



Fixed-Mobile Convergence – Market and Regulatory Trends in Western Europe

Next Generation Network Interconnection
VIB conference, Brussels, March 28 & 29, 2007

James Thomson

Cullen International

james.thomson@cullen-international.com

FMC service characteristics

- Requires user to have:
 - ADSL subscription (+ PSTN subscription)
 - Mobile subscription
 - GSM / WiFi handset
- At home:
 - Outgoing calls: made via WiFi / ADSL connection (VoB calls)
 - Incoming calls: different models. Either terminated via WiFi / ADSL connection or via mobile network
- Outside home:
 - Outgoing + Incoming calls via mobile network
- But, lots of variation between FMC offers:
 - Offered behind mobile or fixed number
 - Seamless call handover, use in public WiFi hotspots, single billing

Why FMC?

- User benefits
 - Single handset convenience
 - Cheaper outgoing calls made from mobile at home
 - Example: BT Fusion “4 for 1” inclusive call minutes

- Operator benefits
 - Defence against Fixed-Mobile substitution
 - Defence against VoB competitors (mobility as service differentiator)

Limited take-up so far

BT Fusion subscribers	Total UK mobile subscribers
40K	68m (113%)

- ▼ Developments at start of 2007:
 - ▼ BT Fusion introduces WiFi handsets for residential customers (Bluetooth until then) and access in BT Openzone hotspots
 - ▼ BT Corporate Fusion to launch in Germany and Spain
 - ▼ Deutsche Telekom stops T-One in favour of “Homezone” model

Call Termination

FMC services offered behind Mobile Number

	Calls to Fixed Geographic Number	Calls to Mobile Number
Subscriber at Home	Not part of FMC service	Call terminates on WiFi / ADSL Mobile call termination rates apply
Subscriber Outside	Not part of FMC service	Call terminates on mobile network Mobile call termination rates apply

- Examples: BT Fusion (UK), Orange Unique (F, NL, UK)

Call Termination

FMC services offered behind Fixed Number

	Calls to Fixed Geographic Number	Calls to Mobile Number
Subscriber at Home	<p>Call terminates on WiFi / ADSL</p> <p>Fixed call termination rates apply</p>	<p>Call terminates on mobile network</p> <p>Mobile call termination rates apply</p>
Subscriber Outside	<p>Call is forwarded to mobile network</p> <p>Subscriber pays calls forwarding charge</p> <p>Fixed call termination rates still apply</p>	<p>Call terminates on mobile network</p> <p>Mobile call termination rates apply</p>

- Examples: TeliaSonera Home Free (DK), Deutsche Telekom T-One (D) (service now stopped)



Cullen
INTERNATIONAL

“Unbundled” FMC

- ▶ Similar to FMC services behind Fixed Number on previous slide except can be used with SIM card from any mobile operator
- ▶ Examples: Free (F), Ya.com (ES)

Pseudo FMC “Homezone” services

- ▼ Lower retail tariffs for outgoing calls made within certain radius of home address (Homezone)
- ▼ But incoming / outgoing calls always stay on mobile network
- ▼ Examples: O2 Genion and Vodafone Zuhause (D)
- ▼ Some open questions:
 - ▼ Can associate fixed geographic numbers with the service?
 - ▼ Example: Vodafone Casa Numero Fisso (IT) suspended
 - ▼ What is applicable termination rate for call to fixed number which terminates on mobile network?
 - ▼ Example: European Commission comments on Germany Market 16

Seamless call handover when moving between home (WiFi) and outside (Mobile)?

Seamless call handover		No seamless call handover
Outgoing call continues to be charged at retail rate applicable where call was started	Retail rate for outgoing call changes	
BT Fusion (UK) Orange Unique (F, NL, UK) Telecom Italia TIM Unica (IT)	TeliaSonera Home Free (DK) – subscriber is informed by a ‘bip’ tone	Deutsche Telekom T-One (D) Neuf Cegetel TWIN (F)



Can make/receive calls in WiFi hotspots outside home?

Public WiFi hotspots of same operator	Home hotspots of other subscribers “Pairing”	No
BT Fusion (UK) Deutsche Telekom T-One (D) Neuf Cegetel TWIN (F)	BT Fusion (UK) Orange Unique (F) Free (F)	TeliaSonera Home Free (DK) Orange Unique (NL, UK) Telecom Italia TIM Unica (IT)

Single billing?

Single bill for FMC + ADSL + PSTN services	No
TeliaSonera Home Free (DK) Neuf Cegetel TWIN (F) Orange Unique (F) Deutsche Telekom T-One (D)	BT Fusion (UK) Free (F) Telecom Italia TIM Unica (IT) Orange Unique (NL, UK)

Regulatory Intervention

- Only one country where NRA intervention on FMC so far (Italy):
 - Telecom Italia TIM Unica – Quota on subscribers
 - Vodafone Case Numero Fisso “Homezone” - Suspended
- FMC not addressed so far by any NRA in context of market analysis (Markets 1-6, 9, 15 or 16)
- Replicability: FMC = LLU + MVNO
- Future of Market 15 in Recommendation on Relevant Markets?