Introduction

At today’s world it is difficult to create services for mobile terminals because you never know what they support and what not.

Markup languages

The goal should be that mobile browsers could use same markup languages than Web browsers.

A standard way to support markup languages and style sheets would ease the development of mobile content in browser environment and is needed to make the mobile content and browsing to increase.

Meta information

In current Internet services meta tags, for example refreshing and caching, are widely used. These functionalities are important but they are not supported in current mobile browsers.

Basic scripting

Basic scripting is needed to enable more advanced services in mobile Internet sites. For example, in WAP services digital signatures made with wmlscript have been used for authenticating the user.

Adopting beneficial features from WAP world

Mobile terminals are developing really fast and they have started supporting various markup languages, W3C should adopt beneficial features from WAP world that improve user experience. These features are for example:

?? Keypad mode for input. Service provider can assign using eg. attribute what characters are accept to enter to field, for example field is only numeric –type etc... This improves user experience because by doing this user do not have to change the input mode.
Wireless Telephony Applications Interface (WTAI). User could start phone application straight from the browser just pressing link, which contains phone number.

**Security issues**

For banks and other companies it is evidently very important to ensure end-to-end security in their services. In TCP/IP phones there is no problem with this because connection is always end-to-end secure although connection can go through operator’s gateway using SSL-tunneling.

In dual stack phones that contain both TCP/IP and WAP 1.x stacks there is however a security risk. User can take insecure connection to operator’s gateway which forms secure https connection to service provider. For service provider this connection looks like normal https connection but it is not secure. Customer information will remain at the operator’s server, which is not acceptable neither for the service provider nor the consumer.

This problem should be notified and proper means should be taken to ensure end-to-end secure connections because this will increase usage of secure mobile services. At the moment service providers with high security requirements have to block out phones with dual stack support because there is no guarantee of the security.

**Proposals for Internet in mobile terminals**

Nowadays we should not talk about Mobile Internet, we should talk about Internet in Mobile. Here are some thoughts that would make Internet in Mobile possible

?? If Web page has a mobile version, information should also transferred to the browser. Mobile browsers can then access mobile pages directly. Search machines could also use this same attribute when searching mobile web pages. There should be also an access from mobile web page to normal page.

?? Mobile browser manufactures should inform what attributes (html, css, …) their browser supports.

?? Mobile browsers should user same markup languages than Web -browsers.
There could be some kind of “experience box” what everybody could use. In this “box” there would be information about differences between browser, what they support and what not.

About Nordea

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Nordea has almost 11 million Nordic customers and 1209 bank branches. It employs about 29 000 people.

Nordea is a world leader in Internet and mobile banking with 4.1 million Internet and mobile banking e-customers. The Nordea share is listed in Helsinki, Stockholm and Copenhagen.