

# ***Femtocell Market Update and Femto Forum Activities***

Andy Germano

***Femto Forum - Vice Chairman***

April 27<sup>th</sup>, 2011



# The Femto Forum

- Promoting & enabling femtocells
- Not-for-profit, founded in 2007
- Independent, Inclusive, International

## Aims

Ecosystem Development

Market Education

Driving open standards



End-to-end system providers



Network Elements



Other enablers

CORNING

ETRI

TMC

工業技術研究院

Powerwave

TOSHIBA

com

TRAC

Products



Components and Software



60 operators covering 1.7 billion mobile subscribers – 33% of total

74 providers of femtocell technology

# Femto Forum Priorities for 2011



Encourage operator deployments (identifying motivations, overcoming obstacles, spreading best practice)



Consumer attitudes and value proposition



Metro/outdoor cells



Integrated Femtocell / Wi-Fi Networks



LTE femtocells



Enterprise Femtocells



Service enablement

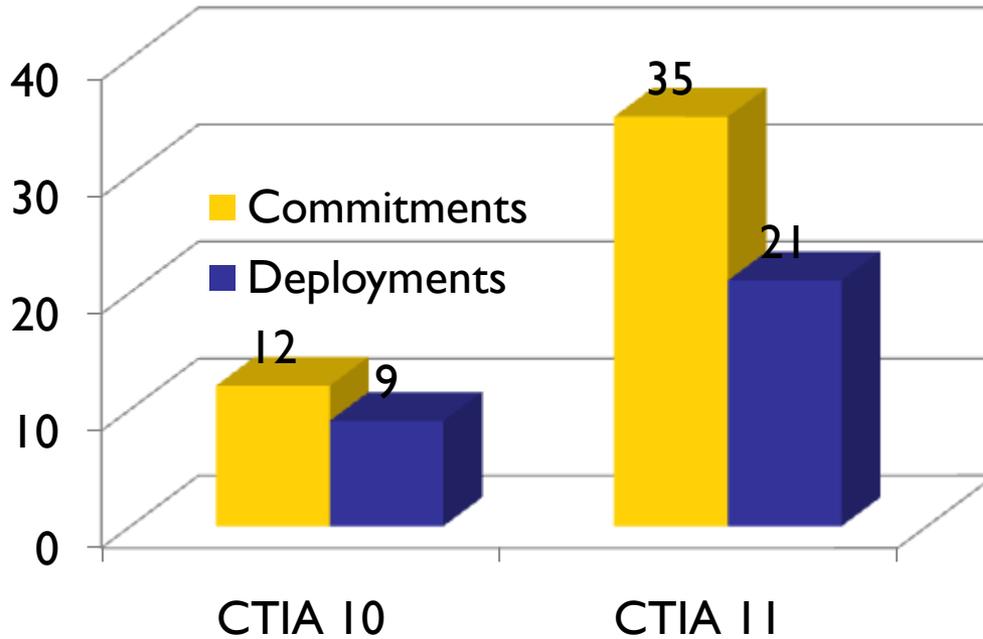


Open interoperability

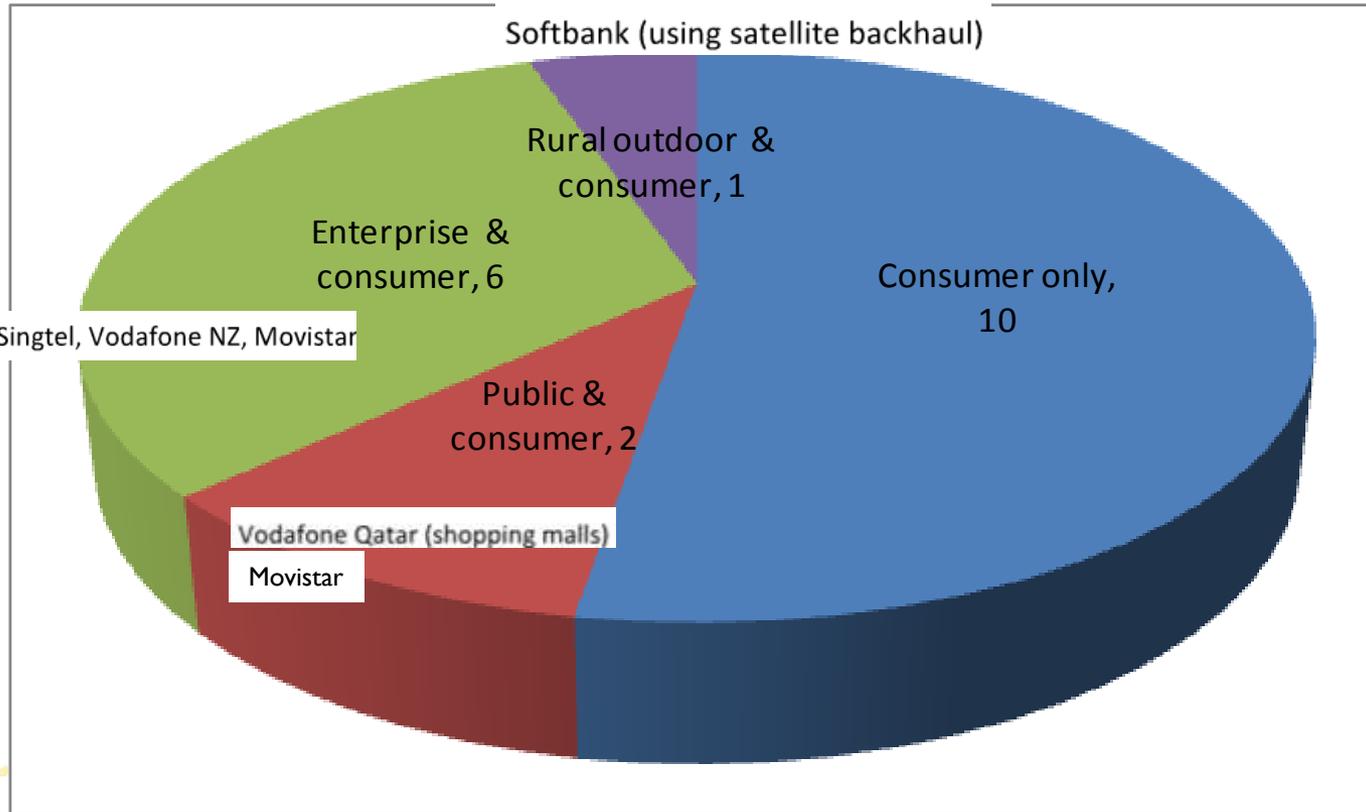
# Latest News on Femtocells

- Femtocell commercial deployments have more than doubled – to 21– since Mobile World Congress 2010 (*Informa Report*)
- Strong pipeline: commitments to launch almost tripled, to 35
- Last year all deployments were residential – now one-third include enterprise
- Femtocells are getting smaller – USB-connected and powered
- Femtocells are getting bigger - first metro and rural deployments now commercial
- Femtocell Services: New API for Developers; Update to TR-196
- Continued Plugfests via ETSI
- Consumer Research

# Strong Growth in Deployments and Commitments



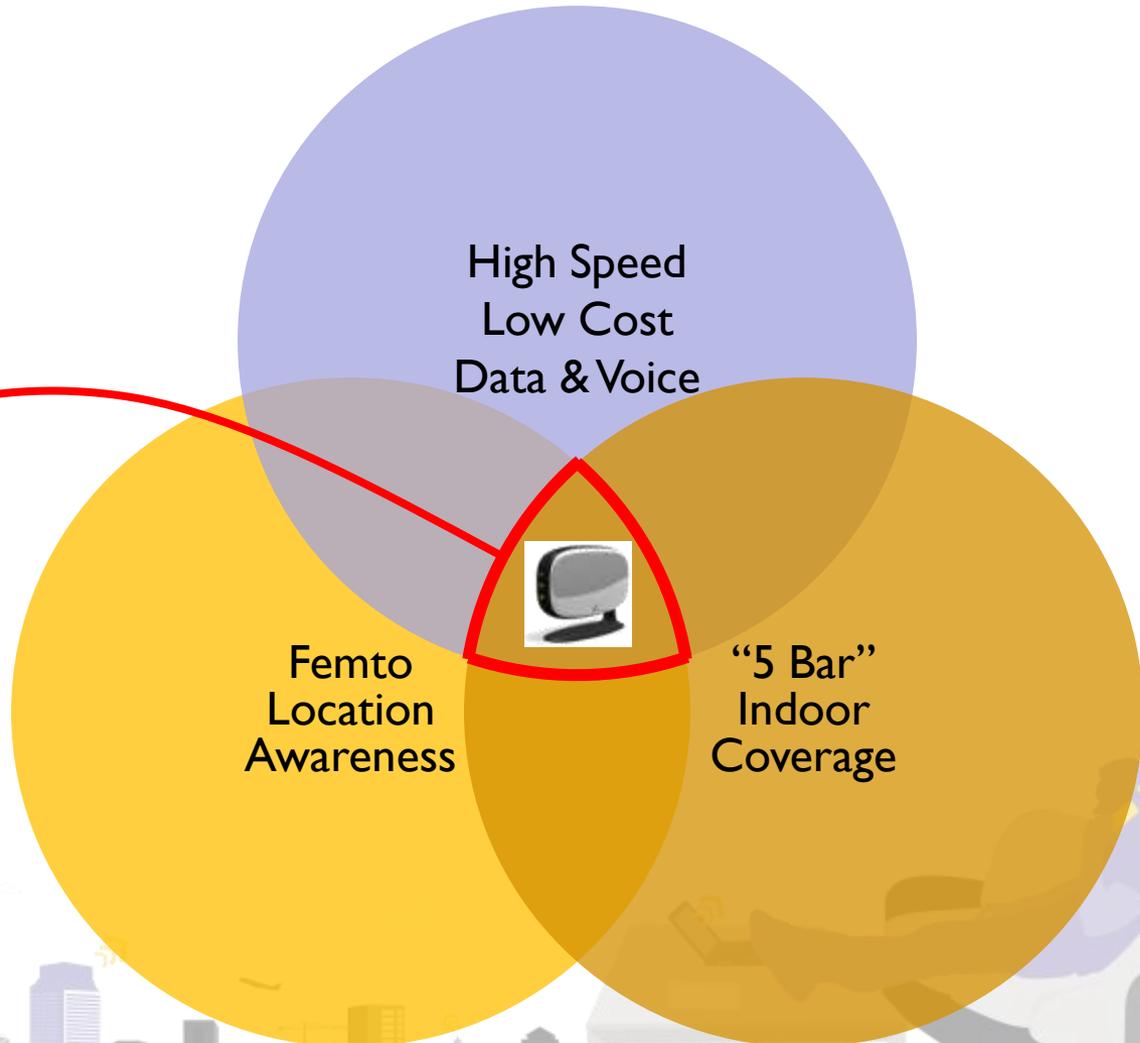
# Diversifying Deployments



# New API for Femto Services

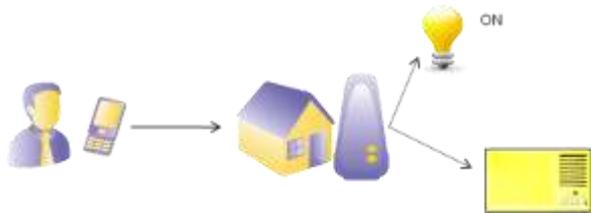
- An **industry-wide agreed set of API specifications** that enable advanced mobile applications based on femtocell technology.
- **First applications have already been built** based on these specifications by Forum members for operator customers.
- The API **provides femtocell awareness information** so developers can incorporate enhanced presence, context and location-sensitive features into new and existing apps.
- In parallel Femto Forum **worked with Broadband Forum** to update TR-196 Femto Access Point Service Data Model, to enable support for femtocell applications. This allows mobile operators to use their **standard management systems to remotely provision and configure advanced femtocell applications** on their customers' equipment as well as issue repairs and updates.

# An Application “Sweetspot”



# Femtocell-enabled Services

## Secure home access



## Home messaging



- Presence, location, context and remote access
- A bridge between the mobile and home networks
- Unlocking content, sharing and social networks on your mobile

## Chameleon home screen

UX-Zone changes the home screen to mirror your environment



## Picture synchronisation & remote control



# Second Femto Forum UMTS Femtocell Plugfest



- Plugfest took place in February 2011
- Focused on Broadband Forum TR-196 femtocell management standard
- Interoperability tests were conducted between femtocell access points, management systems, security gateways and femtocell network gateways
- The plugfest also tested the IPsec/IKEv2 security protocols which allow femtocells to communicate over the public Internet to operators' core networks in a highly secure manner
- 13 participants:
  - Ablaze Wireless, Acme Packet, Alcatel-Lucent Telecom, Alpha Networks, Argela, Askey Computer Corporation, Huawei, Institute for Information Industry, NEC Corporation, Node-H, Nokia Siemens Networks, PicoChip and Ubiquisys

# Consumer Research

- Femto Forum commissioned the most comprehensive ever survey of consumer attitudes to femtocells
- Over 6,100 consumers across six countries
- Conducted by international research firm Parks Associates
- Findings announced at MWC



# Key Findings

## Global Femtocell Survey

### Voice coverage

- Main driver for femtocells is in building voice coverage - and is main driver for consumer rating of mobile operator

### Churn Reduction

- Voice service improvement alone could prevent 42% of consumers switching operators in the next 12 months

### Competitive advantage

- 10% of consumers willing to switch to an operator offering femtocells

### More users

- 30% of consumers in multicarrier households would switch to a single provider offering femtocells

### Wi-Fi complementary

- 83% of heavy Wi-Fi phone users find femtocells very/extremely appealing

### Added-value services

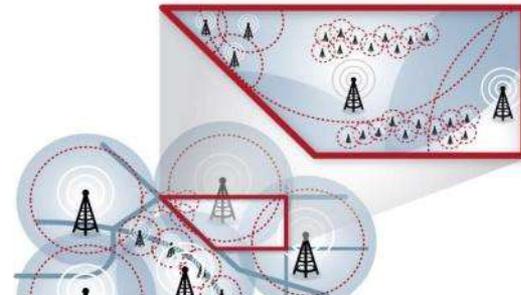
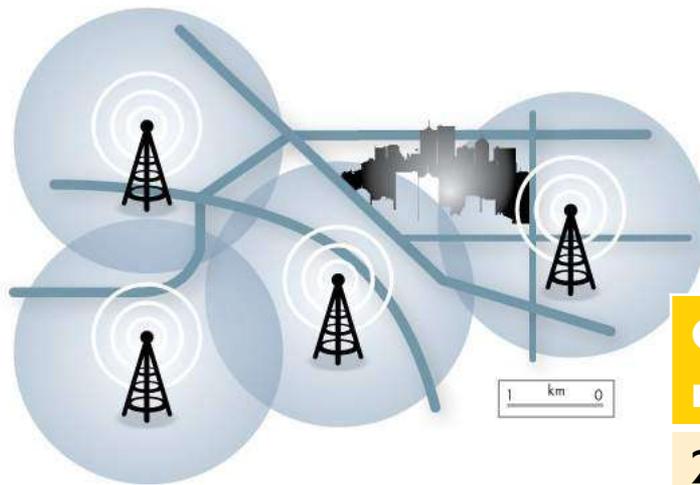
- 68% of femtocell fans found at least one advanced femtocell service very/extremely appealing

### Regional differences

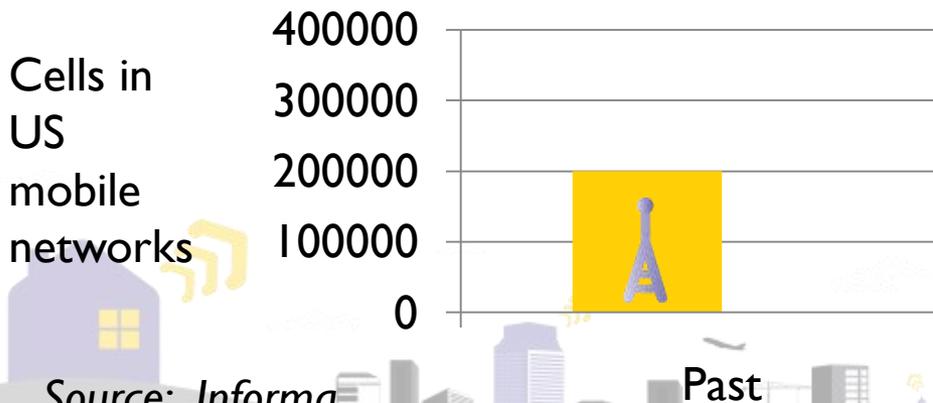
- China most aware of femtocell technology where 63% found femtocells very/extremely appealing
- Japan: main driver was faster data speeds

60% of consumers are interested in femtocells

# The shape of mobile networks has changed...



Global macrocells	Global femtocells
2.2m	1.7m

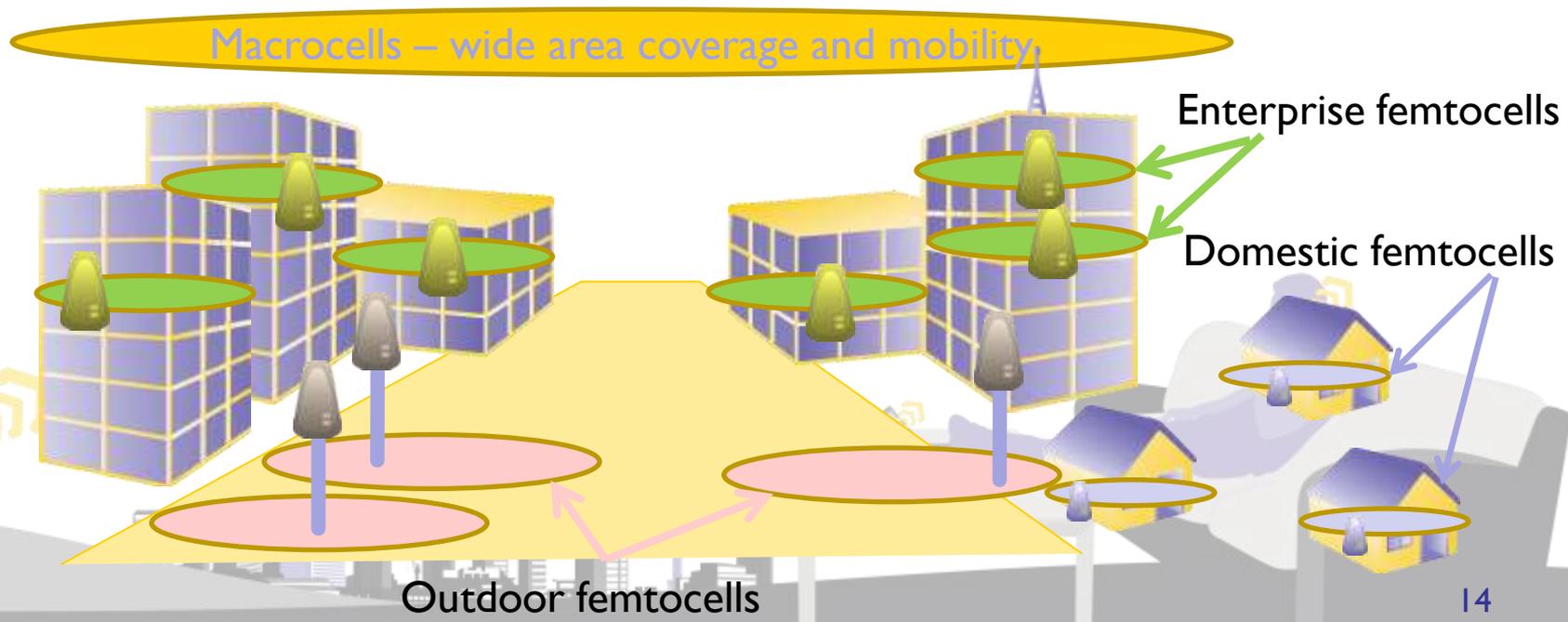


- Macrocells
- Femtocells

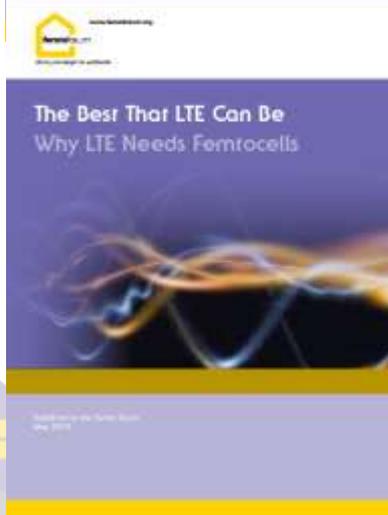
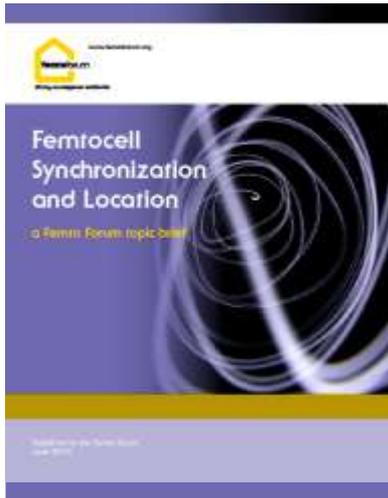
Source: Informa  
October 2010

# Femtocells aren't only for home

- Cost-effective deployment in offices, high-traffic or low coverage locations
- Enterprise femtocells: overlay currently, integrated in future
- Metrozone: capacity offload for rapid-response LTE service
- Rural and developing markets via wireless backhaul



# Femto Forum Publications



# Femto Forum Vision

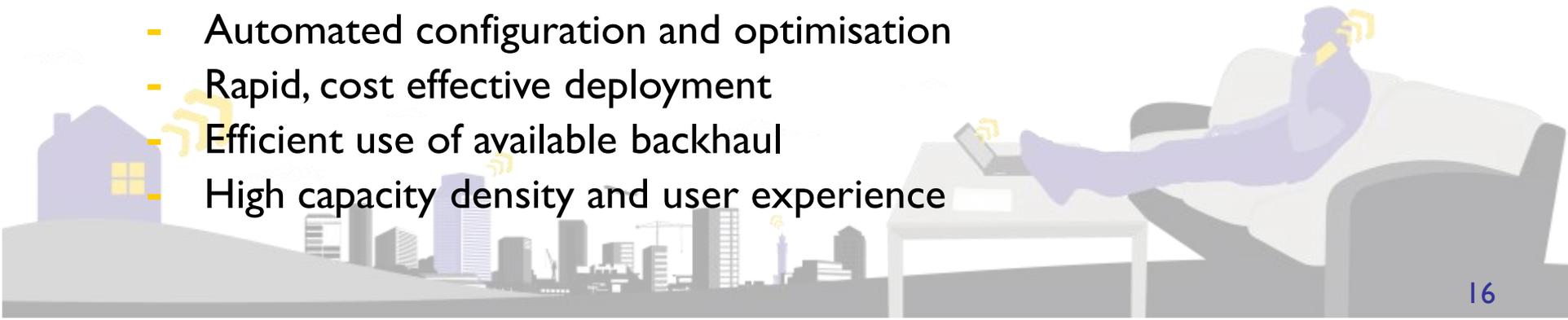
## “Delivering a great mobile experience to one billion users via femto technology”

### Femto Forum’s scope

We support the whole range of small cell applications enabled by femto technology. This technology has been enabled by the advent of femtocells, but is broader than femtocells, including office and outdoor environments.

Femto technology includes key attributes such as:

- Scalability
- Automated configuration and optimisation
- Rapid, cost effective deployment
- Efficient use of available backhaul
- High capacity density and user experience



# Upcoming Events (Please Join Us)

- Femto World Summit – June 20-23 London, UK
- Femto Forum Asia Plenary – September 13-16, Kuala Lumpur
- FemtoZone Femtocell Super Session 4G World, Chicago  
October 24-27
- Femtocell Americas – December 6-9 USA



# Summary

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

