

POSITION PAPER

Implementation of a Device Description Repository

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Fundacion CTIC has detected the interest of different actors in the creation of web services and applications that can be enjoyed in potentially each and every device. These actors vary from companies playing the role of content providers, application developers or operators to public organizations as regional or national governments. In order to serve contents and applications to the wide range of web devices available in the market, content adaptation is needed in order to improve user experience (and sometimes even just to be able to give a experience to the user). So it is absolutely necessary to have reliable mechanisms allowing for the recognition of devices/browsers capabilities (and also users' preferences).

From Fundacion CTIC's point of view, one of the best chances to have a "good" and "cheap" device description repository (with current open technology and standards) is the combination of different techniques and philosophies using a common vocabulary "to rule them all". For instance, a small prototype has been designed which hides CC/PP and WURFL under a self-created device description vocabulary allowing for query of CC/PP or WURFL when a device requests for some service. An even more refined version is being prepared so certain device features are taken from CC/PP or from UAProf depending on which feature is needed (for example, if WURFL is considered to be more reliable when declaring supported mark-up languages than CC/PP, then the piece of vocabulary SUPPORTED_MARKUP will ask WURFL for it). It also allows for retrieval of information from the only underlying API offering such information (WURFL supports PREFERRED_LANGUAGE_MARKUP and CC/PP does not, at least in a standardized way, but CC/PP allows for user preferences and WURFL does not). Finally, any existing API allowing for device description might be added to the prototype by just

implementing a new interface translating prototype's self-created device descriptions into requests to the underlying API.

Unluckily, this approach (which tries to get the best of each API and philosophy available) needs a lot of expert knowledge in order to know who is best at what, identify errors in the information given by an API, patch information as new devices are brought to the market or as new bugs of existing devices are found out, and so on.

Instead of a success, the prototype shows the need to set requirements for a Device Description Repository with all of the requirements defined in DDR 1.0 and maybe more to come in future versions of the document (thanks to discussions as the ones that will surely take place in the workshop).

Taking into account the goal of the workshop (exploring the DDR design and implementation issues), Fundacion CTIC would like to highlight some of them in case the DDWG has not already discussed these topics internally:

- The minimal set of information that the DDR needs to be useful for content adaptation: this is a must, but not closing our eyes to a set of information as full as possible in order to achieve services and applications tailored with high granularity.
- Merging legacy and external device information into a new common repository: another must for the DDR that reminds us also about the importance of inclusion in the repository about the age of a device (how long it has been since the device was created and avoid old devices when querying the DDR for statistics).
- The roles of other technologies such as CC/PP and UAProf: the new DDR should include the pros and avoid the cons of these and other existing technologies.

- Reliability and trust in distributed information systems: something not taken into account in current technologies as it should have been.