The RDS Forum – why it is really so useful for the FM broadcasters

A presentation by
Johnny Beerling and Dietmar Kopitz

www.rds.org.uk/

About us

- **Johnny Beerling**

  formerly Controller of BBC Radio 1

  former Chairman of EBU RDS Programme Experts Group and

  now Chairman of RDS Forum

- **Dietmar Kopitz**

  formerly EBU Chief Engineer

  now

  Broadcast Consultant and

  Chief Executive of the RDS Forum

- **RDS Forum continued**

  Promotion of RDS implementation

  Maintenance of technical RDS specifications

  Development of new RDS-ODA features

  - These are RT+ and eRT

- **Similar Forum activities exist for...**

  DVB, DAB, DRM and TPEG – with strong support from EBU

Majority of broadcasters may not be aware of ...

- the new features that have emerged within the RDS Forum
- and enhancements made by the updating of the IEC RDS standard edition 2 from 2009

RDS Forum background

- **RDS Forum was founded by EBU in 1993**
- **RDS Forum became independent in 1999**
  - Constituted as member-funded association
    - A not-for-profit international organisation of public interest
    - Formally registered in Geneva
- **Members receive relevant information on ...**
  - Future of Radio (analogue & digital)
  - New RDS developments
  - Migration to Digital Radio
- **Members exchange experience**
  - How to use RDS correctly and take corrective action

- a strong association of RDS users !!!

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Those who attended the 2011 Forum

Belgium: *TISA*
France: *Continental, Radio France, TDF, Worldcast/Auditem*
Finland: *Nokia*
Germany: *Bosch, Delphi, Harman-Becker, iBiquity, IRT, J+K Technologies, Qbit, T&C*
Hungary: *Magyar Radio*
Italy: *Axel Technology*
Netherlands: *Catena, ItoM, International Datacasting, TomTom*
Norway: *Post & Telecom Authority*
United Kingdom: *Silicon Labs, Ofcom, WorldDMB, DRM Forum*
USA: *Data FM, Navteq, SiliconLabs*
Sweden: *Mitsubishi Electric Automotive*
Switzerland: *SRG/SSR, Swiss Association of Private Broadcasters, Swisscom Broadcast*

The future of FM radio in Europe

- **There is an obvious need for ...**

  Development of digital broadcast technologies

  Development of internet radio

  Encourage use of multimedia radio animation

- **In spite of this:**

  FM radio will continue for at least another 15 years

  RDS is not an outdated technology

  RDS has much **added value** and has still much to offer in this time frame

- **Broadcasters have built data links**

- **They also use digital play-out centres**

  It will be cheap and easy to use more dynamic RDS features now, such as RadioText and RadioText Plus

... and the future of FM radio in the UK ?

The Digital Britain Final Report published in June 2009 suggested:

- The BBC should switch-off FM radio for its National Networks in 2015 (now it is realised by the government that such a date is not realistic and the situation will be reviewed in 2017)
- Then use DAB as a replacement
- In the UK there are currently only about 13 million DAB home/portable radios and almost none in cars

- Please note:

  This is less than 10% of all existing radios in the UK (about 200 million domestic and portable radios plus 50 million in cars)

The transition to digital radio listening will therefore be unavoidably very long

... more on FM in the UK

- **There are almost no DAB receivers yet in cars**
- It will take 15 years at least, until all cars will use DAB radios in the UK
- Re-equipping existing cars with DAB radios will be very expensive
  - Nobody would be interested to do this because of the high cost involved
- How will local travel information be delivered?
  - currently this is a popular service provided by using RDS features
- The Digital Britain Report 'experts' seem to have been somewhat misinformed by the Digital Radio lobby

BBC reaction: It will only switch-off FM transmitters when

- DAB coverage is equivalent to FM coverage
- A majority of their listeners (98%, the BBC said) are using DAB radios, in-cars (when?) as well as in the home

To achieve this:

- £100 million (at least) must be invested in new DAB transmitters
- The car industry must manufacture all cars with DAB & FM radios
  - The expectation is: as from 2013 ???

The environment consideration

- **Currently there is an environmental argument against waste**
- **If FM broadcasting were to be stopped in the near future ...**
  - We calculate for Europe ...
    - over 1 billion radios would be redundant, have to be destroyed (or sent to Africa as somebody suggested in the UK)
    - and replaced with DAB digital radios
  - Broadcasters too would be left with much redundant equipment, wasting more resources

Transition from FM to Digital Radio

- **In the RDS Forum we study the transition problems**
- **The listener is interested in content and service features**
  - No interest in whether FM/RDS or Digital Radio deliver these
- **A well conceived linkage concept may well support**
  - Migration to digital radio, specifically in cars
  - The RDS Forum 2010 started to study solutions
- **Then the natural transition to digital radio will be helped as well**

Forum needs more broadcast members

- **The RDS Forum wants to raise ...**

  awareness among broadcasters of the potential that FM radio with RDS still has to offer

- **RDS technology can offer some innovative features**

  The manufacturing industry will support these with new products

  They are even ahead of the broadcasters with their innovations

- **There must be sufficiently large markets to...**

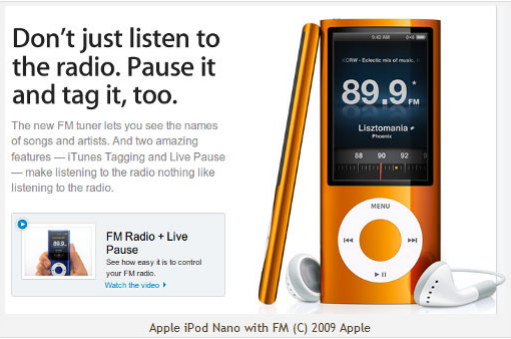
  make production of innovative radio receivers viable

  - **Therefore, for major broadcasters, there is a need to remain committed to fully using the dynamic RDS features**

RadioText Plus / RT+ examples – 1/2

Kenwood Electronics implemented RT+ on all of its US FM car radio models

RadioText Plus / RT+ examples – 2/2



Apple iPod Nano with FM (C) 2009 Apple

This 91.3 screen was captured in October 2009 on radio BAYERN 1 in Munich:

- Upper line shows normal RadioText scrolling through the display

- Lower two lines show
-RT+ tagged music info
> Music title on line 1
> Artist name on line 2

2009: Apple implemented RT+ in the iPod nano 5G and 2010 in the iPod nano 6G

RadioText Plus now in mobile phones

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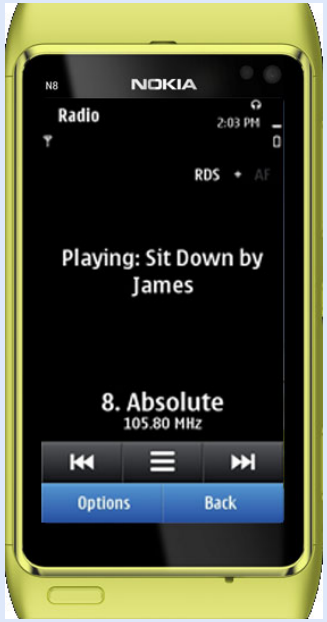
- **In four recent mobile phone models**
  - Nokia implemented RT+ with the new Symbian^3 phones
  - These are the new Nokia 2010 models: N8, E7, C7 and C6

NOKIA
Connecting People



These phones have all an FM/RDS radio with RT/RT+ for

- **Music titles** (to purchase the song)
- **Artist names**
- **Radio programme web address** (stored to non-volatile memory)
  - That web address is then always available on your phone !!!

Broadcasters – This brings a real digital breeze to your listeners of your so popular analogue FM radio with RDS

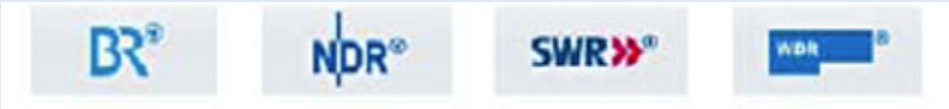
- If you go for that RDS feature, you can only win-win-win

- Watch also this video to learn what the N8 does

http://www.youtube.com/watch?v=zGuY3tMvbC4

RT+ implementation increases

- **In 2008 – Clear Channel Radio / USA implemented RT+ on 400 stations**
  - **Here is their press release**
  - **http://www.clearchannel.com/Radio/PressRelease.aspx?PressReleaseID=2276**
  - **Since then over 200 commercial radio stations followed**
  - **They belong to the Greater Media, Radio One and Bonneville broadcast groups**
- **Several German public broadcasters started RT+ in 2006**
  - Now - in 2011 - there are already 12 FM programmes
    - The number is likely to increase



    - In addition, in Germany, some RDS features are also used on DVB-S radio
      - To achieve this the RDS Forum upgraded the UECP to the new version 7
      - The UECP can be downloaded from this web site / Go to 'Publications' and there it is
- **2009: in London the commercial station Absolute Radio started RT+ music tagging**

RDS is an incredible success story

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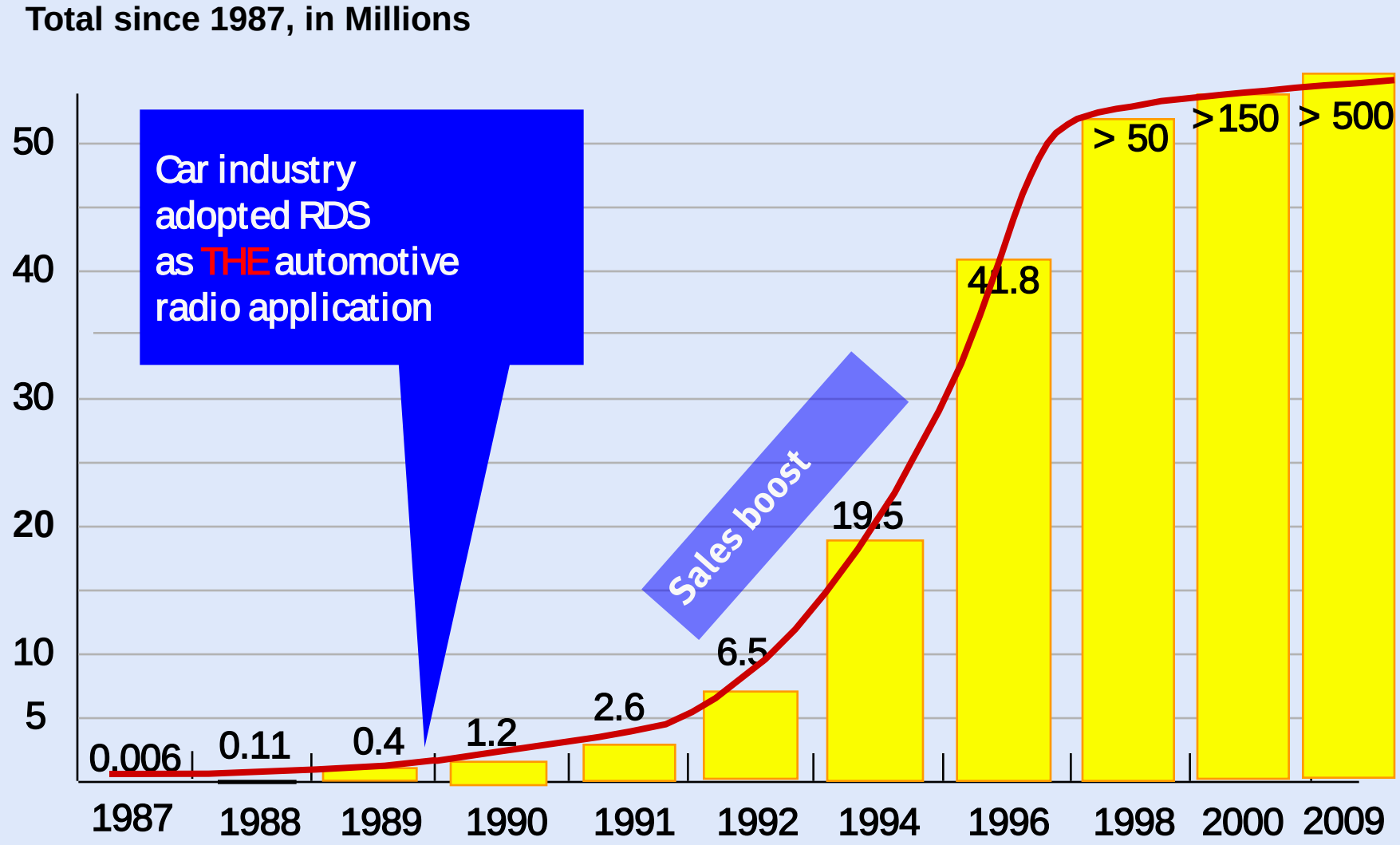
- *Many mobile phones now include an RDS radio*
- *Since 1987 there are now at least one billion RDS radios worldwide*
- *Over 500 million RDS radios exist in Europe*
- *In 2009, one chip manufacturer * alone reached over 500 million RDS radio chips sold*
- *In 2010, the annual growth rate went beyond 600 million RDS radio receivers worldwide*

* Source: RDS Forum Member Silicon Labs, USA

Time taken to establish the RDS market



Analysis supplied by RDS Forum Member Frits de Jong, TomTom

The price of FM/RDS chips is very low

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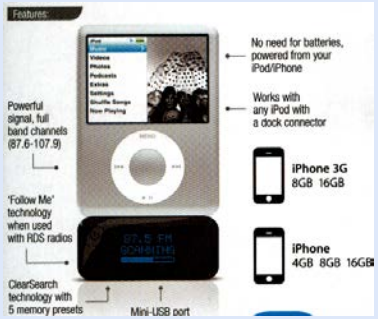
Therefore many handheld devices have implemented RDS technology

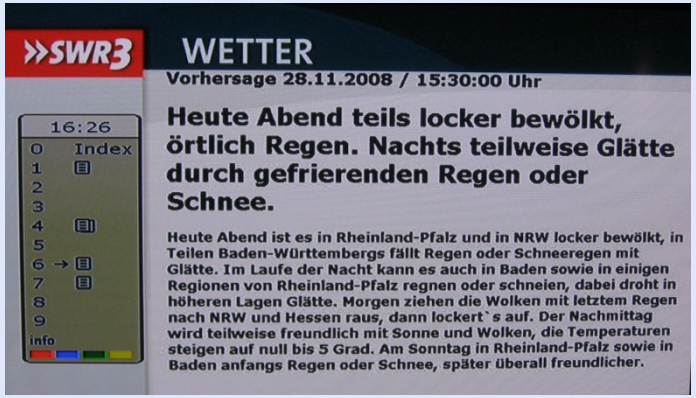


Links with other radio technologies

Some new or earlier RDS features are now used by

- **DAB which has a new specification called Dynamic Label Plus**
  - this is derived from RT+
  - WorldDMB Forum was made aware of new RDS extended character set for eRT
- **DVB-S radio in Germany**
  - Several public broadcasters use RT and RT+
  - RDS-UECP (also updated in 2009) is used to implement **RaSS – Radio Screen Show**
- **RadioDNS**
  - Use for FM radio a unique radio programme id. derived from RDS
  - Link to programme related web pages delivered by the broadcaster

How RaSS is implemented on DVB-S by some German radio programmes



...even with radio receivers designed for the young generation - like this one

RDS and FM radio have still much to offer ! How? See next slide then!

Deliver multimedia content with RDS

- **The ideal multimedia content**
  - to show on a (mobile) FM radio connected to Internet
    - would be the home page of the radio programme
      - Example: www.br-online.de/br-klassik/

      - This web address can be captured and stored from RT with RT+
    - Thus the home page will automatically appear on the display
      - like on the radio shown on the previous page
  - The open source Symbian platform (release 3) supports this feature since February 2010
- **FM radio is now becoming “digital” !!!**

Can we work together ?

- **Benefits to the broadcasters**
  - They can be updated on recent RDS developments
  - Can be encouraged to use more dynamic RDS features
  - In Central and Eastern Europe
    - These broadcasters were not initially involved in RDS development
    - An exchange of RDS knowledge can be very beneficial to them
    - They may introduce also RDS-TMC just now and could well take advantage of the know-how within the RDS Forum
  - FM radio can be made very attractive

    Notably with many enhancements offered by RDS and when fully used by well informed broadcasters

    You can well be part of them – just join the RDS Forum

Broadcasters be aware -

- **RDS is well established – <u>not</u> old technology**
  - The RDS Forum has updated the specifications (RDS standard and the UECP) to respond to present day requirements
  - FM/RDS radios are nowadays available to all listeners
    - **Everyone has at least one FM/RDS radio**
  - In cars, FM/RDS is still the pre-dominant receiver technology
  - In the USA, FM broadcasting and RDS are seen very positively –
    - on top of this: HD Radio is being deployed now offering digital radio
  - FM will be here at least for another 15 years – thus it is important to use the new RDS features as well !!!
  - FM/RDS is the most successful radio technology now
    - In Europe, will DAB/DMB ever succeed to be a suitable replacement ?

In March 2009 – RDS turned 25 !

NAB NATIONAL ASSOCIATION OF BROADCASTERS

Radio TechCheck

The Weekly NAB Newsletter for Radio Broadcast Engineers

April 13, 2009

Radio Data System (RDS) Turns 25

Without a doubt the most successful FM subcarrier-based data broadcasting technology has been the Radio Data System (RDS). RDS has undergone a renaissance of sorts in the U.S. in the last few years, and is now widely used for transmission of program associated data (PAD) such as song title and artist, as well as for traffic information to navigation devices by the Broadcast Traffic Consortium (BTC) and Total Traffic Network (TTN). An informal NAB poll conducted late last year suggested that in some major markets 80% or more of stations are transmitting RDS.

Engineers:
How to be Ready for HD and 3Gb/s

- **In March 2009, RDS turned 25! Not the RDS Forum which started only in 1993, but the RDS specification, published by the EBU in March 1984.**

Broadcasters be aware -

- **To offer the listening public the best of RDS**

  Broadcasters need to be reminded of the optimum way of operating the basic service and be made fully aware of all the available options

Economic arguments

- **With the current economic downturn ..**

  all broadcasters will be suffering cash shortages

- **The implementation of these latest RDS features**

  can be a cheap way to enhance the service for the listeners without massive capital investment

- **Tagging music with ‘title’ and ‘artist names’ is**

  easy to implement for many broadcasters today as such Metadata are already attached to the audio recordings

Please join the RDS Forum now ...

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- **We will be happy to work with you and give you the best professional advice to make the best use of RDS in your FM broadcasts**

- **Your listeners will appreciate this**

- **The RDS Forum annual fee is relatively low**
  - It serves to finance the permanent Office and the infrastructure used to exchange experience
  - If we convinced you – contact us please

    dkopitz@compuserve.com

    johnny@johnnybeerling.com

RDS development status today

- RDS specification first published by EBU in 1984
- First RDS CENELEC standard published in 1990
- CENELEC RDS standard updated in 1992 and 1998
- First RBDS US standard published in 1993, updated in 2005
- First RDS IEC standard published in 2000, updated in 2009
- RDS specification – 25th anniversary in 2009

- Total number of FM radio / RDS decoder ICs annual sales:
  - Over 1 billion chips now per year

Thank you

for your attention

and please tell other broadcast colleagues

that they are welcome to join our Forum

The next annual RDS Forum meeting will be held in Glion / Montreux on 11 & 12 June 2012
Guests are welcome for a Guest conference fee of 800 Swiss Francs or ~ 650 EUR