Digital radio in the car
The best driver experience

Mobile reception guidelines for Italy

November 2018

WorldDAB General Assembly

Berlin

Hanns Wolter, DAB Italia s.c.p.a.

The Status Quo

- Every day in Italy 79,3% of the population listens to radio
- According to the latest data 67,7% of the Italians listen to radio in their cars
- The percentage of cars with DAB+ is growing strongly











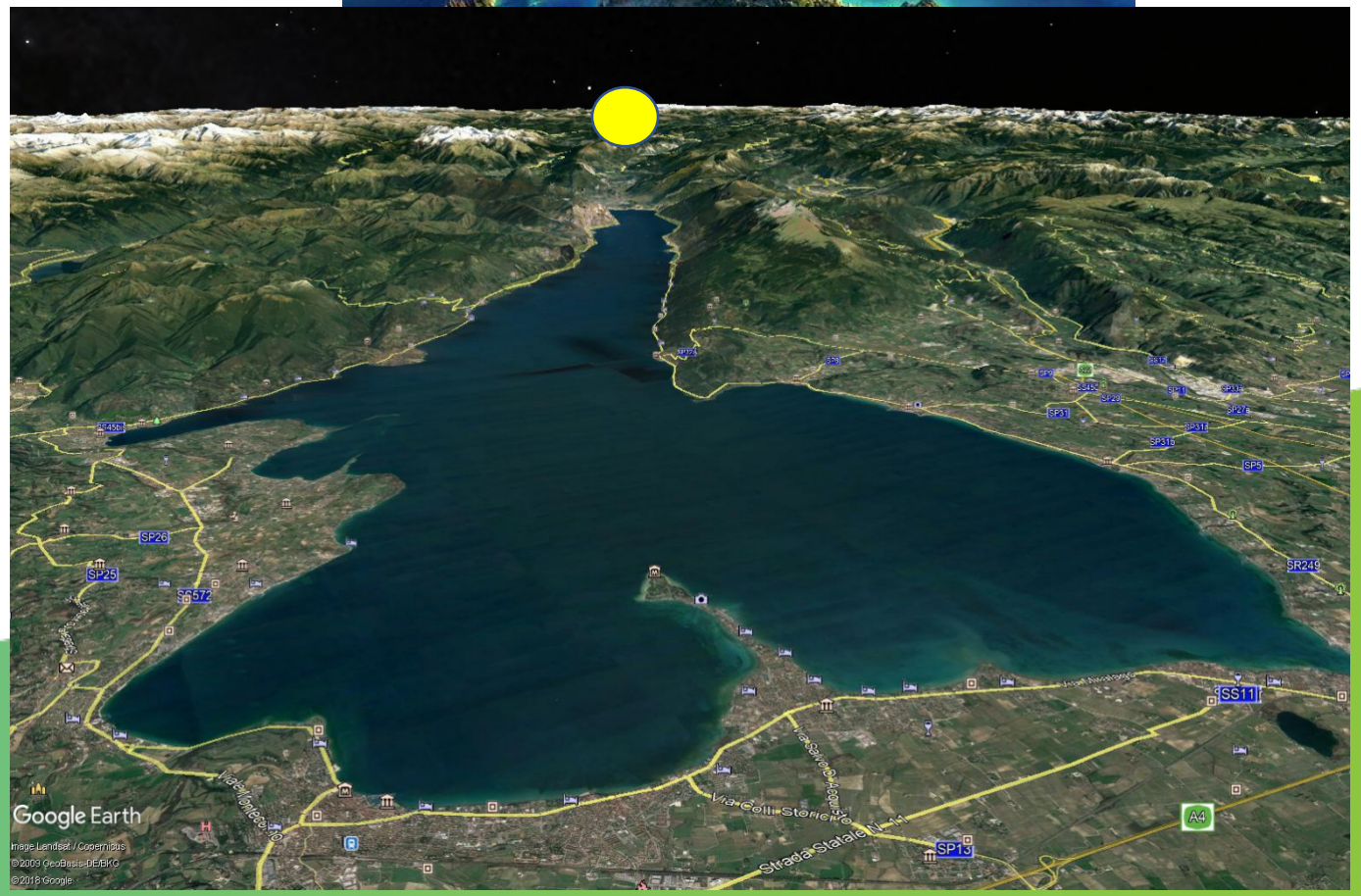





dab+ digitalradio

The Status Quo

- Building national SFN networks can be easy, if you have a flat environment
- …but Italy is far from flat!
- Therefore networks cannot always guarantee very high field strengths



The Status Quo

- The three national operators DAB Italia, Rai and EuroDAB want to support users and car manufacturers in creating a great listening experience
- But…it has emerged that OEM DAB+ car radios have great differences in reception performance
  - Some are good
  - Others not really…
  - 10dB difference!

Minimum required field strength for automotive receivers

- This document is based on existing experiences and work done over the last years by all operators
- It is an indication on the minimum field strength which shall be provided by operators in order to allow for mobile reception by automobiles
- Also, it is expected that automotive receivers perform correctly at this field strength

DAB ITALIA s.c.p.a.

eurodab ITALIA

Rai Centro Ricerche Innovazione Tecnologica e Sperimentazione

Digital radio DAB+: Minimum required field strength for automotive receivers

Abstract:

In Italy the percentage of automobiles fitted with DAB+ is constantly growing and regulation imposes only digital capable radio receivers, both domestic and automotive, to be sold starting from January 1st 2020.
In this context of increasingly fast development of DAB + digital radio in Italy, mobile car reception is pivotal for a good user experience.
De facto, past tests and experiences have shown that the implementation of DAB+ reception systems (antenna+receiver) in the automotive sector has not always been able to guarantee a satisfying user experience even in areas where the field strength is equal or above the minimum planning parameters.
Therefore, in order to guarantee good operating conditions and reference for both planners and manufacturers this document determines the minimum field strength at which automotive receptions systems are expected to work correctly.
Considering all technical aspects and technological developments the document indicates that the minimum field strength at 1.5m height at which a reception system must correctly work in a real usage environment is 43 dBµV/m.
This value can be considered as a refence for mobile reception planning for DAB+ networks in Italy.
The network operators who have agreed this document are avail[illegible] developing solutions and in testing receptions systems.

dab+ digitalradio

Minimum required field strength for automotive receivers

- Considering all technical aspects and technological developments the document indicates that the minimum field strength at 1.5m height at which a reception system must correctly work in a real usage environment is 43 dBµV/m.
- This value can be considered as a refence for mobile reception planning for DAB+ networks in Italy.
- The network operators who have agreed this document are available to support the industry in developing solutions and in testing receptions systems.

TECH 3391

GUIDELINES FOR DAB NETWORK PLANNING

dab+ digitalradio

Digital radio in the car
The best driver experience

Thank you!

November 2018

WorldDAB General Assembly

Berlin

Hanns Wolter, DAB Italia s.c.p.a.