SLOVENSKI STANDARD

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Digitalne izboljšane brezvrvične komunikacije (DECT) - Profil podatkovnih storitev (DSP) - Generična storitev: blokovno posredovanje z mobilnostjo (storitve tipov A in B, razred 2)

Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic frame relay service with mobility (service types A and B, class 2)

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Page 2
ETS 300 701: October 1996

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Contents

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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).

Transposition dates	
Date of adoption of this ETS:	4 October 1996
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1 Scope

This European Telecommunication Standard (ETS) defines a profile for Digital European Cordless Telecommunications (DECT) systems conforming to ETS 300 175 parts 1 to 9 [1] to [9]. It is part of a family of profiles that 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 defines the types A and B services, mobility class 2 as referred to in ETR 185 [14].

This ETS supports the type A and B services using the frame relay service defined fully in ETS 300 435 [12]. Type A is optimized for low power and simplicity, while type B is optimized for high speed and throughput. Both are fully compatible and can interwork with each other.

This ETS is intended for use in roaming applications and so specifies mobility class 2. It therefore specifies the use of the network layer Call Control (CC) and Mobility Management (MM) entities, and the Data Link Control (DLC) layer LAPC and Lc entities.

This ETS integrates the frame relay service with a fully functional Control plane (C-plane). It therefore supports interworking with all connectionless networks supported by the type A and B mobility class 1 services while removing the restrictions of closed user group operation. It extends, without modifying, the interworking conventions of the type A and B mobility class 1 services.

This ETS defines the specific requirements on the Physical (PHL), Medium Access Control (MAC), DLC and Network (NWK) layers of DECT. This ETS also specifies Management Entity (ME) requirements and generic Interworking conventions 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: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

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

[3]   ETS 300 175-3: "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: "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: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".

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

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

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

[9]   ETS 300 175-9: "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]   ISO 8802: "Information technology -- Telecommunications and information exchange between systems -- Local and metropolitan area networks -- Specific requirements".

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

[13]   ETS 300 651: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Generic data link service; Service type C, class 2".

[14]   ETR 185: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Data Services Profile (DSP); Profile overview".

[15]   RFC 791 (September 1981): "Internet Protocol".

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3   Definitions and abbreviations

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3.1   Definitions

For the purposes 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 burst 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 burst data. Equipment implementation the type B profile shall inter-operate 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 purposes of this ETS, the following abbreviations apply:

CC   Call Control
C-plane   Control plane
DECT   Digital Enhanced Cordless Telecommunications
DLC   Data Link Control. Layer 2b of the DECT protocol stack
DSP   Data Services Profile
FP   Fixed Part
IP   Internet Protocol
IPUI   International Portable User Identity
IWF   Interworking Functions
IWU   Interworking Unit
LAN   Local Area Network
LAP   Link Access Procedure
LAPC   A DLC layer C-plane entity
LLME   Lower Layer Management Entity
LSB   Least Significant Bit
MAC   Medium Access Control. Layer 2a of the DECT protocol stack
ME   Management Entity
MM   Mobility Management
MSB   Most Significant Bit
NWK   Network
PARK   Portable Access Rights Key
PHL   Physical (layer)
SDU   Service Data Unit
TAF   Terminal Adaptation Functions
TDMA   Time Division Multiple Access
U-plane   User plane