

**HARMONIZATION WITH DVB SI
IN THE USE OF THE
ATSC DIGITAL TELEVISION STANDARD**

ATSC RECOMMENDED PRACTICE

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1. PURPOSE AND SCOPE

This document specifies a recommended practice for use of the ATSC *Digital Television Standard* to ensure interoperability internationally at the transport level with the European Digital Video Broadcast (DVB) project as standardized by the European Telecommunications Standards Institute (ETSI). The DVB Service Information standard is defined in ETSI ETS 300 468 (Ref. [1]). Guidelines for use of the *Digital Television Standard* are outlined which ensure avoidance of conflict with DVB transport in the areas of Packet Identifier (PID) usage and assignment of user private values for descriptor tags and table identifiers.

Adherence to the recommendations described herein makes possible the simultaneous carriage of System/Service Information (SI) conforming to both the ATSC standard (ATSC A/56) and the ETSI ETS 300 486 standard. Such dual carriage of SI may be necessary when Transport Streams conforming to the ATSC standard are made available to receivers supporting only the DVB Service Information standard or when Transport Streams conforming to the DVB standard are made available to receivers supporting only the ATSC SI standard.

2. REFERENCES

The following documents are applicable to this recommended practice:

1. ETSI ETS 300 468 "Digital broadcasting systems for television, sound and data services; Specification for Service Information (SI) in Digital Video Broadcasting (DVB) Systems."
2. ATSC Standard A/53 (1995), ATSC Digital Television Standard.

3. GUIDELINES

The following sections describe recommended practice for use of PID values, table identifiers and descriptor tags. The following briefly summarizes these recommendations:

1. **PID values:** Program Number 1 in the program paradigm should not be used.
2. **Table identifiers:** 0x40 through 0x7F should not be used.
3. **Descriptor tags:** 0x40 through 0x7F should not be used.

3.1 PID Values

DVB SI is carried in the MPEG-2 Transport Stream in PIDs 0x0010 through 0x0014. Therefore, it is recommended that when the program paradigm is used, Program Number 1 is *not* used. The lowest PID value that should be used to carry services is 0x0020, corresponding to Program Number 2.

It is noted that re-multiplexing equipment is capable of PID re-assignment, which necessarily involves rebuilding the Program Association Table (PAT) and Program Map Table (PMT) for each service in the multiplex. Such equipment can re-map PIDs to avoid 0x0010 through 0x0014, as long as no intrinsic meaning is carried in the Program Number value itself.

3.2 Table Identifiers

It is common practice that the `table_ID` values in use across different PID streams are kept separate in order to minimize confusion. Therefore, the recommendation is to reserve certain values of `table_ID` so as not to conflict with the DVB SI standard. Accordingly, `table_ID` values in the range 0x40 through 0x7F should be reserved for harmonization with ETS 300 468. Values for `table_ID` in the range 0x80 through 0xBF may be freely used for user private sections.

3.3 Descriptor Tags

ETSI 300 468 defines descriptors with `descriptor_tag` values in the 0x40 to 0x7F range. Some descriptors in this range are reserved for future extension of the DVB standard. Accordingly, users of the ATSC *Digital Television Standard* are advised to avoid descriptor tags in this range. The range 0xB0 through 0xFE can be safely used for user private descriptors (the use of which is controlled by an appropriate MPEG-2 `registration_descriptor()`).