OMA Home Environment Services Workshop
Small Cell Services

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The information in this presentation is public

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Why Small Cell Services?

- "5 Bar" Indoor Coverage
- High Speed
- Low Cost
- Data & Voice
- Femto Location Awareness
- An Application Sweet Spot
Small Cell Services:
Some Examples
Intelligent Home
Social Networking
Consumer Research

Let’s start with some hard data…
Appeal of New Femtocell Features (Q3/10)

Q4080. "In addition to providing improved coverage, femtocells can also enable a number of new features. How appealing to you are the following?"

(Among all Broadband HHs with Mobile Phone)
Most Appealing Femtocell Feature (Q3/10)

Q4085. "Of the following features, which are the most appealing?"
(Among all Broadband HHs with Mobile Phone, Interested in at least two features)
Consumer Willingness to Pay

- Family Locator: 35%, 41%
- Family Alerts: 32%, 38%
- Virtual Home Number: 32%, 47%
- Cellphone Remote Control: 25%, 47%
- Home Reminders: 25%, 41%
- Photo Sync: 17%, 22%
- Music Sync: 15%, 35%
- Contact/Calendar Sync: 12%, 32%

driving convergence worldwide
Price Sensitivity of New Femtocell Services

Q4090-4092. "How likely are you to purchase your top-ranked service at these price points?"
(Among Femtocell Fans Ranking Specified Service As Their Most Desired Service)

<table>
<thead>
<tr>
<th>Price</th>
<th>Cellphone Remote Control</th>
<th>Family Alerts</th>
<th>Family Locator</th>
<th>Virtual Home Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>$4.99/2.99/0.99</td>
<td>34%</td>
<td>59%</td>
<td>60%</td>
<td>65%</td>
</tr>
<tr>
<td>€4.99/2.99/0.99</td>
<td>48%</td>
<td>59%</td>
<td>90%</td>
<td>98%</td>
</tr>
<tr>
<td>£4.99/2.99/0.99</td>
<td>60%</td>
<td>78%</td>
<td>91%</td>
<td>83%</td>
</tr>
<tr>
<td>RMB 10/5/2</td>
<td>59%</td>
<td>77%</td>
<td>90%</td>
<td>91%</td>
</tr>
<tr>
<td>Yen 499/299/99</td>
<td>65%</td>
<td>60%</td>
<td>60%</td>
<td>65%</td>
</tr>
</tbody>
</table>
Where will Small Cell Applications Reside?

1. On the mobile handset
2. On the Femto Access Point (FAP)
3. HomeLAN
4. In the Network
   - Secure Gateway
   - Application Server
   - Internet
   - Cloud

The Small Cell Forum is working to define the API’s to support these cases
Small Cell Services Architecture

Handset Application Logic

Local Application Logic

Cloud Application Logic

Application Logic

UE

Femtocell

Application Gateway

Application Server

SmallCell Zone Service Management Platform

API Legend

Application Developer API's

Management API's

Other Network API's

Local Network

Operator Network
Rich applications behind simple API’s

1. User walks into Small Cell Zone
   - FemtoZone Awareness notification “Enter SmallCellZone” dispatched to application
2. Application sends SMS with link to web portal (session id “correlator” given in url)
3. User clicks on SMS link to open browser to:
   - Opt-into the program (1st interaction)
   - Make online purchases – order coffee, buy movie tickets
   - Get information about products – retail stores
   - View media (e.g. sports casts) – coffee shops
   - User data free in SmallCellZone…

![Diagram of network and application flow](image)
Small Cell Forum Resources:

• **Applications Showcase**
  • [http://www.femtoforum.org/appCode234/applications%200809.html](http://www.femtoforum.org/appCode234/applications%200809.html)

• **Developer Community Outreach**
  • applications@smallcellforum.org
  • **White Papers**
  • **Emulator**
  • **Developer Events**

• **Services Video**
  • [http://www.smallcellforum.org/new_services/](http://www.smallcellforum.org/new_services/)
Summary:

• Based on consumer research:
  • Consumers WANT Small Cell Services AND
  • They are willing to pay

• New Revenue Opportunity for Mobile Operators

• Small Cell Forum have published an Industry API
  • Additional API work continues

• Emulator Announced this week
Conclusions:

- **Small Cells** address immediate needs
- **Small Cells** are here now
- **Small Cells** are growing fast
- **Small Cells** provide a unique platform for mobile services

“Delivering a great mobile experience to one billion users via small cell technology”
Thank you!

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