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Technical Specification

Digital Video Broadcasting (DVB); Allocation of Service Information (SI) and Data Broadcasting Codes for Digital Video Broadcasting (DVB) systems

Reference
RTS/JTC-DVB-39

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Foreword

This Technical Specification (TS) has been produced by Joint Technical Committee (JTC) Broadcast of the European Broadcasting Union (EBU), Comité Européen de Normalisation ELECtrotechnique (CENELEC) and the European Telecommunications Standards Institute (ETSI).

The present document is based on the DVB document TM1324, rev. X / 162 rev. 13, and it may be converted into a standard after market feedback. For this purpose, the wording of a standard (normative elements) rather than of a technical report (informative elements) has been used.

NOTE: The EBU/ETSI JTC Broadcast was established in 1990 to co-ordinate the drafting of standards in the specific field of broadcasting and related fields. Since 1995 the JTC Broadcast became a tripartite body by including in the Memorandum of Understanding also CENELEC, which is responsible for the standardization of radio and television receivers. The EBU is a professional association of broadcasting organizations whose work includes the co-ordination of its members' activities in the technical, legal, programme-making and programme-exchange domains. The EBU has active members in about 60 countries in the European broadcasting area; its headquarters is in Geneva.

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Founded in September 1993, the DVB Project is a market-led consortium of public and private sector organizations in the television industry. Its aim is to establish the framework for the introduction of MPEG-2 based digital television services. Now comprising over 200 organizations from more than 25 countries around the world, DVB fosters market-led systems, which meet the real needs, and economic circumstances, of the consumer electronics and the broadcast industry.

1 Scope

The present document supplements the following documents:

- European Norm (EN) EN 300 468 [1] which describes the Service Information (SI) to be used with Digital Video Broadcasting (DVB) systems;
- EN 301 192 [2] which describes mechanisms for the delivery of generic data through DVB bitstreams;
- TS 101 812 [3] and TS 102 812 [4] which describe the DVB's Multimedia Home Platform (MHP).

The present document identifies the codes allocated for SI, data broadcasting and MHP in DVB systems. The following sets of code values are identified:

- the Original_Network_id used to identify the original network (DVB-SI);
- the Network_id used to identify a network (DVB-SI);
- the Bouquet_id used to identify a bouquet (DVB-SI);
- the CA_system_id used to identify the kind of encryption used (DVB-SI);
- the Country code used to identify a country or region (DVB-SI);
- the Private_data_specifier values used to identify a private SI system (DVB-SI);
- the Data_Broadcast_id used to identify a data broadcast specification (DVB-DATA);
- the Platform_id used to identify the IP/MAC platform in use (DVB-DATA);
- the CP_system_id used to identify the copy protection system (DVB-SI);
- the Encoding_type_id used to identify string encodings (DVB-SI);
- the Generic Stream Transport Layer Signaling used to identify the protocol syntax in the payload of Generic Streams (DVB-GSE).

These codes are allocated by the DVB Project at the request of potential service providers and once allocated, become part of EN 300 468 [1] by reference. Further details can be obtained by contacting DVB Services Sàrl. (http://www.dvbservices.com)

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2 References

References are either specific (identified by date of publication and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.
- Non-specific reference may be made only to a complete document or a part thereof and only in the following cases:
  - if it is accepted that it will be possible to use all future changes of the referenced document for the purposes of the referring document;
  - for informative references.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication ETSI cannot guarantee their long term validity.

2.1 Normative references

The following referenced documents are indispensable for the application of the present document. For dated references, only the edition cited applies. For non-specific references, the latest edition of the referenced document (including any amendments) applies.

[1] ETSI EN 300 468: "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems".

[2] ETSI EN 301 192: "Digital Video Broadcasting (DVB); DVB specification for data broadcasting".

[3] ETSI TS 101 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.0.1".

[4] ETSI TS 102 812: "Digital Video Broadcasting (DVB); Multimedia Home Platform (MHP) Specification 1.1".

[5] ISO 3166-1: "Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes".

[6] ETSI TS 102 606: "Digital Video Broadcasting (DVB);Generic Stream Encapsulation (GSE) Protocol".

[7] CENELEC EN 50221: "Common Interface Specification for Conditional Access and other Digital Video Broadcasting Decoder Applications".

[8] ETSI TS 102 006: "Digital Video Broadcasting (DVB); Specification for System Software Update in DVB Systems".

2.2 Informative references

The following referenced documents are not essential to the use of the present document but they assist the user with regard to a particular subject area**.** For non-specific references, the latest version of the referenced document (including any amendments) applies.

[i.1] ETSI ETR 162: "Digital Video Broadcasting (DVB); Allocation of Service Information (SI) codes for DVB systems".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 468 [1], EN 301 192 [2] and the following apply:

applicant: organistaion which applies for an identifier under the regime of the present document

registrar: organization who keeps a public register of DVB-SI identifiers and assigns new values to Applicants under the regime of the present document

NOTE: The DVB Project is the only Registrar for DVB-SI identifiers. The DVB Project may pass this task on to one or more third parties.

3.2 Abbreviations

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

CA	Conditional Access
CP	Copy Protection
CPCM	Content Protection and Copy Management
DVB	Digital Video Broadcasting
IP	Internet Protocol
IPDC	Internet Protocol Datacasting
MAC	Medium Access Control
MHP	Multimedia Home Platform
MMDS	Multichannel Multipoint Distribution Service
SI	Service Information
TS	Transport Stream

4 Principles of registration

The present document defines the allocation of identifiers pertaining to different DVB specifications (e.g. MHP, SI, Data Broadcasting, etc.). It does not describe the detail or the template as to how this should be done. The aim of the present document is to provide assistance to those soliciting and allocating identifiers.

Each identifier has the following attributes:

1) It **is defined** in a DVB specification (e.g. DVB Service Information (EN 300 468 [1])).

2) It is **a binary number** represented by its hexadecimal equivalent denoted by the prefix "0x".

3) It **has a text description**. It is the table of values and descriptions which is published on www.dvb.org and/or www.dvbservices.com

4) It **is allocated to** an organization operating in the digital television space (e.g. ACME Digital Broadcasting, Inc.), or a grouping of such companies (e.g. a ACME - Association of Cable/MMDS Enterprises) or an institution acting in digital television, e.g. IEEE (Institute of Electrical and Electronic Engineers).

5) It **may be allocated** for a given region. For terrestrial broadcasting, this is typically a sovereign country; for satellite operations, this is typically a geographical region spanning many countries, but consistent with the footprint of the satellites owned by the operators.

The present document describes where to find definitions of each identifier, who to refer to when there are questions, templates for the allocations and rules governing them. In addition, and where appropriate, there are descriptions of best practice and some historical notes.

The DVB Project shall be the only Registrar entitled to accept applications and perform registrations under the regime of the present document and within the application area of EN 300 468 [1]. The DVB Project shall maintain a public, on-line register of assigned identifiers to ease quick look-up of the current assignments.

NOTE: For practical reasons, the DVB Project may choose to delegate the operation and maintenance of the public, on-line register and the authority of receiving applications and performing registrations to one or more third parties.

5 Register of Service Information (SI) codes

5.1 Original Network identification coding

Original_network_id values shall be allocated to broadcasters, network operators and content producers to uniquely identify networks within the application area of EN 300 468 [1], by insertion in the original_network_id field.

Table 1: Original_network_id registration template

Reistration field	Required	Description
Original Network ID	optional	ID according to the template below
Original Network Name	required	Name of the Network (e.g. "ACME TV")
Original Network Operator	required	Name of company which operates network (e.g. "ACME Broadcast Corp.")
Original Network Legal Contact	required	Name and e-mail of authorized legal signatory of "Original Network Operator"
Original Network Technical Contact	required	Name and e-mail of technical contact of "Original Network Operator"
Original Network Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Original network ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed bouquet_id value.

The rules for the allocation of original_network_ids are as follows:

1) In principle only one original_network_id would be assigned to each network operator, broadcaster or content producer.

2) Original_network_ids are a scarce resource and their allocation is under responsibility of the Registrar. Application of multiple original_network_ids is subject to exhaustive verification and discouraged.

3) 256 original_network_ids values are reserved for private/temporary use. Their allocation is not subject of the ETSI standard.

NOTE: The concept of distinction between the allocation of Original_Network_id and Network_id is new since edition 1 of ETR 162 [i.2]. The introduction of this concept was necessary because the address space for Network_ids and Original Network_ids was limited to 65 535 values and it was considered that terrestrial networks and cable networks might require a large number of Network_ids.

Since these networks have in most cases a clearly identified geographical region of validity, the re-usage of Network_ids is possible. However, Original_Network_ids have to be unique independent of geographical region, since they are used to uniquely identify the transport streams and services.

In terrestrial networks, however it is recommended that all operators within a country use the same original_network_id. This implies that broadcasters and operators within a country would need to coordinate the allocation of transport_stream_ids and service_ids between them. The Registrar is recommended to allocate original_network_id values for terrestrial operators on the basis of country_code + 0x2000. This will help receivers to discriminate broadcasts from multiple countries.

As a consequence, the present document contains one table for the unique identification of Original_Network_ids and another table for the identification of unique and re-usable Network_ids. In order to explain the matter some examples are given in annex A.

The values given in table 2 are to be used to identify networks within the application area of EN 300 468 [1], by insertion in the field original_network_id.

Table 2: Original_network_id allocation template

Original_network_id	Description	Operator
0x0000	Reserved	Reserved
0x0001 to 0xFEBF	Reserved for general registration through the DVB Project (see http:/www.dvb.org)	
0xFEC0 to 0xFF00	Network Interface Modules	DVB Common Interface [7]
0xFF00 to 0xFFFF	Private_temporary_use	

5.2 Network identification coding

Network_id values shall be allocated to broadcasters and network operators to identify networks within the application area of EN 300 468 [1], by insertion in the network_id field.

A network is defined as a collection of MPEG 2 Transport Stream (TS) multiplexes transmitted on a single delivery system, e.g. all digital channels on a specific cable system. Network_IDs are unique within the geographical region defined by the country_code:

- For satellite networks, this is a region spanning many countries.
- For a cable network, this is a single country.
- For terrestrial networks, this is a single country also, but it iss important that two adjacent countries shall not have the same block of Network IDs. Hence the concept of colour coding countries was introduced.

Table 3: Network_id registration template

Reistration field	Required	Description
Network ID	optional	ID according to the template below
Network Type	required	Satellite, terrestrial or cable
Network Name	required	Name of the Bouquet (e.g. "ACME Cable")
Network Country Code	required	Country code where the bouquet is unique (e.g. “North America”)
Network Operator	required	Name of company which operates the network (e.g. "ACME Pay-TV, Inc.")
Network Legal Contact	required	Name and e-mail of authorized legal signatory of "Bouquet_Operator"
Network Technical Contact	required	Name and e-mail of technical contact of "Bouquet_Operator"
Network Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Network ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed network_id value.

The rules for the allocation of network_ids are as follows:

1) Network_ids will be allocated on a geographical basis such that no conflict of network ids occurs in any geographical region. (Satellite network ids will be unique world-wide).

2) Network_ids are a scarce resource and their allocation is under responsibility of the Registrar. Application of multiple network_ids is subject to exhaustive verification and is discouraged.

3) 256 network_ids values are reserved for private/temporary use. Their allocation is not subject of the ETSI standard.

4) Network_ids will be allocated according to table 4.

5) Network_ids for the terrestrial delivery medium will be made available to the appropriate national telecommunications regulator and their allocation in each country is under responsibility of this regulator.

6) In order to avoid the uneconomical use of network_ids, the values will be given in blocks of 256 values on a country by country basis. Non-allocated network_ids will be kept reserved.

7) The allocation of terrestrial network ids shall be based on a 4-colour-map approach (see annex B). Two blocks of 256 values are reserved for the eventual case of collision.

8) If 256 values are not sufficient for a country, a new block of 256 colours will be allocated. This block can be used by all countries with the same colour in the colour map.

NOTE: Due to the re-usable allocation of all types of network_id values (satellite, cable and terrestrial), no link between network_id and original_network_id exists.

The schemes and values given in tables 4 and 5 shall be used for allocating network_id values.

Table 4: Top-level Network_id allocation template

Network_id	Description	Network type	Country code(s) validity	Comment
0x0000	Reserved		all	Reserved
0x0001 to 0x2000	Unique satellite	Satellite	902	(4 096 values)
0x2001 to 0x3000	Unique terrestrial	Terrestrial	902	(4096 values)
0x3001 to 0x3100	Re-useable terrestrial	Terrestrial	Countries of colour A	(256 values)
0x3101 to 0x3200	Re-useable terrestrial	Terrestrial	Countries of colour B	(256 values)
0x3201 to 0x3300	Re-useable terrestrial	Terrestrial	Countries of colour C	(256 values)
0x3301 to 0x3400	Re-useable terrestrial	Terrestrial	Countries of colour D	(256 values)
0x3401 to 0x3500	Re-useable terrestrial	Terrestrial	Countries of colour "E" (to be used only in case of collision)	(256 values)
0x3501 to 0x3600	Re-useable terrestrial	Terrestrial	Countries of colour "F" (to be used only in case of collision)	(256 values)
0x3601 to 0xA000	Reserved for future use	Terrestrial		(27 136 values)
0xA001 to 0xB000	Re-useable cable	Cable	To be specified	(4 096 values)
0xB001 to 0xF000	Reserved for future use	Cable		(16 384 values)
0xF001 to 0xFF00	Unique cable	Cable	all	(3 840 values)
0xFEC0 to 0xFF00	Network Interface Modules	DVB Common Interface	all	(64 Values
0xFF01 to 0xFFFF	Temporary private use	Not defined	all	(255 values)

Table 5: Detailed Network_id allocation templates

Network_id	Description	Network type	Country code(s) of validity	Operator
0x0001 to 0x2000	***Unique satellite***	***Satellite***	***all***	***Satellite Operator***
0x0000	Reserved	all	all	
0x0001 to 0x2000	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x2001 to 0x3000	***Unique terrestrial***	***Terrestrial***	***all***	***Terrestrial Operator***
0x2001 to 0x3000	Reserved for registration through the DVB Project Office (see http://www.dvb.org)			

0x3001 to 0x3100	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour A***	***(256 Values)***
0x3001 to 0x3100	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x3101 to 0x3200	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour B***	***(256 Values)***
0x3101 to 0x3200	Reserved for registration through the DVB Project Office (see http://www.dvb.org)			

0x3201 to 0x3300	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour C***	***(256 Values)***
0x3201 to 0x3300	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x3301 to 0x3400	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour D***	***(256 Values)***
0x3301 to 0x3400	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x3401 to 0x3500	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour "E" - to be used only in case of colision***	***(256 Values)***
0x3401 to 0x3500	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x3501 to 0x3600	***Re-useable terrestrial***	***Terrestrial***	***Countries of Colour "F" - to be used only in case of colision***	***(256 Values)***
0x3501 to 0x3600	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0x3601 to 0xA000	***Reserved for future use***	***Terrestrial***	***To be defined***	***(27 136 Values)***
0x3601 to 0xA000	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0xA001 to 0xB000	***Re-useable cable***	***Cable***	***Country code(s) of validity***	***(4 096 Values)***
0xA001 to 0xB000	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0xB001 to 0xF000	***Reserved for future use***	***Cable***	***To be defined***	***(16 384 Values)***
0xB001 to 0xF000	Reserved for registration through the DVB Project (see http://www.dvb.org)			

0xF001 to 0xFF00	***Unique cable***	***Cable***	***Country code(s) of validity***	***(3 840 Values)***
0xF001 to 0xFEBF	Reserved for registration through the DVB Project (see http://www.dvb.org)			
0xFEC0 to FF00	Network Interface Modules	Common Interface	all	64 Values

0xFF01 to 0xFFFF	*Temporary_use*	*Network_type*	*Country code(s) of validity*	*(255 Values)*
0xFF01 to 0xFFFF	Private_temporary_ use	Not defined	all	User_defined

5.3 Bouquet_id

Bouquet_id values shall be allocated to broadcasters and network operators to identify bouquets within the application area of EN 300 468 [1], by insertion in the bouquet_id field.

Table 6: Bouquet_id registration template

Reistration field	Required	Description
Bouquet ID	optional	ID according to the template below
Bouquet Name	required	Name of the Bouquet (e.g. "ACME Pay-TV Service")
Bouquet Country Code	required	Country code where the bouquet is unique (e.g. North America)
Bouquet Operator	required	Name of company which operates Bouquet (e.g. "ACME Pay-TV, Inc.")
Bouquet Legal Contact	required	Name and e-mail of authorized legal signatory of "Bouquet Operator"
Bouquet Technical Contact	required	Name and e-mail of technical contact of "Bouquet Operator"
Bouquet Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Bouquet ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed bouquet_id value.

The scheme and values given in table 7 shall be used for the allocation of bouquet_id values.

Table 7: Bouquet_id allocation template

Bouquet_id	Bouquet name	Country Code of Validity	Bouquet operator
0x0000	Reserved	all	Reserved
0x0001 to 0xFFFF	Reserved for general registration through the DVB Project (see http://www.dvb.org)		

5.4 CA_system_id

CA_system_id values shall be allocated to Conditional Access system vendors to identify CA sytems within the application area of EN 300 468 [1], by insertion in the CA_system_id field.

Table 8: CA_system_id registration template

Reistration field	Required	Description
CA System ID	optional	ID according to the template below
CA System Name	required	Name of the company supplying Conditional Access services (e.g. "ACME CA Services, Inc.")
CA System Legal Contact	required	Name and e-mail of authorized legal signatory of "CA System Name"
CA System Technical Contact	required	Name and e-mail of technical contact of "CA System Name"
CA System Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The CA System ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed CA_system_id value.

The scheme and values given in table 9 shall be used for allocation of CA_system_id values.

Table 9: CA_system_id allocation template

CA_system_id values	CA system specifier
0x0000	Reserved
0x0001 to 0x00FF	Reserved for registration to standardized systems through the DVB Project (see http://www.dvb.org)
0x0100 to 0xFFFF	Reserved for general registration through the DVB Project (see http://www.dvb.org)

In the standardized systems registration range, allocations shall only be made for Conditional Access systems which are defined as such by an appropriate DVB authority, and which are fully described in a publicly available document from a recognized standardization body.

In the general registration range allocations shall only be made to bone fide Conditional Access system vendors. Applicants need to demonstrate that the vendor is proposing a registration for a legitimate Conditonal Access product.

5.5 Country code values

Country_code values shall be allocated to geographical areas to identify groups of countries or parts of countries within the application area of EN 300 468 [1]. These are supplementary to ISO 3166 [5]. This identifier helps in defining geographical coverage of other identifiers.

Table 10: Country_code registration template

Reistration field	Required	Description
Country Code	optional	ID according to the template below
Geographical Area Name	required	Name of the geographical area (e.g. "North America")
Geographical Area Legal Contact	required	Name and e-mail of authorized legal signatory of "Geographical Area Name"
Geographical Area Technical Contact	required	Name and e-mail of technical contact of "Geographical Area Name"
Geographical Area Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Country Code field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed country_code value.

The scheme and values given in table 11 shall be used for allocation of country_code values.

Table 11: Country code allocation template

Code	Grouping
000 to 899	Reserved for ISO 3166 [5] use
900 to 999	Reserved for registration through the DVB Project (see http://www.dvb.org)

Due to the dact that geographical areas are ot be represented by this identifier, allocations of country_code values shall only be made to bone fide organistaions. Applicants need to demonstrate that they represent the geographical area in question in an appropriate way. Preferred Applicants for country_code_values are hence organization kown to be in agreement with the legal and regulatory authorities and other determining organizations active in or substantially affected by the area for which a country_code value is ot be registered.

5.6 Private data specifier values

Private_data_specifier values shall be allocated to broadcasters, manufacturers and network operators and content producers to identify private SI elements within the application area of EN 300 468 [1], by insertion in the field private_data_specifier.

Table 12: private_data_specifier registration template

Reistration field	Required	Description
Private Data Specifier	optional	ID according to the template below
Private Data Specifier Organization	required	Name of the company or organization which is responsible for the character set described above (e.g. "ACME Fonts, Inc.")
Private Data Specifier Legal Contact	required	Name and e-mail of authorized legal signatory of "Encoding Type ID"
Private Data Specifier Contact	required	Name and e-mail of technical contact of "Encoding Type ID"
Private Data Specifier Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Private Data Specifier field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed private_data_specifier value.

The scheme and values given in table 13 shall be used for allocating private_data_specifier values.

Table 13: Private data specifier values

Private data specifier values	Organization specifying private SI codes
0x00000000	Reserved
0x00000001 to 0xFFFFFFFF	Reserved for general registration through the DVB Project (see http://www.dvb.org)

Since the private_data_specifier plays important roles in national broadcast regulations and service aggregation, being able correctly identify the origins of the private data is important. Hence, private_data_specifier values shall only be allocated to bona fide organizations for which there is a legal signatory.

5.7 Data_broadcast_id

Data_broadcast_id values shall be allocated to broadcasters, Conditional Access vendors, middleware vendors and other standardization bodies to identify the types of Data Broadcast services within the application area of EN 300 468 [1], by insertion in the field data_broadcast_id.

Table 14: data_broadcast_id registration template

Reistration field	Required	Description
Data Broadcast ID	optional	ID according to the template below
Data Broadcast Specification Name	required	Name of a Data Broadcast Specification (e.g. "ACMEcast 1.0")
Data Broadcast Specifier	required	Name of the company specifying the "Data Broadcast Specification Name" mentioned above (e.g. "ACMEcast, Inc.")
Data Broadcast Legal Contact	required	Name and e-mail of authorized legal signatory of "Data Broadcast Specifier"
Data Broadcast Technical Contact	required	Name and e-mail of technical contact of "Data Broadcast Specifier"
Data Broadcast Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Data Broadcast ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed data_broadcast_id value.

The scheme and values given in table 15 shall be used for allocation of data_broadcast_id values.

Table 15: Data_broadcast_id allocation template

Data_broadcast_id	Data broadcast specification
0x0000	Reserved for future use
0x0001 to 0x00EF	**Reserved for registration to DVB data broadcasting**
0x0001	Data pipe
0x0002	Asynchronous data stream
0x0003	Synchronous data stream
0x0004	Synchronized data stream
0x0005	Multi protocol encapsulation
0x0006	Data Carousel
0x0007	Object Carousel
0x0008	DVB ATM streams
0x0009	Higher Protocols based on asynchronous data streams
0x000A	System Software Update service [8]
0x000B	IP/MAC Notification service [2]
0x000C to 0x00EF	Reserved for future use by DVB
0x00F0 to 0x00FF	**Reserved for registration to MHP data broadcasting**
0x0100 to 0xFFFE	Reserved for general registration through the DVB Project (see http://www.dvb.org)
0xFFFF	Reserved for future use

In the general registration range separate allocations for different versions of the same data broadcast specification shall only be made if and when a receiver would otherwise not be able to detect the version used from the contents of the data broadcast streams themselves or from private data carried in DVB-SI descriptors bearing a data_broadcast_id field. Data broadcast specifiers are thus encouraged to design their specifications such that receivers can detect the version used without the use of separate data_broadcast_id values.

5.8 Platform_id

Platform_id values shall be allocated to network operators and IPDC platform operators to uniquely identify the IP/MAC platform in use which is defined in EN 301 192 [2], by insertion in the platform_id field.

Table 16: Platform_id registration template

Reistration field	Required	Description
Platform ID	optional	ID according to the template below
Platform Name	required	Name of the IP/MAC Platform (e.g. "ACME MobileTV").
Platform Operator	required	Name of company which operates IP/MAC Platform (e.g. "ACME Mobile Com, Inc.")
Platform Legal Contact	required	Name and e-mail of authorized legal signatory of "Platform Operator"
Platform Technical Contact	required	Name and e-mail of technical contact of "Platform Operator"
Platform Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Platform ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed platform_id value.

The scheme and values given in table 17 shall be used for allocating platform_id values.

Table 17: Allocation of platform_id values

Platform_id	Owner
0x000000	Reserved
0x000001 to 0xFFEFFF	Reserved for general registration through the DVB Project (see http://www.dvb.org). These platform_id values are globally unique.
0xFFF000 to 0xFFFFFE	Managed by the network operator, and may be used for IP/MAC Platforms supporting services only within a single DVB network. These platform_id values are unique within a network_id only.
0xFFFFFF	Reserved

5.9 CP_system_id

CP_system_id values shall be allocated to identify Copy Protection (CP) systems to which DVB-CPCM content will be exported within the application area of EN 300 468 [1], by insertion in the field CP_system_id.

Table 18: CP_system_id registration template

Reistration field	Required	Description
CP System ID	optional	ID according to the template below
CP System Description	required	Name of a Content Protection System (e.g. "ACME Content Safe 1.0"
CP System Specifier	required	Name of the company supplying the CPS (e.g. "ACME CPS Consortium")
CP System Legal Contact	required	Name and e-mail of authorized legal signatory of "CP System Specifier"
CP System Technical Contact	required	Name and e-mail of technical contact of "CP System Specifier"
CP System Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The CP System ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed CP_system_id value.

The scheme and values given in table 19 shall be used for allocation of CP_system_id values.

Table 19: CP_system_id allocation template

CP_system_id values	CP system specifier
0x0000	DVB CPCM Content Licence
0x0001	DVB CPCM Auxiliary Data
0x0002	DVB CPCM Revocation List
0x0003 to 0x00FF	reserved for future use by DVB CPCM
0x0100 to 0xFFFF	Reserved for general registration through the DVB Project (see http://www.dvb.org)

In the general registration range allocations shall only be made to bone fide Copy Protection system vendors. Applicants need to demonstrate that the vendor is proposing a registration for a legitimate Copy Protection product.

5.10 Encoding_type_id

Encoding_type_id values shall be allocated to broadcasters, network operators and content producers to identify string encodings within the application area of EN 300 468 [1], by insertion in the field encoding_type_id in the second byte of the string.

Table 20: encoding_type_id registration template

Reistration field	Required	Description
Encoding Type ID	optional	ID according to the template below
Encoding Type Description	required	Name of a character encoding type (e.g. "ACME Universal Character Set 3")
Encoding Type Specifier	required	Name of the company or organization which is responsible for the character set described above (e.g. "ACME Fonts, Inc.")
Encoding Type Legal Contact	required	Name and e-mail of authorized legal signatory of "Encoding Type ID"
Encoding Type Technical Contact	required	Name and e-mail of technical contact of "Encoding Type ID"
Encoding Type Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Encoding Type ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed encoding_type_id value.

The scheme and values given in table 21 shall be used for allocation of encoding_type_id values.

Table 21: encoding_type_id

encoding_type_id values	Organization
0x00	Reserved
0x01 to 0xEF	Reserved for general registration through the DVB Project (see http://www.dvb.org)
0xF0 to 0xFF	Reserved for future use

5.11 Generic Stream Transport Layer Protocol Signaling

The DVB-S2, -T2 and -C2 physical layers provide Generic Stream modes for conveying arbitrary, variable length payload frames. To identify the type of payload frames, a field in the header of these physical layers is used.
For example, in the case of DVB-S2 and -T2, the SYNC field is used. Further details about the fields used can be found in [6].

Table 22: Generic Stream Protocol Type registration template

Reistration field	Required	Description
Protocol Type ID	optional	ID according to the template below
Protocol Type Description	required	Name of protocol specification (e.g. "ACME SkyDSL")
Protocol Type Specifier	required	Name of the company or organization which is responsible for the protocol specification above (e.g. "ACME Sat Coms, Inc.")
Protocol Type Legal Contact	required	Name and e-mail of authorized legal signatory of "Protocol Type ID"
Protocol Type Technical Contact	required	Name and e-mail of technical contact of "Protocol Type ID"
Protocol Type Notes	optional	Notes on the application, e.g. last revised and what revisions were made

The Protocol Type ID field in the registration template is to be seen as a proposal by the Applicant. The Registrar is not required to follow this suggestion and may assign a different value. In this case, the Applicant should be provided with a rationale for not having assigned the proposed Protocol Type value.

The scheme and values given in table 23 shall be used for allocation of Protocol Type values.

Table 23: Generic Stream Protocol Types allocation template

Protocol Type	Definition
0x00	Generic Stream Encapsulation [6]
0x01 to 0xB8	Reserved for registration to standardized protocols through the DVB Project (see http://www.dvb.org)
0xB9 to 0xFF	user private

In the standardized protocols registration range, allocations shall only be made for standard protocols which are defined as such by DVB Project, and which are fully described in a publicly available document from a recognized standardization body.

Annex A (informative): Example Scenarios for the Utilization of network_id and original_network_id

A.1 Re-transmission of a satellite signal in terrestrial networks

A service operator A-TV transmits his transport stream to satellite X-SAT. The signal is re-transmitted by the terrestrial network A-NET in country A **with modifications to the content. The signal is re-transmitted by the terrestrial network in country B without modifications to the content:**

- A-TV has the unique original_network_id 0x1234.
- Another television network B-TV (original_network_id = 0x5678) is using the same satellite for the contribution to A-Net in country A and to B-Net in country B.
- The original_network_id of a DVB-T network is very likely to be the one given for that country according to table 1 of the present document. The originating service operator and its original_network_id in this case do not occur in the NIT of terrestrial networks.
- X-SAT has the network_id 0x0200 (in range of unique satellite networks).
- A-NET and B-Net share the re-usable terrestrial network_id range of 0x3300 to 0x334f.

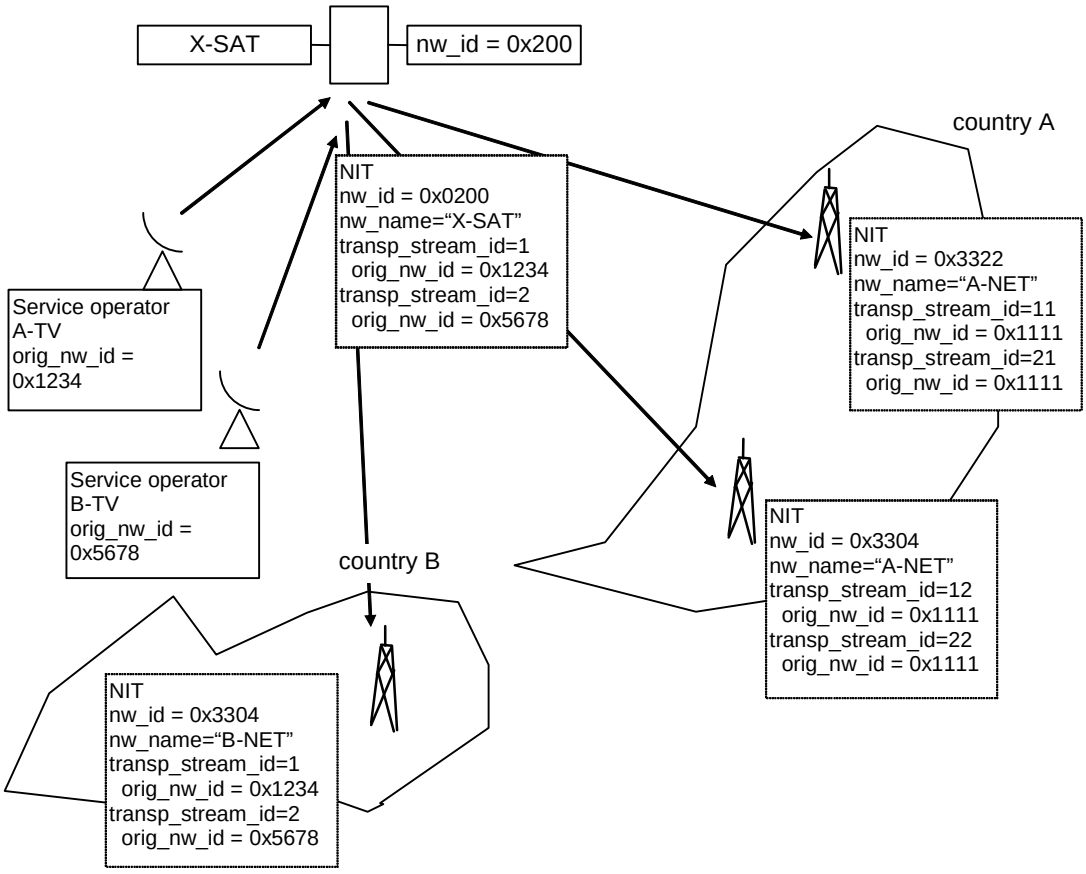

Figure A.1

The satellite NIT contains the original_network_id of A-TV and the network_id of X-SAT.

On the terrestrial network the original_network_id has always the value that has been allocated for a certain country by Table 1 of the present document. The network_id is replaced by one of the network_ids of country A that could be re-used in country B if it has the same colour in the colour-map (see annex B).

A.2 Re-transmission of a satellite signal in cable networks

The same scheme as above applies. Cable networks generally can use re-usable network_ids because there is no risk that IRDs are connected to two cable networks sharing the same network_id at the same time.

The satellite serves different cable networks in L-Town and in E-Town. They can use the same network_id because they are physically separated.

A special case is the transmission of cable network NITs as "foreign" NITs on a satellite. In this case the cable network_ids have to be in the unique range of values since a collision on other networks using the same re-usable network_id cannot be guaranteed. **Note that this method is not recommended since the number of unique network_ids is limited.**

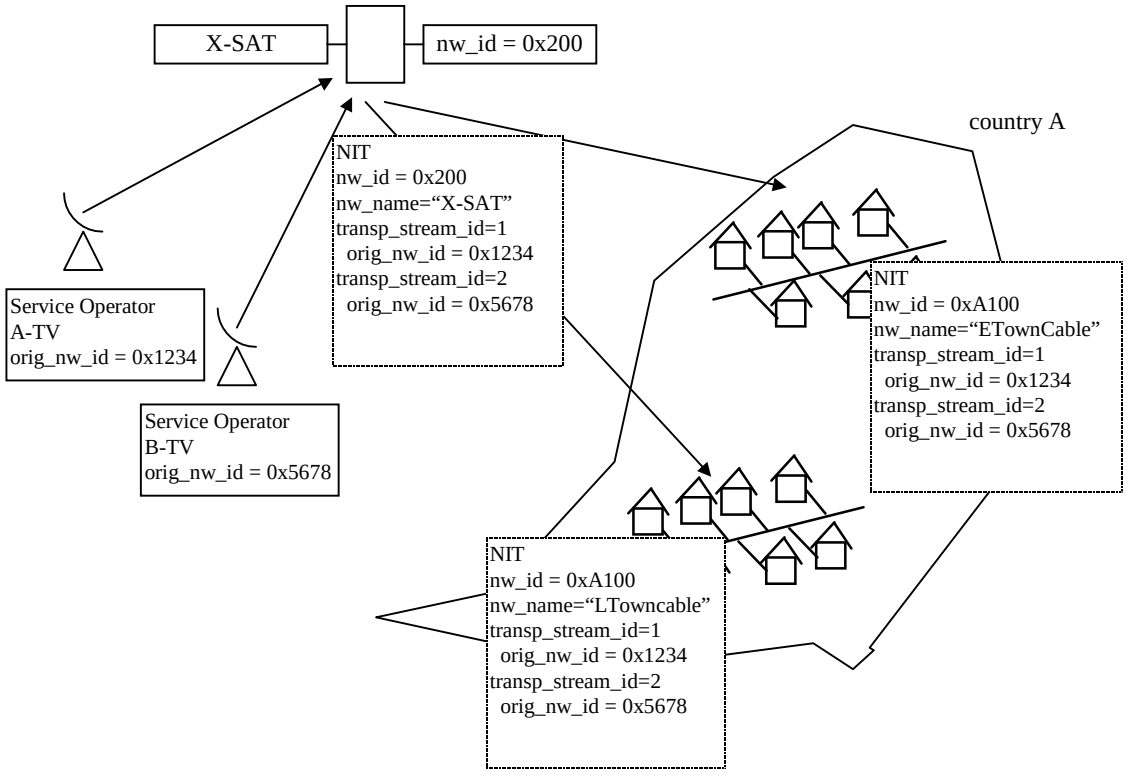

Figure A.2

Annex B (informative): Colour Map for the allocation of terrestrial network_ids

The allocation of network_ids in terrestrial networks needs to be coordinated between geographically neighbouring network operators to enable terminals to reliably acquire a service near network boundaries. Within countries this is typically handled by national regulatory bodies. To support coordination between countries, DVB uses an allocation scheme based on colour-maps under which a colour is associated with each range of network_id values. Another country is only assigned values of the same colour if other countries of this colour are geographically distant enough to not radiate any overlapping terrestrial broadcasts. Figure 1 below shows the allocation of colours to network_id ranges and countries as of this writing.

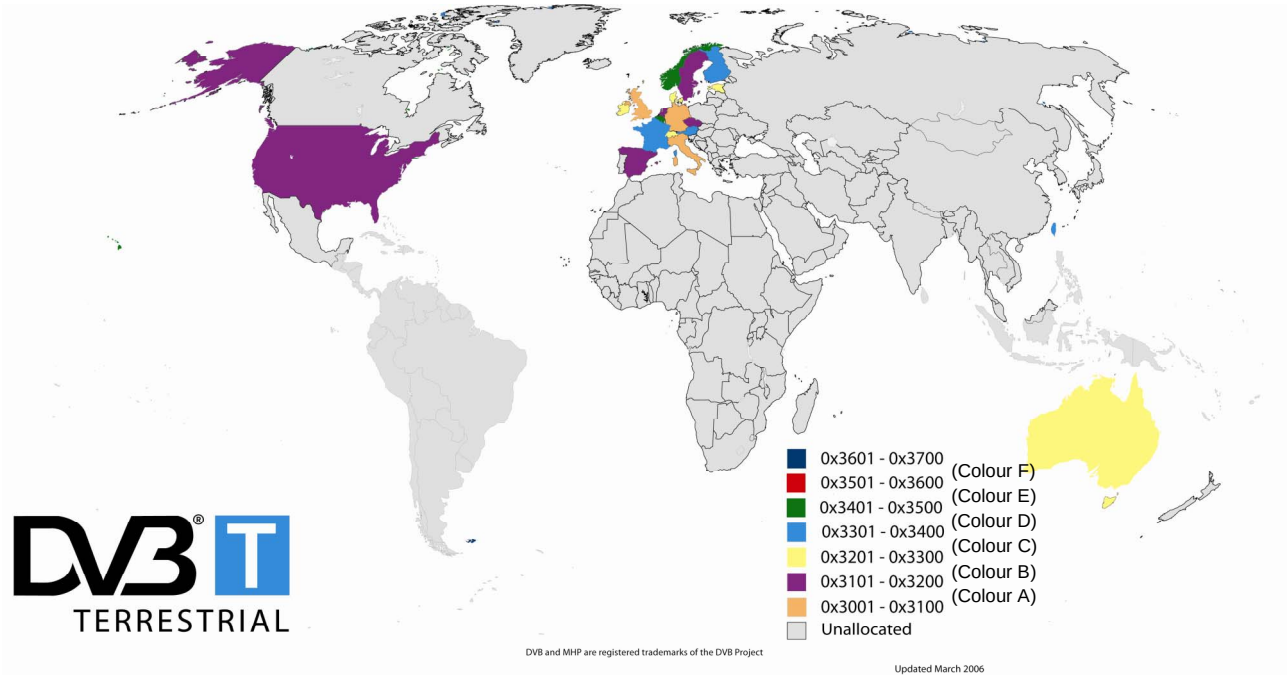

Figure B.1: Colour map for allocating network_ids in terrestrial networks

Annex C (informative): Bibliography

ETSI TR 101 211: "Digital Video Broadcasting (DVB); Guidelines on implementation and usage of Service Information (SI)".

ETSI TR 101 202: "Digital Video Broadcasting (DVB); Implementation guidelines for Data Broadcasting".

History

Document history		
First Edition	October 1995	Publication as ETR 162
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