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HDFI Observatory on OTT linear services: Objectives and activities

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Summary

- Background notes on OTT linear services today
- Objectives and motives for an OTT Observatory within HDFI
- Organization structure and relations to the other bodies within HDFI
- Main Activities

With OTT linear services we are confronted with a very complex scenery

❑ For linear service on broadband the playground or paying field is much larger than licensed broadcasters

❑ The value chain is much larger (e.g. the role of CDN providers is unprecedented and challenging)

❑ If service providers keep going their own way, things may become too difficult for the users. We already see how the user experience is challenged: too many tv interfaces, each OTT provider has its own "app" or "widget" to be deployed on all major vendor platforms

❑ The system of liaisons (more or less formal) as of now, does not cleary suffice

➢ An Observatory at HDFI level has been deemed necessary: constituted on 9 June 2021, with representatives from each HDFI Associate, has met on July, September and October. Will keep meeting every two months

OTT linear service deployment at User interface: the current complexity

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Services / Devices	...	Serv $_k$	...
PC browser	yes	yes	yes
		If the user knows the specific *url*	
...			
Dev $_j$		**App** $_{k,j}$	
...			

Services = {RaiPlay, MediasetPlay, TIMVision, Dazn,iPlayer, Netflix, Amazon, AppleTV+, ...}

Devices = {iOS, Android, AppleTV, AndroidTV, FireStick, TimBox,   TV with its own branded operating system ...}

1. Check *whether* an App for the Service K is available on device platform J
2. Download the App
3. Enjoy watching (good luck with variety of UI)

❑ The user should deal with an unbound number of apps
❑ The user is biased to consume services with apps preinstalled on his device
❑ The service provider should deploy an App for each possible receiver platform

We have a new standard to harmonize all of this, as regards **linear services**
DVB-I

The essence of DVB-I

❑ **Objective**:

➤ Every device platform vendor deploys an application suitable to receive all OTT linear services from any provider
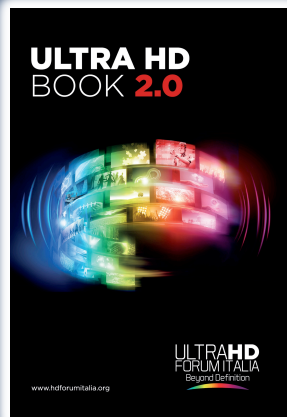
❑ **Conditions**:

➤ Preserve current streaming standards and HbbTV

➤ OTT linear services must be discoverable by the user through a universal TV guide and by search/indexing functions

➤ OTT linear services must be listed in a Common Service Directory

➤ It must be possible to associate preset services to logical channel numbers in the remote

➤ Integration of User Experience for OTT with that of DTT and SAT.

❑ **Reference standard:**

❑ ETSI TS 103 770 v1.1.1 (2020-11) "Digital Video Broadcasting (DVB); Service Discovery and Programme Metadata for DVB-I"

UHD Book 2.0 - Compatible HD and UHD receivers for the Italian market: baseline requirements

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- Published in December 2020
- Errata-corrige in April 2021
- First version to ever mention DVB-I which supersedes a previous linear IP services proprietary spec

The *Foreword* section of UHD Book 2.0, which is the meeting point of an effective internal debate, has been devoted to DVB-I sets out in detail some verifiable conditions that will have to be met for future adoption of DVB-I to take place in Italy, thus confirming the mandatory nature of the specification, while allowing great flexibility for some period to come.

ULTRA HD BOOK 2.0
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UHD Book   Final 2.0

Foreword (DVB-I related)

Among the main highlights of this new volume, we introduce **MANDATORY** support of the new DVB-I standard, which is a candidate to play an important role in linear TV distribution over IP.

This is a potential step of significant innovation for the European and Italian television scenario, while being aware that its implementation on receivers is not necessarily on the current agenda of the entire supply chain, at least until the Italian ecosystem gives signs of commitment to introduce at some point in time the services that this standard will make possible.

Therefore, there is a need to have the widest possible involvement of the value chain, with a process of planning and coordination between radio and television operators, transmission networks, manufacturers of receivers, regulatory authorities as well as certification bodies, in order to develop the most stable conditions to launch a consumer service capable of determining a consolidated and competitive experience of fruition.

The MANDATORY status of DVB-I referred to in Section 7.3 is dependent upon completion of all the following conditions:

1. the DVB-I specification has been ratified by ETSI as International Standard.
2. There have been DVB-I PoC/trials completed by major Italian Broadcasters, showing the real interoperability of an end-to-end system between TV services, network services and receivers.
3. On completion of successful trials as per 2. above, the results of the trials have been used to develop the conditions for a new reference Italian "bollino" for the certification of receivers compliant to the requirements included in the current UHD Book 2.0 volume.
4. The conditions for a new "bollino" requiring DVB-I have been published with 18 months advance notice ("sunrise" period) of launch of the new "bollino".

The MANDATORY "status" for DVB-I included in the body of the volume does apply indeed to the technological requirement; the implementation "conditions", to which the status is subject calls for the implementation of the above-mentioned conditions, so that operators in the supply chain can correctly identify them with respect to realistic market conditions and the commitment of the parties involved.

We hope that this approach will give more confidence to the operators of the supply chain and at the same time spread awareness about the involvement and commitment to be given to allow the introduction of DVB-I technology in the best conditions of use for its success.

DVB-I support by the UHD Book 2.0.

❑ The MANDATORY status of DVB-I referred to in UHD Book 2.0 is dependent upon completion of all the following conditions:

1) The DVB-I specifications WILL have been ratified by ETSI as an I.S. (International Standard).
2) DVB-I PoC/trials (E2E) WILL have been executed and completed by the major Italian broadcasters
3) The completion of the above mentioned PoC/trials WILL have created the commercial conditions for a new DVB-I "bollino" suitable for the compatibility certification of the receivers.
4) The DVB-I "bollino" profile WILL HAVE BEEN published 18 months before the launch ("sunrise" period).

❑ Support of the following bodies and institutions is required to consolidate the above conditions:

❖ Ministry (MISE) and Regulator (AgCOM)
❖ Trade Associations (CRTV; ANITEC), and Supply Chain (Consumers, Resellers, GDO, etc.) Market (C.E Industry, etc.)

Main issues with OTT linear services

❑ Service discovery: non discriminatory access of Content Providers

    ❖ Regulations are needed, before entering operational exercise

❑ Service Directory Models

❑ CSR (Central Service Registry) at global level (e.g. DVB-run)

❑ Local Service Registry, as a branch of the CSR

❑ Who manages what: legislation and Regulatory Aspects

❑ Compliance to the new technical standard DVB-I

❑ Receiver support of Service Directory

❑ User experience:

    ❖ should be as simple as the use of terrestrial, cable and satellite broadcast services.

    ❖ Should see no more latency than terrestrial, cable and satellite broadcast services

Objectives and motives for the Observatory

- Monitor DVB and other Forums activities and outcomes on the matter of OTT linear services, and specifically on DVB-I uptake process
- Monitor regulations across Europe and regulations in Italy
- Monitor trials throughout Europe and Italy
- Possibly draft reports on OTT linear services progress in Europe and in Italy
- Host demos and showcases in HDFI-organized events
- Inject major technical findings in the production process of future UHD Book versions

Relations to other bodies within HDFI

Board of Directors

Observatory – Linear OTT Services
International and national initiatives
Monitoring of ongoing DVB activities
Coordinator: S. Trigila

Reporting

**GDL
JTG**

MDEX
Media Distribution
Experience Group

Panels with stakeholder organization (e.g. Confindustria Radio TV and Anitec)

Focus: progress in OTT linear services

❏ Focus: live services (streamed while shooting)
  e.g. football matches

❏ Catch-up of linear services

❏ Mass-audience services

❏ Niche-audience services

Note: on-demand services are currently out of scope

Main activities

❑ Monitoring of technical forums (DVB, 3GPP, EBU, HbbTV, Ultra HD Forum)

❑ Liaisons with relevant category organizations in Italy: CRTV, ANITEC

❑ Mapping of linear services already in place

❑ Monitoring of PoCs in Italy

❑ Monitoring/influencing the growing Service Directory scenario
  ❖ National, European, International

❑ Market aspects (data and projections)
  ❖ Receivers enabled with OTT linear service reception standards (DVB-I)

❑ User Experience across the service delivery chain

❑ **Regulatory Aspects** (AGCOM, MISE and other European regulators)

Monitoring of POCs in Italy

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- ❑ Identify running POCs, any type of PoC
- ❑ OTT-generic or DVB-I compliant
- ❑ For each of them, characterize
  - ❖ Leading broadcaster(s) / players
  - ❖ Purpose
  - ❖ Services involved
  - ❖ Infrastructure involved
  - ❖ On-going results and test data gathering
  - ❖ Main feedback items from the PoCs
- ❑ Include novel OTT mass-delivery commercial services as "mega" PoCs
  - ❖ Understand weaknesses and strengths
  - ❖ Understand overall audience satisfaction
  - ❖ Draw lessons

HDFI policy with respect to PoCs

- ❑ PoCs are organised by initiatives from groups of players
- ❑ HDFI per se does not organize nor runs any PoC
- ❑ HDFI observes with interest any trial/PoC involving one or more of its members
- ❑ HDFI is glad to report about a PoC if permitted by the owners
- ❑ HDFI can host demos at its organised events

- ❑ *THE DEMO AREA FEATURES A DEMO OF A POC related to DVB-I*

Thanks for your kind attention