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Geneva, 5-7 March 2008





Universal Mobile Device Connectivity

INTRODUCING THE OMNI PORT PLATFORM

The Fully Networked Car
Geneva, 5-7 March 2008



Cellport History of Innovation

- Founded in 1993
- Research Labs in Boulder, USA and Tokyo, Japan
- Focused on R&D of 360° mobile device connectivity
- Largest global licensor of telematics technologies
- Launches Omniport platform with wireless carrier partner in 2008

Cellport's Telematics Innovations

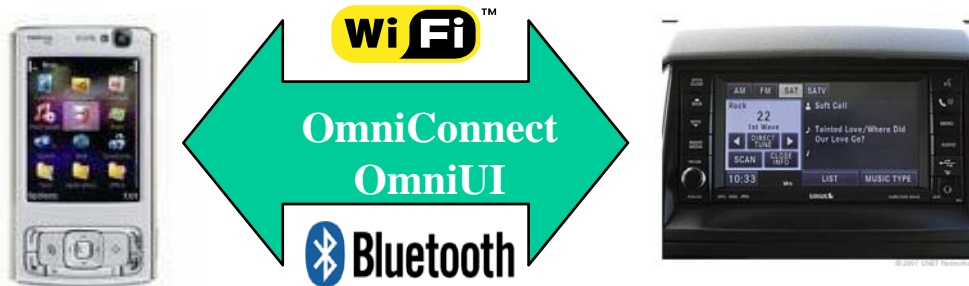
- o Universal Hands free connectivity



- o The Car as Mobile Web Server



- o Omniport Platform



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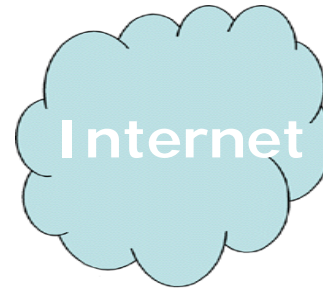
The next Challenge Islands of Disconnect



**Incompatible
Mobile Phone
Platforms**



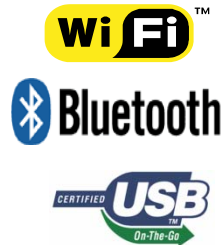
Many Wireless Carriers



Google™

YAHOO!

Many Web Services



**Diverse Local
Connectivity**



Proprietary Car Interfaces

Barriers between Cars and Consumer Electronics

- Lifecycle Disparity
 - Automotive: 5-10 years
 - Consumer Electronics: 1-3 years
- Different Environment
 - Operating system
 - User interface
 - Communication links
- Access to services
 - Open Web 2.0 services vs. limited scope Telematics services
- Power and charging interfaces
- Multiple Audio / Video/ Connectivity standards

Challenges of Walled Gardens

- No seamlessly shared resources (discovery, connect, and disconnect of devices)
- No integrated user interface:
 - User Interface of the mobile device is not accessible in the car
 - The UI of the mobile device is not suitable for use during driving (e.g. search in a phonebook)
- The UI of the car infotainment system is controlled by the car OEM
- Mobile device interface is controlled by carrier and device OEM
- Application level standards only offer minimal feature set and implementations are incompatible

Introducing the OmniPort Platform



The solution to the world of mobile device connectivity

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OmniConnect™ and OmniUI™

○ Flexible two part solution

- Application on mobile device leverages car resources
- Customizable, Web 2.0 technology based user interface in car device leverages applications and resources in mobile device and securely exposes resources to the mobile device
- Doesn't depend on standard application profiles

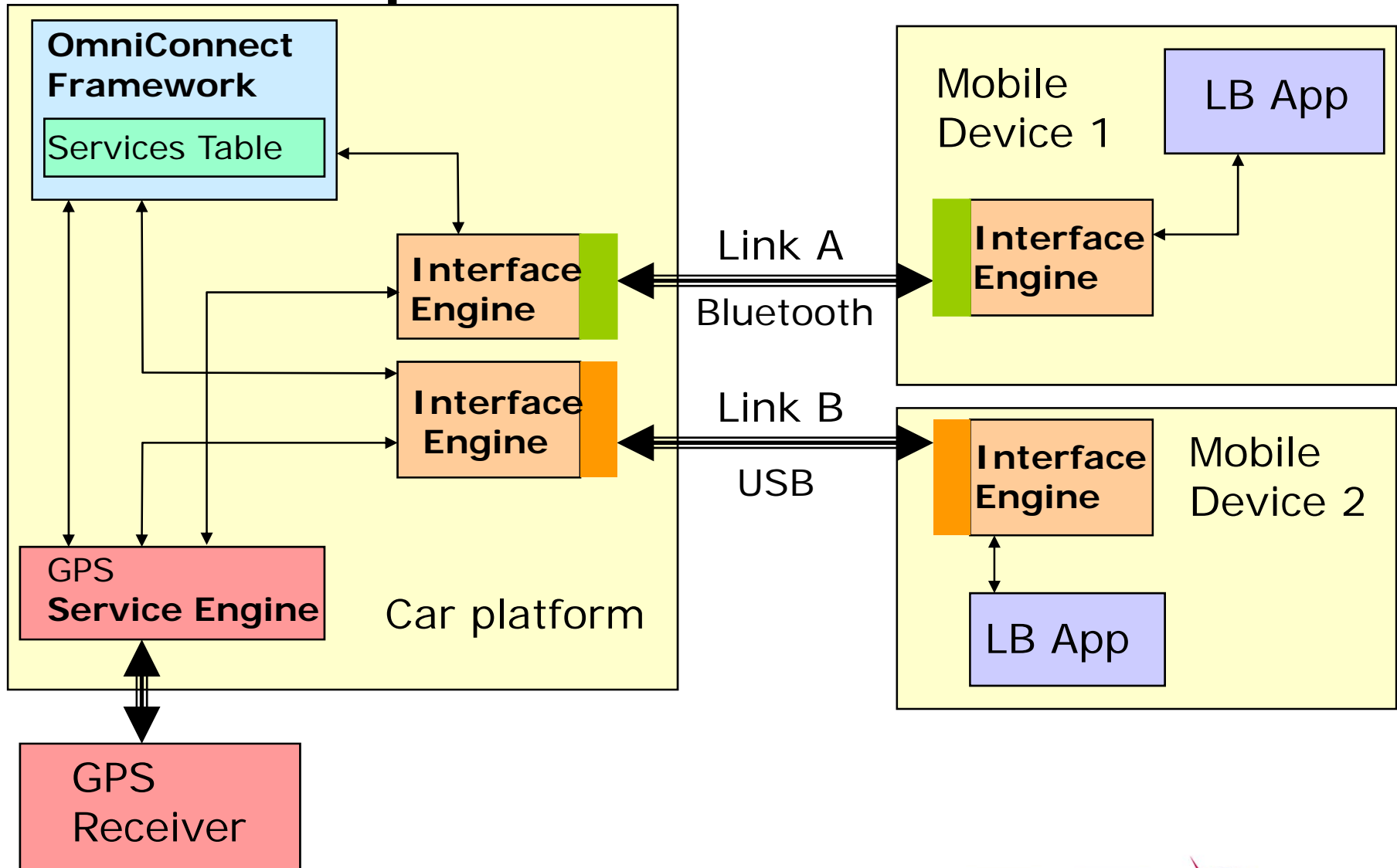
○ Works over multiple communication links (e.g. USB, serial, Bluetooth, ..)

- Provides Access to Resources and Services Across disparate O/S's and Platforms
- Supports existing application communication protocols (no modifications required)

What is OmniConnect

- Three vital middleware components:
 - OmniConnect framework
 - Service advertisement and discovery of local and remote resources (e.g. user interface, GPS, phonebook, ...)
 - Brokers relationships between CPC enabled client applications and required resources
 - OmniConnect service engines
 - “Provides” a specific service or information to local and remote client applications (e.g. GPS info)
 - Can support a variety of application level protocols (e.g. NMEA 0183)
 - OmniConnect interface engines
 - Abstracts communication from physical interfaces (e.g. Bluetooth, USB)
 - Allows applications to utilize remote resources
- Small footprint
 - Portable to any embedded platform or desktop computer
 - Consists of small executables residing on the local platform

Example: Using GPS over multiple communication Links



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What is OmniUI?

○ Flexible Export of User Interface

- OmniUI allows user to access remote applications like web-services on a browser interface using Web 2.0 technologies
- The user interface can be transposed and adapted to the target environment using style-sheets
- OmniUI interprets and displays the user interface on target device depending on its capabilities
- OmniUI Monitors user events (e.g. button presses)

○ OmniUI integrates with

- tactile interface, such as buttons, scroll wheels and touch screens
- Speech recognition and text to speech systems
- Media Codecs for playback
- Remote web services (Web 2.0 applications)

OmniConnect and OmniUI seamlessly integrate the mobile device with the car!



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Omniport - The connected world delivered!



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Status and Conclusion

- Technology licensed and transferred to Omniport
 - OmniConnect/OmniUI ported to multiple computing environments
 - Major wireless Carrier partner will launch Omniport equipped phones
 - Universal Home Docking solutions under development
 - In discussions with automotive industry
- Initial Omniport enabled phone applications include
 - Media Player
 - Speaker Phone with Address Book Access
 - Alarm Clock
- The possibilities with Omniport enabled Web 2.0 services are endless
 - Web Search for businesses and locations
 - Navigation
 - Weather
 - Messaging and social networking