ITU - TRAI International Training Programme on "Emerging Trends in Broadcasting"

New Delhi, India
11 October 2019

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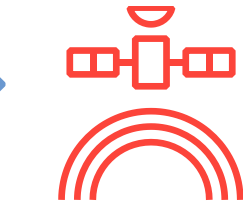
ITU Regional Office for Asia-Pacific

Meet us

What we do

‘Committed to Connecting the World’

3 Sectors



ITU Radiocommunication

Coordinating radio-frequency spectrum and **assigning** orbital slots for satellites

ITU Standardization

Establishing global standards

ITU Development

Bridging the digital divide

193 MEMBER STATES

+900 MEMBERS FROM THE PRIVATE SECTOR, ACADEMIA AND INTERNATIONAL AND REGIONAL ORGANIZATIONS

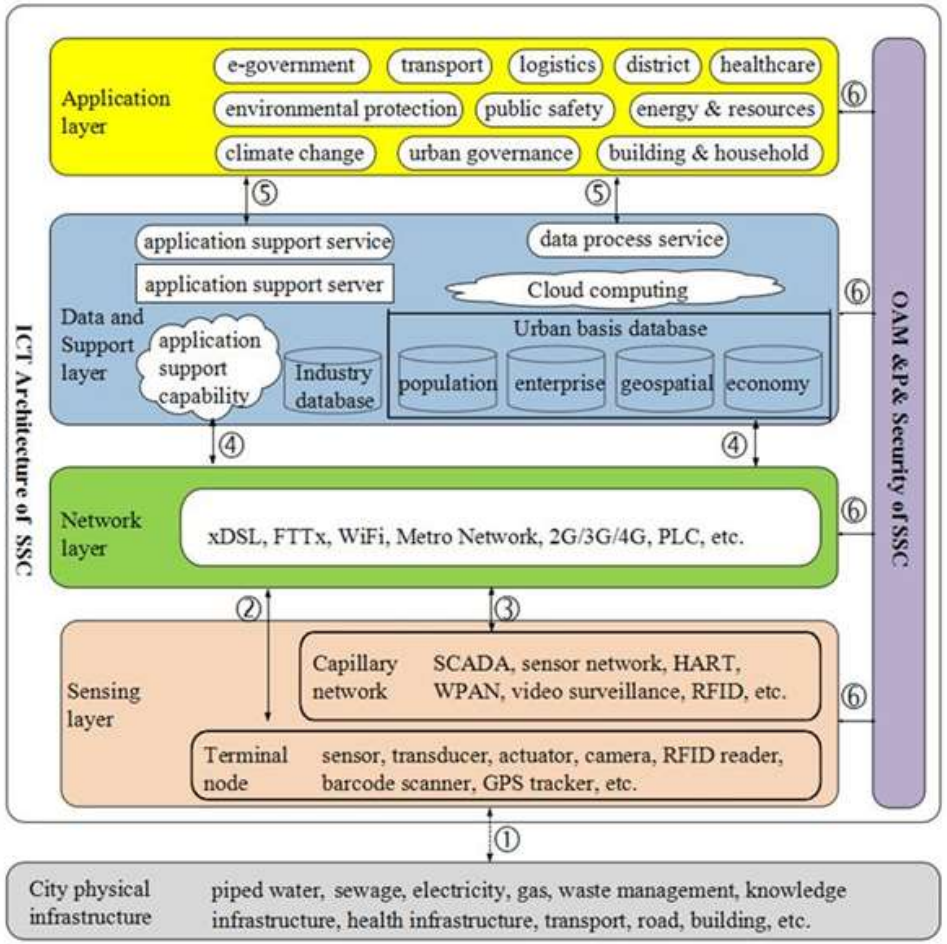
Digital transformation is key to accelerate our progress towards SDGs..

17 Sustainable Development Goals

169 Targets

Changing paradigm of networks in the digital society..

Digital transformation requires an ecosystem approach



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Enabling Environment , Digital Inclusion

Skills and capacity Building

Innovation

Source: ITU-T Focus Group on Smart Sustainable Cities

Asia-Pacific Regional Initiatives On Broadcasting

ASIA-PACIFIC REGIONAL INITIATIVES 2018-2021

- Addressing special needs of LDCs, SIDs including Pacific island countries and LLDCs
- Harnessing ICTs to support the digital economy and an inclusive digital society
- Fostering development of infrastructure to enhance digital connectivity
- Enabling policy and regulatory environments
- Contributing to secure and resilient environment

ASP3: Fostering development of infrastructure to enhance digital connectivity

Objective: To assist Member States in the development of telecommunication/ICT infrastructure in order to facilitate provision of services and applications on that infrastructure.

Expected results

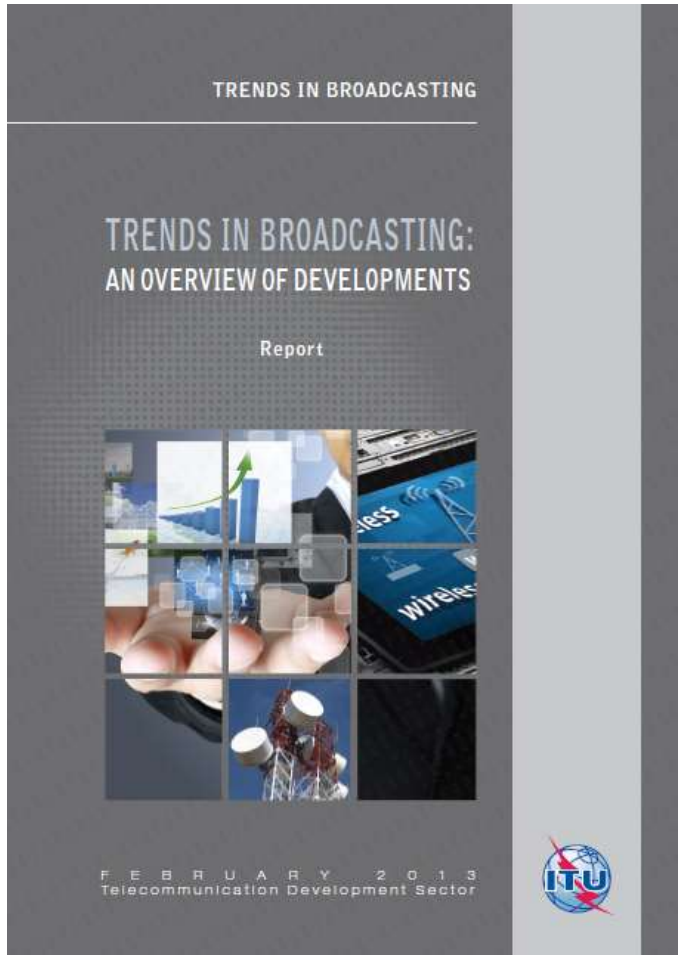
1) Migration/transition of analogue networks to digital networks, application of affordable wired and wireless technologies (including interoperability of ICT infrastructure), and optimized use of the digital dividend;

The Challenge of Managing Digital Content: ITU-TRAI RR 2017

- This paper highlights the disrupting yet empowering ability of digital content, before going on to outline the issues of traditional content regulation in a digital environment.
- The paper comes with recommendations for consideration of regulating digital content, both commercial and user-generated and suggests flexible and future-proofed regulatory approach is key in such an innovating and dynamic technological environment.
- The structure of this paper is as follows:
  - ✓ Exploring what is meant by digital content and how it is disrupting and empowering (see section 2);
  - ✓ (Highlighting the challenges with traditional content regulation in a digital environment (see section 3);
  - ✓ (Outlining possible solutions and frameworks for regulating digital content (see section 4); and
  - ✓ Conclusions and issues for discussion (see section 5).

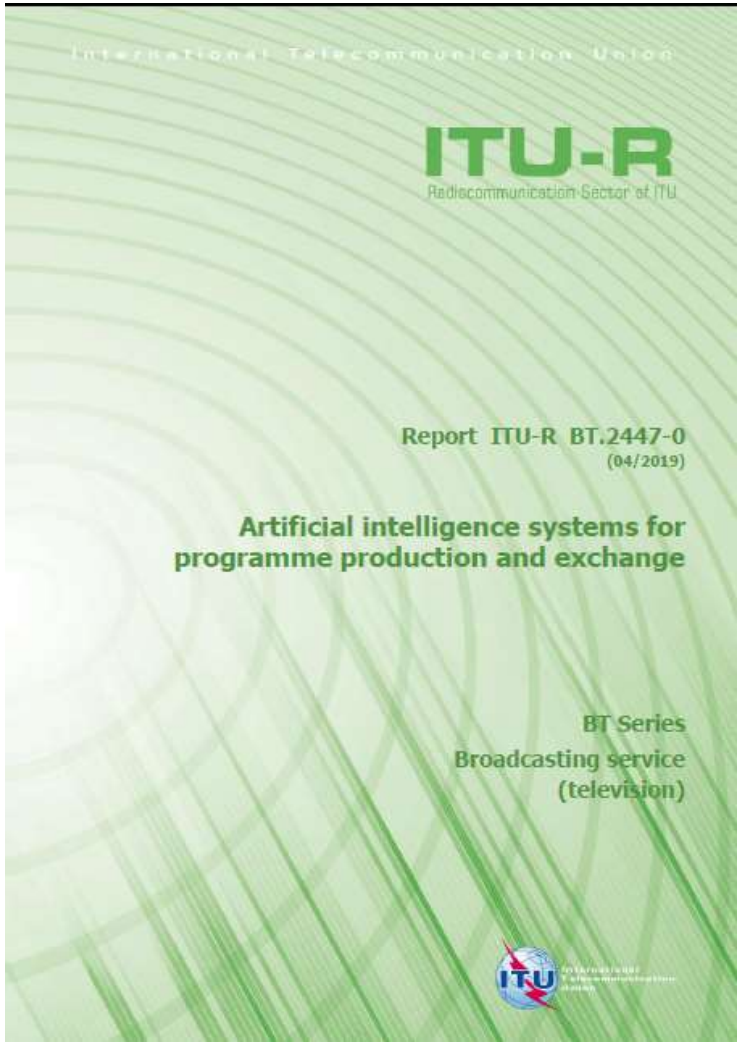
Trends in broadcasting: An overview of developments

- ITU Publication “Trends in broadcasting: An overview of developments” is a comprehensive guide to inform and educate stakeholders in broadcast and media.
- Report presents transition to digital terrestrial broadcasting for both television and radio
- The report deliberates spatial definitions - HD, UHD-1 and UHD-2, compression systems.



ITU Report on AI systems for programme production and exchange

- New broadcasting technologies driven by Artificial Intelligence (AI) are being introduced to the broadcasting workflow.
- These technologies intend to increase productivity, efficiency and creative opportunities during programme production, and to convey information to viewers quickly, accurately and automatically.
- AI has been deployed in international events to optimise and gain operational efficiency to edit short video clips.
- AI has also been deployed in many broadcast operations including language translation, AI-driven announcer, meta-data creation, to animate sign language, captioning, face detection and recognition.



ITU Initiatives on Broadcasting

- ITU-T SG 9 - Broadband Cable and TV
- ITU-T SG16 - Multimedia
- ITU-R SG6 - Broadcasting Service
- ITU-D SG1 /Q2/1 - Strategies, policies, regulations and methods of migration and adoption of digital broadcasting and implementation of new services
- ITU-D SG2 - ICT Services and applications for the promotion of sustainable development
- IRG-AVA - Intersector Rapporteur Group Audiovisual Media Accessibility
- IRG-IBB - Intersector Rapporteur Group on Integrated Broadcast Broadband

ITU Workshops on Future of the Television

- **2018**
  - 25-26 January, Geneva: Future of Cable TV

    https://www.itu.int/en/ITU-D/Regional-Presence/Europe/Pages/Events/2018/FCTV/The-Future-of-Cable-TV.aspx
  - 26 November, Bogotá: Future of Television for the Americas

    https://www.itu.int/en/ITU-T/Workshops-and-Seminars/201811/Pages/default.aspx
- **2019**
  - 7 June, Geneva: Future of TV for Europe

    https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20190607/Pages/default.aspx
  - 8 October, Geneva: Workshop on "The Future of Media"

    https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20191008/Pages/programme.aspx
  - 9-11 October, New Delhi, "Emerging Trends in Broadcasting"

    https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Pages/Events/2019/ITU-TRAI-International-Training-on-Emerging-Trends-in-Broadcasting.aspx
  - Mid-December, ARB region: "Emerging trends in Broadcasting"
- **2020**
  - China: Future of TV in Asia-Pacific region

Close cooperation among the 3 sectors: TSB + BDT + BR organization and contributions

Some relevant ITU-D Publications on DTTB

- Roadmap preparation

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/GuidelinesAnalogueDB_2014_E.pdf

- DSO database

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/DSO/Pages/default.aspx

- Licensing toolkit

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/Licensing%20Toolkit%20-%20DTTB.pdf

- Interactive multimedia services

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/InteractiveMultimediaServicesASP.pdf

- Case studies: Australia, Japan, Thailand

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/DTTB_CaseStudy_Australia.pdf

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/DTT_FieldStudy_Japan.pdf

https://www.itu.int/en/ITU-D/Spectrum-Broadcasting/Documents/Publications/DTT_Thailand.pdf

National Roadmaps for Transition from Analogue to DTTB

Cambodia

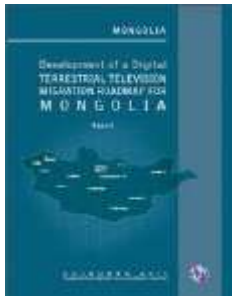
Fiji

Indonesia

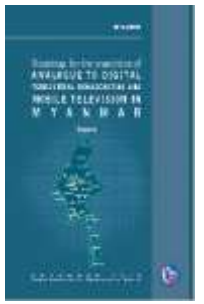
Lao PDR

Maldives

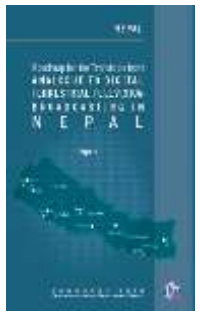
Micronesia



Mongolia

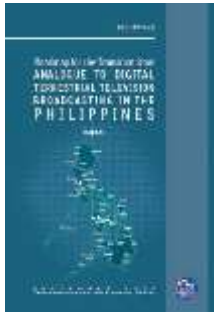


Myanmar



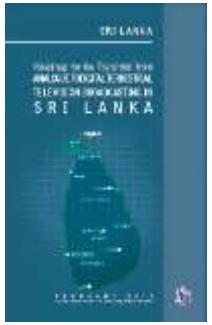
Nepal

Papua New Guinea



Philippines

Samoa



Sri Lanka

Thailand

Tonga

Vanuatu

- Afghanistan
- Bangladesh
- Bhutan
- Kiribati
- Nauru
- Solomon Islands
- Timor Leste
- Viet Nam

National Roadmaps for Transition from Analogue to Digital Terrestrial Television Broadcasting (24 countries in the APAC region, **10 in Pacific**)

Objectives

- Latest technologies being deployed and trends related to broadcasting sector and a summary of the ITU assistance in the Asia-Pacific region on transition from analogue to digital broadcasting
- Opportunities for broadcasters and telcos to embrace OTT while carrying out their traditional broadcasting over the air and IPTV delivery on their networks while offering CDN services
- Share real experiences and brainstorm on possible solutions to address existing as well as emerging challenges in digital broadcasting technologies
- Policy and regulatory options to encourage innovation and address consumer choices
- Designed for middle and senior level managers from telecommunication/ICT policy-makers, regulators, industry, academia from ITU membership

Exploring the Future of Media

- What are the prospects for the future of video and other media?
- What are the new technologies and forms of media entering the fold?
- How will innovations in fields such as virtual and augmented reality deliver highly immersive new media experiences?
- How will the emerging technology of artificial intelligence affect our use of media?
- And what are the new risks to be considered?
- How can we ensure that the future of media is accessible to people with visual impairments?
- Will our increasing dependence on new media affect our ability to discern reality from fiction?
- How will we verify digital integrity to counteract the threat of manipulated content?

https://www.itu.int/en/ITU-T/Workshops-and-Seminars/20191008/Pages/default.aspx

Topics

- Present Status, Trends, New Technologies in Broadcasting Sector
- Broadcasters' and Telcos' Perspective on OTT – IBB, IPTV vs. OTT
- Business Models for OTT
- Broadband Over Cable TV Network
- Broadcast off-load Technologies
- CDN Networks for Media Delivery and Distribution
- IBB and OTT Media Services in the Asia-Pacific
- Emerging Trends in Devices for Content Distribution
- Emerging Trends in Rating and Weightage of Different Media
- AI, ML and Cyber Security
- Regulatory Policy, Practices & Challenges in the Era of Convergence (of Services) Policy and Regulations
- Summary, Conclusions, Lessons Learnt and the Way Forward

Outcome

- Build human and institutional capacity on technology trends , policy and regulatory aspects
- Sharing country experiences of new and emerging models
- ITU initiatives on Digital Broadcasting / ASO and assistance for countries in Asia-Pacific region
- Media Release by TRAI
- Outcome Report covering key deliberations under each session
- Encouraged to submit the outcome to the ITU D Study Group

ITU : I Thank U