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Digitalne izboljšane brezvrvične telekomunikacije (DECT) - Profil podatkovnih storitev (DSP) - Generična storitev podatkovne povezave (storitev tipa C, razred 2)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service (service type C, class 2)

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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).

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1 Scope

This European Telecommunication Standard (ETS) defines a profile for Digital Enhanced Cordless Telecommunications (DECT) systems conforming to ETS 300 175, Parts 1 to 9 [1] to [9]. It is part of a family of profiles which build upon and extend each other, aimed at the general connection of terminals supporting non-voice services to a fixed infra-structure, private and public.

This ETS specifies a Link Access Protocol (LAP) service suitable for non-transparent transfer of character-oriented or bit-oriented data streams and intended for use in private and public roaming applications. It builds upon the generic frame relay service offered by the Data Services Profile (DSP) base standard (Type A and Type B services) and adds full Data Link Control (DLC) functionality to the basic service. Annexes to this ETS contain interworking conventions to specific character orientated services.

This ETS defines the Type C Service, Mobility Class 2. The Type C service is fully compatible with both the Type A and Type B services defined in ETS 300 435 [11].

This ETS defines the additional requirements on the Physical Layer (PHL), Medium Access Control (MAC) layer, DLC layer and Network (NWK) layer of DECT. The standard also specifies Management Entity (ME) requirements and generic Interworking Conventions (IC) which ensure the efficient use of the DECT spectrum.

2 Normative references

This ETS incorporates, by dated or 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] ETS 300 175-1 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

[2] ETS 300 175-2 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical layer".

[3] ETS 300 175-3 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".

[4] ETS 300 175-4 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".

[5] ETS 300 175-5 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".

[6] ETS 300 175-6 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".

[7] ETS 300 175-7 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".

[8] ETS 300 175-8 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".

[9] ETS 300 175-9 (1996): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 9: Public Access Profile (PAP)".

[10] ETS 300 444: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".

[11] ETS 300 435: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Data Services Profile (DSP); Base standard including inter-Working to connectionless networks (service types A and B, Class 1)".

[12] CCITT Recommendation Q.921 (1988): "Digital subscriber signalling system no. 1 data link layer".

[13] CCITT Recommendation V.42: "Error-correcting procedures for DCEs using asynchronous-to-synchronous conversion".

[14] CCITT Recommendation V.24 (1988): "List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)".

[15] CCITT Recommendation V.25bis (1988): "Automatic calling and/or answering equipment on the general switched telephone network (GSTN) using the 100-series interchange circuits".

[16] CCITT Recommendation V.42bis (1990): "Data compression procedures for data circuit- terminating equipment (DCE) using error correcting procedures".

[17] ETR 043: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common interface; Services and facilities requirements specification".

[18] ETS 300 476-2: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Data Link Control (DLC) layer - Portable radio Termination (PT)".

[19] ETS 300 476-3: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 3: Medium Access Control (MAC) layer - Portable radio Termination (PT)".

[20] ETS 300 476-4: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 4: Network (NWK) layer - Fixed radio Termination (FT)".

3 Definitions and abbreviations

3.1 Definitions

For the purpose of this ETS, the following definitions apply:

mobility class 1: Local area applications, for which terminals are pre-registered off-air with one or more specific Fixed Parts (FPs), and establishment of service and user parameters is therefore implicit, according to a profile-defined list.

mobility class 2: Private and public roaming applications for which terminals may move between FPs within a given domain and for which association of service parameters is explicit at the time of service request.

multiframe: A repeating sequence of 16 successive Time Division Multiple Access (TDMA) frames, that allows low rate or sporadic information to be multiplexed (e.g. basic system information or paging).

service type A: Low speed frame relay, with a net sustainable throughput of up to 24 kbits/s, optimized for bursty data, low power consumption and low complexity applications such as hand-portable equipment.

service type B: High performance frame relay, with a net sustainable throughput of up to 552 kbits/s, optimized for high speed and low latency with bursty data. Equipment implementation the Type B profile inter-operates with Type A equipment.

service type C: Non-transparent connection of data streams requiring Link Access Protocol (LAP) services, optimized for high reliability and low additional complexity. This builds upon the services offered by the type A or B profiles.

TDMA frame: A time-division multiplex of 10 ms duration, containing 24 successive full slots. A TDMA frame starts with the first bit period of full slot 0 and ends with the last bit period of full slot 23.

3.2 Abbreviations

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

ACK	Acknowledgement
AMCI	Advanced MAC Connection Identifier
BPAD	Bit oriented Packet Assembler/Disassembler
C	higher layer control Channel (see CS and CF)
CC	Call Control. A NWK layer functional grouping
CF	higher layer signalling Channel (Fast)
CISS	Call Independent Supplementary Services
CLMS	Connectionless Message Services
COMS	Connection Oriented Message Services
C-plane	Control plane
CS	higher layer signalling Channel (Slow)
DCE	Data Circuit terminating Equipment
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control
DTE	Data Terminal Equipment
FP	Fixed Part
FT	Fixed radio Termination
GAP	Generic Access Profile
GSM	Global System for Mobile communication
I	higher layer Information channel (see IP)
IP	higher layer Information channel (Protected)
IPUI	International Portable User Identity
ISDN	Integrated Services Digital Network
IWF	Interworking Functions
IWU	Interworking Unit
LAP-B	Link Access Procedure (Balanced)