

Convergence- or Not?

Moderator: **Michael F. Finneran**

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Our topic...

- *Some analysts believe that the convergence of wireline and wireless, and, even more importantly, the convergence of multiple mobile wireless technologies into a single handset with the real-time handoff of a connection among them defines the ultimate wireless solution.*
- *Others believe that the deployment of a single technology using both traditional cells and indoor femtocells is a much simpler – and more effective - approach.*
- *This session will examine fixed/mobile convergence, mobile/mobile convergence, device and software trends, and femtocells and related approaches in a debate designed to answer this fundamental question for enterprise IT managers and users.*

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Our Panel:

- **Pejman Roshan**
VP of Marketing/Founder- **Agito Networks**
- **Vivek Khuller**
President and CEO- **DiVitas Networks**
- **Luc Roy**
VP of Enterprise Mobility- **Siemens Enterprise Communications**
- **Brian Tamminen**
VP of Strategic Marketing- **ADC/LGC Wireless**

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Fixed Mobile Convergence

The ability to integrate private networks, wired and wireless, with public cellular services and pass calls between them

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Customer Motivations for FMC

- **Cost Savings:** Likely only in special cases; best hope is diverting international calls off cellular
- **Improved Accessibility:** Faster decision making as critical people can be accessible continuously via one number and one voicemail.
- **Mobile Unified Communications:** Greater productivity for the mobile users by integrating PBX-based features on the mobile device
- **Business Ownership of Telephone Numbers:** Customers are calling the business number, not the user's cellular number.
- **Better Indoor Coverage:** Without radio repeaters, distributed antenna systems, or micro-cells

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FMC Differentiators

- **Control Point**
 - Enterprise/PBX Controlled- eFMC
 - Carrier Controlled- cFMC
- **Hand-off**
 - None, Manual, or Automatic
- **Functionality**
 - Simple Voice Call
 - Combined Voice/Data Service
 - Mobile Unified Communications

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Customer Controlled Solutions- eFMC

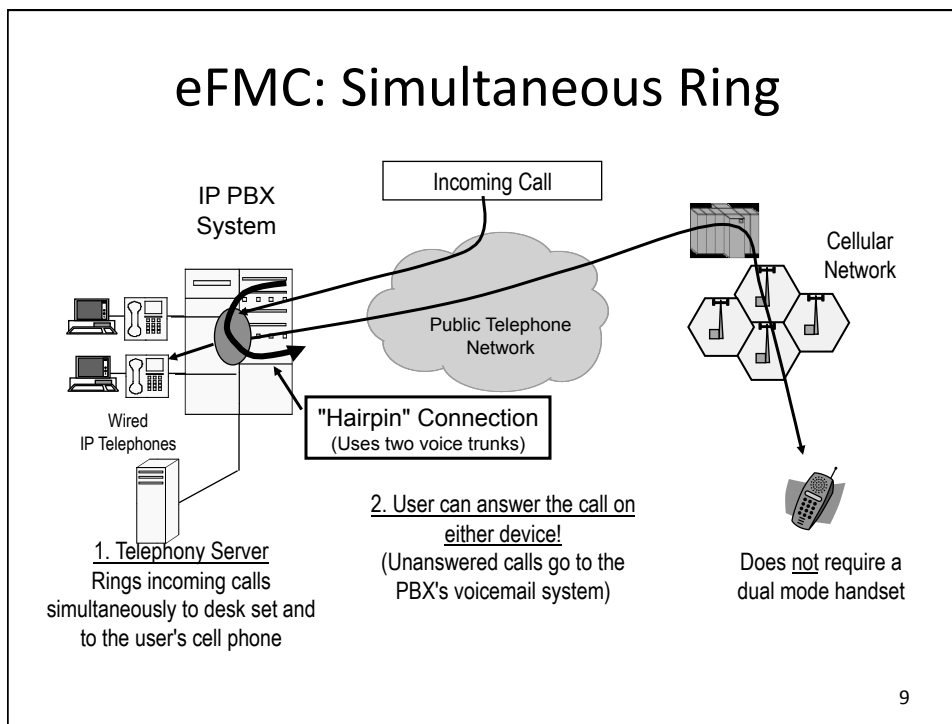
- Basic Advantages
 - Available today in spite of the cellular carriers
 - Delivers the major productivity benefits:
 - One number, one voice mail, anywhere access
 - Business has the potential to "own" the number
 - Having customers calling a sales person's personal cell phone becomes a major problem if that sales person quits and goes to work for a competitor!

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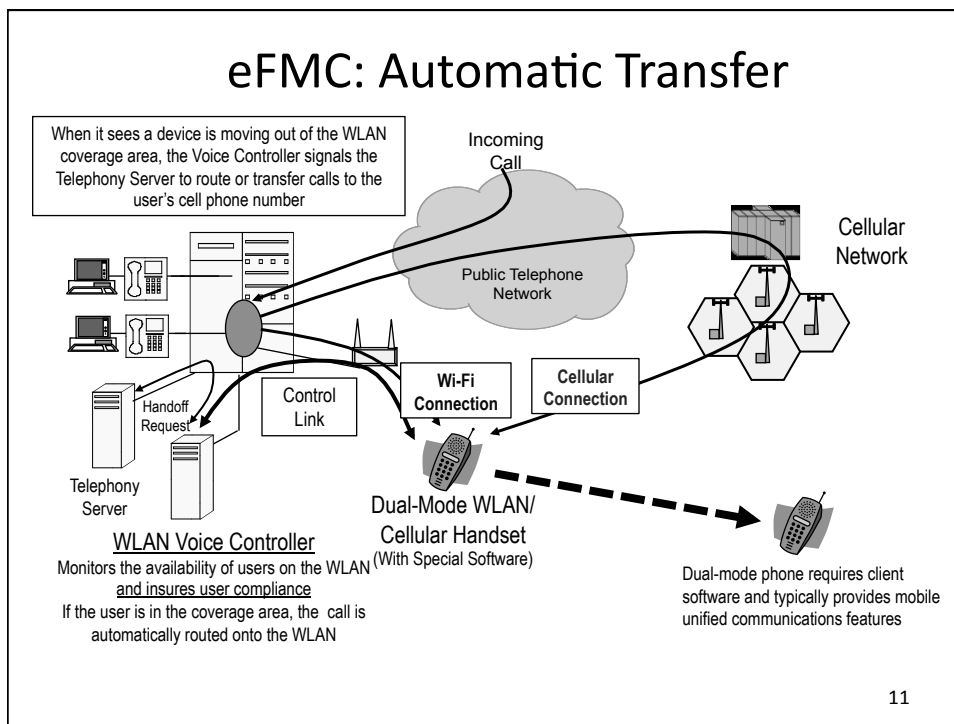
eFMC: Simultaneous Ring

- Solution Elements:
 1. IP PBX with Simultaneous Ring/Extension-to-Cellular Feature
 2. Works with any cellular-only handset whose number is stored in the IP PBX
- Benefits:
 - One number, one voicemail, anywhere access
 - Business maintains control of the number (if outbound cellular calls are also routed through the PBX)
 - Optional capability to manually transfer calls to the cellular number
- Management Issues:
 - Cost:
 - Incoming/outgoing cellular call passes through the PBX
 - Ties up two PBX trunks ("Hair pinning")
 - Intra-company cell-to-cell calls are no longer free
 - Enforcement Problem: How can we insure the user selects the lower cost option when they are near a wired desk set?

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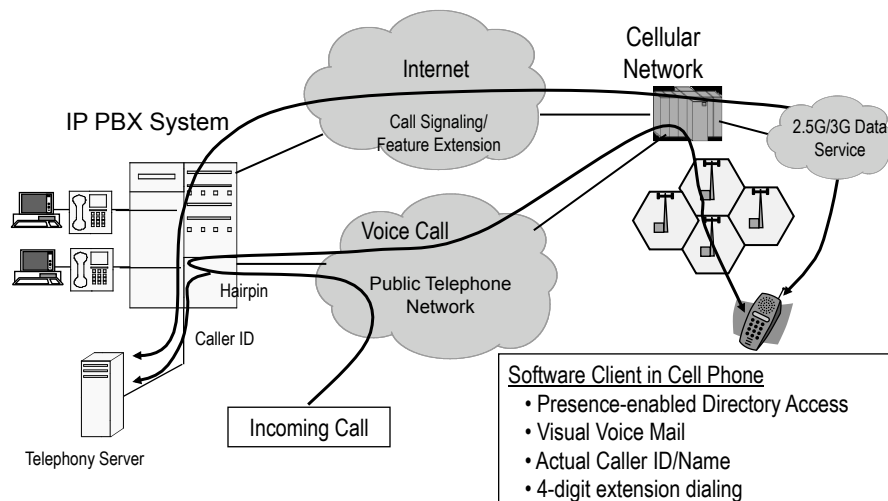
- ## eFMC: Automated Transfer
- Solution Elements
 1. WLAN Voice Controller
 - Recognizes the availability of users over the WLAN
 - Interfaces to the telephony server to arrange WLAN/cellular transfers
 2. Dual Mode WLAN/Cellular Handsets
 - Client software to interface with the WLAN Voice Controller (i.e. not just any dual mode handset)
 - Handsets with required WLAN voice features (i.e. Battery, Security, QoS)
 3. Voice-capable WLAN Infrastructure
 - Benefits:
 - One number, one voicemail, anywhere access
 - Company maintains ownership of phone number
 - Inbound/outbound cellular calls routed through the PBX
 - Automated handoff
 - Assured compliance: Calls forced onto the WLAN if the user is within range
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eFMC: Mobile Unified Communications

- Capabilities Provided:
 - One number, one voicemail, anywhere access
 - Company maintains ownership of phone number
 - Inbound/outbound cellular calls routed through the PBX
 - Handoff may be manual or automatic
 - Unified Communications Features (Not all solutions offer all features):
 - Presence-enabled Corporate Directory Access
 - Actual Caller ID on incoming calls/Caller name on internal calls
 - Visual Voice Mail: The ability to view voicemail messages on the cell phone display
 - 4-, 5-digit Extension Dialing

eFMC: Mobile Unified Communications



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cFMC: Cellular Carrier Concerns

The Party Line

- Quality Control: Concerned they will be held responsible for poor call quality or disconnects caused by WLAN screw-ups?
- Revenue Impact: How will the cellular carrier be compensated?
- Handset Subsidies: Will they have to underwrite the cost of a handset that makes WLAN calls?
- Security: Will WLAN security lapses open exposures in cellular network security?

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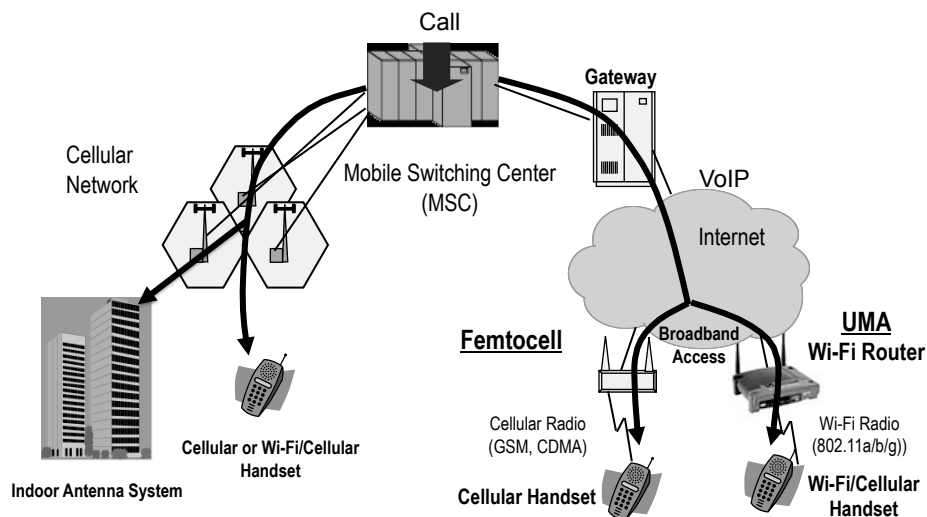
cFMC: Cellular Carrier Concerns

The Cynical View

- Customer Control: Cellular carriers have enjoyed a unique franchise in mobile voice service that commands a premium price
- Consumer Tunnel Vision: The carriers are 99% focused on consumer markets and do virtually nothing for the enterprise
- Parochial View of Wireless Technologies: Don't trust anything but the cellular technology they know

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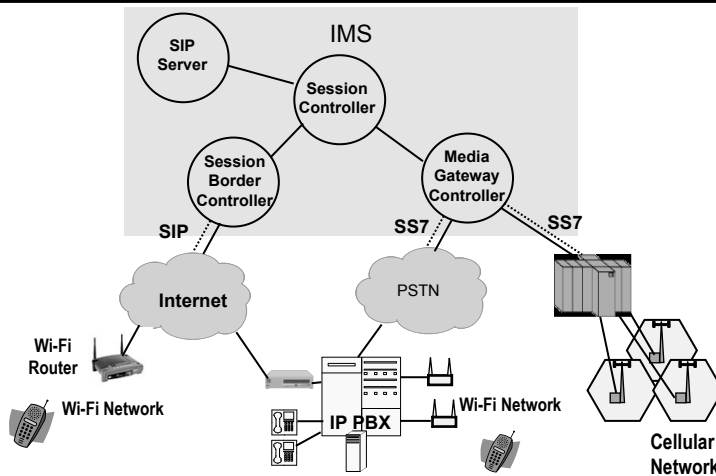
cFMC: Carrier Controlled Options



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IMS Vision: Network Agnostic, All-IP

Vision: One number, one device, one voicemail, one feature set, and one bill



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FMC Conclusion

- Lots of options available, considerable interest from the user population
- Two sets of solutions: eFMC and cFMC
- The question for our panel:
 - Which is the best option for the enterprise?
 - Do we need anything more than good indoor cellular service?
 - What is the eventual FMC solution for large sites, small sites, SOHO, telecommuters, traveling users?

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