
Digital Radio Update

HD Radio™ & DRM

Hal Kneller

Regional Sales Manager – Europe, Russia & Southern Africa



Making Digital Radio **Work.**

Agenda

HD Radio™ Technology:

- Stations are adopting the power increase
- FCC may announce asymmetrical @ NAB
- More automotive adoption & receivers
- Artist Experience



DRM (Digital Radio Mondiale)

- Nautel re-elected to steering & Exec Boards @ GA
- DRM+ receives ITU-R completing the standard
- Vatican Radio completes DRM+ Trial
- Numerous other DRM+ trials w/Nautel



HD Radio Update

Over 150 FM stations have increased HD Power

- Many to intermediate levels due to limitations (tx?)
- A few have gone to -10 dBc
- Some have utilized asymmetrical power (experimental)

FCC May use NAB to announce Asymmetric Power

- Nautel has been very active in promoting & developing this (HD PowerBoost™)
- Nautel filed 2 sets of comments with FCC in December
- WAMU (in DC) was first station
 - Uses NV40HD



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HD Radio Update

More Automotive OEMs coming on line

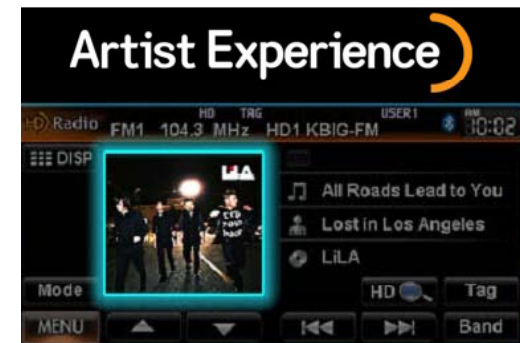
- 27 Car companies offer HD Radio receivers
- 138 total models offer HD Radio receivers
- 63 as standard (these numbers keeps increasing)

Receivers now offering enhanced features

- Artist Experience (logos, graphics, etc)
- Integrated navigation displays w/traffic updates
- HD Radio Smartphone prototype (NAB Fastroad)



 Digital Radio



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HD Radio Update

By the numbers

- 2164 Stations have converted
- 1117 HD2
- 256 HD3
- 16 HD4
- More than 7 million HD Radio receivers in the US
- Mexico starting major rollout as we speak



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DRM Update

Nautel re-elected to SB & EC 2 year term

- GA in UK in March, update to strategic plan
- DRM+ receives ITU-R as system “G” BS.1114
- This completes the standard (540 kHz – 230 MHz)
- New User Guide coming soon (updates/add DRM+)
- India MW rollout pacing upwards, Russia pending
- Big show of receivers @ IBC



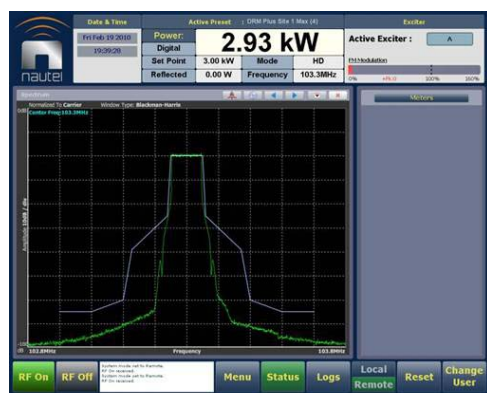
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DRM Update

Nautel equipped numerous DRM+ trials

- Brazil (NVE low power, NV10 high power)
- Sri Lanka (NVE low power)
- India (VS1/VS-DRM low power)
- Scotland (NV5 high power)
- Vatican City (VS1/VS-DRM low power)
- South Korea (NV3.5 high power)



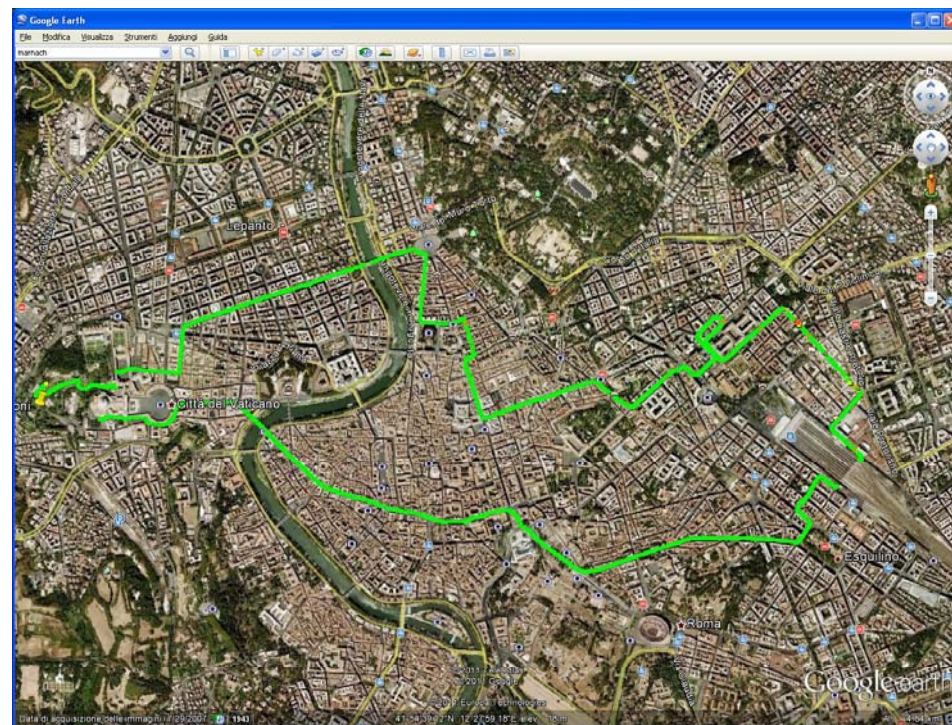
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DRM Update

Vatican City Trial (Powered by VS1/VS-DRM)

- Rome is a “challenging” market with dozens of pirates
- Hilly Terrain
- Significant multipath
- Scattered tx sites
- Receiver overload
- Full report pending



DRM Update

Vatican City Trial (Powered by VS1/VS-DRM)

Ing. Paolo Lazzarini - Radio Vaticana Direzione Tecnica
In email to me on 16 March states:

“...so I believe that results are better than expected”



Digital Radio Summary

- HD Radio continues to roll out in US, Mexico
 - Technology advances coming (asymmetrical etc.)
 - More receivers than ever
 - New consumer features are here
- DRM Completes the standard with ITU-R
 - Numerous successful trials on different continents
 - DRM Receiver situation has improved
 - Vatican Radio trial shows DRM can work well in a rough environment
 - India
 - ***Come to our event!***



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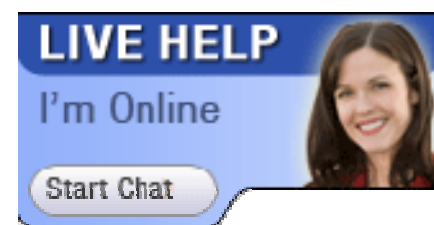


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Thank You



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