

ISART

Day 4:
Innovation &
Research

Business Panel

30 July 2010

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11th ANNUAL INTERNATIONAL SYMPOSIUM ON
ADVANCED RADIO TECHNOLOGIES
ISART – Spectrum Sharing Technologies
27 – 30 July 2010
Boulder, Colorado USA

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T-Mobile®

T-Mobile History of Innovation

- Early embracer of Wi-Fi
 - ✓ Global network of 45K HotSpots, including 10K in US
- First US carrier to launch Unlicensed Mobile Access (UMA), standardized in 3GPP Rel. 6 as Generic Access Network (GAN)
 - ✓ Blackberry Bold and Nokia E73 -- latest phones with Wi-Fi calling (2Q2010)
- First to launch Android handset globally (T-Mobile G1)
 - ✓ Largest number of Android handsets of any US carrier

T-Mobile HotSpot

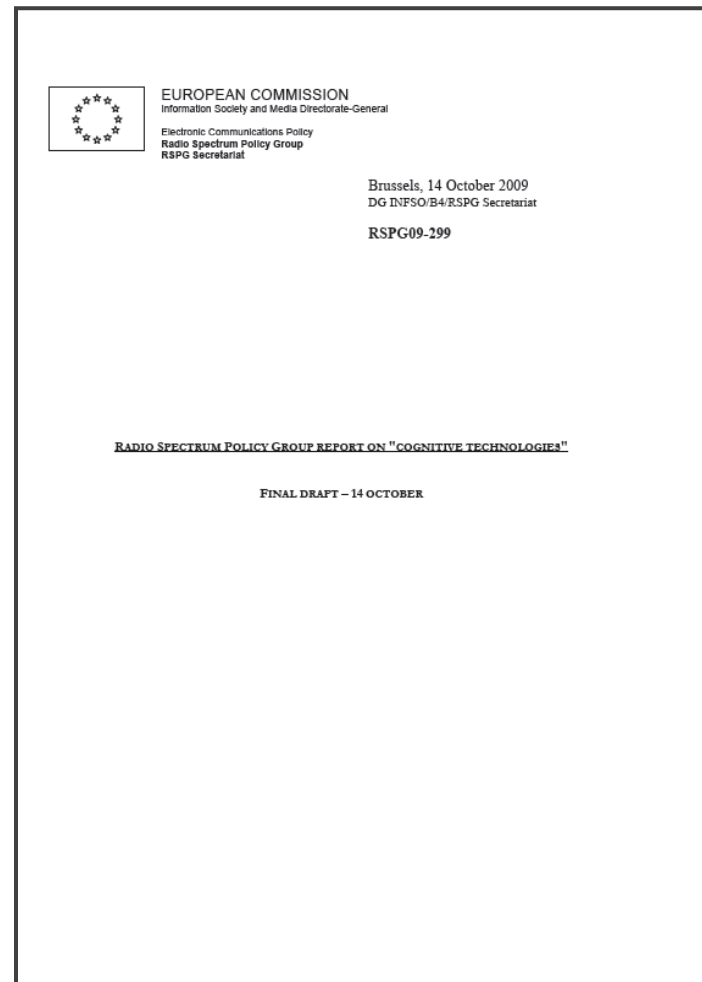
BlackBerry Bold
with Wi-Fi Calling



“The concept of ‘unused spectrum’ is not self-evident.”

“[U]nused by one user does not mean unusable for another user or application. On the other hand ‘no signal present’ does not necessarily mean that the frequencies are potentially available.”

- Radio Spectrum Policy Group Report on ‘Cognitive Technologies’ (Oct. 2009)



Leaving No Stone Unturned

MS Network Improvement Timeline (Dec. 2009)

Step	Action	Timeframe
1	HSPA Upgrades	2009 – 2011
2	Transition to Ethernet / Fiber + Microwave Backhaul	2009 – 2011
3	Offloading Traffic via Wi-Fi / Femtocell	2009 – 2011
4	Install Mobile Packet Core Gateways	2010 – 2012
5	Rollout of LTE	2010 – 2013
6	Optimize Spectrum / Propagation	2010 – 2013

Morgan Stanley

Note: Network improvement includes capacity / speed / coverage and pertains to market improvement is added.
Source: Simon Flannery, Ehud Gelblum, Morgan Stanley Research.

➤ Yet this ultimately will not be enough, and DSA will have a role to play.

For Your Consideration

- Promising USG remarks this week on possible additional sharing in temporal/geographic domains.
 - ✓ Previous government efforts commendable
 - ✓ Appropriate to move beyond traditional binary views
- Journey of a thousand steps . . .
 - ✓ Look beyond the usual suspects
- Let's stipulate import of services involved

Thank you.

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