



RECEIVER PROFILES in AUTOMOTIVE

EBU, Geneva, 19/03/2009

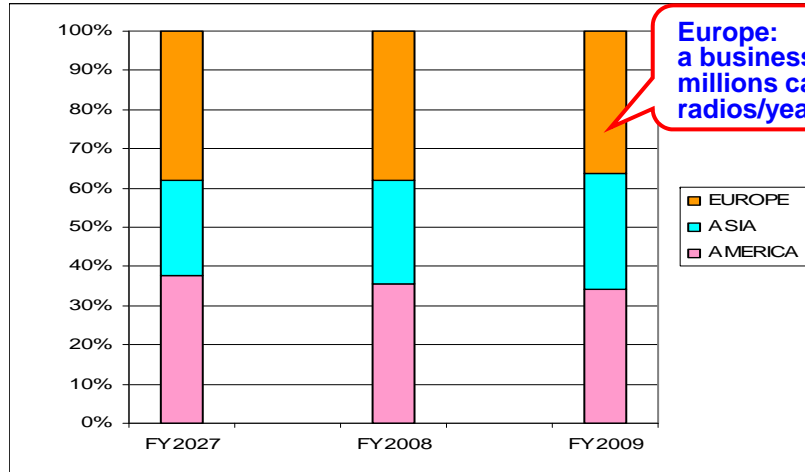
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Agenda

- ▶ **In-car Radio Business**
- ▶ **Expectations and Key factors of success of Digital Radio**
- ▶ **Receivers to come**

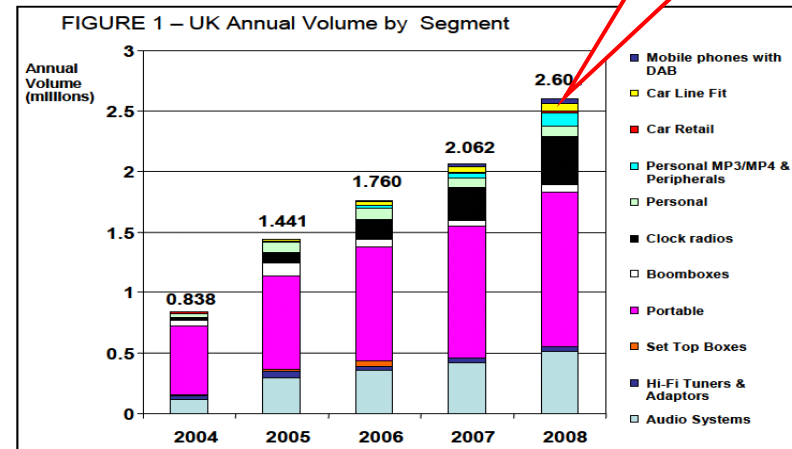
In-car Radio Business (under preparation !!)

Car Line OEMs per region:



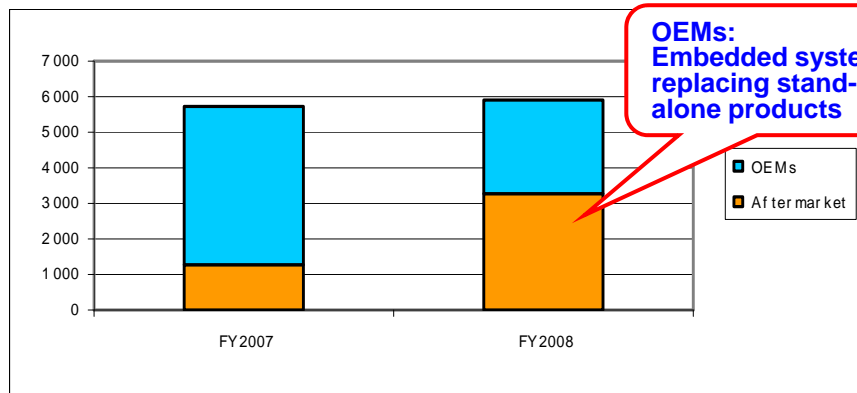
Europe: a business of 22 millions car radios/year

Digital Radio in UK:



In-car DAB: Growing very slowly

Digital Radio 'Aftermarket / OEM' split in US:



OEMs: Embedded system replacing stand-alone products

Digital Radio in US:



Satellite Radio: Almost 20 million subscribers

HD Radio: About 4 to 5% of new cars are equipped

Key factors of success for Digital Radio in Automotive

- ▶ **Additional content/services:**
 - ▶ **Pictures:** weather maps, traffic maps
 - ▶ **News:** worldwide events, shares, singers and actors events
 - ▶ **Local info:** what is going on nearby ?
 - ▶ **Help on Navigation:** events, optimised route
 - ▶ **Interactivity:** access further datas (zoom on), vote,
- ▶ **At least neither degradation on audio quality and nor on area coverage compared to FM,**
- ▶ **Time line should fit with time-to-market in Automotive industry which is about 1 year more than for consumer products,**
- ▶ **Broadcast services (no subscription),**
- ▶ **Receivers price adder to be balanced with new services,**
- ▶ **Backward compatibility.**

Receivers to come

- ▶ **DAB offering new audio programs like in UK, is not a guarantee for success in Automotive,**
- ▶ **DAB in L-Band only is not a commercial success due to infrastructure constraints,**
- ▶ **What's changed:**
 - ▶ **More efficient audio codec used in DAB+ and T-DMB**
 - ▶ **Pan European Receiver (16 bit SId and according Profiles)**
 - ▶ **The Legal decision in France (applicable on September 1st, 2013)**
- ▶ **What are the remaining brakes on concrete success:**
 - ▶ **Guarantee on concrete and attractive content to come**
 - ▶ **European Frequency Spectrum availability in Band III**
 - ▶ **Receivers**

Receivers to come

- ▶ **The legal decision in France is really cutting the famous Chicken and Egg process. Receivers will come !
Possible European harmonization there ?**
- ▶ **The WorldDMB and DIGITALEUROPE (EICTA) position for pan-european Receivers allows OEMs to develop only one radio product to cover all needs overall Europe,**
- ▶ **In-car applications will implement FM <-> DAB, DMB follow-me,**
- ▶ **Automotive industry really needs TPEG as offering new services.
Here is the only remark on Profiles:
According to Profiles 2 and 3, TPEG is being mandatory in all cars:**
 - **some products are Radio with small display, without navigation system and without any intent to provide TPEG output stream for external portable devices**
 - **Norm is not mature enough yet to guarantee Transmitters/Receivers adequation for the 10 coming years.**

Profiles and Logos

- ▶ **TPEG should be restricted to products with a navigation system, and could only be mandatory from 2013 onwards,**
- ▶ **As the patent situation is not clear to all manufacturers, all of them can not yet committ they would only launch Profiles 1 and 3 products and not also Profile 2,**
- ▶ **Profile 1 is a concrete use-case but only due to the legal decision in France, not due to additionnal services the end-user will ask and pay for it,**
- ▶ **We already see different Digital Radio Logos without a clear harmonization. Additionnal logos would only have our support when being auto-certified attribution managed by an independant european committee.**