



**E**UROPEAN  
**T**ELECOMMUNICATION  
**S**TANDARD

**FINAL DRAFT**  
pr **ETS 300 393-10**

April 1999

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Source: TETRA

Reference: DE/TETRA-04004-10

ICS: 33.020

**Key words:** TETRA, PDO, protocol, SDL

**Terrestrial Trunked Radio (TETRA);  
Packet Data Optimized (PDO);  
Part 10: SDL model of Air Interface (AI)**

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## Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Terrestrial Trunked Radio (TETRA) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

This ETS consists of 5 parts as follows:

Part 1: "General network design";

Part 2: "Air Interface (AI)";

Part 7: "Security";

**Part 10: "SDL model of the Air Interface (AI)";**

Part 11: "Protocol Implementation Conformance Statement (PICS) proforma specification".

<b>Proposed transposition dates</b>	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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## 1 Scope

This European Telecommunication Standard (ETS) defines the Specification and Description Language (SDL) model of the TETRA PDO Air Interface.

## 2 References

This ETS incorporates by dated and undated reference, provisions from other publications. These 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] ETS 300 393-2: "Terrestrial Trunked Radio (TETRA); Packet Data Optimized (PDO); Part 2: Air Interface (AI)".
- [2] ITU-T Recommendation Z.100 (1993): "CCITT specification and description language (SDL)".

## 3 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

CONP	Connection Oriented Network Protocol
MLE	Mobile Link Entity
MM	Mobility Management
MS	Mobile Station
PDO	Packet Data Optimized
PDU	Protocol Data Unit
SAP	Service Access Point
SCLNP	Specific ConnectionLess Network Protocol
SDL	Specification and Description Language
SP	Service Primitive
TETRA	TErrestrial Trunked RAdio

## 4 General

The Specification and Description Language (SDL) model defined in this ETS is the TETRA Packet Data Optimized (PDO) Mobile Station (MS). The model is based on the description given in ETS 300 393-2 [1]. Even though some base station functionality has been given in ETS 300 392-2 [1] this has not been defined in the SDL model. Specification of concurrent services for the TETRA protocol stack is not in the scope of this ETS. In case there are any conflicts between the SDL model and ETS 300 393-2 [1], the textual specification should be taken as the correct description instead of the SDL model.

Due to the fact that SDL is not suitable for bit exact data description, there is no data description given in this ETS. The names of the signals and the parameters are the same as in ETS 300 393-2 [1] where the use of SDL defined in ITU-T Recommendation Z.100 [2] has permitted it.

The SDL model in this ETS is created from the SDL validation model of TETRA PDO leaving out detailed descriptions that were necessary for validation purposes only. Generally only SDL blocks and processes of the TETRA MS validation model have been included. SDL procedures have been included in the model in case there is a non-trivial functionality in a procedure that is not obvious from the naming or use of the procedure.

Generally, each of the SDL protocol entities of the TETRA MS has been built of two main parts: the protocol part and the formatter part, converting PDUs to N - 1 Service Primitives (SP). The protocol part of the SDL models handles the main functionality of the entity. It contains the handling of SAPs above the protocol entity and PDU interface to the next lower protocol entity. The formatter part of the SDL models handles the conversion between the PDUs of the protocol entity and SPs of the SAPs of the next lower service interface.

Due to the number of pages in the SDL specification of the PDO MS, the actual SDL specification diagrams are attached to this ETS as electronic files. The Portable Document Format files that are referenced in this ETS (see note) are contained in archive 393a\_e1.ZIP which accompanies the present document.

- NOTE:
- *conp.pdf*: Connection Oriented Network Protocol (CONP) SDL model;
  - *sclnp.pdf*: Specific Connection Less Network Protocol (SCLNP) SDL model;
  - *mm.pdf*: Mobility Management (MM) SDL model;
  - *mle.pdf*: Mobile Link Entity (MLE) SDL model;
  - *layer2.pdf*: Layer 2 SDL model.

## History

Document history			
June 1998	Public Enquiry	PE 9845:	1998-06-17 to 1998-11-13
April 1999	Vote	V 9926:	1999-04-27 to 1999-06-25