

CHALLENGES IN DVB-T2 MIGRATION



Jan Macku
Business Development



Iga Mubarak
Business Development

ZENTERIO OS

Zenterio offers TV operators an independent operating system for TV client devices. The Zenterio solution reduces complexity and enables TV operators to launch new, advanced services faster.

What's the value for
National Broadcaster,
Regulator, Reseller
and others?



Technical Specification of TV client device (DVB-T2 STB)

Cost efficient STB for the mass market which follows DVB-T2 standards and available for further deployment Over the Air upgrade.

Three inconsistencies in Tech spec provided by Regulator;

1	RF input via a PAL-B/G modulator
2	Controls to be provided on the front panel, Menu, P+, P-, V+, V-
3	STB should support a DVB-CI+ (Plus) (Common Interface) slot



TECH. SPECIFICATION OF STB




1	RF input via a PAL-B/G modulator	This is rather old component with high cost (3-5 USD) for integration with minimum TV' s on the market.
2	Controls to be provided on the front panel, Menu, P+, P-, V+, V-	Modern STB and its management is handled by Remote Control (RCU) only. Every additional hardware (buttons, display etc.) increases the cost of STB. RCU is significantly cheaper than additional hardware.
3	STB should support a DVB-CI+ (Plus)	(Common Interface) slot to any type of conditional access module to be plugged into the set top box a) Inappropriate option b) Better option c) Recommended option

TECH. SPECIFICATION OF STB



a)	Inappropriate option		
	<p>CI+ has to be supported by TV with integrated CI+ client.</p> <p>CI (+) slot – high cost HW in STB 5 USD, CAM module 40 USD, Smart card 5 USD</p>	<p>approx. 50 USD extra to support Pay TV and distribution & logistic issues</p>	
b)	Better option		
	<p>certified STB chipset inside STB for particular CAS</p>	<p>still extra cost of approx. 10 USD for Smart Card reader and Smart Card, distribution & logistic issues</p>	

c)	Recommended option		
	<p>certified chipset in STB for particular CAS with cardless CA.</p>	<p>Cost in total around 2 dollars per STB without distribution, logistics and technical issues with CAM module and Smart Card</p>	

The BEST solution available for linear Pay TV service

Additional features for DVB-T2 zapper

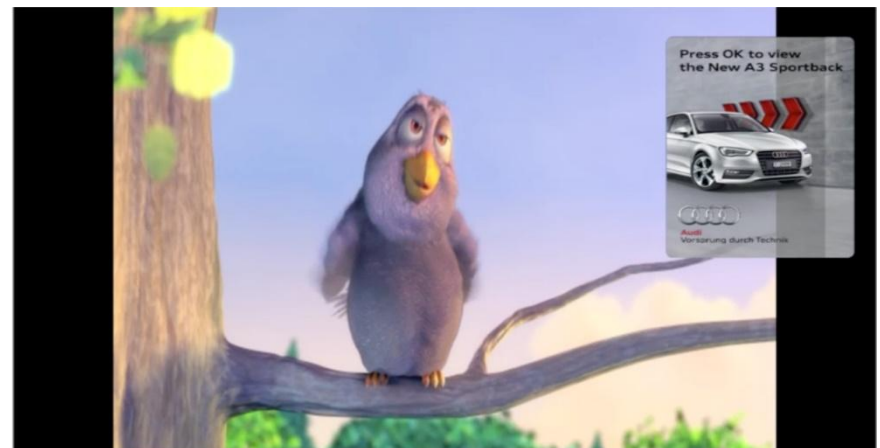
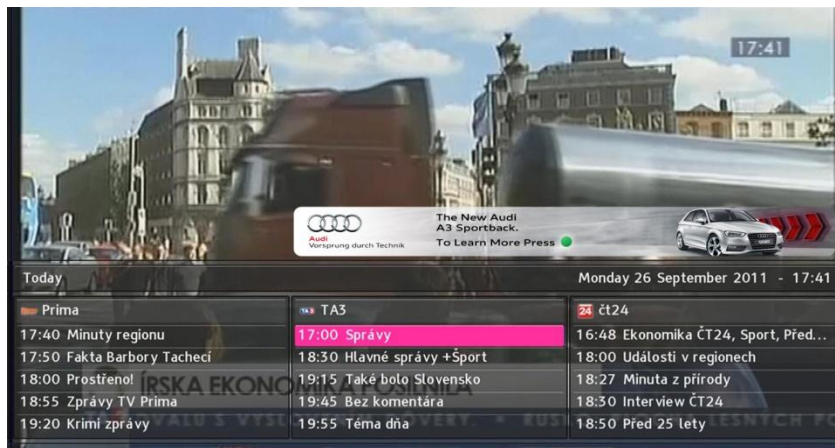
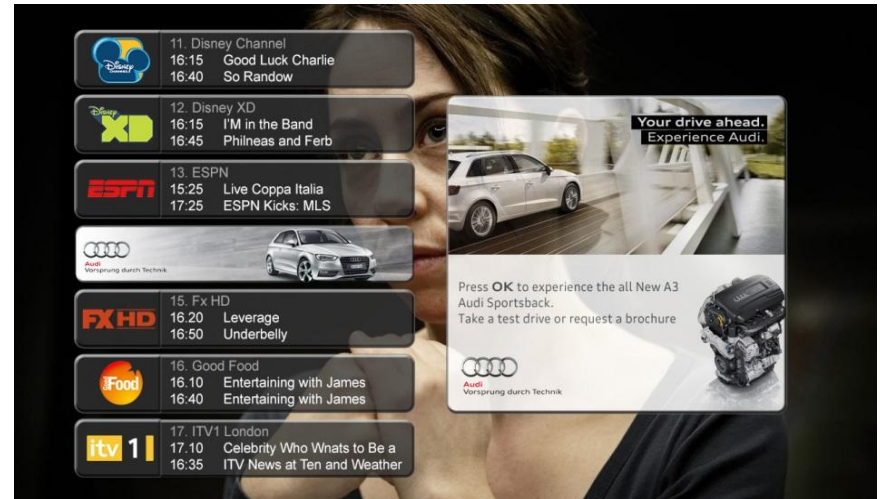
Mandatory - Software in STB has to support **Over the Air** (OTA) functionality;

- Allow to update/upgrade the software according to a latest settings from National Broadcaster and STB vendor's needs
- Implementation of additional services required such of USB PVR (Personal Video Recorder), Advertising tool etc.



How to generate money from DVB-T2 network

Money generator with the plug-in in the software for Advertising tool

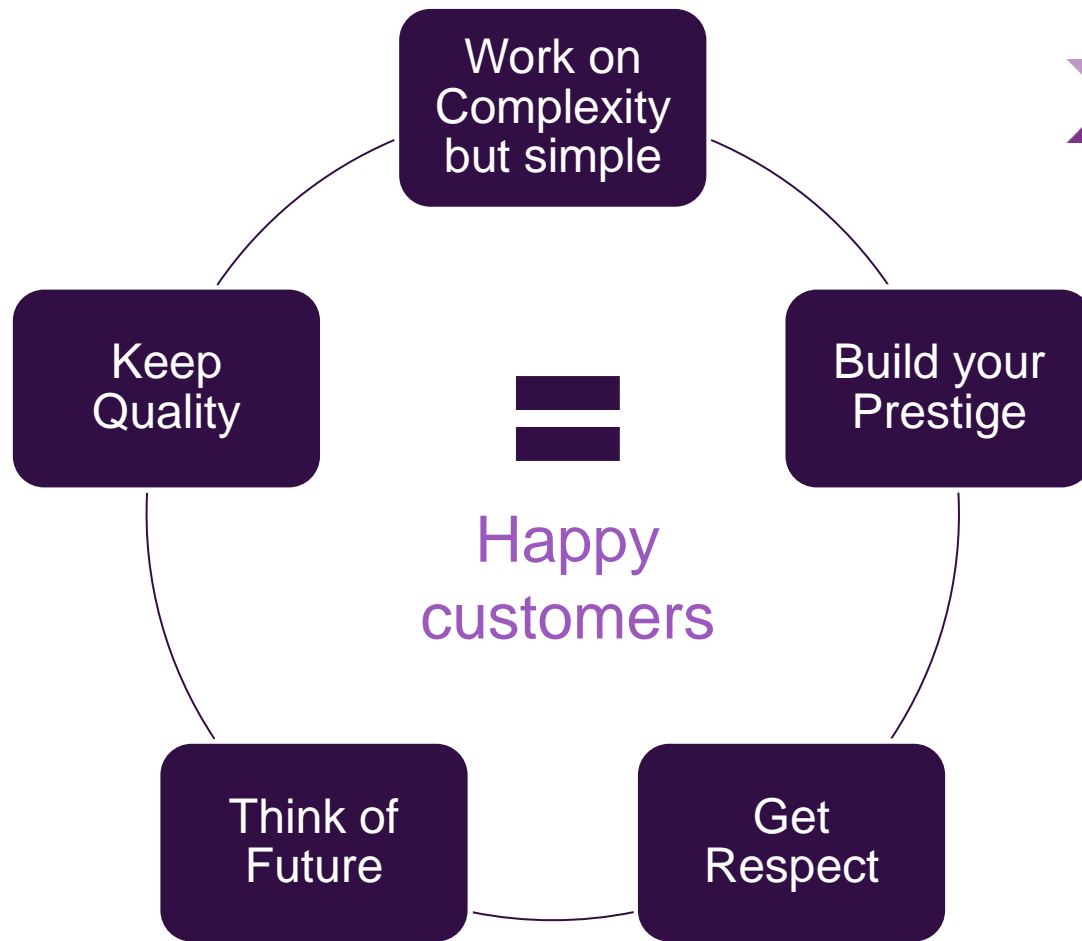


DVB-T2 migration process



DVB-T2 is a challenge with exciting long term process, in summary;

PHASE 1	Analog switch off to DVB-T2 migration with Free to Air channels (FTA). Additional services available such as USB PVR, Advertisement tool etc. with software upgrade Over the Air.
PHASE 2	Support of Pay TV content – (Linear TV services)
PHASE 3	hybrid solution (DVB-T2 STB with internet connectivity) to offer interactive services such of Video on Demand (VOD), TV Archive, Catch up TV, Web services etc. Security chipset in STB is required from CA vendor for DRM client (Digital Rights management)



We are not rich enough to buy cheap things
The cheapest things tend to be the most expensive

Thank you

Jan Macku, Business Development

Iga Mubarak, Business Development