



# Leveraging Femto @Home

*Value-Added Services to Drive Consumer Demand*

**Pradeep Samudra**

AVP, Business Development

Mavenir Systems

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# Outline

- Mobile Operator's Challenges
- Femtozone Services
- Femto Services Gateway: Mavenir's Femto Solution
- Summary

# Current “Indoor” Market Dynamics

## Usage

- Approximately 70% of the voice traffic **indoor** is mobile originated
- Wireless operators under threat with FMC/triple/quad play solutions

## Coverage

- Customers perceive this as an **operator “problem”**, not a value added feature
- At present, “extras” can facilitate adoption

## Capacity

- “Unlimited” **bandwidth availability and usage**
- Enhanced user experience with improved data speeds at home
  - Increase in freed macrocell capacity relieves cost pressure for operator

***The Challenge: How to monetize the femto service and drive demand profitably?***

# Business Model Evolution

*ABI Research* forecasts that by 2011 there will be **102 million users** of Femtocell products on **32 million access points** worldwide

**But,**

“...the business model is **not** yet **proven** and the benefits to consumers are **not** universally **compelling**; mobile operators will have to develop sophisticated bundles covering phones, data cards/devices, Femtocells, and voice, data (and likely video) services to attract subscribers.”

*- Infonetics*

**And so, the solution**

“Femtocell will be **more than voice** in the future” bringing together – My mobile, My laptop, My (private and social) network, My car, My mp3, My camera all in the “Connected Home”

*- Tier 1 Wireless Operator based in Europe*

# Femto Roll Out

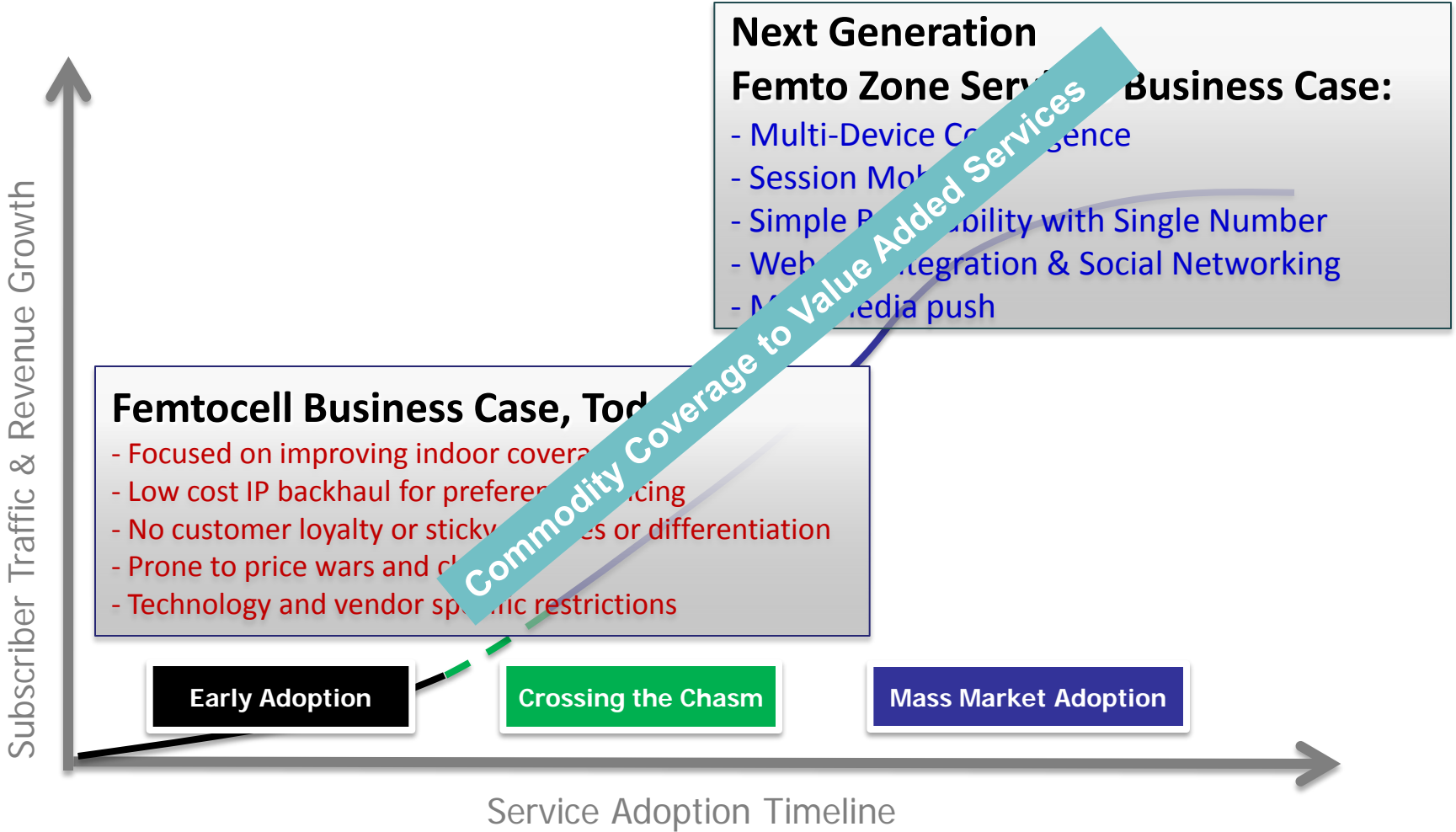
- Operators dilemma
  - Perception issue (pitch for quality-macro or femto?)
    - Differentiation difficult to articulate
- Cheap (unlimited voice) while under femto coverage?
  - Good start, but the savvy subscribers will quickly react
- Enterprise Services
  - Integration with Enterprise applications, including PBX

**Challenges - Coverage, Cost, Churn**  
**Solution - New Services**

- Unique value added services
  - Presence "I am home!"
  - Alerting & Notification "Don't forget the laundry"
  - Enhanced voice services "Multiple rings"
  - Integration with web 2.0 applications "Voice mail via e-mail"



# Service Transformation



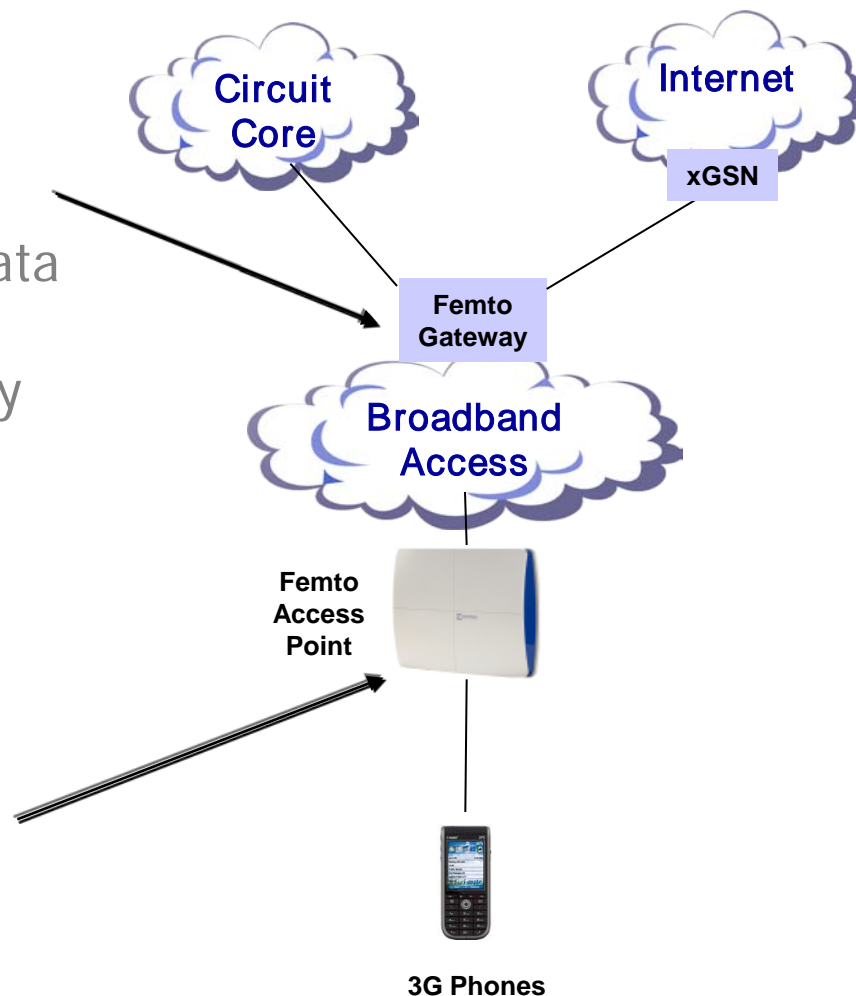
# 3G Femto Architecture

## ➤ Femto Gateway

- Femto Gateway connects to Circuit Core for voice and messaging and Internet for data services
- Security Gateway Functionality

## ➤ Residential Gateway

- Access point supports 3G handsets only



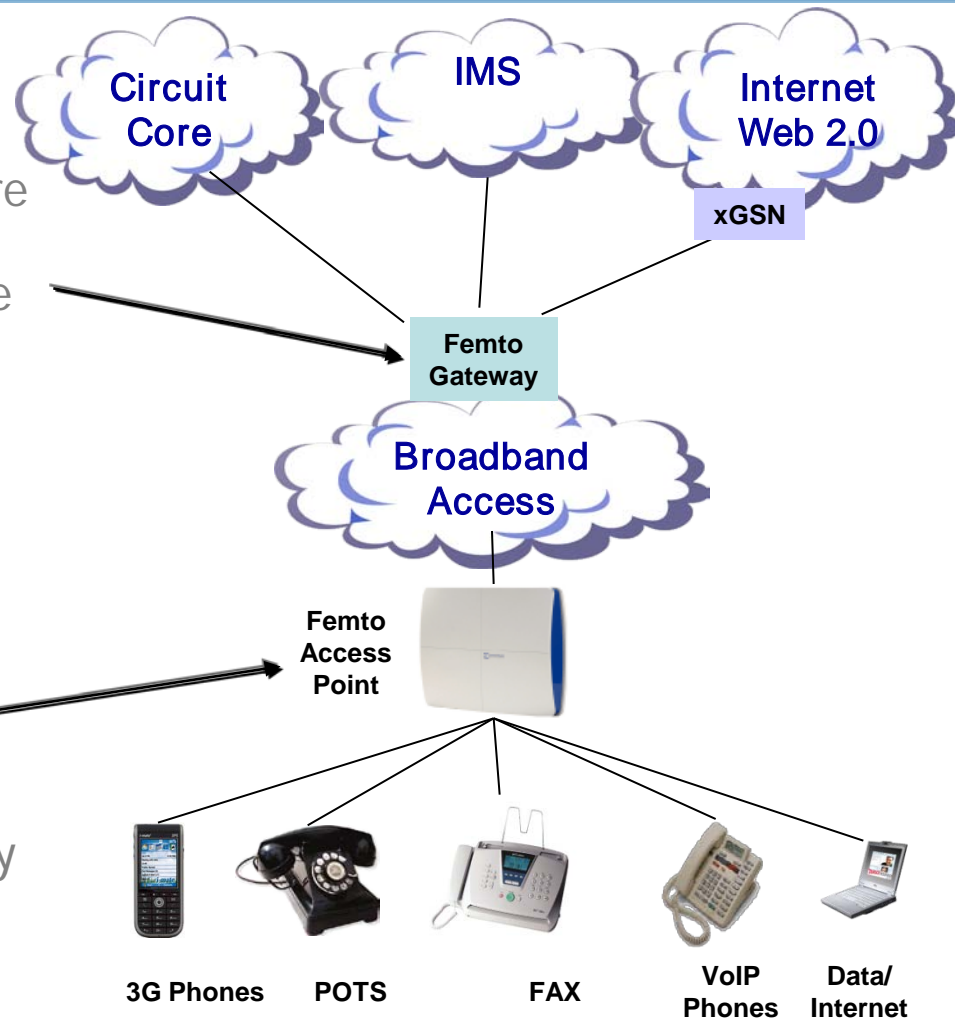
# Next G Femto Architecture

## ➤ Femto Gateway

- Domain Selection
- Voice & Messaging to Legacy Core
- IMS for Next Gen Services (IM & Presence) & Blending at the Edge
- Web 2.0 integration and Social Networking interfaces
- Single Number, Sim/Seq Ringing
- Session Border Controller (SBC), P-CSCF and Security Gateway Functionality Combined

## ➤ Residential Gateway

- POTS Termination, including Fax via SIP ATA Functionality
- SIP Access
- 3G Handsets



# Enhancing the User Experience

- Multi-Device Convergence
- User Group management
  - Family & White list guest access/control
- Multimedia Data
  - Zone triggered push and pull services
- Web 2.0 + Mobile Integration
  - Asynchronous communications
  - Presence, Messaging, Location
  - Access to Social Networking
  - Service Continuity

# Service Evolution

**Beyond 'better coverage, cheaper voice, better data' ....  
Win with Enhanced Services**

**Coverage**  
Basic ability to use your mobile phone at home



**Cheap calls at home**  
Monthly subscription for homezone discounts



**Fast mobile data**  
Great mobile web & TV experience at home



**Femtozone services**  
Home-triggered presence updates & file transfers

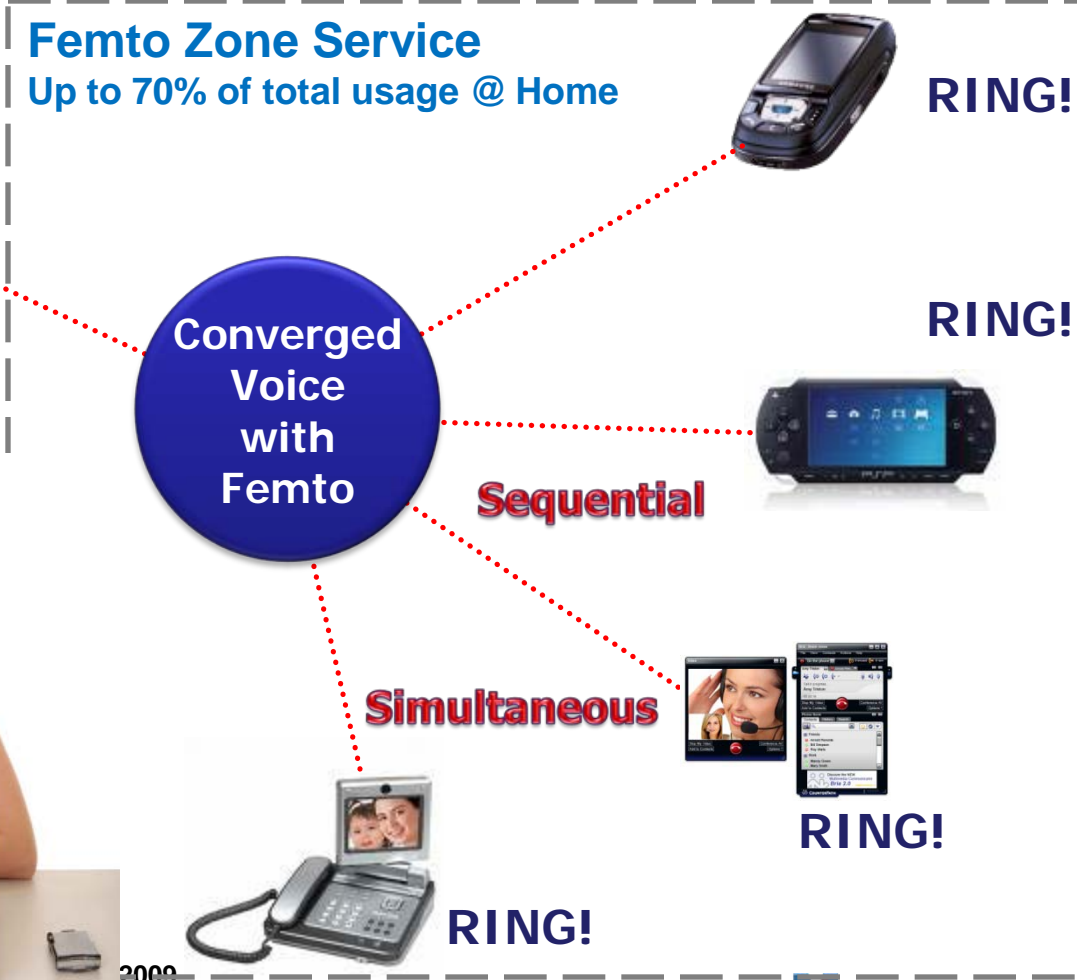
**ShoZu PLAZES**



**Connected Home**  
Connects mobile phone to services on the home LAN



# Service Example – One Number

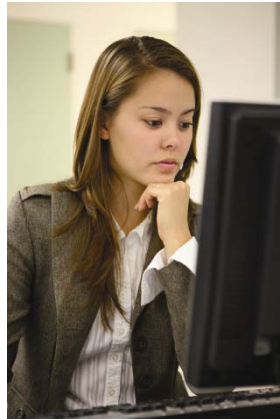


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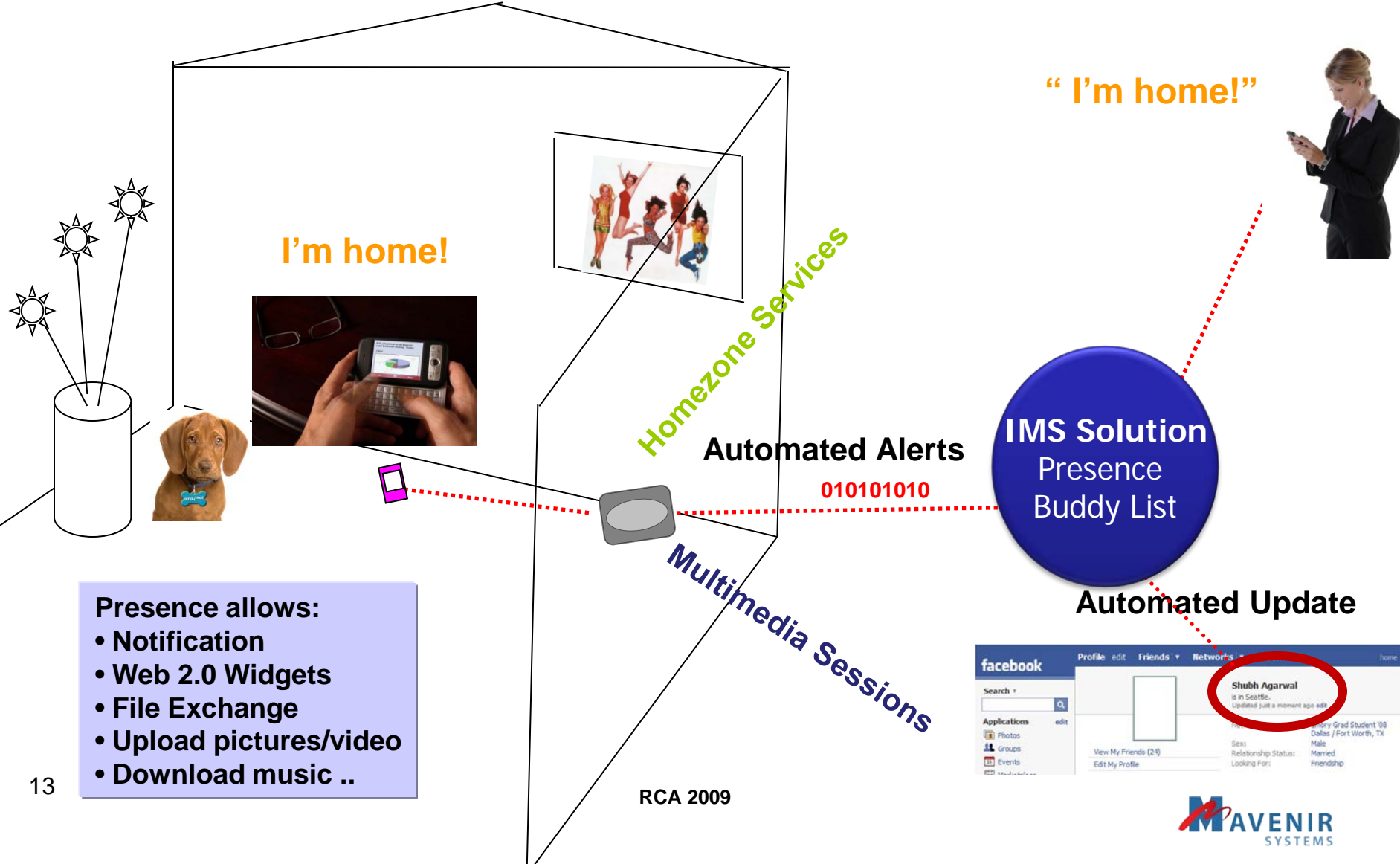
# Service Example – Intelligent Messaging



“Hey, when are you leaving?”



# Service Example – Presence & Buddy Notification



- Presence allows:**
- Notification
  - Web 2.0 Widgets
  - File Exchange
  - Upload pictures/video
  - Download music ..

# Service Example – Web 2.0 Integration

## Femto Presence Detection:

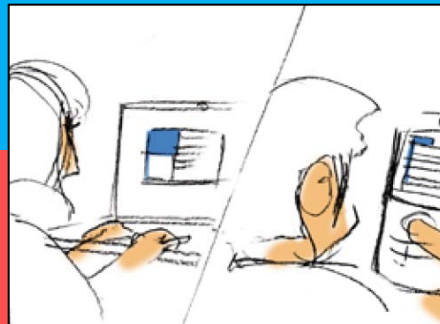
Auto updates on social networks,  
Multimedia push triggers  
(e.g., photo sharing, video download)



## Voice Notes:

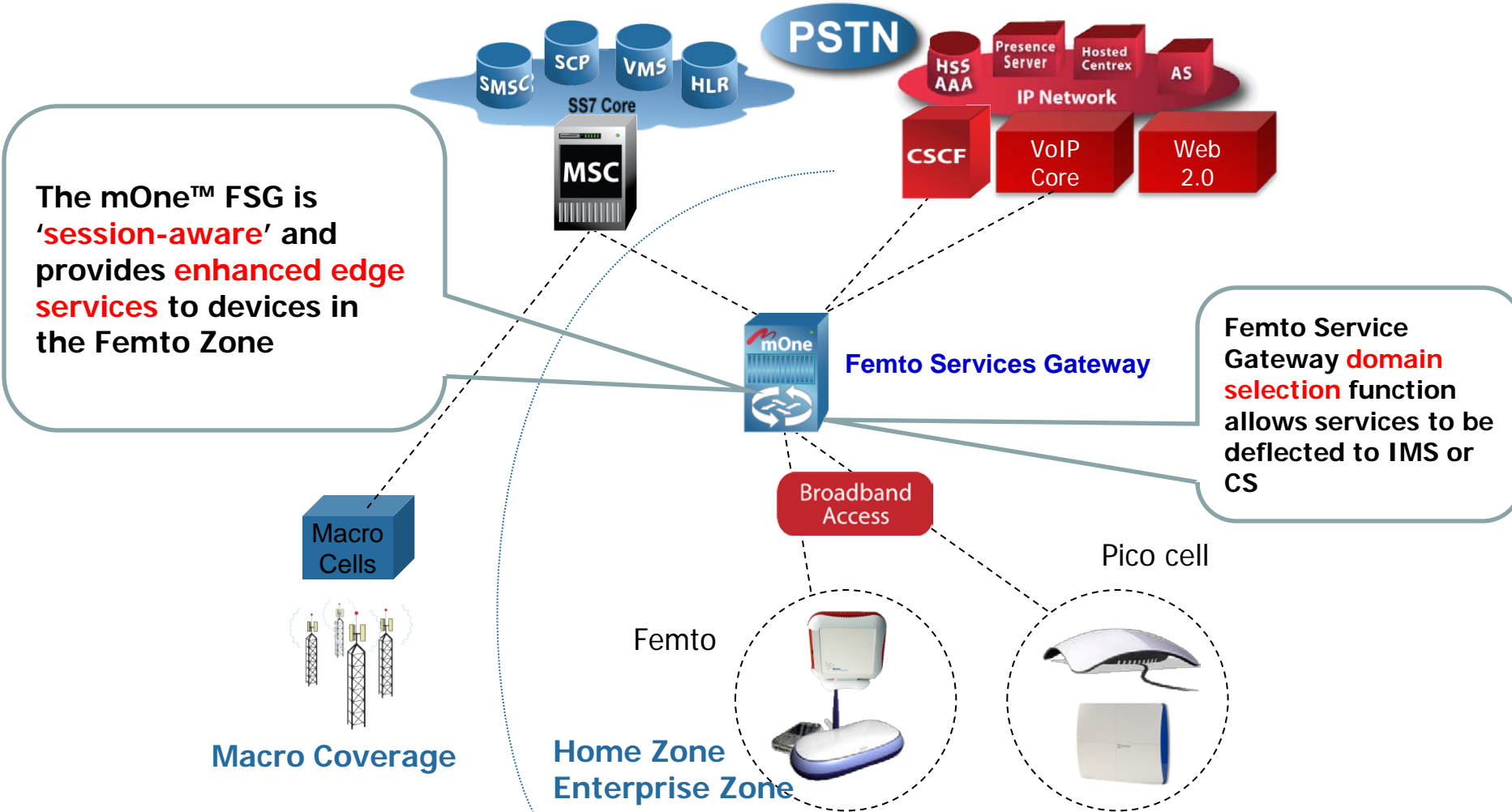
Service delivery over  
multiple devices  
(e.g., voicemail,  
text services with  
voice-to-text engines)

**Seamless Messaging:**  
Simultaneous message  
transmission/reception  
over multiple devices  
(web site, mobile or  
gaming device) with  
single identity in the  
Femto Zone



**Event Notification:** Notification of user availability  
and location/arrival at home or visitor Femto Zone

# Mavenir Femto Services Architecture



# Mavenir's Femto Services Gateway

- mOne™ Convergence Gateway Features:
  - **Control layer** functions enable Femto Zone Services
  - **Standard interfaces** defined in Femto Forum architecture
  - **High capacity** support for both CS and PS domain traffic
  - **Turnkey solution** with best in breed partners

# Summary

- **Mass market adoption of femto** is driven by business case for 'Next Generation' Femto Zone Services
- **Consumer interest is achieved** with clearly defined value proposition circling services
- **Operators need to differentiate** from commodity offerings with unique converged services that enrich user experience

**Mavenir** takes services  
to new heights.

