



Device and User Context

In addition to accessing device and network APIs, MWR2012 comes with a context framework that provides mechanisms to trigger applications or services on demand based on contextual descriptions. MWR2012 provides information about the user's environmental and social context for applications to adapt accordingly. Therefore, technologies for describing and acquiring contextual information such as device capabilities, network access, user identity and preferences, location, and the user's social network are provided.

Personal Device Cloud

MWR2012 explicitly encourages the development of cross-platform applications running on multiple devices either by providing the same service on each platform or by smartly integrating the features of each platform into one compelling application. Applications that are aware of the 'device environment' of a specific user are able to offer additional functionalities and supplement features missing on one device with features found on another device. (Examples: „Do you want to use the virtual keyboard on the TV screen to insert this text or do you prefer to type this on your mobile phone instead?“; „Should I continue to play this song from the car radio on your connected MP3 player?“).

Components

The heart of MWR2012 consists of a service container extending the web runtime and providing web browser and widget runtime functions. The container manages all service and API access to system resources, while a policy subsystem secures exposure of services to the JavaScript runtime environment, ensuring that only trusted applications have access to provided services and APIs. MWR2012 allows rapid creation and distributed execution of mashups across multiple devices. For example, MWR2012 allows an easy-to-create web application that can request the current position from the device, take a picture with the device's camera, and publish the data to specific cloud services – all in HTML/JavaScript without native coding. In addition, these functions just need a few lines of JavaScript code with MWR2012 – in contrast to realizations in native development environments.

Solutions and Services

MWR2012 is available for Google's Android Platform (Version 2.1 and higher) as proof-of-concept implementation. Further platform support will be available on demand. MWR2012 can be licensed for non-commercial showcases and application conformance tests.

In addition, Fraunhofer FOKUS offers:

- Training sessions in MWR2012-based application engineering
- Tutorials about mobile web technologies, including WAC, BONDI, HTML5, and W3C
- Specific extensions of Media Web Runtime on demand

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