

DAB digital radio development around the world

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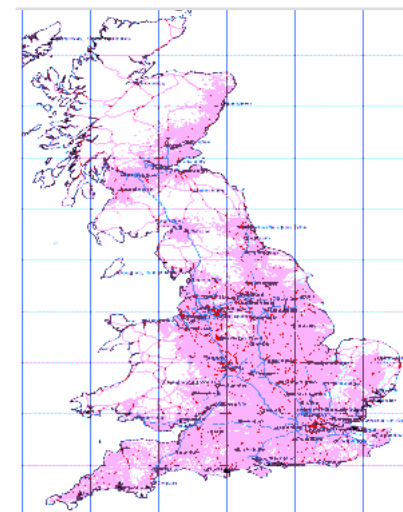
- Over 100 members from 30 different countries
- Industry networking forum
- Industry information source
- Safeguarding DAB standards
- Development forum - receiver, content, systems

DAB - Global standard



UK - focus on audio services

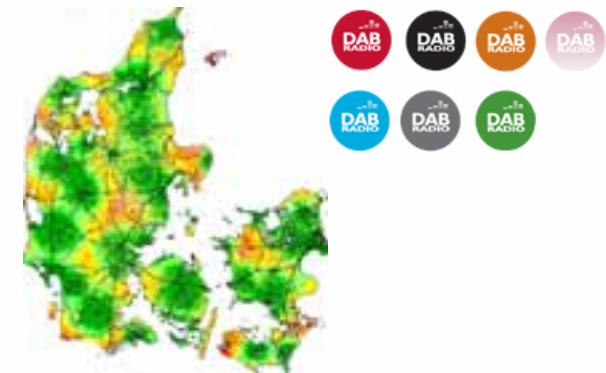
- Coverage over 85% population
- 2.8 million DAB sets sold by 2005
 - Over 10% of households
- Key consumer driver: More choice
 - 420+ DAB stations on-air
 - 50% new to the listener



Scandinavia

Denmark

- Coverage ~100% population
- Nearly 10% of households
- +150,000 sets in 2005



Norway & Sweden

- Coverage ~70% population
- Norway +25,000 sets
- Sweden - sets sales just beginning



Central Europe

Germany & Switzerland

- 85% coverage
- Over 150 DAB audio services on-air
- +300,000 sets by end 2005



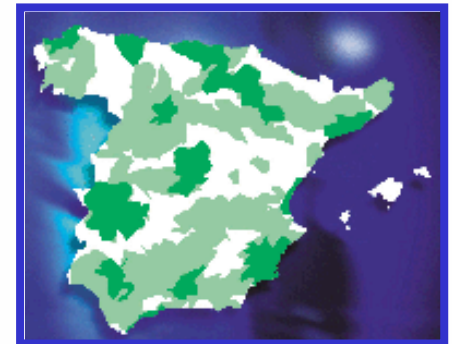
Belgium & Holland

- Belgium launch 2004 & Holland following in 2005/06
- High population coverage - 99%
- Belgium +50,000 sets by end 2005

Southern Europe

Spain

- Market launch in 2005
- Many national + local services
- Catalunya has 48 DAB audio services



Italy

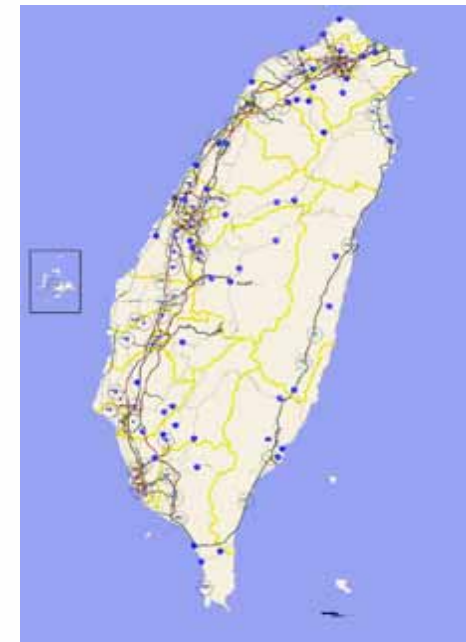
- Coverage now 65% population
- Consumer launch 2006
- Rapid sales growth expected



DAB in Asia

Taiwan

- Following successful trials
- Multiplex licences awarded
- Full commercial launch in 2006
- Taiwan is the leader in DAB chipset & silicon manufacturing



DAB in Asia

Korea

- 6 multiplexes licences awarded
- Commercial launched Dec 1st 2005
- Mixture of radio & TV services
- Focus on mobile multimedia (DMB)
- Samsung, LG, Perstel making mobile sets (PMP, PDA, phones)



DAB in Asia

China

- Guangdong: DMB video & DAB audio trials on-air
- Beijing: DAB/DMB trials, Target 2008 Olympics
- Hong Kong: DAB trials on-air
- China DAB Group - trial rollout - Shanghai & Tianjin



DAB in Asia

Singapore

- 3 multiplexes on-air in Singapore
- Initial sets sales +10,000 after recent promotion

Australia

- Trials in Sydney & Melbourne
- Govt recently announce DAB rollout framework
- Rollout expected within next 2 years

Rapid DAB receiver developments

DAB covers full range

Over **200** DAB products in the market

Full range:

75 kitchen portables

30 micro systems

25 handhelds (incl MP3 DAB)

20 tuner separates (incl DAB 'adapters')

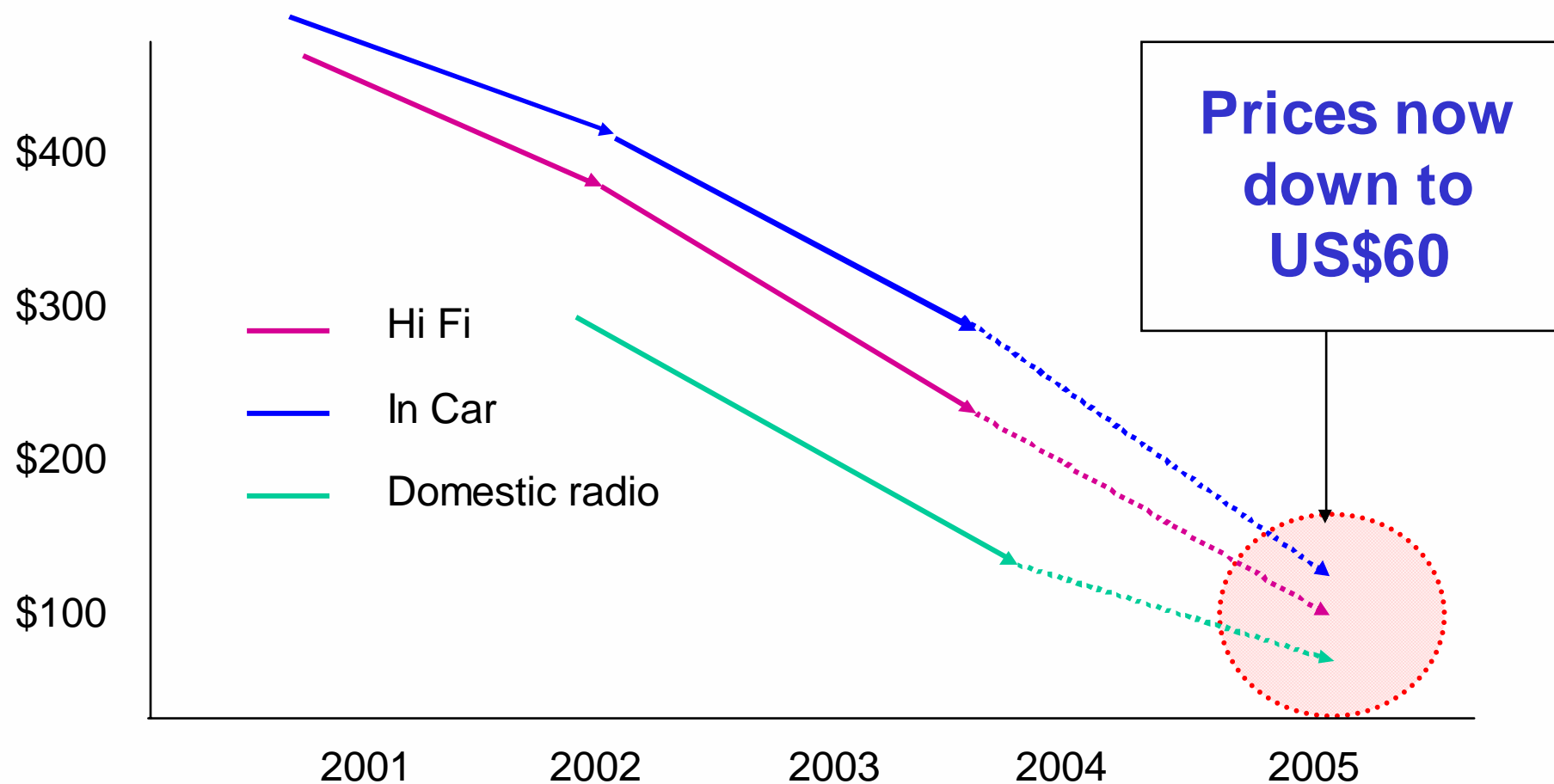
15 clock radios

15 boomboxes

15 in-car radios

5 set top boxes/ home cinema with DAB

Prices continue to fall



2005: In-car DAB rollout

- DAB now available as upgrade option

(General Motors, Ford, Volvo, VW/Audi, Jaguar, Land Rover, Mitsubishi, Renault, DaimlerChrysler)

- General Motors DAB as standard fit (some models in UK, rollout in Europe)

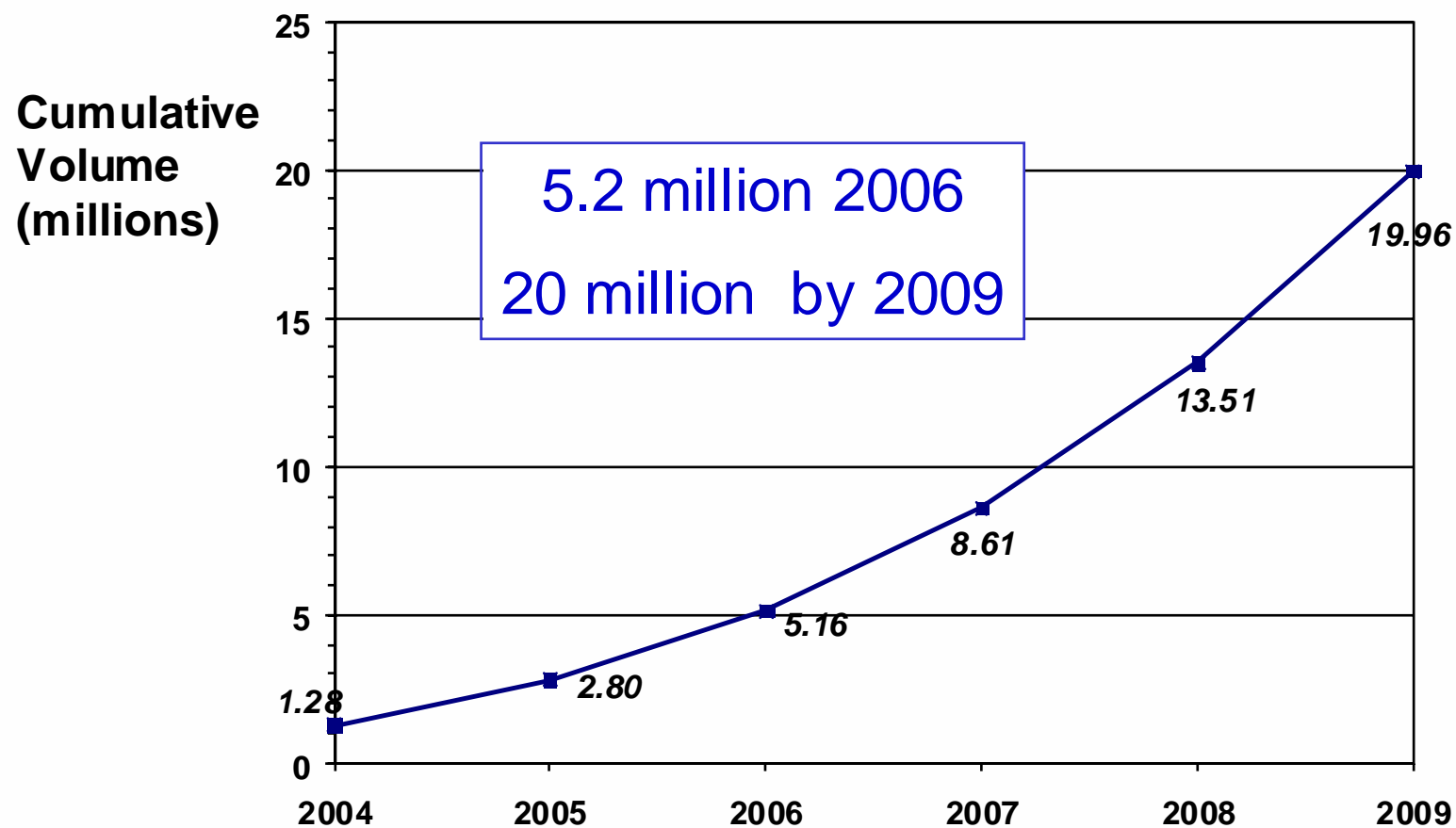
- 2006/07 most plan DAB standard fit

UK - rapid DAB growth in last 3 years



Source: GFK – approx 88% coverage of the DAB market

UK - 5 year forecasts



Europe - forecasts for DAB

European forecast ~ 40 million by 2010

- 2005/06 growth in Germany, Denmark, Norway, Sweden, Belgium, Holland, Switzerland, Spain & Italy
 - Example, Denmark 10% of households in 2 years
- In addition: Mobile DAB/DMB multimedia devices (20m by 2010) & in-car standard fit (growth 2006/07)

Source: Eureka Research 2005

DAB listeners a listening to radio for longer

Unusual early adopter profile

Radio Fans

35+ years old

Married with family

Professionals



UK example - Analogue choice (Bristol)

National



Regional

vibe **101** fm

Local

BBC RADIO BRISTOL



UK example - Analogue choice (Bristol)

National



Regional

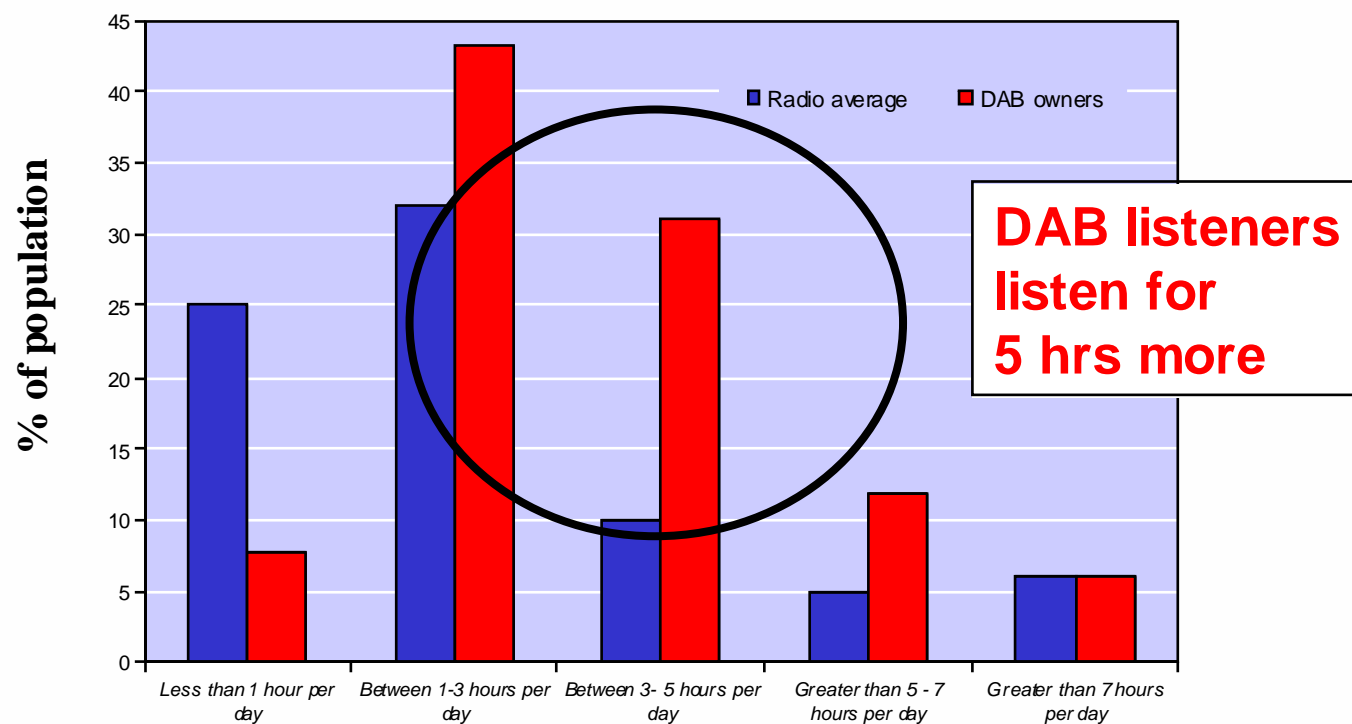


Local



DAB listeners listen longer

Listeners to DAB listen for 20% longer each week



DAB Audio Rewind/Store/Replay

- **Pause & Rewind**
- **Record & Replay**
- **Download to SD card**
- **USB connection**
- **Playback MP3 files**

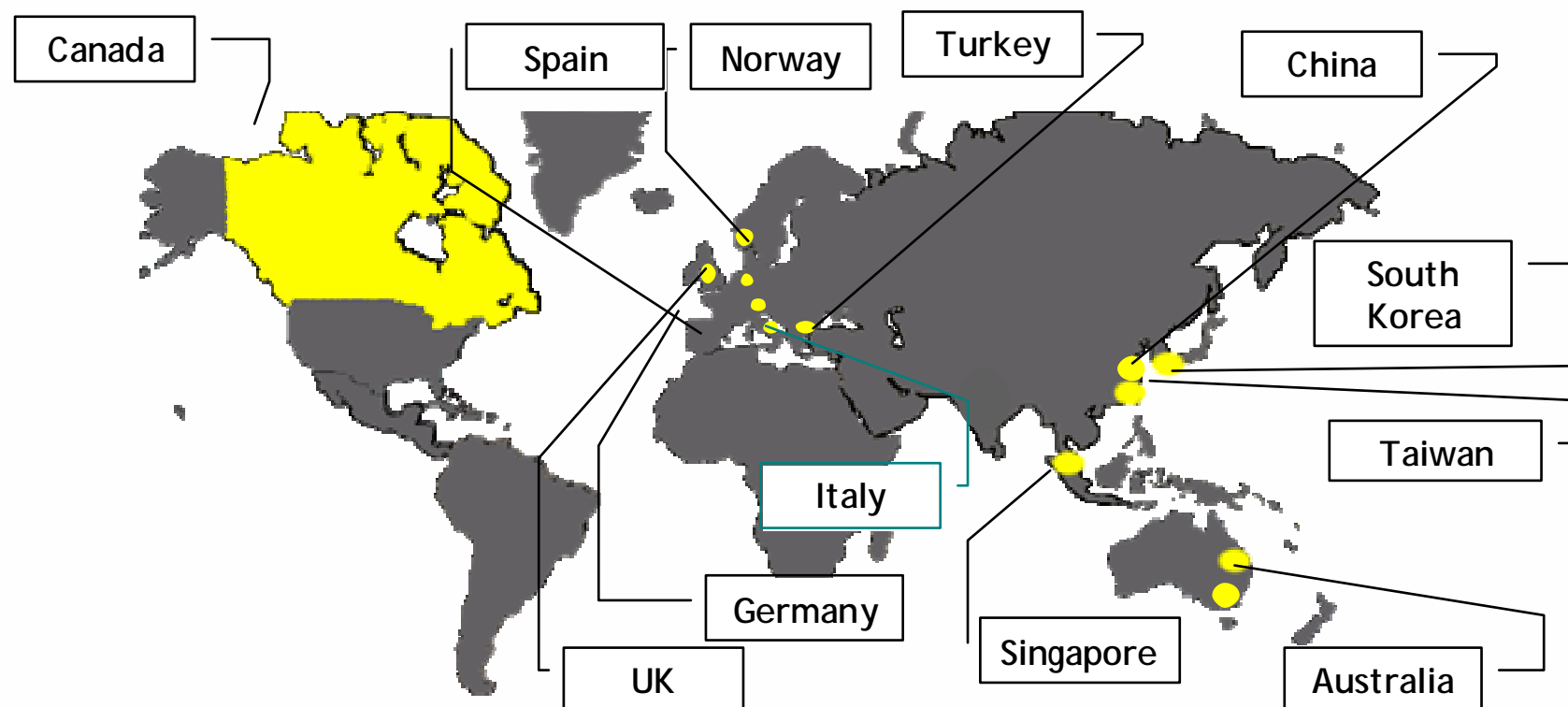
ROBERTS
Sound for Generations

PURE
DIGITAL

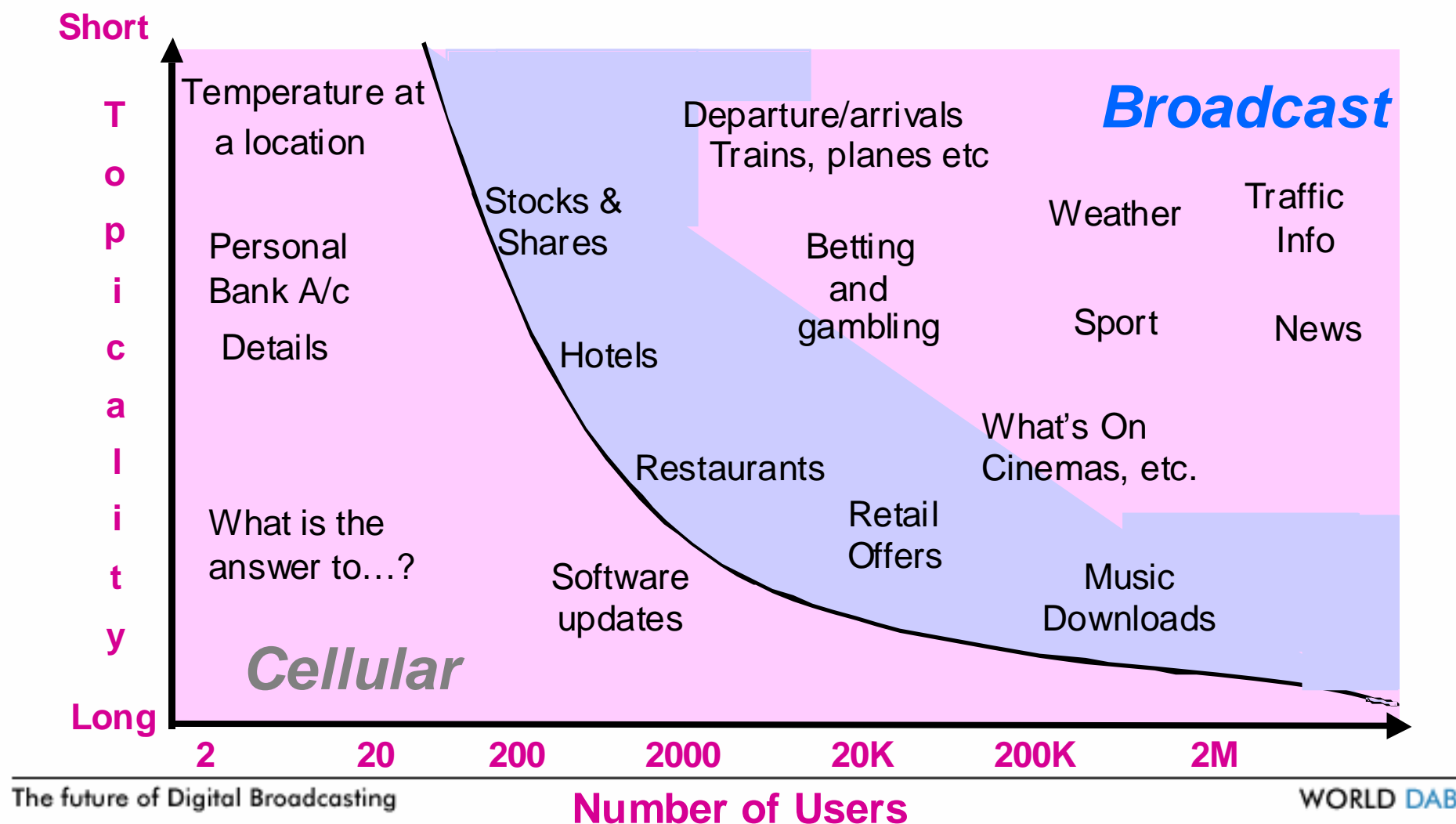
DAB Multimedia (DMB)

Asia leading the way

Worldwide DAB Multimedia projects



Broadcast Multimedia strengths



DAB Multimedia

DAB ideal mobile multimedia broadcasting (DMB)

- Proven, reliable and robust platform
- Broadcast solution designed for mobile reception
- Global market - frequencies available across the world
- Infrastructure in place - transmitter networks
- Seen as complimentary by Telco/3G developers
- Multimedia (DMB) receivers available in 2005

Conclusion

- Global standard – already 40 countries
- Mature, proven, reliable and robust system
- Millions of DAB receivers sold (prices of US\$60)
- DAB offers more consumer choice & control
- It is flexible for integration/convergence
- It is a cost-effective for mobile multimedia

Thank you!

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