

## COMMISSION DECISION

of 11 December 2006

**establishing a list of standards and/or specifications for electronic communications networks, services and associated facilities and services and replacing all previous versions***(notified under document number C(2006) 6364)***(Text with EEA relevance)**

(2007/176/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

HAS ADOPTED THIS DECISION:

Having regard to the Treaty establishing the European Community,

*Article 1*Having regard to Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive) <sup>(1)</sup> and in particular Article 17(1) thereof,**List of Standards**

1. The List of Standards and/or specifications for electronic communications networks, services and associated facilities and services is established.

Having consulted the Communications Committee,

It shall replace the previous versions of the List of Standards published on 31 December 2002 and 23 March 2006.

Whereas:

This publication is in addition to the list of standards for the minimum set of leased lines published in the *Official Journal of the European Union* on 25 July 2003.

(1) An interim 'List of standards and/or specifications for encouraging the harmonised provision of electronic communications networks, electronic communications services and associated facilities and services' has been published in the *Official Journal of the European Communities* <sup>(2)</sup>

2. The List of Standards, as set out in the Annex, shall be published in the *Official Journal of the European Union*.

(2) The interim list of standards referred to both the regulatory framework under Council Directive 90/387/EEC <sup>(3)</sup> and the regulatory framework in force, under Directive 2002/21/EC. Additions and modifications to that list were made in March 2006 <sup>(4)</sup>.

*Article 2***Addressees**

This Decision is addressed to the Member States.

(3) It is therefore necessary to move beyond the interim list and to draw up and publish a list of standards to replace the abovementioned publications.

Done at Brussels, 11 December 2006.

(4) The revised list of standards has been drawn up in cooperation with experts from Member States and the European Telecommunication Standards Institute (ETSI),

*For the Commission*

Viviane REDING

*Member of the Commission*

<sup>(1)</sup> OJ L 108, 24.4.2002, p. 33.

<sup>(2)</sup> OJ C 331, 31.12.2002, p. 32.

<sup>(3)</sup> OJ L 192, 24.7.1990, p. 1. Directive repealed by Directive 2002/21/EC.

<sup>(4)</sup> OJ C 71, 23.3.2006, p. 9.

## ANNEX

**List of standards and/or specifications for electronic communications networks, services and associated facilities and services**

## EXPLANATORY NOTE CONCERNING THIS ISSUE OF THE LIST OF STANDARDS AND/OR SPECIFICATIONS FOR ELECTRONIC COMMUNICATIONS NETWORKS, SERVICES AND ASSOCIATED FACILITIES AND SERVICES

In accordance with Article 17(1) of the Framework Directive (2002/21/EC) the Commission draws up and publishes in the *Official Journal of the European Communities* a list of standards and/or specifications which serve as a basis for encouraging the harmonised provision of electronic communications networks, electronic communications services and associated facilities and services, to ensure interoperability of services and to improve freedom of choice for users.

This publication replaces the former interim List of Standards (2002/C 331/04) which referred to both the 'old' regulatory framework (i.e. Article 5 of Directive 90/387/EEC as amended by Directive 97/51/EC) and the current regulatory framework (i.e. Article 17 of the Framework Directive 2002/21/EC). This publication also replaces the 'interactive digital television' amendment to the List of Standards (2006/C 71/04) of 23 March 2006 <sup>(1)</sup>. The minimum set of leased lines with harmonised characteristics and associated standards referred to in Article 18 of Directive 2002/22/EC (Universal Service Directive), published in Commission Decision (2003/548/EC) of 24 July 2003 <sup>(2)</sup> is not affected by publication of this List of Standards.

In accordance with Art 17(2) of the Framework Directive, in the absence of standards and/or specifications in this list, Member States must encourage the implementation of standards and/or specifications adopted by European standards organisations and, in the absence of such standards and/or specifications, encourage the implementation of international standards or recommendations adopted by the International Telecommunications Union (ITU), the International Organisation for Standardisation (ISO) or the International Electro technical Commission (IEC).

The present publication is a selective list of standards and/or specifications in the areas concerned. Compared to the interim list of standards (2002/C 331/04), fewer standards and/or specifications have been included, recognising that Article 17(2) of the Framework Directive already requires Member States to encourage the use of standards or specifications adopted by the European Standardisation Organisations other than those published in the List of Standards.

This list of standards has been produced taking into account following criteria. These criteria were drawn up in cooperation with Member States in the Communications Committee and subsequently validated via a public consultation.

The revised list should include standards and/or specifications:

- For interconnection of, or access to, electronic communications networks and/or interoperability of electronic communications services, to the extent strictly necessary to ensure end-to-end user interoperability and freedom of choice for users;
- Whose implementation does not represent an undue expense as compared with the expected benefits (i.e. proportionality);
- and that fulfil one or both of the following criteria:
  - Standards and/or specifications for key interfaces representing the boundaries between systems owned and operated by different parties, including cross-border aspects, in particular standards and/or specifications solving severe and likely cases of non-interoperability or a lack of freedom of choice;
  - Standards and/or specifications which are relevant in today's marketplace, which are still evolving and have some future life span.

The revised list should not include:

- Standards and/or specifications for well established networks and services that are no longer subject to evolution;
- Standards and/or specifications for networks and services that are currently in an early phase of their development;

<sup>(1)</sup> OJ C 71, 23.3.2006, p. 9.

<sup>(2)</sup> OJ L 186, 25.7.2003, p. 43.

- By implication of paragraph (1)(c) standards and/or specifications where achieving interoperability and freedom of choice can be left to the market because it will be secured through consumer demand or industry interest.

Notwithstanding the criteria in (1) and (2) above, special attention should be given to:

- Standards and/or specifications currently in use for regulation at national or European level, where the impact of their elimination should be first assessed.
- Standards and/or specifications that are needed to provide specific public interest obligations, according to national or Community law, that operators do not have a commercial incentive to implement.

## PREFACE

### 1. General

The standards and/or specifications listed hereafter constitute the 'List of Standards and/or specifications' referred to in Art.1 of the Commission Decision C(2006)6364 of 11/XII/2006.

Pursuant to Article 17(1) of the Framework Directive (2002/21/EC) the Commission draws up and publishes in the *Official Journal of the European Communities* a list of standards and/or specifications to serve as a basis for encouraging the harmonised provision of electronic communications networks, electronic communications services and associated facilities and services.

If the standards and/or specifications referred to in the paragraph above have not been adequately implemented so that interoperability of services in one or more Member States cannot be ensured, the implementation of such standards and/or specifications may be made compulsory under the procedure laid down in paragraph 4 of Article 17 of the Framework Directive.

The List of Standards will be revised on a regular basis to take account of requirements resulting from new technologies and market changes. Interested parties are encouraged to comment on this issue.

The Communications Committee<sup>(?)</sup> has been consulted insofar as the list relates to Article 17 of the Framework Directive.

Standards agreed under the R&TTE Directive (1999/5/EC) and published in the Official Journal of the European Union are outside the scope of this document.

### 2. Structure of the list of standards

- Chapter I: Compulsory standards and/or specifications
- Chapter II: Transparent transmission capacity
- Chapter III: Publicly offered user interfaces.
- Chapter IV: Interconnection and access
- Chapter V: Services and features
- Chapter VI: Numbering and addressing
- Chapter VII: Quality of Service
- Chapter VIII: Broadcasting Services

### 3. Status of the standards and/or specifications in the list

The status of standards and/or specifications is different for the standards and/or specifications in Chapter I and other chapters of the document.

Standards and/or specifications listed in Chapter I are compulsory to use. Standards and/or specifications can be made compulsory by following the procedure set out in Article 17(4) of the Framework Directive. According to Article 17(4) of the Framework Directive, 'where the Commission intends to make the implementation of certain standards and/or specifications compulsory, it shall publish a notice in the Official Journal of the European Communities and invite public comment by all parties concerned'. The Commission acting in accordance with the procedure referred to in Article 22(3) of the Framework Directive, shall make implementation of the relevant standards and/or specifications compulsory by making reference to them as compulsory standards and/or specifications in the List of Standards published in the Official Journal of the European Communities.

The use of standards and/or specifications listed in Chapters II to VIII is encouraged but there is no legal obligation to implement them. According to Article 17(2) of the Framework Directive, 'Member States shall encourage the use of the standards and/or specifications referred to (. . .) for the provision of services, technical interfaces and/or network functions, to the extent strictly necessary to ensure interoperability of services and to improve freedom of choice for users'. In this context, the list of recommended standards and/or specifications should be seen as candidates to become compulsory standards and/or specifications as soon as the authorities detect effects of market distortion, associated to the insufficient respect of recommended standards and/or specifications.

In accordance with Article 17 of the Framework Directive, the purpose of this list is 'to serve as a basis for encouraging the harmonised provision of electronic communications networks, electronic communications services and associated facilities and services' (first paragraph), 'to ensure interoperability of services and to improve freedom of choice for users.' (second paragraph). This should be kept in mind when implementing standards and/or specifications which contain alternatives or optional clauses.

According to Article 17(5) and (6) of the Framework Directive, 'where the Commission considers that standards and/or specifications (. . .) no longer contribute to the provision of harmonised electronic communications services, or that they no longer meet consumers' needs or are hampering technological development, it shall (. . .) remove them from the list of standards and/or specifications (. . .)'.

<sup>(?)</sup> Established under Article 22 of the Framework Directive.

Apart from the standards and/or specifications mentioned in Chapter I of this list, other legislative measures within the regulatory framework for electronic communications networks and services may result in the use of certain standards and/or specifications being made compulsory for some undertakings.

#### 4. Standard and/or specification version

When no version number of the standard and/or specification is quoted, the version referred to in this list is the version valid at the time that the list is published.

Unless otherwise specified, when referring to a multipart standard and/or specification, all the parts and subparts of the standard and/or specification are relevant. In some cases, where clearly specified, only certain parts of a standard and/or specification are included in the list.

#### 5. Technical standards and/or specifications

Most of the standards and specifications mentioned in this list are ETSI deliverables under both the previous and current ETSI nomenclature. Definitions of the different type of ETSI deliverables can be found under 'ETSI Directives' available on: <http://portal.etsi.org/directives/>

The most relevant of these deliverables are:

Deliverables under the current ETSI nomenclature:

**Technical Specification, TS**, contains mainly normative provisions, approved by a Technical Body.

**Technical Report, TR**, contains mainly informative elements, approved by a Technical Body.

**Standard, ES**, contains mainly normative provisions, approved by ETSI Membership.

**Guide, EG**, contains mainly informative elements, approved by ETSI Membership.

**Special Report, SR**, contains information made publicly available for reference purposes.

**European Standard (telecommunications series), EN**, contains normative provisions, approved by the National Standards Organizations and/or National Delegations with implications concerning Standstill and National transposition.

**Harmonized Standard**, an EN (telecommunications series) the drafting of which has been entrusted to ETSI by a mandate from the European Commission under European Directives 98/34/EC and 98/48/EC and has been drafted taking into account the applicable essential requirements of the 'New Approach' Directive and whose reference has subsequently been announced in the Official Journal of the European Communities.

Deliverables under the previous ETSI nomenclature to which reference is made in the list:

**European Telecommunication Standard, ETS**, contains normative provisions approved by the National Standards Organizations and/or National Delegations with implications concerning standstill and national transposition.

**ETSI Technical Report, ETR**, contains informative elements approved by a Technical Committee.

#### 6. Addresses where documents referenced can be obtained

ETSI Publications Office

postal address:

ETSI  
650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex  
France  
tel. (33 -4) 92 94 42 41  
fax (33 -4) 93 95 81 33  
e-mail: [publications@etsi.fr](mailto:publications@etsi.fr)  
website:

[http://www.etsi.org/services\\_products/freestandard/home.htm](http://www.etsi.org/services_products/freestandard/home.htm)

Direct download of ETSI deliverables can be obtained on: <http://pda.etsi.org/pda/queryform.asp>

ITU Sales and Marketing Service (For ITU-T documents)

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fax (41 -22) 730 51 94  
e-mail: [sales@itu.int](mailto:sales@itu.int)  
website: <http://www.itu.int>

#### 7. References to EU legislation

The list refers to the following legislative documents which may be found at [http://europa.eu.int/information\\_society/topics/telecoms/regulatory/index\\_en.htm](http://europa.eu.int/information_society/topics/telecoms/regulatory/index_en.htm)

*Directive 2002/21/EC* (Framework Directive) of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services (OJ L 108, 24.4.2002, p. 33).

*Directive 2002/19/EC* (Access Directive) of the European Parliament and of the Council on access to, and interconnection of, electronic communications networks and services and associated facilities (OJ L 108, 24.4.2002, p. 7).

*Directive 2002/22/EC* (Universal Service Directive) of the European Parliament and of the Council on Universal service and users' rights relating to electronic communications networks and services (OJ L 108, 24.4.2002, p. 51).

*Directive 2002/58/EC* (Directive on privacy and electronic communications) of the European Parliament and of the Council on the processing of personal data and the protection of privacy in the electronic communications sector (OJ L 201, 31.7.2002, p. 27).

*Directive 2002/20/EC* (Authorisation Directive) of the European Parliament and of the Council on the authorisation of electronic communications networks and services (OJ L 108, 24.4.2002, p. 21).

*Recommendation 2000/417/EC* of the Commission on unbundled access to the local loop (OJ L 156, 29.6.2000, p. 44).

*Regulation EC/2887/2000* of the European Parliament and of the Council on unbundled access to the local loop (OJ L 336, 30.12.2000, p. 4).

*Commission Recommendation (2005/57/EC)* of 21 January 2005 on the provision of leased lines in the European Union (Part 1 — Major supply conditions for wholesale leased lines) (notified under document number C (2005) 103). (OJ L 24, 27.1.2005, p. 27)

*Commission Recommendation (2005/268/EC)* of 29 March 2005 on the provision of leased lines in the European Union — Part 2 — pricing aspects of wholesale leased lines part circuits (notified under document number C(2005) 951). (OJ L 083, 01.04.2005 p. 52)

*Commission Recommendation 2003/558/EC* of 25 July 2003 on the processing of caller location information in electronic communication networks for the purpose of location-enhanced emergency call services. (OJ L 189, 29.7.2003, p. 49)

*Directive 1999/5/EC* of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. (R&TTE Directive) (OJ L 91, 7.4.1999, p. 10)

*Council Decision 2001/792/EC* of 23 October 2001 establishing a Community mechanism to facilitate reinforced cooperation in civil protection assistance interventions. (OJ L 297, 15.11.2001, p. 7)

*Decision No 676/2002/EC* of the European Parliament and of the Council of 7 March 2002 on a regulatory framework for radio spectrum policy in the European Community (Radio Spectrum Decision). (OJ L 108, 24.4.2002, p. 1)

*Directive 98/34/EC* of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations and of rules on information society services, as modified by Directive 98/48/EC. (OJ L 204, 21.7.1998 p. 37)

COM(2004)541 'Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on interoperability of digital interactive television services' of 30 July 2004.

COM(2006)37 'Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions on reviewing the interoperability of digital interactive television services' of 2 February 2006, pursuant to communication COM(2004)541 of 30 July 2004.

## 8. Definitions and abbreviations

### Definitions

The definitions in the relevant EU legislation listed in section 7 apply.

### Abbreviations

For the purposes of the present document, the following abbreviations apply:

3GPP	3 <sup>rd</sup> Generation Partnership Project
API	Application Program Interface
DAB	Digital Audio Broadcasting
DVB	Digital Video Broadcasting
ETSI	European Telecommunications Standards Institute
GSM	Global System for Mobile communications
ISDN	Integrated Service Digital Network
IP	Internet Protocol
IPAT	Internet Protocol Access Terminal
ITU	International Telecommunications Union
MHEG	Multimedia and Hypermedia Experts Group
MHP	Multimedia Home Platform
NGN	Next Generation Networks
NTP	Network Termination Point
OSA	Opens Service Access
PoI	Point of Interconnection
PSTN	Public Switched Telephone Network
QoS	Quality of Service
ULL	Unbundled Local Loop
UMTS	Universal Mobile Telecommunications System
WML	Wireless Mark-up Language
WTVML	Wireless TeleVision Mark-up Language, also designated WTML

## LIST OF STANDARDS AND/OR SPECIFICATIONS FOR ELECTRONIC NETWORKS, SERVICES AND ASSOCIATED

**Facilities and services**

The purpose of publishing standards and/or specifications in the list is to encourage the provision of harmonised electronic communications services to the benefit of users throughout the Community, to ensure interoperability and to support the implementation of the regulatory framework. The main guiding principle to include standards and/or specifications is to focus on standards and/or specifications related to the provisions in the Directives. The criteria used to include standards and/or specifications in this list, have been explained in the explanatory note.

## CHAPTER I

**1. Compulsory Standards**

There are no compulsory standards in the present document.

Standards can be made compulsory by following the procedure set out in Article 17(4) of the Framework Directive. Where the Commission intends to make the implementation of certain standards and/or specifications compulsory, it shall publish a notice in the Official Journal of the European Communities and invite public comment by all parties concerned.

## CHAPTER II

**2. Transparent transmission capacity**2.1. *Local Loop access to third parties*

Technical interfaces and/or service features	Reference	Notes
Spectral management on metallic access networks; Part 1: Definitions and signal library	ETSI TR 101 830-1 (V.1.1.1)	

## CHAPTER III

**3. Publicly offered user interfaces (NTP)**

Under certain market conditions <sup>(4)</sup> a National Regulatory Authority may impose obligations on operators to meet reasonable requests for access to, and use of, specific network elements and associated facilities.

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

## CHAPTER IV

**4. Interconnection and access**

Under the provisions of the Access Directive, providers of Electronic Communication Networks and Services may have particular interconnection and/or access obligations.

ULL and bitstream standards and/or specifications are included in Chapter II.

<sup>(4)</sup> See Article 8.2 of the Access Directive.

4.1. *Application Program Interfaces*

Technical interfaces and/or service features	Reference	Notes
Open Service Access (OSA); Application Programming Interface (API/Parlay 3)	ETSI ES 201 915 series	
Open Service Access (OSA); Application Programming Interface (API/Parlay 4)	ETSI ES 202 915 series	
Open Service Access (OSA); Application Programming Interface (API/Parlay 5)	ETSI ES 203 915 series	
UMTS Customized Applications for Mobile network Enhanced Logic (CAMEL) Phase 3; CAMEL Application Part (CAP) specification	ETSI TS 129 078	
UMTS Open Service Access (OSA); Application Programming Interface (API); Part 1: Overview	ETSI TS 129 198-1	
UMTS Open Services Architecture Application Programming Interface — Part 2	ETSI TR 129 998	

4.2. *Access to network facilities and services*

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

4.3. *Interconnection*

Technical interfaces and/or service features	Reference	Notes
IP-Cablecom; Part 12: Internet Signalling Transport Protocol (ISTP)	ETSI TS 101 909-12	defines the SS7 interface to the Signalling Gateway of an IP-Cablecom network
IP-Cablecom; Part 23: Internet Protocol Access Terminal — Line Control Signalling (IPAT — LCS)	ETSI TS 101 909-23	identifies the V5.2 signalling interface to the IPAT of an IP-Cablecom network

## CHAPTER V

5. **Services and features**5.1. *Caller Location*

Technical interfaces and/or service features	Reference	Notes
Emergency location protocols	ETSI TS 102 164	
Location Services (LCS); Functional description; Stage 2 (UMTS)	ETSI TS 123 171	

5.2. *Broadcasting aspects*

Broadcast standards and/or specifications found relevant are included in Chapter VIII.

5.3. *Advice of charge (AoC)*

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

5.4. *Directory Enquiry Services*

Technical interfaces and/or service features	Reference	Notes
Computerized directory assistance	ITU-T Recommendation E.115 (02/95)	Is currently used to implement international public directory services
International public directory services	ITU-T Recommendation F.510	Also suitable for interconnecting national directory databases.
Unified Directory Specification	ITU-T Recommendation F.515	

5.5. *Anonymous Call Rejected (ACR)*

Although ACR was standardized for PSTN/ISDN networks, only some of the current implementations do partly comply with the standards and/or specifications and ACR was not standardized for GSM networks.

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

## CHAPTER VI

6. **Numbering and addressing**6.1. *Carrier selection and carrier pre-selection*

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

6.2. *Number portability*

No standard and/or specification is included in the present List of Standards, as none were currently seen to be satisfying the criteria set out in the explanatory note.

## CHAPTER VII

7. **Quality of service (QoS)**

Technical interfaces and/or service features	Reference	Notes
User related QoS parameter definitions and measurements	ETSI EG 202 057 series (parts 1 to 4)	
Quality of telecom services;	ETSI EG 202 009 series (parts 1 to 3)	Parameters relevant to the users
Performance parameter definitions for quality of speech and other voice band applications utilising IP networks	ITU-T Recommendation G.1020 (Including annex A)	

*Note.* Under Articles 11 and 22 of the Universal Service Directive, national regulatory authorities may in specified circumstances require the use of certain standards and/or specifications for supply-time and quality-of-service parameters, definitions and measurement methods. These standards and/or specifications are listed in Annex III of the Directive.

7.1. *Grade of Service*

Technical interfaces and/or service features	Reference	Notes
End-user multimedia QoS categories	ITU-T Recommendation G.1010 (11/01)	

7.2. *Network performance objectives*

The present List of Standards only includes standards and/or specifications relevant to IP based services.

Technical interfaces and/or service features	Reference	Notes
Network performance objectives for IP-based services	ITU-T Recommendation Y.1541 (including Appendix X and Amendments 1 and 2)	Some technologies may need special treatment on tolerances.
Quality of Service (QoS) concept and architecture	ETSI TS 123 107 (3GPP TS 23.107)	Mapping between ITU-T Recommendation Y.1541 and TS 123107 QoS Classes

## CHAPTER VIII

8. **Broadcasting Services**8.1. *Application Program Interfaces*

Technical interfaces and/or service features	Reference	Notes
Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.1.1	ETSI TS 102 812	version 1.2.1
Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.0.3	ETSI ES 201 812	version 1.1.1 previously TS 101812 v. 1.3.1
MHEG-5 Broadcast Profile	ETSI ES 202 184	version 1.1.1

8.2. *Standards and/or specifications for the realisation of interactive television content*

Technical interfaces and/or service features	Reference	Notes
WTVML, Specification for a Lightweight Microbrowser for interactive TV applications, based on and compatible with WML	ETSI TS 102322	version 1.1.1

8.3. *Digital Broadcasting*

Technical interfaces and/or service features	Reference	Notes
Digital Audio Broadcasting (DAB); A Virtual Machine: DAB Java Specification	ETSI TS 101993	