

Planning and Regulations Department
ANATEL

Developing countries needs on broadcasting: Brazilian case study

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ITU-D Focus Session on Broadcasting for new
applications



Digital Switchover in Brazil



Adoption: In June 2006, the Brazilian government adopted, by means of Decree n. 5820/2006, the ISDB-T system as a base for the Digital Terrestrial Television (DTT) transmissions. On December 2nd, 2007, the official system launch date in the city of São Paulo.



Strategy: ASO in two phases, the first between 2016 and 2018, in all capitals and other main cities to allow for 4th generation IMT advanced system in the 700 MHz, and the second phase, which started in 2021 to complete the switchover in all locations where analogue TV is still in operation.



Governance: Transition activities funded by the 700 MHz band auction in Brazil and operationalized by a third-party entity, constituted by the winning bidders on the auction. A Steering Committee constituted by telecom providers, broadcasters and the Ministry of Communications and Anatel was also instituted to decide on important guidelines and milestones.



Deadline: The deadline for the analogue switch-off in the areas of the second phase was set to December 2023, based on a projection of the expected lifespan of existing analogue TV sets in Brazilian households.

Needs on Broadcasting: Brazil

- ❖ First and foremost, Brazil needs to complete its digital switchover and shutdown the last analogue TV stations in remote areas and municipalities.



- **First phase results:**

- 1,379 municipalities, comprising 129.6 million people, completed the analogue switch-off, including all state capitals, metropolitan areas, and other areas where the analogue switch-off was required to clear the 700 MHz band, corresponding to 62.6% of the Brazilian population.

- **Second phase targets:**

- The second phase comprehends 2,896 municipalities, some of them having partially digitized its transmissions, and others with analogue TV only (1,639 municipalities).
- **Digitaliza Brasil Program.**

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❖ Digitaliza Brasil Program:



Objective: Completing the transition to digital terrestrial television by December 2023, the final deadline for the switch-off;



Actions:

- Continue the distribution of DTV reception kits to low-income families, where deemed necessary;
 - Estimates are that 4.2 million DTV kits will be distributed (in addition to the 12 million that were distributed in the first phase of the ASO);
- Digitize stations in analogue-only locations;
 - Acquiring and installing DTV transmitters for the analogue broadcasters, as well as bearing costs with regulatory demands (mainly taxes and engineering labour);
 - Standardized transmission assembly will be used as a reference for the deployment of stations in each of the municipalities, which can be modified to meet local conditions;
 - The equipment will allow sharing of common infrastructure between up to 8 DTV broadcasters' channels.

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❖ Evolution of the DTV in Brazil:



▪ TV 3.0 Project:

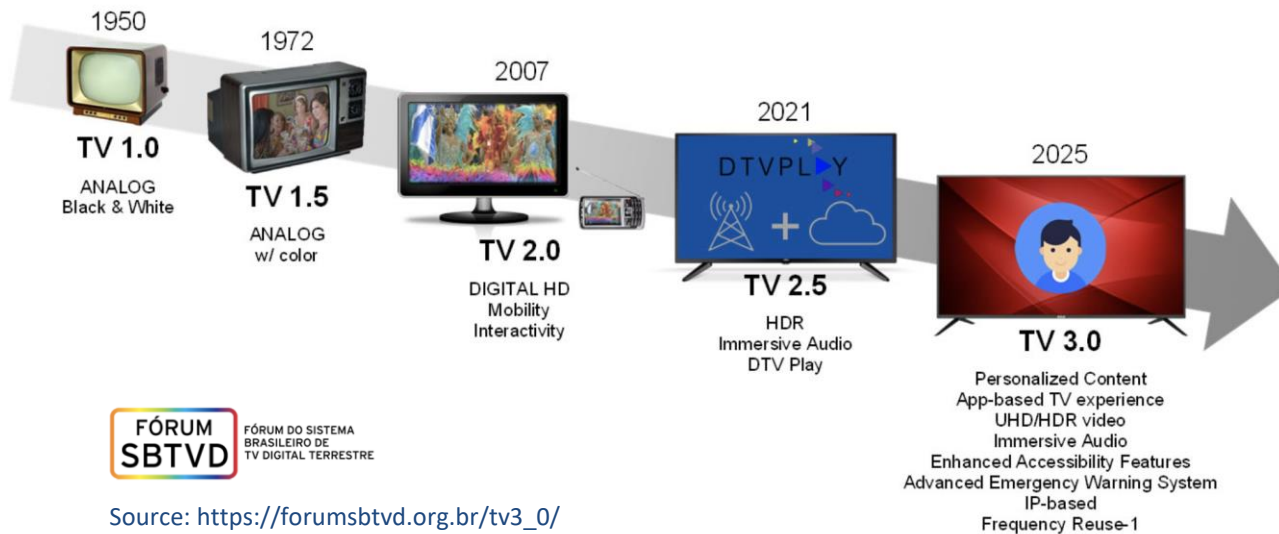
- First generation Digital Terrestrial Television system:
 - **ISDB-T standard, incorporating technological innovations proposed by Brasil** (MPEG-4 AVC - H.264 video coding, MPEG-4 AAC audio coding, closed caption character set for the Brazilian Portuguese, and a new middleware for interactive applications (Ginga, H.761);
 - ✓ The SBTVD Forum developed the first SBTVD standards, that were published in 2007. Since then, the standards have been continuously revised and updated by the Forum.
 - ✓ The technological innovations proposed by Brazil incorporated into the International ISDB-T standard, which is currently adopted by 20 countries;
- Following the take up of the deployment and the innovations incorporated and planned to be included to the digital television standards and systems, the **SBTVD established the TV3.0 Project**, aiming at incorporating those **latest evolutions to the Brazilian digital television system**.

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❖ Evolution of the DTV in Brazil:

▪ TV 3.0 Project (cont.):

Background – Terrestrial TV Evolution in Brazil

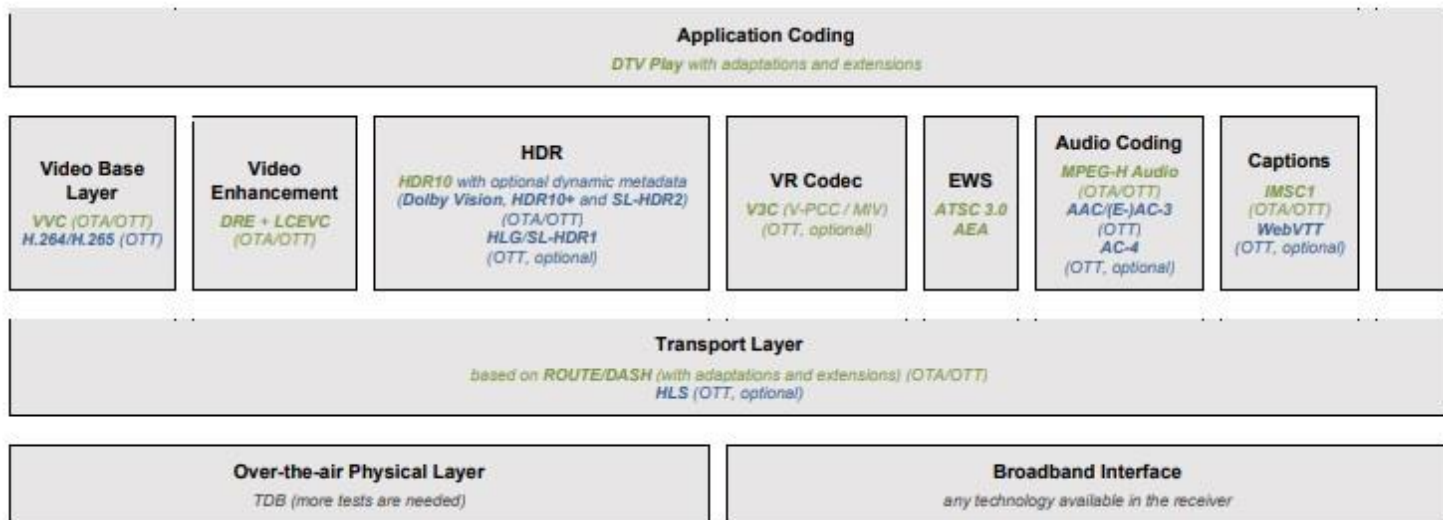


Needs on Broadcasting: Brazil

❖ Evolution of the DTV in Brazil:

▪ TV 3.0 Project (cont.):

- The SBTVD Forum issued a **Call for Proposals (CfP) for the TV 3.0 Project** targeting 6 system components: (i) Over-the-air Physical Layer; (ii) Transport Layer; (iii) Video Coding; (iv) Audio Coding; (v) Captions; and (vi) Application Coding.
- SBTVD expected to **issue new technical specifications**;
- **An end-to-end demonstration of TV 3.0, integrating all its system components, is planned for August 2024. TV 3.0 is expected to launch in 2025**
- **Further information can be obtained at https://forumsbtvd.org.br/tv3_0/.**



Thank you!

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