Fixed Mobile Convergence
Case Studies

RCA Business and Technical Conference - 2010
Who is PC Management?

What is Fixed Mobile Convergence (FMC)?

Fixed Line Carrier’s Benefits of FMC.

Fixed Line FMC Case Study

What is Femtocell

Wireless Carrier Benefits of FMC
Who is PC Management?

- Founded in 1990 to build and manage regional wireless carriers
- Managed, operated, invested and sold over 18 regional wireless carriers in the U.S. many under the Cellular One brand.
- Frequently involved in transactions of 100+ million dollars.
- Majority owner of Keystone Wireless operating as IMMIX Wireless.
- 1st MVNO turned up late 2006
- Supported up to 25 MVNOs
- Made FMC available mid 2007
- Over 400K MVNO Subs supported today
What is Fixed Mobile Convergence?

Wireless and Wireline Convergence

Yesterday
Discrete Markets

TV
Mobile
Internet
Fixed Telephony

Today
Convergence

Content/Applications (ubiquitous)
Network (all IP based)

Devices
Location

Fixed Broadband
Wireless Broadband

PC MANAGEMENT
Network Convergence...

Landline Network ↔ VoIP ↔ Cellular ↔ Wireless Network

...does not happen at the handset level
The Key Strategy…Bundling Services

Double Play – Unlimited Voice & DSL

Triple Play – Unlimited Voice, Broadband and TV

Quad Play Bundle – Voice, Broadband, Wireless and Entertainment
Benefits of Wireless Network Convergence

- Use Wi-Fi in Buildings…better Coverage
- One Number Solution
- Increased Margins
  - Hosted Models…Reduced Capital Costs
- Customized services for Enterprise and Consumer users
- Voice and Data Traffic Offload… 30% consumer, 55% enterprise
### Consumer Segments (Age)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Average</th>
<th>WLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent Ages up to 29 - Youth</td>
<td>6.6%</td>
<td></td>
</tr>
<tr>
<td>Percent ages 30-39 - Young Family</td>
<td>17.3%</td>
<td></td>
</tr>
<tr>
<td>Percent ages 40-49 - Family</td>
<td>29.4%</td>
<td></td>
</tr>
<tr>
<td>Percent ages 50-64 - Mature Adults</td>
<td>27.6%</td>
<td></td>
</tr>
<tr>
<td>Percent Age over 65 - Seniors</td>
<td>19.1%</td>
<td></td>
</tr>
</tbody>
</table>

Customer profile before Wireless

Customer profile of Wireless Bundle Subscribers
## Income

<table>
<thead>
<tr>
<th>Income Category</th>
<th>Average</th>
<th>WLS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income Unknown</td>
<td>16.6%</td>
<td></td>
</tr>
<tr>
<td>Poverty 0-24K</td>
<td>8.6%</td>
<td></td>
</tr>
<tr>
<td>Lower Income 25-49K</td>
<td>32.2%</td>
<td></td>
</tr>
<tr>
<td>Lower Mid Income 50-74K</td>
<td>18.5%</td>
<td></td>
</tr>
<tr>
<td>Mid Income 75-99K</td>
<td>10.0%</td>
<td></td>
</tr>
<tr>
<td>Upper Mid Income 100-200K</td>
<td>11.0%</td>
<td></td>
</tr>
<tr>
<td>Wealthy 200K+</td>
<td>3.1%</td>
<td></td>
</tr>
</tbody>
</table>

Customer profile of 2 current operators…ILEC and Cable
Customer profile of 2 current operators with Wireless…ILEC and Cable
## Bundles & Customer Spend

<table>
<thead>
<tr>
<th></th>
<th>Average W/O wireless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Spend (Excluding Wireless Revenue)</td>
<td>$41.73</td>
</tr>
<tr>
<td>DSL Penetration</td>
<td>37.80%</td>
</tr>
<tr>
<td>Bundle Penetration (3 or more products)</td>
<td>47.40%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>1.20%</td>
</tr>
</tbody>
</table>

Customer profile of ILEC operators

Customer profile of ILEC operators
Customers who had bundles W/O Wireless .................. 1.3% Churned

Customers who had bundles with Wireless ...................... .2% Churned

For every .5% drop in churn you add 4 years to the life of a customer!
Analysis of Wireless Products Launched by Fixed Voice Providers

1. Affected all age and income ranges
2. Wireless customers spend more on wireline products
3. 20% higher take rate for Broadband.
4. Customers are 5 times more likely to bundle entertainment services.
5. Reduced churn 1.3% to .2%
Hosted FMC is an OPEX solution Compared to the CAPEX Femtocell Model

1. Traditionally wireless carriers do not seek wireline alternatives
2. In home coverage product has been Femtocell
3. FMC can be a new alternative to in home voice and data coverage issues
Traditional Femtocell CAPEX Model

$ CAPEX $
Benefits of Wireless Network Convergence

- Use Wi-Fi in Buildings…*better coverage*
- Offload Data to Wi-Fi…*faster speeds*
- Increased Margins
  - Hosted Models…*reduced capital costs*
  - No Additional CPE needed…*CPGA not increased*
“1 OUT OF 8 OR 12.5% OF WIRELINE SUBSCRIBERS WILL CUT THE CORD IN 2010”
Yankee Group April 2010

“50% OF ADULTS 30 AND UNDER HAVE NEVER OWNED A WIRELINE PHONE”
CTIA 2009

“AT&T AND SPRINT LAUNCHES FEMTOCELLS...OTHERS TO FOLLOW”
Fierce Wireless 2010

THE NEXT GENERATION
OF WIRELESS USERS ARE HERE!

How will you define
your Future?
Questions?
Questions?
Questions?
Thank You!

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