

Position Statement for Mobile Web Initiative: A universal channel delivery context and device information repository

Stéphane H. Maes

stephane.maes@oracle.com

**Director of Architecture, Standards and Technical Strategies
Mobile, Voice and Wireless - Pervasive Technologies
Oracle Corporation**

1. Personal Interest

Stéphane has several years of experience and history with mobile and pervasive technologies. At IBM and now at Oracle, he pioneered numerous activities, including speech and speaker recognition technology, voice browsing (SpeechML), embedded speech recognition, multi-channel and device-independent authoring and middleware (XForms, XSLT, XHTML multi-channel...), multimodal computing and conversational computing and their use in pervasive computing like mobile and car environments. As this work progresses, he became convinced that speech and multi-modal interfaces will complement mobile GUI interfaces and become the core user interface of pervasive computing and in particular the mobile internet.

His work also focuses on defining and implementing an overall architecture for mobile computing internet that accelerates interworking and convergence / harmonization with the internet in general. This is achieved by appropriately shaping the mobile internet with "internet technologies" that can also extend both the internet and the mobile internet capabilities (including mobile enablers), deployment models and supported business models. This has recently resulted into the proposed OMA Service Environment (OSE) approved by OMA for its base architecture. The OSE has the potential to provide an appropriate framework for converging mobile technology framework like Parlay/OSA and IMS (IP Multimedia Sub-system) under a common service oriented architecture that does not differ from the web. In particular, such a framework is also key to ensure that web service technologies are one single technology stack that they be used in mobile or fixed domains.

In his current role at Oracle Corporation, Stéphane oversees strategy, research and development of tools and middleware (declarative and imperative, JSP and JSF, portlets) to support mobile, voice and telephony, multi-channel applications, multimodal and multi-device applications. This includes applications optimized for specific interaction channels and devices including: WAP, XHTML, J2ME, MS .NET Compact Framework, SALT, device-specific XHTML / Ecmascript MP, WML, XForms/XHTML, VoiceXML (browser specific and browser-independent), JSPs, JSFs and portlets. His work responsibility include adding mobile, voice, multi-channel access, enablers and features to most of Oracle product (data base, application server, development tools, enterprise manager, collaboration suite applications or enterprise applications).

During the years, Stéphane has created, chaired, actively participated, often as editor, managed representation or monitored related standard activities including W3C, OASIS, WS-I, IETF, 3GPP, ITU. Parlay, OMA, ETSI, WAP, JCP etc...

2. Mobile Web Initiative

2.1 Caveat

We applaud the surge of interest for the mobile web that resulted into this workshop as well as the decision to host the workshop in parallel with the OMA Technical plenary. It is indeed important to understand and respect the domain of expertise of the existing standard organizations in this space. OMA is leading the specification of the mobile internet reusing technologies specified by the W3C, IETF, OASIS etc... We would hope as a member of both the W3C and OMA that the present initiative will focus on tightening the collaboration, accelerating convergence of technologies and identification of issues or gaps that can be better addressed by coordinating the work of both organizations. We would discourage setting up uncoordinated, overlapping or competing activities.

In this spirit, the rest of this document identifies a fundamental issue that we believe should be addressed jointly by W3C and OMA through a coordinated initiative to establish a device and channel repository.

2.2 *The gap in delivery context*

We believe that the single most pressing problem met currently when developing, testing or deploying mobile product, applications or services is the lack of information about the channel / device delivery context. Numerous W3C, OMA work and other standard activities (e.g. JCP) have identified this issue and tried to partially address it. See for example analyses provided by the W3C Device Independent WG, the CC/PP work, the UAProf WG, JCP JSR 188, ...

CC/PP, UAProf provide mechanisms to access some device / channel information. Today such context information is often lacking, incomplete or even incorrect.

Companies and private initiatives have started compiling such repositories. However it is our experience that these repository often are based on information inferred on the device or channel by the owner of the repository and may often be inaccurate or incomplete. Also these repositories always lag the deployment of new devices. And it is with such new devices that the problem is the most acute: how to make sure that a brand new device is supported by a product or application can be accessed by a new hot device (e.g. what XSLT to use or define), what to do with this new unknown device used by a particular user etc...

2.3 *Channel delivery context and device information repository*

We recommend the establishment of a device / channel information repository that would store information available about all known devices and channels.

For the purpose of initiating discussions, we intentionally do not discuss technical implementation options. Some could be presented at the workshop if appropriate. To agree on the need, concept and initiate such an initiative is more important.

We believe that such a repository should be designed to be widely distributed with one or multiple root repositories. Ideally information would be provided by the device and user agent manufacturers. This has been an issue in the past; however the industry pressure resulting from the establishment of such a industry wide repository may provide enough incentives to overcome these challenges.

By allowing a distributed repository, other actors can contribute to the repository (e.g. companies that collect such information by inference, operators, service providers or companies that distribute and customize devices etc...).

Appropriate validation or certification mechanisms may be used; but other non-certified information may be allowed if clearly identified as such and appropriately managed.

The repository may offer ways for some service providers to monetize some information. It may also allow information about specific devices (e.g. a particular device of a particular user versus device type like installed applications and versions, OS version, preference, EMEI or MISDN to delivery context mapping). Privacy and regulatory considerations may restrict access to such information or provided anonymization of the delivery context in response to authorized requests.

Delivery context information should encompass all information relevant to the development, testing, deployment or debugging of mobile product, applications or services. It should not be limited to web centric/relevant information.

We propose that the establishment of such a repository be initiated as a joint activity between OMA and W3C. W3C and OMA should agree on a generic distributed repository solution.

OMA should then focus on establishing a mobile device root repository that contains all the information relevant to the support of the mobile web and OMA enablers.

The W3C should establish the web root channel and device repository and focus on other branches (e.g. web devices/user agent, industrial devices, set top boxes, etc....), possibly in collaboration with other bodies expert in other device domains.

Such a repository would address a major challenge of the mobile web. It would also accelerate convergence with the web by provided a universal way to access and use delivery / context information for all devices or channels that they be mobile, pervasive or others.