

IPTV Demystified



IPTV – OTT Technology



What is IPTV & OTT ?

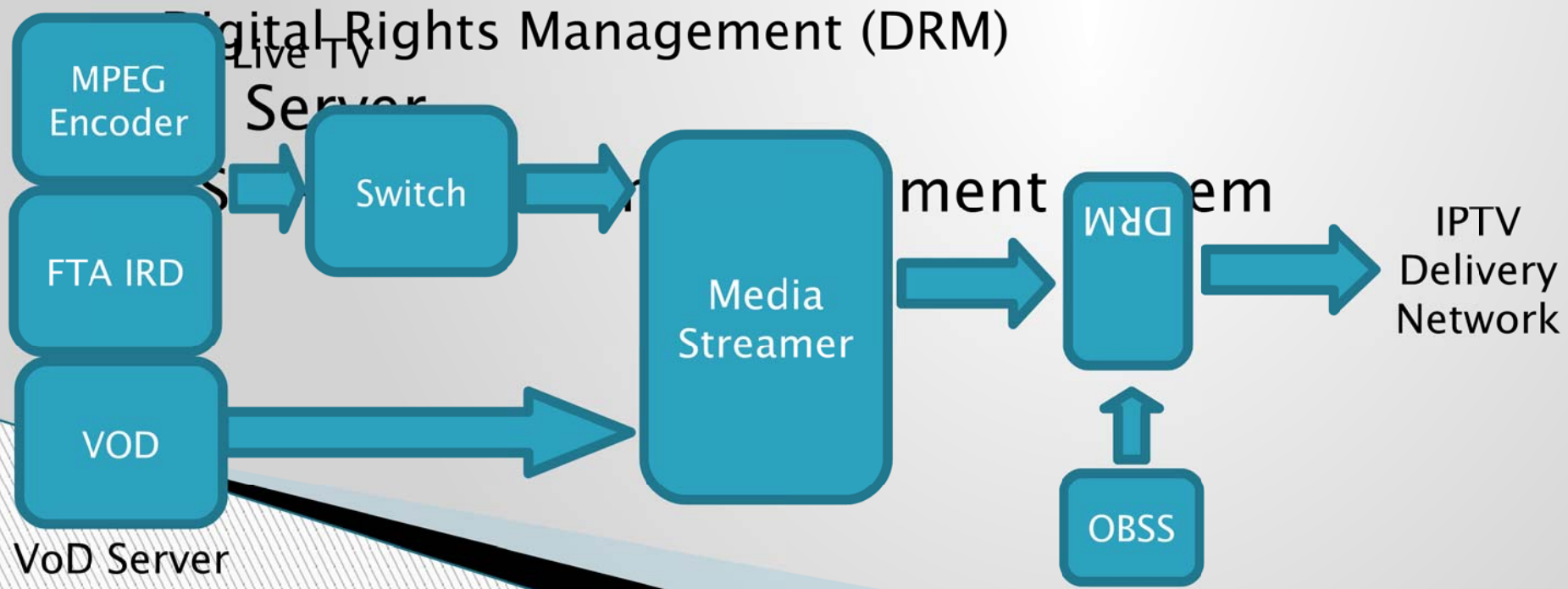
- ▶ Internet networks differ from cable and satellite by offering content through the same client-server model that delivers your email, websites, and other Internet-based services. (IP stands for Internet Protocol, the “language” used to transfer packets of data between computers attached to the Internet network.)
- ▶ In both cases, the consumer requests and receives content via Internet Protocol. The primary difference between IPTV and OTT streaming is that OTT streamed content

OTT & IPTV

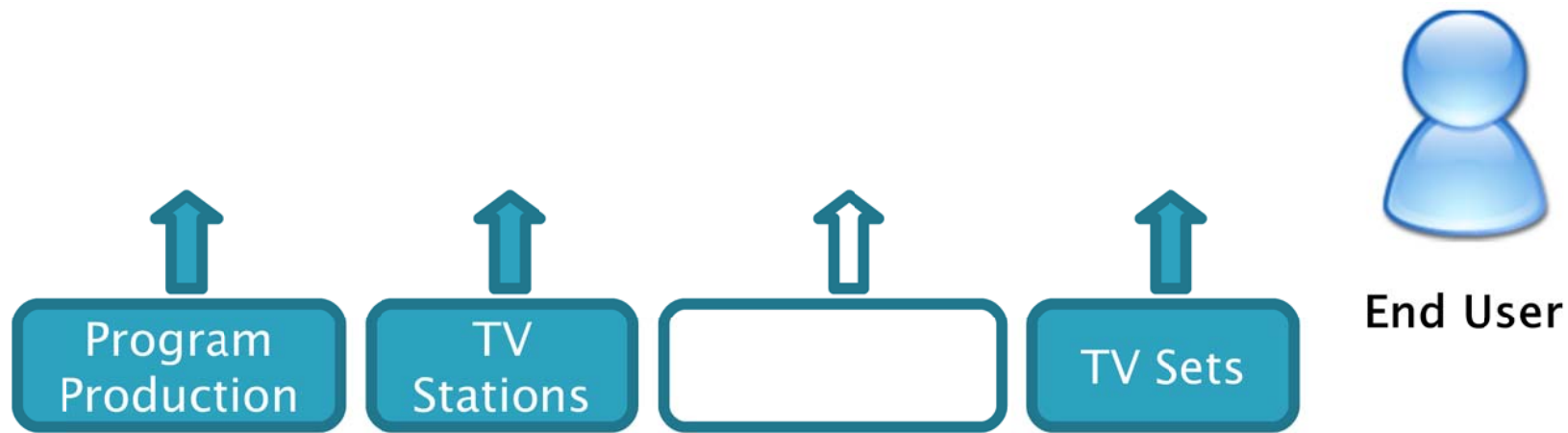
	OTT	IPTV
Transport	Use general internet	Use dedicated, private network
Geographical Reach	Can be access from anywhere in the globe	Limited by service provider
Service quality	Not guaranteed. Totally depends on Internet speed.	Guarantees high quality audio and video
Access Mechanism	Mobile handset / PC / Tablet / OTT STB	Set-Top-Box most of the time
Content Generation	Use own content	Provided by existing TV broadcasters

IPTV Head End

- ▶ Acquiring video from different sources
- ▶ Video Encoding
- ▶ VoD delivering
- ▶ Content security
 - Conditional Access System (CAS)



IPTV Process

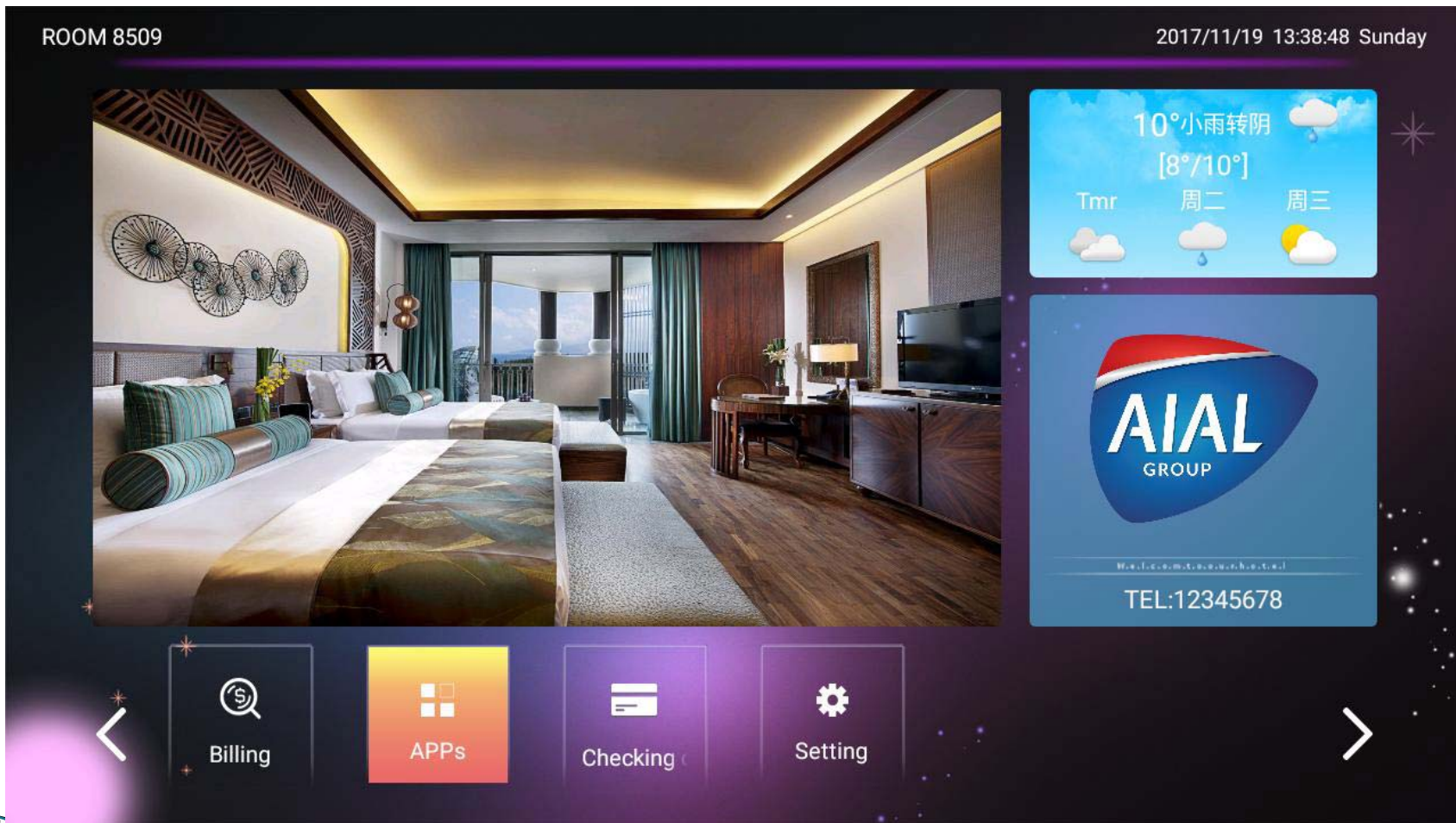


▶ IPTV Content Delivery:

- TV Head End
- IPTV Middleware
- VOD Systems
- Media Content Protection Systems (DRM)
- IP STB

IPTV Services Management

ROOM 8509 2017/11/19 13:38:48 Sunday



The IPTV interface displays a central image of a hotel room (Room 8509) with two beds and a balcony. To the right, a weather forecast shows 10°C with light rain, transitioning to cloudy, with a range of 8°C to 10°C. The forecast includes icons for 'Tmr' (cloud), '周二' (rain), and '周三' (sun). Below the weather is the AIAL GROUP logo, which features a stylized 'AIAL' in white on a blue shield with a red and white top section. The logo is accompanied by the text 'GROUP' and a phone number 'TEL:12345678'. At the bottom, a navigation bar contains icons for 'Billing', 'APPS', 'Checking', and 'Setting', along with left and right arrow navigation buttons.

10° 小雨转阴
[8°/10°]
Tmr 周二 周三

AIAL
GROUP

TEL:12345678

Billing APPS Checking Setting

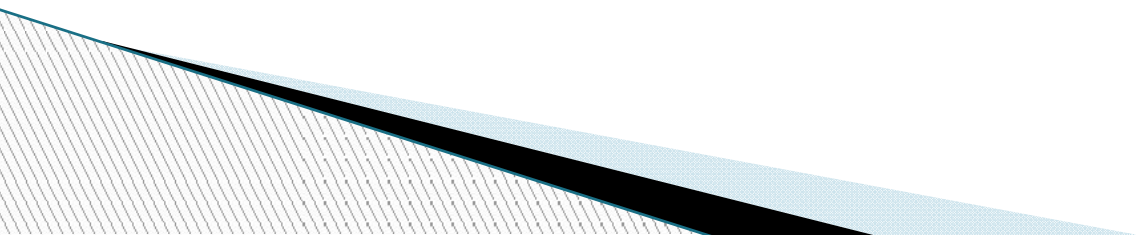
IPTV System Management

The screenshot displays the IPTV Management System web interface. The browser address bar shows the URL `192.168.58.199:8080/iptv2/manager/index.jsp`. The page features a navigation bar with icons for Backup, Restore, Upload, Client Status, and Message, along with a user profile for 'admin'. The main header includes the title 'IPTV Management System' and three buttons: 'Requests', 'Room Services', and 'CheckOut Requests'. A dashboard section shows four statistics: 3 Free, 1 Online, 5 In, and \$0 Today. A left sidebar contains a menu with 'Home' (selected) and other options: Client, Program, Advertisement, Custom, Authority, Data, and System. The main content area, titled 'Home', contains a 'Tips' section with the following items:

- The port of live program need to bigger than 2000
- If you want to import live programs, please download the file [live_program_import.xml](#)
- If you want to import the EPG of live program, please download the file [Text File](#) 、 [Excel File](#)
- [IPTV Management System User Manual](#)

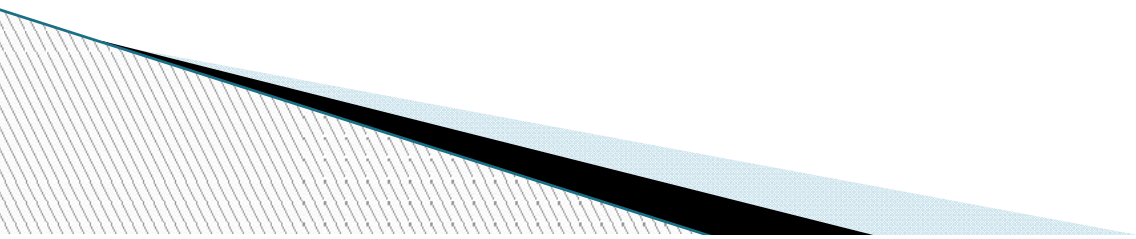
IPTV Technical challenges

- ▶ Bandwidth requirements for streaming
 - High bandwidth continuously
 - Last mile is the problem
 - DSL originally employed for burst (web) traffic, Not support MPEG-2
 - Need to compress the video streams
- ▶ Reducing channel change time
 - Due to multicasting it takes time
- ▶ Providing VoD
 - Need to unicast messages



IPTV Content Security

- ▶ DRM – Protection against theft and piracy of digital media content

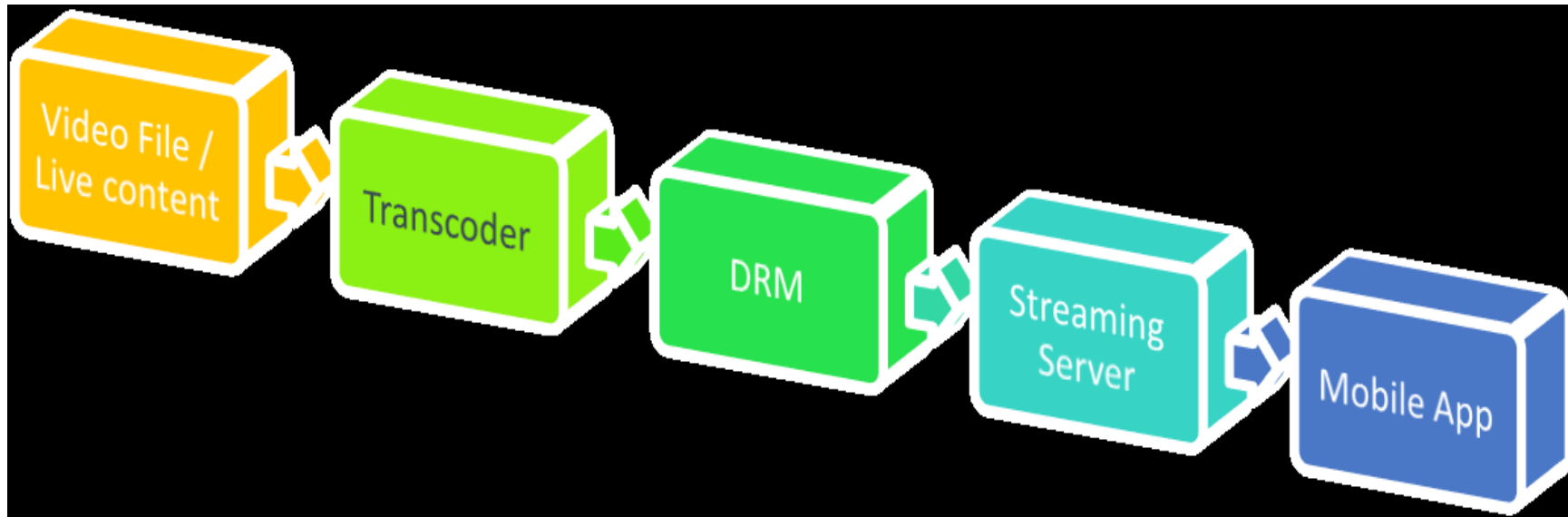


OTT System



Multi-screen services

Content flow for OTT



OTT Network

PIXIFIX™ ENCODERS/TRANSCODERS/OTT PLATFORMS

PIXIFIX provides efficient video processing across the video chain



IP/SDI/ASI input interfaces

dynamic bit rate support

highly customisable feature set

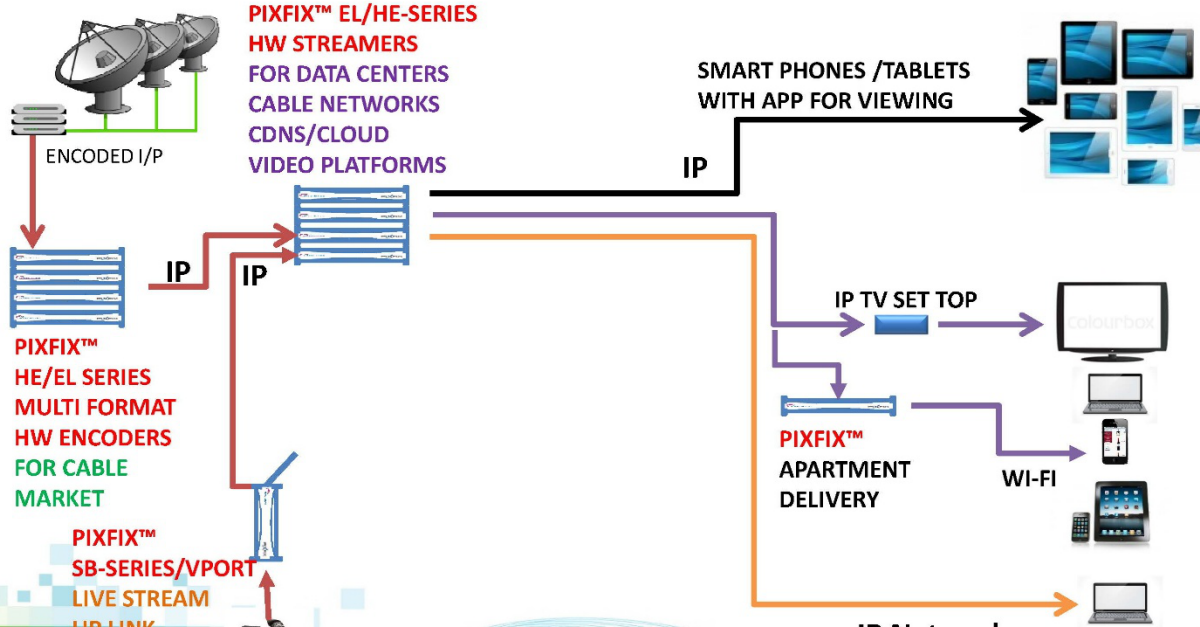
IP/UDP/RTP/MPEG-TS outputs

multiple devices support

dynamic network management

Multiple codec support

3RD party streaming software inbuilt



IPTV / OTT STB



Hybrid STB DVB-C + OTT



Q & A

