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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS is a multi-part standard and will consist of the following parts:

- Part 1: "General network design".**
- Part 2: "Air Interface (AI)".
- Part 3: "Inter-working - Basic Operation", (DE/RES-06001-3).
- Part 4: "Gateways for Basic Services", (DE/RES-06001-4).
- Part 5: "Terminal equipment interface", (DE/RES-06001-5).
- Part 6: "Line connected stations", (DE/RES-06001-6).
- Part 7: "Security".
- Part 8: "Management services", (DE/RES-06001-8).
- Part 9: "Performance objectives", (DE/RES-06001-9).
- Part 10: "Supplementary Services (SS) Stage 1".
- Part 11: "Supplementary Services (SS) Stage 2", (DE/RES-06001-11).
- Part 12: "Supplementary Services (SS) Stage 3", (DE/RES-06001-12).
- Part 13: "SDL Model of the Air Interface", (DE/RES-06001-13).
- Part 14: "PICS Proforma", (DE/RES-06001-14).
- Part 15: "Inter-working - Extended Operations", (DE/RES-06001-15).
- Part 16: "Gateways for Supplementary Services", (DE/RES-06001-16).

Transposition dates

Date of adoption of this ETS:	12 January 1996
Date of latest announcement of this ETS (doa):	31 May 1996
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	30 November 1996
Date of withdrawal of any conflicting National Standard (dow):	30 November 1996

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1 Scope

This ETS defines the Trans-European Trunked Radio system (TETRA) supporting Voice plus Data (V+D). It specifies the air interface, the inter-working between TETRA systems and to other systems via gateways, the terminal equipment interface on the Mobile Station (MS), the connection of Line Stations (LSs) to the infrastructure, the security aspects in TETRA networks, the management services offered to the operator, the performance objectives, and the supplementary services that come in addition to the basic and tele-services.

This part of this ETS applies to the TETRA V+D radio air interface.

It establishes the TETRA general network design:

- it defines and specifies the circuit mode and packet mode reference points for the MS, LS and switching and management infrastructure;
- it defines and specifies a model of the air interface protocol stack where the different functions of layers and sublayers are listed based on ISO 8473 [13] and ISO 8208 [11] methodology;
- it defines and specifies the TETRA addressing and identities and their organisation in groups corresponding to the different functions;
- it defines and specifies the functions provided by the circuit mode teleservices used for speech and basic services used for data transfer;
- it defines and specifies the functions related to the management of the users' mobility across networks and inside a network including roaming and migration;
- it defines and specifies the functions related to the transport of short data messages as a service specific to TETRA;
- it defines and specifies the functions related to the support of connection oriented packet data service in TETRA;
- it defines and specifies the functions related to the support of connectionless packet data service in a way specific to TETRA;
- it defines and specifies the supplementary services that mainly extend the capabilities of the circuit mode basic and teleservices;
- in informative annexes, it illustrates the various possibilities of individual circuit mode call scenarios and provides guidance on priority concepts for packet data and circuit mode services and on the service quality.

NOTE: This part of this ETS may, by its nature as a general design statement, require updating when later parts of the ETS are completed (in order to avoid any non-alignment). If a discrepancy occurs between this part and any other part of this ETS, then the other part will take precedence. This part will be updated at a frequency consistent with maintaining the integrity of the ETS as a whole.

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] CCITT Recommendation E.163 (1988 Blue Book): "Numbering Plan for the International Telephone Service".
- [2] CCITT Recommendation E.164 (1988 Blue Book): "Numbering Plan for the ISDN Era".