European Standards for RDS-TMC

Standards Background

The EC funded FORCE/ECORTIS Projects and the EC-funded EBU EPISODE Project have been working for the last three years to complete the RDS-TMC standardization, in collaboration with the RDS Forum and CEN TC 278 Working Group 4. This was necessary to provide a comprehensive platform for a European wide implementation of RDS-TMC. This is sometimes called the ALERT service and has become the subject of the so-called ALERT Memorandum of Understanding (MoU).

Since any ALERT service uses the TMC feature of RDS, conveyed by an RDS sub-carrier added to the baseband multiplex signal of a VHF/FM Band II transmission, it is usual to consider the RDS standard, CENELEC EN 50067:1998, as the *core* specification. Additionally, a series of CEN pre-standards (including a considerable amount of European industry IPR) are then used to fully specify RDS-TMC functionality which comprises the message protocol, event messages, location referencing, and the newer extension named ALERT-Plus, specified for Status messages.

Specification of the RDS system - *the "core" RDS standard* [CENELEC EN 50067:1998]

The RDS standard is a truly "open" standard, originally developed by the EBU in the early 1980s, then published as a European standard in 1992. It has recently been updated as a result of successful work by the RDS Forum and CENELEC TC 207.

The standard is now available (from CENELEC and the EBU) published as CENELEC EN 50067:1998 and contains several new features including the ODA feature, originally suggested for RDS-TMC purposes; additionally it includes specific references and "hooks" to the RDS-TMC standards in the CEN ENV 12313 series. Furthermore RDS Guidelines are being prepared by the RDS Forum and will be published shortly. Comprehensive information can be obtained from the RDS Forum web site at URL: **www.rds.org.uk/**.

Coding Protocol for RDS-TMC - *the "ALERT-C protocol"* [CEN ENV12313-1]

The coding protocol for RDS-TMC is defined in CEN ENV 12313-1:1998 and is now available from the CEN Central Secretariat. Therefore this should be taken as the main standard describing, the so-called, ALERT-C protocol. This standard contains both the protocol and the RDS-TMC related coding which now uses type 1A, 3A and 8A groups (ODA compliant format). It is to be hoped that the FORCE/ECORTIS Projects will publish Guidelines for RDS-TMC shortly.

RDS-TMC standardized by CENELEC and CEN

EN 50067:1998 - the RDS standard upgraded for RDS-TMC

ENV 12313 series for TMC - only pre-standards completed

ENV 12313 series contain IPR with licencing consequences

ALERT services covered by MoU

Event and Information codes for TMC - *the "Event List"* (CEN ENV12313-2)

The Event and Information codes for RDS-TMC, required by the ALERT-C protocol are specified in the CEN ENV12313-2 standard and is now available from the CEN Central Secretariat. This standard uses the so called CEN-English to define a traffic message, eg "stationary traffic for 1km" which is code 102. The meaning of this code has to be defined for *each* of the European languages and this work was completed in spring 1998. In the example used above, it is interesting to note that the official UK "translation" of code 102 is "stationary traffic for ½ mile".

Location referencing rules for RDS-TMC (CEN ENV12313-3)

CEN TC 278 SWG 7.3 has been responsible for drafting this standard which is now planned to become the third part of the ENV 12313 standards series, specifying and, in this case, detailing the Location referencing rules. These rules are required so that every TMC Service Provider uses common methodology in creating their location database, but it does not restrict their value-added aspects, allowing some to code more "finely" than others. In early drafts, some variation of interpretation resulted, and the FORCE/ECORTIS Projects established a subgroup "Interpretation of the Location referencing Rules" with the intention to write a "Location coding Handbook".

European Pre-standards, numbered in the ENV series

The CEN Internal Regulations state that a European Pre-standard may be established as a prospective standard for *provisional* application in technical fields where the innovation rate is high (e.g. Information Technology) or, when there is an urgent need for guidance and primarily where aspects of safety for persons and goods are *not* involved.

The lifetime of an ENV is first limited to three years. An extension of the ENV for another two years (only once) is possible. It can also be converted after formal vote into a European Standard in the EN series. As far as the ENV 12313 series of European Pre-standards for RDS-TMC is concerned, it is unclear at the time of writing, when the conversion from the Pre-standard ENV to the full standard EN will be made, for all three specifications mentioned.