



**Fixed-Mobile  
Convergence Alliance**

June 2005

**Wi-Fi SIP & GAN (UMA) Generic Product  
Requirements  
Overview for 3GPP CT1**

# A Guide to this Presentation

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# Wi-Fi SIP & GAN (UMA) Definitions

- **Wi-Fi GAN (UMA)** refers to the specific use of Wi-Fi unlicensed spectrum (IEEE 802.11a,b,g,h) to deliver Fixed Mobile Convergence services. Users will be able to rove and handover between cellular networks and public and private wireless networks using dual-mode handsets. Protocol and architecture aspects will be as per 3GPP Generic Access to the A/Gb interface TS 43.318 and TS 44.318 specifications. A key feature is that users will have a consistent experience for their mobile voice and data services as they transition between cellular and wireless networks.
- **Wi-Fi SIP** refers to the use of wireless enabled handsets or mobile stations for both enterprise and consumer voice (VoIP) and data applications, with multimedia session initiation, service signalling and control being performed by SIP. In addition the use of HTTP, HTTPS and HTML for support applications such as remote management, self care and authentication. A key feature will be the provision of seamless access through connectivity to public hotspots, consumer access points and corporate/enterprise access points.

Wi-Fi is a registered trade mark of the Wi-Fi Alliance

# The FMCA

- The Fixed-Mobile Convergence Alliance (FMCA) is a global alliance of telecom operators whose objective is to accelerate the development of Fixed-Mobile Convergence products and services.
- Total FMCA combined global subscriber base is now approx. 240 million.
- With 17 Members the FMCA is the fastest growing Operator Alliance.
- An additional 19 Telcos have requested and received information on the FMCA.
- **FMCA Members who are 3GPP Members** : BT Group Plc, KPN N.V., NTT Com, Rogers Wireless Inc., Swisscom.

## 17 Members

- Auna
- AT&T Corp
- Belgacom
- Bezeq
- Brasil Telecom
- BT (Chair)
- Cegetel
- Cesky Telecom
- Korea Telecom
- KPN
- NTT Com
- PCCW
- Rogers Wireless (Vice-Chair)
- Swisscom
- TRUE/ Orange
- Telecom New Zealand
- Telkom South Africa

# FMCA PRD Documents

- Aims and Objective
  - To comply with 3GPP technical standards and not to compete with these under any circumstances.
  - To define global FMC product requirements for the key convergence technologies (Bluetooth CTP, Wi-Fi GAN [UMA] and Wi-Fi SIP)
  - The FMCA has no intention of developing new technical standards.
- The FMCA Product Requirements Definition (PRD) Documents work from the identified technical specifications, taking these to the level of detailed required to produce a Convergence product.

# Reasons for engaging 3GPP CT1

- To capture 3GPP CT1 member views on the alignment of the Wi-Fi GAN (UMA) and Wi-Fi SIP FMCA Mobile Station product requirements with existing and emerging 3GPP Terminal technical specifications and activities.
- To review both outstanding and new technical issues identified by the FMCA that require further industry activity. Discussions on how appropriate issues can be fed into the 3GPP CT1 workflows for consideration.

# PRD Timescales

- **Phase 1 – PRD development – May to end August 2005**
  - Deliver Wi-Fi GAN (UMA) & Wi-Fi SIP PRDs.
  - Ensure PRD Credibility through the creation of solid interfaces with selected Standards Development Organisations
- **Phase 2 – Technology Migration Paper: June to end October 2005**
  - Deliver Wi-Fi GAN (UMA) to Wi-Fi SIP Technology Migration Paper.
- **Phase 3 – PRD Reviews: August to end November 2005**
  - Review and revise PRDs based on standards and industry feedback

# Working together (next steps)

- The need to establish a working relationship between 3GPP CT1 and FMCA to review Mobile Station product requirements for Wi-Fi SIP and Wi-Fi GAN (UMA) and outstanding technical issues.
- FMCA to issue top-level discussion papers to 3GPP CT1 by mid-June 2005.
- FMCA to agree with 3GPP CT1 Members the PRD review process (with timescales to align with end August 2005 FMCA PRD delivery date).
  - Should we have an ad-hoc FMCA/3GPP meeting to review the discussion document in July?



# Working with other SDO's (1)

- **Wi-Fi Alliance – Wireless Cellular Convergence (WCC) Group**
  - To ensure alignment of FMCA Product Requirements for Voice over Wi-Fi services, Wi-Fi enabled Mobile Stations and Access Points with Wi-Fi Alliance Certifications.
- **3GPP TSG SA WG1 - Services**
  - To ensure alignment of FMCA service and feature product requirements with 3GPP specifications and work activities.
    - E.g. standardisation of IMS-SIP / Wi-Fi - GSM/3G handover.
- **3GPP TSG SA WG2 - Architecture**
  - To ensure alignment of FMCA Wi-Fi SIP product requirements with 3GPP activity on IMS over WLAN

# Working with other SDO's (2)

- **ETSI TISPAN**

- To ensure alignment of FMCA Wi-Fi SIP and Wi-Fi UMA end to end Product Requirements with ETSI TISPAN activities and specifications.
  - E.g. alignment of service, protocol, QoS, security and mobility aspects

- **Home Gateway Initiative (HGI)**

- To ensure alignment of FMCA Product Requirements for home gateways with HGI recommendations/activities.
  - E.g. alignment of QoS, Connection Admission Control, Security, Authentication and Wi-Fi Association requirements.

# FMCA key technical considerations

- MS security encryption requirements
  - e.g. WPAv2, IEEE 802.11i, IPsec VPN, etc
- MS authentication requirements
  - e.g. HTTP digest, ISIM, USIM, EAP SIM, Dual SIM, etc
- Requirement for supporting seamless autoconnect and handover to existing public Wi-Fi hotspots and APs
- Requirement for voice traffic prioritisation and QoS on an end to end basis.
- Requirement for call admission control at the access point to manage maximum number of simultaneous calls based on available backhaul capacity.
- Requirement to minimise end to end latency especially when in wireless mode and during AP to AP and wireless to cellular (or vice versa) handovers.

# Contact for further information/involvement

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