

# Digital terrestrial television broadcasting – Structure of service information

Televisão digital terrestre – Multiplexação e serviços de informação (SI) – Parte 1: SI do sistema de radiodifusão

Televisión digital terrestre — Multiplexación y servicios de información (SI) – Parte 1: SI del sistema de radiodifusión

Digital terrestrial television broadcasting – Multiplexing and service information (SI) – Part 1: SI for digital broadcasting systems

デジタル放送に使用する番組配列情報 — 第 1 部：デジタル放送における番組配列情報の構成及び識別子の運用基準

Service information for digital broadcasting system — Part 1: Structure of service information and operational standard of identifier for digital broadcasting

## Foreword

This document is the result of the joint efforts of the ABNT, ARIB and SBTVD Forum under the standardization and technical cooperation activities of the Brazil-Japan Digital Television Joint Working Group.

The Brazilian Association for Standardization (ABNT) is the organism responsible for technical standardization in Brazil, providing essential support for Brazilian technical development. It is private, non-profit organization, recognized as the only National Standardization Body. It provides Brazilian society with systematic knowledge, through normative documents, enabling the production, commercialization and use of goods and services, in a competitive and sustainable manner, in the internal and external markets, contributing to scientific and technological development, environmental protection and consumer's protection.

The Association of Radio Industries and Businesses (ARIB) was designated as “the Center for Promotion of Efficient Use of the Radio Spectrum” and “the Designated Frequency Change Support Agency” by the Minister of Internal Affairs and Communications (MIC) of Japan under the provisions of the Radio Law. Under this designation, ARIB conducts studies and R&D, establishes standards, provides consultation services for radio spectrum coordination, cooperates with other overseas organizations and provides frequency change support services for the smooth introduction of digital terrestrial television broadcasting. These activities are carried out in cooperation with and/or participation by telecommunication operators, broadcasters, radio equipment manufacturers and related organizations as well as under the support by MIC.

The Brazilian Digital Terrestrial Television Forum (SBTVD Forum) is a non-profit entity, created with the objective of aiding and stimulating the development and implementation of best practices aiming at the success of systems reality for digital broadcasting of images and sounds in Brazil. Since the creation of the SBTVD Forum in February, 2007, its members have endeavored to establish standards of technical quality which permit deployment of digital television in Brazil. The Technical Module has contributed to the preparation of standards, with active participation by universities, research centers, related industry organizations and broadcasters.

This document does not describe the industrial property rights mandatory to these standards.

This document has no standardization value. Its purpose is to serve as a reference for characterizing the specificities of Brazilian and Japanese digital terrestrial television standards within the scope of the Brazil-Japan Digital Television Joint Working Group.

This document is drafted in accordance with the rules established in the ISO/IEC Directives, Part 2.

In the Brazilian and Japanese harmonized documents, commonalities are described in Clause 5 where Table 1 includes all references to ABNT and ARIB related documents. Differences are described in Clause 6. In each subclause, a reference to the corresponding Brazilian and Japanese related session is included in separate boxes in *italic text*.

No reference is made to the domestic policies of the countries.

## 1 Scope

This document addresses the structure of service information for digital terrestrial television broadcasting in Brazil and Japan.

## 2 Normative references

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

ABNT NBR 15603-1:2007, *Digital terrestrial television – Multiplexing and service information (SI) – Part 1: SI for digital broadcasting systems*

ARIB STD-B10:v4.6:2007, *Service information for digital broadcasting systems*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ABNT NBR 15603-1:2007 apply.

## 4 Abbreviated terms

For the purposes of this document, the abbreviated terms given in ABNT NBR 15603-1:2007 apply.

## 5 Commonalities of the multiplexing and service information system

The common parts of ABNT NBR 15603-1:2007 and ARIB STD-B10:v4.6:2007, part 1, and how they correspond are described in Table 1.

**Table 1 — Correspondence between ABNT NBR 15603-1:2007 and ARIB STD-B10:v4.6:2007, part 1**

Description	ABNT NBR 15603-1:2007 reference clause	ARIB STD-B10:v4.6:2007 reference clause
Data structure of Tables	7.1	6.1

## 6 Differences in the multiplexing and service information systems

### 6.1 Types of Tables

The Tables ECM-S and EMM-S have been excluded from ABNT NBR 15603-1:2007, because this standard only applies to terrestrial broadcasting, while ARIB STD-B10:v4.6:2007 defines a comprehensive set of SI Tables for both terrestrial and satellite broadcasting systems.

The 3<sup>rd</sup> and 4<sup>th</sup> lines after the title in ARIB STD-B10:v4.6:2007, Subclause 4.1, Table 4.2, has been excluded from ABNT NBR 15603-1:2007, Subclause 5.1 Table 4.

The ECM-S and EMM-S Tables in ARIB STD-B10:v4.6:2007, Subclause 4.1, Table 4.2 has been excluded from ABNT NBR 15603-1:2007, Subclause 5.2, Table 5.

### 6.2 Types of descriptors

The satellite delivery descriptor has been excluded from ABNT NBR 15603-1:2007 because this standard refers to terrestrial broadcasting only. The 6<sup>th</sup> line in Table 4.3 in ARIB STD-B10:v4.6:2007, Subclause 4.2, Table 4.3 has been excluded from ABNT NBR 15603-1:2007, Subclause 5.2 Table 5.

In the Brazilian digital terrestrial television system, according to ABNT NBR 15603-1:2007, Subclause 5.2, Table 5, the entire 6<sup>th</sup> line after the title in ARIB STD-B10:v4.6:2007, Subclause 4.2, Table 4.3 has been excluded.

In the Brazilian digital television system, according to ABNT NBR 15603-1:2007, Subclause 5.2, Table 5, the *local time offset descriptor* description has been changed to meet general time offset definitions. The new description in ABNT NBR 15603-1:2007, Subclause 5.2, Table 5 is:

Local time offset descriptor: Descriptor used to describe the time difference between the present time and time indication during daylight saving time.

### **6.3 PID used for Table transmission**

The ECM-S and EMM-S Tables have been excluded from ABNT NBR 15603-1:2007 because this standard refers to terrestrial broadcasting only.

The 4<sup>th</sup> and 5<sup>th</sup> lines after the title in ARIB STD-B10:v4.6:2007, Subclause 5, Table 5.1, have been excluded from ABNT NBR 15603-1:2007, Subclause 6.1 Table 7.

### **6.4 Table identifiers and standard transmissions**

The ECM-S and EMM-S Tables have been excluded from ABNT NBR 15603-1:2007, because this standard refers to terrestrial broadcasting only.

The words ECM-S and EMM-S on the 21<sup>st</sup> and 22<sup>nd</sup> lines after the title in ARIB STD-B10:v4.6:2007, Subclause 5.1, Table 5.1, have been excluded from ABNT NBR 15603-1:2007, Subclause 6.2 Table 8.

### **6.5 Identifier of descriptor**

The PID identifications for the *Satellite delivery system*, *Cable delivery system* and *Cable TS division system* descriptors have been excluded from ABNT NBR 15603-1:2007, because this standard refers to terrestrial broadcasting only.

The 11<sup>th</sup>, 12<sup>th</sup> and 64<sup>th</sup> lines after the title in ARIB STD-B10:v4.6:2007, Subclause 5.1, Table 5.3, have been excluded from ABNT NBR 15603-1:2007, Subclause 6.3, Table 9.

### **6.6 Data construction of descriptors**

The "Data Construction of satellite delivery system descriptor" has been excluded from ABNT NBR 15603-1:2007, because this standard refers to terrestrial broadcasting only.

The Figure 6-23 in ARIB STD-B10:v4.6:2007 has been excluded from ABNT NBR 15603-1:2007, Subclause 7.2.

*In the Japanese digital terrestrial television system, the structure of three descriptors related to conditional access, CA EMM TS descriptor, CA contract information descriptor, and CA service descriptor are defined only in ARIB STD-B10:v4.6:2007.*