



# HBTV Symposium

Working with HBTV



**ITV is an integrated producer broadcaster, operating the largest commercial family of channels in the UK.**

**In addition to traditional broadcasting on our channels we deliver our content on demand through numerous platforms, directly and via the the Hub.**



**Through ITV Studios we produce content for both our own channels and third parties in the UK and overseas.**

**Our distribution business sells finished programmes and formats worldwide.**

**Produces international programming formats such as Come dine with me, and recently acquired Talpa which produces The Voice**

## Important themes for context



**Free to air television**

**Maximising advertising revenue  
across linear or video on demand**

**Public service broadcaster**



## Technical side - ITV in the UK and Global market



digital production partnership

**Digital Production Partnership  
founding member**



**File-based transmission since  
2013**

## Technical groups and organisations



**Digital Television Group  
Council membership**



**HBBTV membership since  
2014**

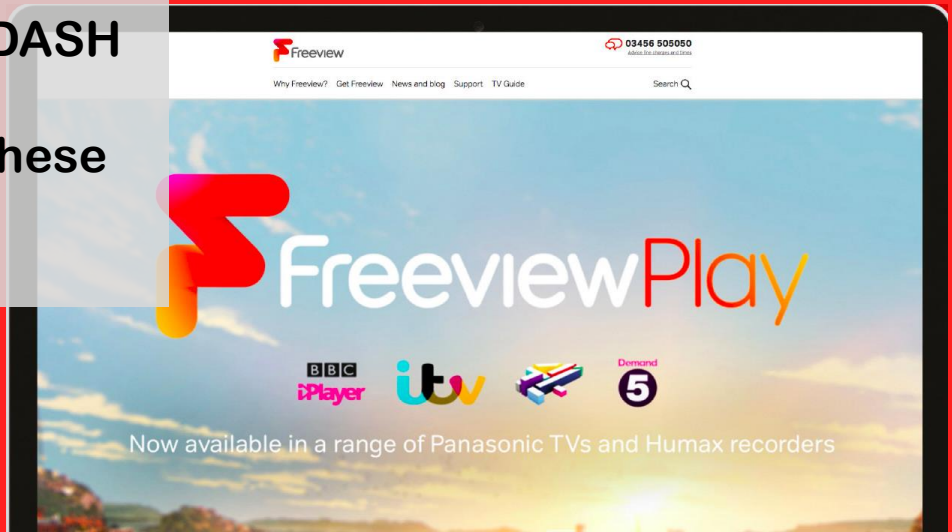


**Shareholder**

**Have been contributing to the HBBTV 2.0.1 specification  
specifically around ad insertion**

## Freeview Play in the UK

- Operates in the horizontal market
- Freeview Play platform launched in UK in 2015 based largely on HBBTV 2.0
- ITV was first broadcaster to launch full VOD service based on DVB DASH video delivery
- Ad insertion: Global first using these technologies



## Highlights of this development

- Using **HTML and the web standards** in the CE market
- **DVB DASH** together with **Ad insertion**
- **No legacy interim streaming format for ITV's VOD service, the ITV Hub**
- **High performing transition times** amongst ITV's VOD platforms
- **Ad insertion performance: Meets a TV experience expectation**



**Viewers expect a TV-like experience when watching video**



# Video Ad insertion timeline



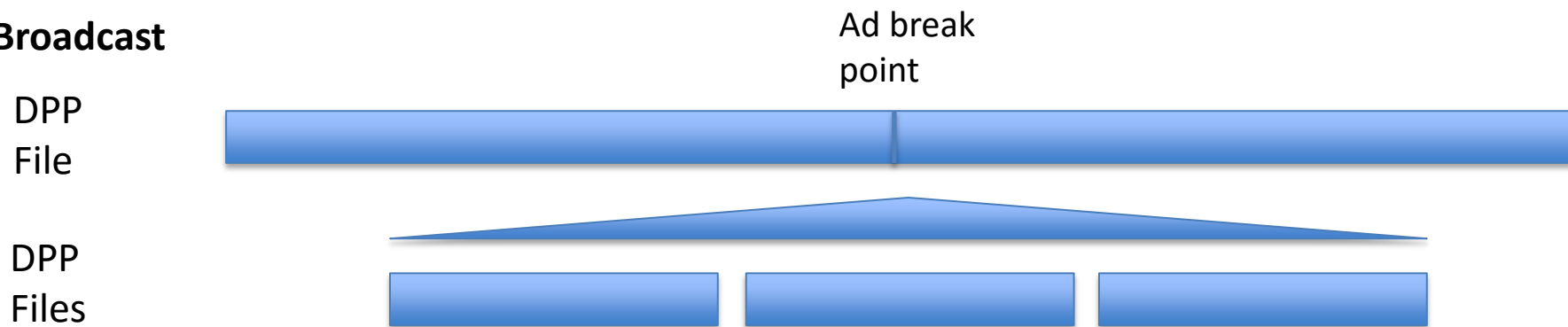
All video on demand platforms use 'Soft parting'

**What is soft parting?**

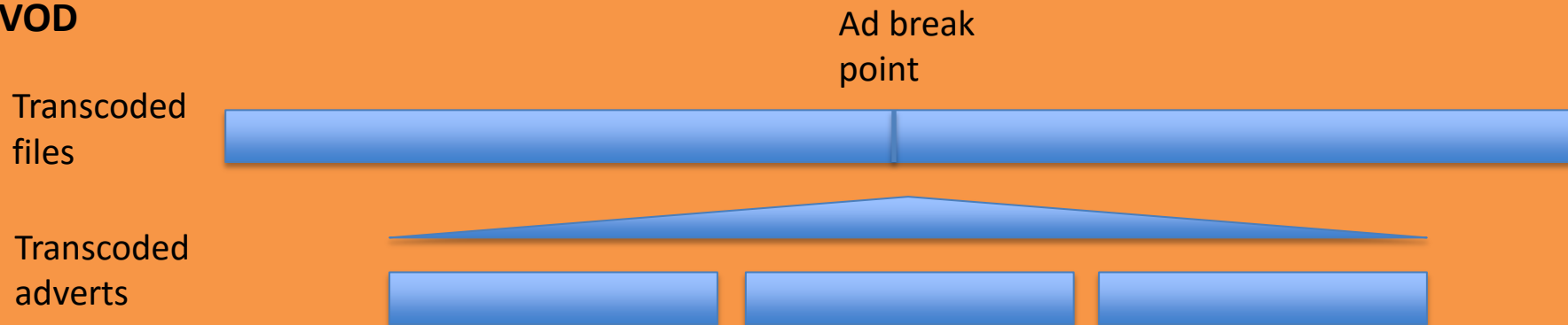
(Clue: It's not a type of haircut)

# What is involved with Ad insertion in Linear TV and VOD?

## Broadcast

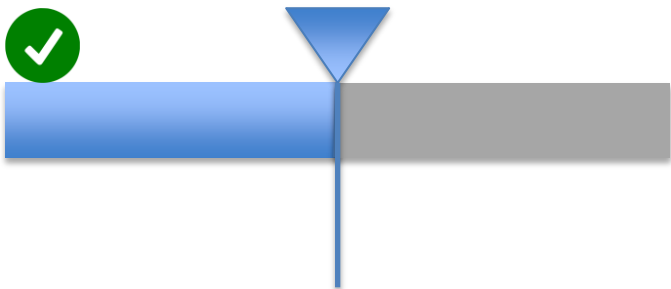


## VOD

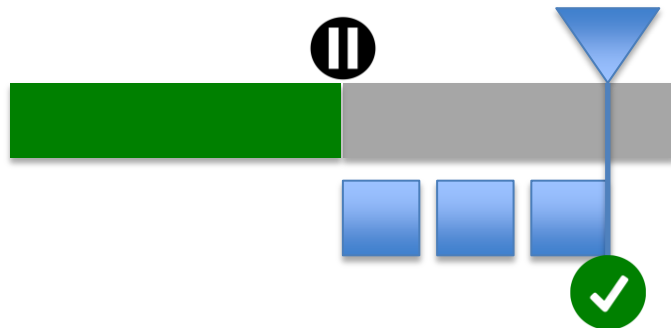


## Using multiple video objects - Ad inserted into video buffer

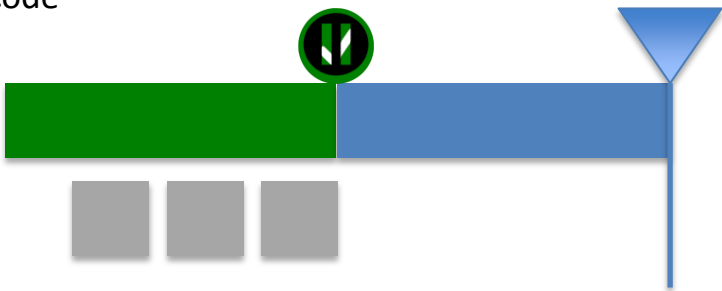
Play first part up until time-code of ad break



Pause programme part in buffer, Play advertising content

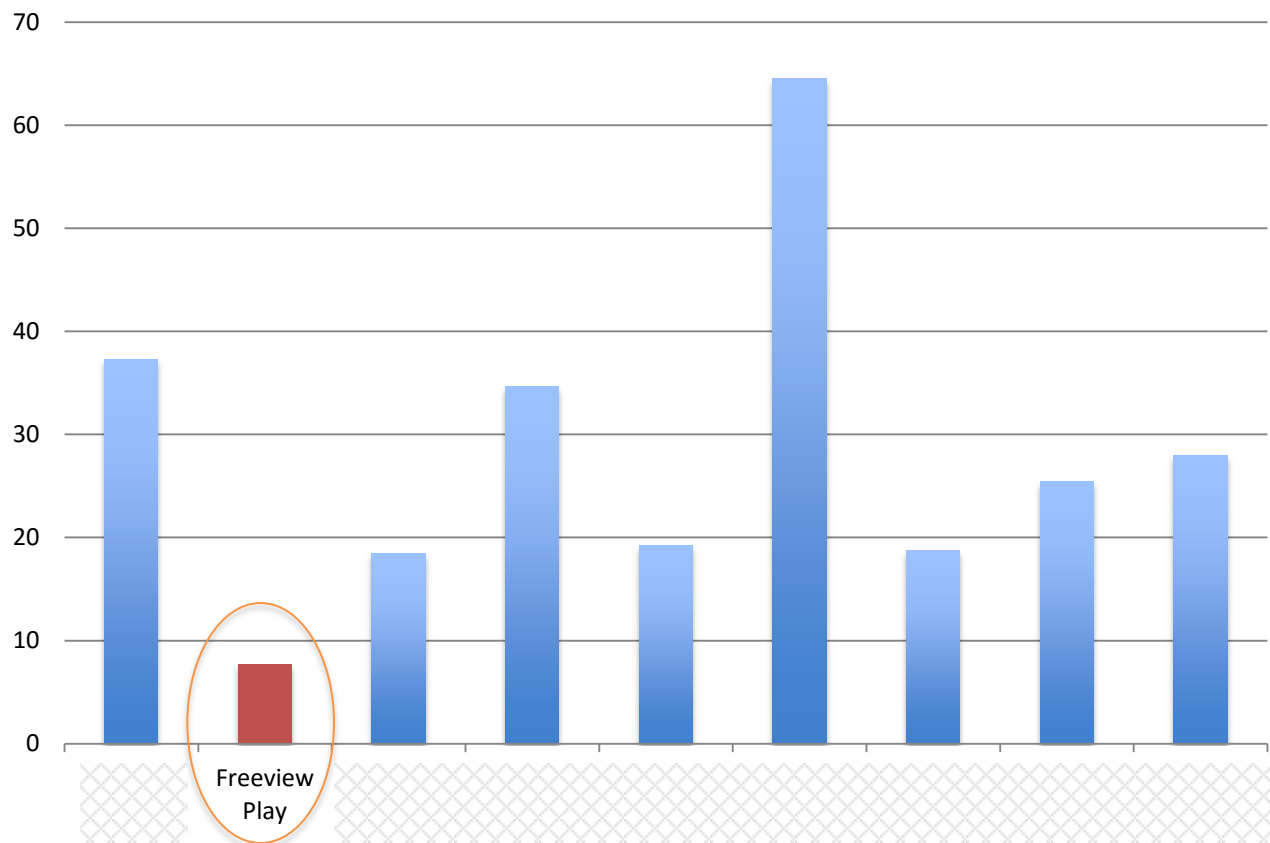


Resume programme part held in buffer, play from time-code



**Results in a near seamless video experience to the user with regards to transitions**

# % of streams on Freeview play with slow transitions





# What has gone well

## Standardisation

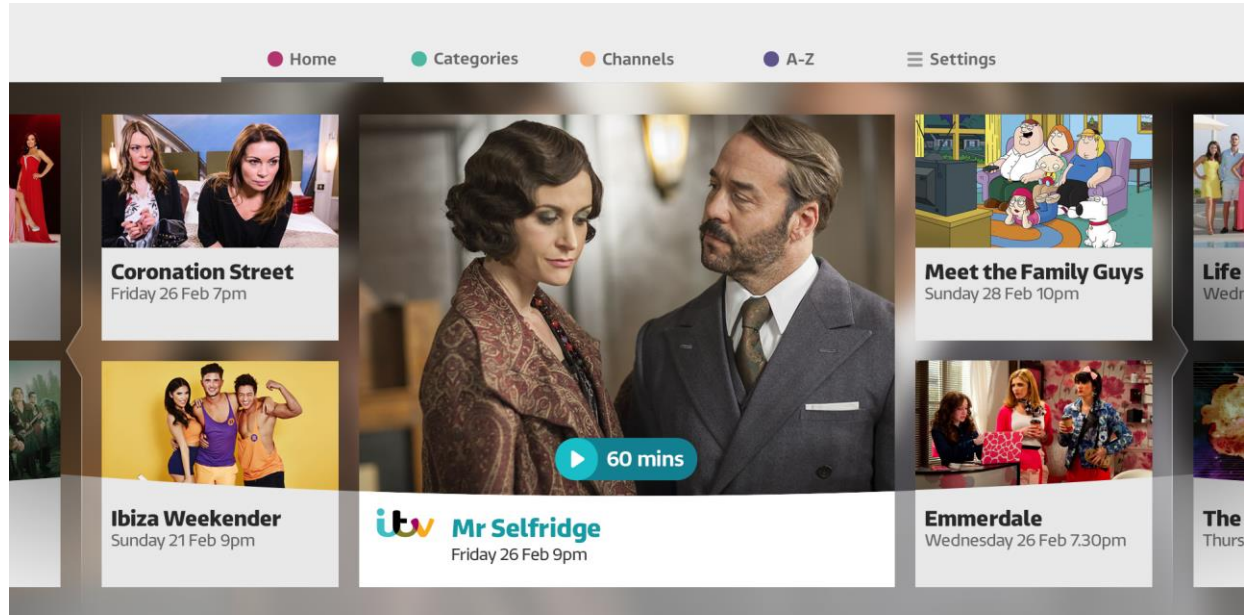
Deployment of ITV's HTML based graphical user interface  
Same content and ad delivery model across web to connected TV

## Development and testing process

Test assertions and working with HBBTV

## Tech foundations

Multiple video objects



What is  
next?

itv



## What is left to do – Access services

- EBU TT-D 2017 obligations
  - Clear key - 2017 obligations
  - Building on multiple Video objects
- Access services are part of a **public service** broadcaster responsibility
  - 90%+ of ITV's linear TV output carries access services.
  - Issue: The VOD space hadn't implemented and deployed standard mechanisms, combined with standard streaming/ABR on the connected TV ecosystem
  - EBU-TT-D Defined subtitles support formally in 2015
  - Freeview Play has standardised support of EBU-TT-D for the 2017 specification of Freeview play. This enables widescale delivery of access services on connected TVs for ITV and other broadcasters

## What is left to do – Access services

ITV have samples created in EBU TT Testing – via Freeview Play

Support in devices will mandatory as part of 2017 ITV service on Freeview devices



Sample EBU TT tests



**Multiple video objects  
has been a success**



**Thank you to..**

**HBBTV and DTG – Worked with both organisations to define ad insertion within the connected TV environment, embracing HTML and web technology as backbone for the specification.**

**Jon Piesing – Support working with HBBTV to ensure ITV's requirements were included to meet our needs**

**Ian Medland – on HBBTV and DTG test cases  
Eurofins & Freeview Play launch manufacturers**