters. For example, entry of URLs is not attractive.
- Networks:
  - Long delays (round-trip time): Each transaction take long time.
  - Charging model: Users pay for amount of data transferred.
  - Bandwidth: Still more limited compared to fixed networks, but this is improving.

The problems described above give the effect that Web pages, which are optimized for desktop computers, often will be difficult to display on mobile devices and the costs for the users will be high. This is especially valid for pages that contain a lot of images and banners.

But mobile browsing is not only more limited than fixed browsing. As mentioned earlier in this paper, the mobile Web also offers enhanced possibilities and we want services to be able to take advantage of the mobile specific features.

Many browser vendors today address the "small device problem" by browser specific solutions for "smart rendering" of "normal" (not mobile adapted) Web content. It is an advantage if a mobile Web browser is capable of accessing any Web page. Yet, despite many attempts to solve the problems of displaying standard Web pages on small displays, the user experience will never be equivalent to the user experience when a desktop computer is used to access Web services. Accordingly, the best user experience is achieved if the content is adapted to the mobile device by the content author.

Obigo AB generally believes that the responsibility has to be moved from the browser vendors to the content authors to provide mobile adapted content. In fact, this is the approach that was chosen by WAP Forum and OMA by the definition of mobile specific content and mobile profiled content. The problem is that the Web has been divided into "the fixed Web" and "the mobile Web". Instead, our goal is to have one Web for both fixed and mobile access. The question is how to make it possible for content authors to create only one version of the pages, optimized for both fixed and mobile access. This probably has to be addressed by content tools providers as well as by guidelines for how to write markup. One solution could be to use the same markup for fixed and mobile access, letting the differentiation be made with style sheets, "CSS handheld". Accordingly, we promote standardized solutions instead of browser specific "smart rendering" implementations.

The other problem is related to network bandwidth, delays and charging. This problem is most obvious when it comes to multimedia content. Solutions are, for example, to send smaller images to mobile devices and to remove banners. Today this is solved by proxies using none-standardized solutions. If possible, this should instead be handled by the content author, by using style-sheets to adapt the content sent to mobile devices.

To increase mobile browsing, we think that there must be more focus on the advantages of using a mobile terminal, instead of a desktop device. For example, the possibility to create location dependent services is an obvious mobile-specific feature. Furthermore, push-based services are more suited for mobile phones than for desktop computers. One issue to be discussed is how these types of services can be supported without dividing the Web into a mobile domain and a fixed domain.

One question is "how can device and context adaptation be made easier"? It must at least be possible to differ between mobile and fixed access. One solution that exists today is UAProf to adapt content to each device. Yet, our impression is that this has never really taken off. The reason is probably that it's to complex and that too many different terminals are in use. Device adaptation must be simple and one approach would be only to divide between mobile and fixed access.

Technology

We do not think there is a need for completely new technologies to achieve a seamless and uncomplicated mobile Web access. Existing technology from W3C and OMA is the basis and a tight cooperation between W3C and OMA is important.

About Obigo AB

Obigo AB is a subsidiary of the Teleca group working with product development, support, sales and marketing of Obigo®. The company is an international business with more than 50 customers in Europe, Asia and US. Customers are handset manufacturers, ODM's and design houses that pre-integrate Obigo into mobile devices.

Obigo is a world-leading application system that consists of software products, such as browsing, messaging and content management. Obigo is designed for mobile multimedia devices and is found in hundreds of millions of mobile phones worldwide. The applications execute within a framework, which is OS, hardware and network independent. The architecture enables simple integration of applications.
www.obigo.com
Obigo® is owned by Obigo AB - A Teleca company.