Sprint’s M2M and Service Enablement Platform

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Agenda

- Traditional Carrier Application Model and Limitations
- New Model – Open Enablement and Impacts
- Application Developer Program/Benefits
- New Revenue Growth – M2M
- Sprint Investments in M2M Ecosystem
Emerging business models will shift the composition of carrier revenue

### Traditional Model

**Suppliers = Costs**
- Content, Apps, Devices
- Network & Termination

**Carrier**
- Products

**End Users**

*Carrier has exclusive relationship with end-user, and looks to suppliers for support*

### Evolving Model

**Customers**
- Application Developers
- Content Distributors
- Advertisers
- Retailers

**Carrier**
- Products
- Platforms/Capabilities
- Access/Transport
- Network Management
- Distribution
- Marketing
- User Data

**End Users**

*Carrier enables and enhances third-party relationships with end-user – and profits from them*
Challenges with “carrier-managed” model

1. Difficult To Scale
   • Prospective vendors/developers needed to build 1:1 relationships across carriers’ Product and extended teams, to gain awareness and support for their solutions
   • Vendors were required to adhere to time-consuming processes to receive ongoing support
   • Business model options were limited and were dictated by the carrier

2. Delayed Time To Market
   • Dated policies and processes created lengthy on-boarding and time-to-market delays

3. Limited Innovation
   • Carriers lacked a network ‘sandbox’ for developers to experiment with new applications

4. High Cost Structure
   • Carriers burdened with high cost model involving development, cost of content, & ongoing support

Sprint’s goal is to spur innovation by enabling the ecosystem
Sprint’s Services Framework
Sprint teams up to deliver compelling services

Sprint delivers Services

Published via APIs

...within Sprint’s Service Framework

Partners integrate API’s into their applications

..to serve customers

LBS
Presence
Geofencing
Account Mgmt
Messaging
Handset Profile
Billing
Digital Wallet
Advertising
Identity Mgmt
Many Others

Developer Environment
• Sandbox
• Communities
• Support

Enablement Environment
• Customization
• Integration
• Support

Usage Environment
• Optimization
• devices, network
• Analytics
• Monetization

August

2010 TBD

Axedea

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Sprint Services Enable Seamless Capabilities

Sprint Network Services enable seamless capabilities across:
- Devices (Laptop, Desktop, Handset, M2M, Server)
- Operating Systems (RIM, Windows Mobile, Android, Palm, etc)
- Development Environments (Browser, App)
Services Framework (with access to IT Services)

Open, Secured, Flexible, & Standards based

[Diagram of Services Framework with components and flows]

- Soap Based Web Service Utilizing Sprint Issued Cert
- Sprint Web Services Gateway
  - Services Platform
    - Service Bus
    - SCIM
    - Web Services Mgmt
    - Service Registry
    - Policy Framework
    - Business Process
- Services
  - Location
  - SMS
  - MMS
  - Sprint Sub Info
  - Account Info
  - Handset Info
  - Billing
- Sprint Platforms
  - Handset Device DB
  - Billing System
  - Location Platform
  - MMSC
  - SMSC

Consumers

Back End Systems
Services organized within 5 core attributes

<table>
<thead>
<tr>
<th>Personal API’s</th>
<th>Core API’s</th>
<th>Optimization API’s</th>
<th>Monetization API’s</th>
<th>Mobile Apps VAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate access to your online services for Sprint customers</td>
<td>Provide the pathways to deliver content to your customers</td>
<td>Optimize the delivery of your content on the Sprint network</td>
<td>Enable commerce opportunities</td>
<td>Applications offered seamlessly thru trusted 3rd party partners</td>
</tr>
<tr>
<td>• Network Address Book</td>
<td>• LBS</td>
<td>• Device Mgmt</td>
<td>• Digital Wallet</td>
<td>• Video platform</td>
</tr>
<tr>
<td>• Policy Management</td>
<td>• SMS &amp; MMS</td>
<td>• Multimedia</td>
<td>• Advertising</td>
<td>• Multi-media</td>
</tr>
<tr>
<td>• Digital Locker</td>
<td>• Geofencing</td>
<td>• 4G</td>
<td>• User info</td>
<td>• Voice/ Speech to Text</td>
</tr>
<tr>
<td></td>
<td>• Presence</td>
<td>• Browser</td>
<td>• Analytics</td>
<td>• Mapping</td>
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<tr>
<td></td>
<td>• Identity manager</td>
<td></td>
<td>• Payment services</td>
<td>• Virus</td>
</tr>
<tr>
<td></td>
<td>• Call control</td>
<td></td>
<td></td>
<td>• Device diagnostics</td>
</tr>
</tbody>
</table>

Legend:

- Availability
  - June
  - August
  - Q4 ‘10
  - 2011
Functional Diagram of an M2M Application

Products & Interfaces

Wireless Hardware (or) Module

Wireless Network

Application Gateway

Internet

Backend Systems

OS Application Services

IP & Cellular Communications Support

Security Features

Management & Application Services

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A Choice of Network Solutions

- Remote Monitoring
- Video Conferencing
- Fleet Management
- Digital Signage
- GPS Tracking & Routing
- Interactive Monitors
- Asset Tracking

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Our Investments

Business Development

New M2M Solutions
Launching Q3 & Q4

Solutions Engineers

Support Available Now

PR & Communications

Briefings Underway

M2M Collaboration Center

Launching Q4

Awareness

Insur. Telematics

CTIA

ATA

NAHC

CHIME

4G World

GridWeek

ODP

Device Management Portal

Launching Q4

Sprint.com/m2m

Launched!
Why Sprint?

*Sprint is the leader you can trust with the network, open architecture, and proven ability to turn your inspirations into reality. Now!*

- A network built for data that is proven, reliable, and effective
- The broadest portfolio of wireless network solutions with iDEN, 2G, 3G, and .... with Sprint 4G The Future is Now
- Secure integrated IP network & backbone transport providing a complete end-to-end solution all from one provider

- A leader in Open Architecture through the Sprint Open Device Initiative that has certified hundred’s of non-Sprint-branded certified devices
- Collaboration with key industry partners to deliver a robust portfolio of services, simplify the certification, testing and operational launch of your solution
- Open to new business models and innovative B2B and B2C solutions across a wide variety of applications
- Reducing complexity with over 10 years experience in delivering M2M solutions; large to small; business & consumer
- Dedicated M2M Solutions Engineers customizing the right solution

Combining our network, rapid service delivery architecture, and expertise to deliver a fast, high quality, and successful launch, now.
Sprint’s Developer Program Supports Developing on Sprint’s Devices / Networks

• **Developer program**
  –  Launched in 2001
  –  Free to Join  
    [http://developer.sprint.com](http://developer.sprint.com)
  –  Extensive Community
  –  Evolving to support Sprint/developer needs

• **Provide support for:**
  –  Content Development
    •  Applications
    •  Service Capabilities
  –  Testing/content upload
  –  Staying up to date
  –  Enhanced Programs
Sprint’s Developer Sandbox – Provides Free Access to Sprint Network Capabilities

- Web 2.0 meets Telco 2.0
- Free to use – register at http://developer.sprint.com
- Seamless functionality across all mobile devices (not just handsets), PC and desktop and mash-up with other services
- Usable within any development software and browsers
- Supports end user privacy opt-in management

### Access Sprint Network/Product Services

* LBS
* Messaging
* Presence
* Geofence

Services are easy to use - Restful format

### Mash-up with Other Services into Your Own Application or Web Page

* Google
* Microsoft
* Facebook
* Yahoo!
* Amazon

The possibilities are endless!