

KDDI's Position Paper for "Web and Automotive Workshop" in W3C

KDDI Corporation

KDDI's Perspectives

Under the change of the environment surrounding the telecommunications business, KDDI as a Japanese Telecom carrier is pursuing the "3M Strategy" which derives from the initial letters of "Multi-use," "Multi-network" and "Multi-device."

This describes the growth strategy for our business and for maximizing our strength that originates from possessing both a mobile and a fixed-line communications business. Through compelling and multi-varied applications and content, KDDI aims to leverage its easy-to-connect and convenient networks to provide new type telecommunications to customers throughout the world at any time and on any devices of choice.

As drivers, passengers, and automotive itself are important objects of 3M Strategy services as well, KDDI is seeking for the upcoming services in the following two (2) domains on the topic of the Workshop:

- Relationship between the car and the mobile phone
- Creating markets for automotive application

KDDI's Viewpoint

As many consumers want to bring their digital lifestyles (e.g. rich applications in multi-devices and cloud services) into the vehicle, the challenge for the concerned industries is how to do this in a safe and quick manner and offer more intelligent and connected applications to their in-vehicle infotainment systems.

Nowadays, most of applications in mobile devices have been provided in operating systems such as iOS, Android, Windows etc.

It is extremely onerous for in-vehicle infotainment systems to ensure interoperability with these devices and operating systems constantly upgrading.

If applications are developed on HTML5-compliant web systems, there's no need to develop individual versions for the various devices and platforms, because HTML 5 will be a great cross-platform solution for developers.

Further to the key advantage, for examples, digital map and navigation applications on HTML5 will cater to client across various traffic information and recommendation of detour and transit plan including suitable parking location. And also an automated verbal concierge service corresponding to user situations will be expected to be deployed in the vehicle.

The following technologies will be required to provide the above applications with high accuracy and quality:

- Interconnectivity between the car and the mobile phone
- APIs for interfacing with sensors in the car
- Mash-up of SVG Map and other Web informations
- Multi-Network Hand-off technology for intermittent access to the network.

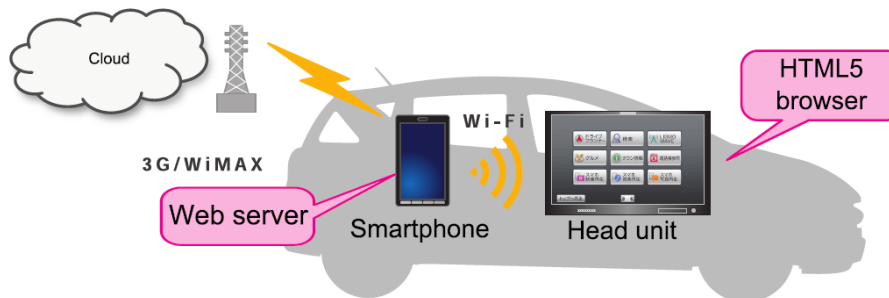
Concrete Examples of KDDI's Suggestion

Over the past several years, KDDI has developed the test beds and experienced some trials for these applications, results and output of which will be provided to expedite standardization.

An example of our development activities is shown in Appendix.

APPENDIX

An Example Configuration Relating to Automotive and Mobile Phone



In the above figure, the smartphone provide a web server function to a HTML5 browser in the head unit, and the smartphone and the head unit are connected by Wi-Fi.

The configuration has the following advantages:

1) Vehicle personalization

Since all the services were provided through the smartphone, personalization for GUI, navigation history, audiovisual entertainment content is easy.

2) Privacy protection

The head unit is a “thin client”, hence no personal data remains inside the car. This is also an important feature for rent-a-car or car sharing.

3) Fast and stable service

The smartphone stores pre-fetch data inside, so that web applications in the head unit can work smoothly even if the communication link between the smartphone and the cloud is slow or disrupted.

In addition, Web application market will also take an important role in this configuration.

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