

Standards driven development:

How standards convergence and conformance is critical to the
evolution of TV services

Who am I?

- Architecture team lead for TV and mobile
- Author of BBC interactive specification
- Involved in BBC engagement for Chromecast launch
- Based @mediacityuk

BBC Content Offerings

ELIZABETH THE SECOND

by the Grace of God of the United Kingdom of Great Britain and Northern Ireland and of Our other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith:

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING!

WHEREAS on the nineteenth day of December in the year of our Lord One thousand nine hundred and twenty-two by Letters under the Great Seal, Our Royal Proclamation His Majesty King George the Fifth granted unto the British Broadcasting Corporation (hereinafter called "the Corporation") a Charter of Incorporation;

AND WHEREAS in pursuance of Letters under the Great Seal, several Charters of Incorporation and Supplemental Charters have been granted unto the Corporation;

AND WHEREAS the period of incorporation of the Corporation will expire on the thirty-first day of July One thousand nine hundred and thirty-one and it has been represented unto Us by Our right trusty and well beloved Counsellor William Douglas-Scott Whitham, Minister of Our Privy Council of the Corporation of London, upon whom has been conferred the Office of the Military Cross, One Secretary of State for the Home Department, that it is expedient that the Corporation should be continued for the period ending on the thirty-first day of December One thousand nine hundred and thirty-two;

AND WHEREAS in view of the widespread interest which is taken by Our People in broadcasting services and of the great value of such services as means of disseminating information, education, and entertainment, We believe it to be

in the interests of Our People in Our United Kingdom and elsewhere within the Commonwealth that the Corporation should continue to provide broadcasting services pursuant to such Statutes and agreements as shall befall in Our Secretary of State may from time to time grant to and make with the Corporation;

NOW KNOW YE that We by Our Privy Council and of Our special grace, certain knowledge and mere motion do by this Our Charter for Us, Our Heirs and Successors will, ordain and declare as follows:—

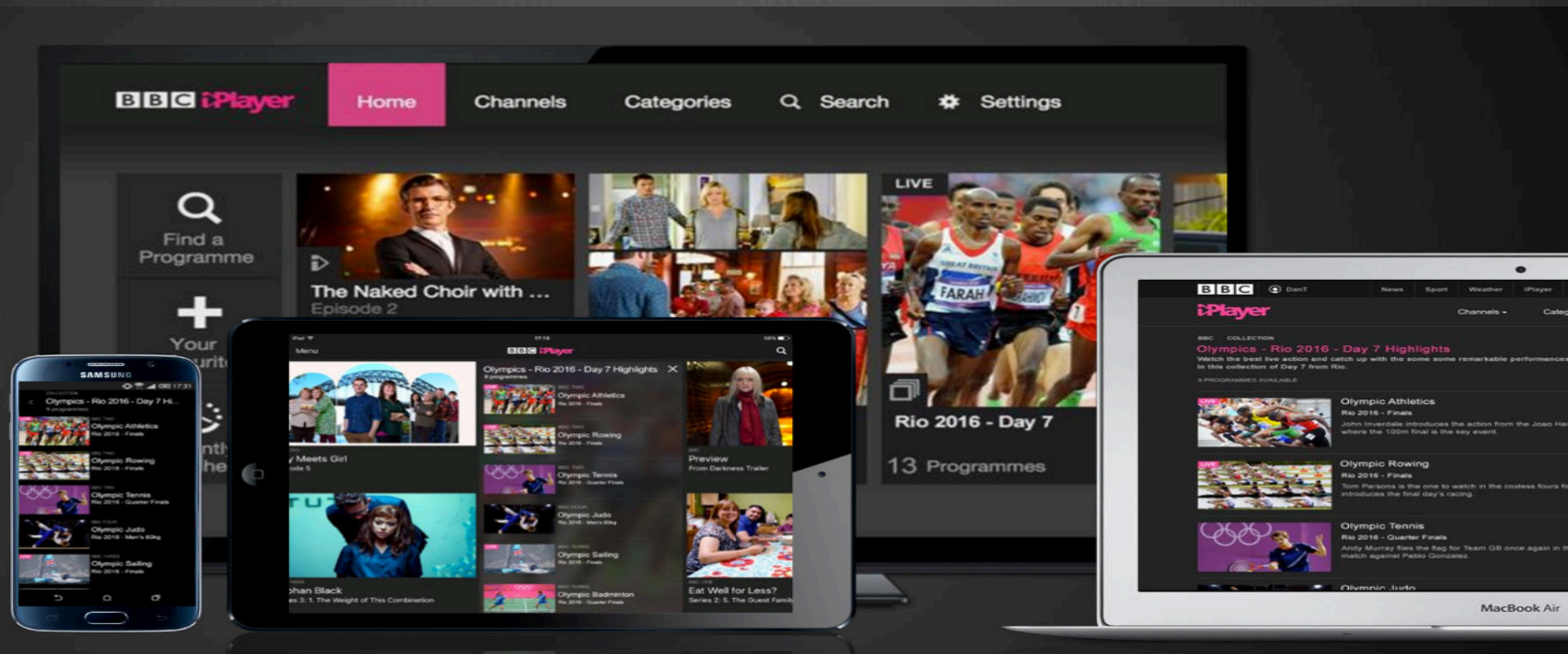
INCORPORATION

1. The Corporation shall continue to be a body corporate by the name of The British Broadcasting Corporation with perpetual succession and a common seal with power to borrow, alter and remove the name at discretion; willing and intending that the Corporation shall and may use and be used in all Courts and be capable to sue or take and hold real and personal property and do all matters and things incidental or pertaining to a body corporate. Notwithstanding the Corporation shall apply the whole of its income solely in promoting its objects. The Governors of the Corporation shall be the members thereof.

TERM OF CHARTER

2. This Our Charter shall come into operation on the first day of August One

BBC Content Offerings



BBC Content Offerings



BBC Content Offerings

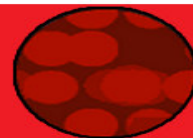


BBC

100

Friday 26 Sep

**Press SELECT for
Rio 2016**

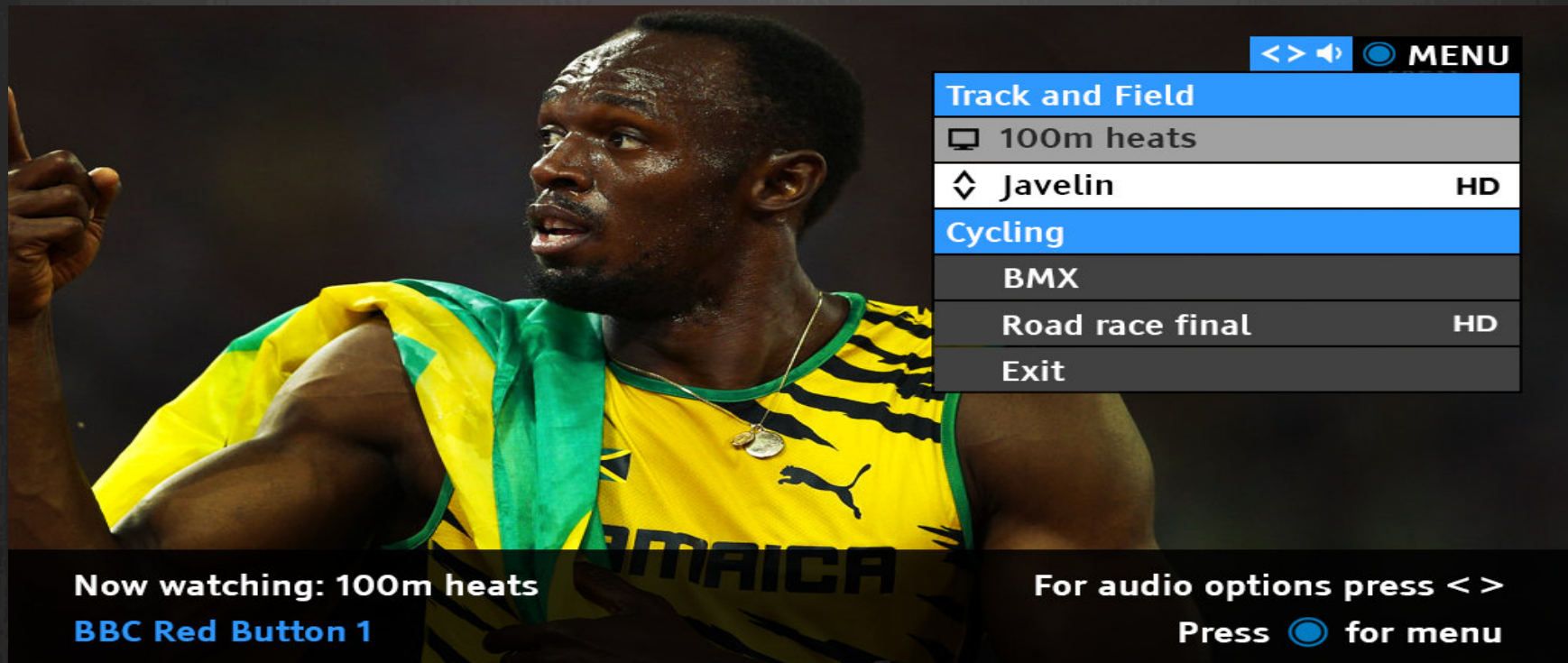




News Index	102
Sport Index	300
Weather	400
Lottery Results	555
Travel	430
INDEX	199



**Beat the traffic
queues: Travel p430**

To exit press TEXT


BBC Content Offerings



< >   MENU

Track and Field	
 100m heats	
 Javelin	HD
Cycling	
BMX	
Road race final	HD
Exit	

Now watching: 100m heats
BBC Red Button 1

For audio options press < >
Press  for menu

BBC Content Offerings

BBC RED BUTTON

News

Sport

iPlayer

Featured

Weather

Lottery

Settings

● Close menu



Rio 2016
Choose Event



Rio 2016
Catch-Up



Frank Skinner
With Ricky Wilson

Audience impact

21m

One minute or more consumption of red button during the olympics

Source: BARB/TRP Research (1+ minute all digital homes)

Audience impact

1.2m

Unique browsers for Red Button+ connected service during the olympics

Source: Comscore Digital Analytics

Audience impact

150-200%

Uplift in unique browsers across a range of devices during the olympics

Source: Comscore Digital Analytics

Audience impact

69.76m

Media plays on connected TV devices for iPlayer alone August

Source: Comscore Digital Analytics

Audience impact

47%

Year-on-year increase in media plays for the same month (August)

Source: Comscore Digital Analytics

Challenges for HbbTv

- What are the challenges HbbTv must overcome to be the king of the mountain market proposition?

Challenges: Device Fragmentation



Challenges: Standards conformance



Image: https://www.eyeonspain.com/userfiles/image/mac75/castells_0015%20-%20Copy%201.jpg

Challenges: Streaming Media



Image: https://c6.staticflickr.com/4/3135/2340993237_955c0ea11f_b.jpg

Challenges: Service Migration

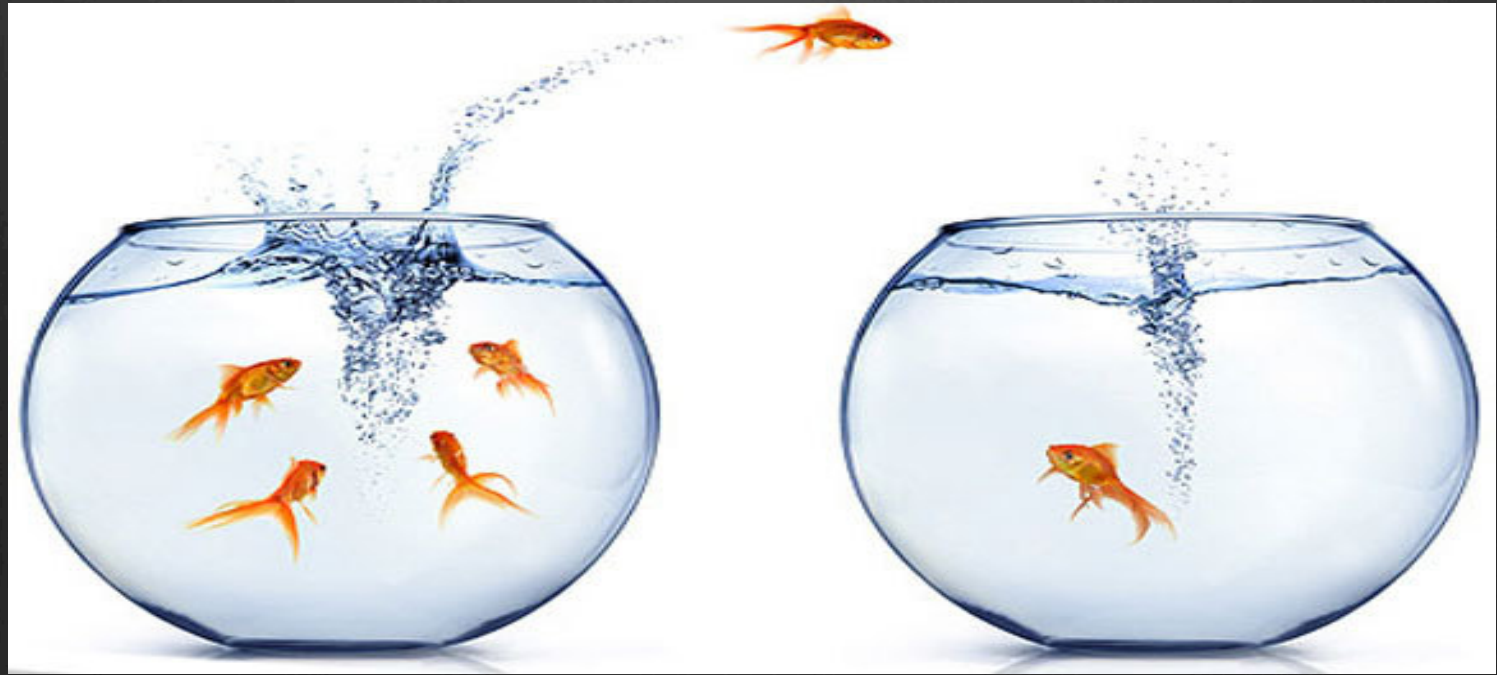


Image: <http://www.owletonline.com/images/services.jpg>

Challenges: Development



Challenges: Development



Our Approach: A certification process

BBC CATAL - 4.7.1 - lg-tv_2016_m2-precert

ABOUT

VIDEO

AUDIO

BROADCAST

NETWORKING

ANALYTICS

STORAGE

RENDERING

ANIMATION

KEYMAPPING

NAVIGATION

EXITING

PRODUCT LINKING

EXPERIMENTAL

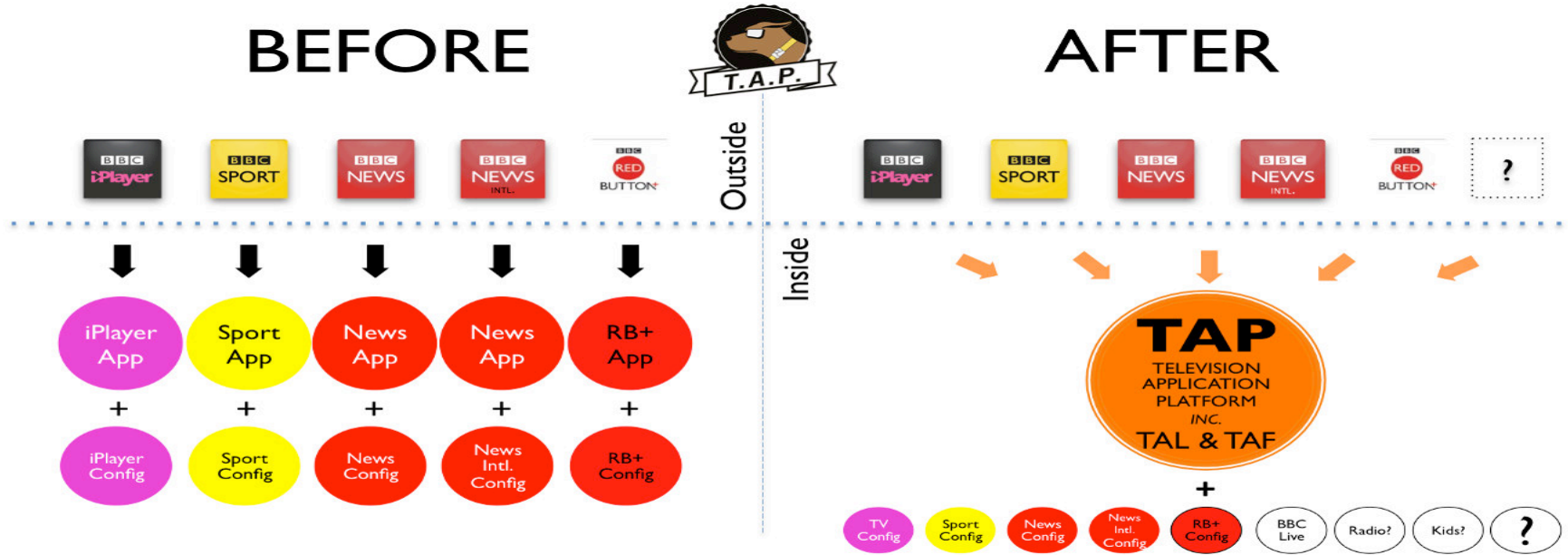
Query string: brand=lg&model=tv_2016_m2&config=precert



Challenges: Multiple products

The screenshot displays the BBC iPlayer website interface, which is a complex layout of multiple video products. The top section features a grid of video thumbnails, including 'The Escape Artist' (Episode 1 and 3), 'EastEnders' (12/11/2013), 'MasterChef: The... Episode 6', and 'QI' (10, Keeps). Below this is a 'MOST POPULAR' section with a grid of colorful dots. The main content area is divided into several sections: 'News in video' (12 items) with thumbnails for 'UK recovery takes hold, says...', 'Trapped with bodies in...', 'Typhoon homeless turn to church', and 'Starved boy 'let down by...'; 'Now playing' (UK recovery takes hold, says Bank 2:30); and a 'BBC NEWS' section with a 'Press || to pause' button and 'Last updated at 20:39'. The right side of the interface features a 'HIGHLIGHTS' section with a grid of video thumbnails, including 'Jamaican drug testing...', 'Dominant Djokovic wins World...', 'Clarke 'reveals' England...', 'MOTD3: Liverpool or Saints...', 'Song hoping for Arsenal...', 'Alesi & Senna battle in 1990...', 'Van der Westhuizen's...', 'Kubica chasing 'impossible...', and 'Basketball star pulls down...'. Below this is a 'LIVE & COMING' section with a 'Coming Up...' button and a 'Brazilian Grand Prix' section, which includes a 'Watch live coverage of the Brazilian Grand Prix starting 11:50 GMT on Friday 22 November.' button. The bottom of the interface features a 'BBC SPORT' section with a grid of video thumbnails, including 'Glastonbury 2013 Choose a stage', 'Wimbledon Live', 'Formula 1 British Grand Prix', 'More from BBC One', 'Holby City Episode 7', 'Doctors Episode 10', and 'Merlin Episode 7'. The BBC logo is visible in the top left corner, and the 'BBC iPlayer' logo is visible in the top right corner.

Our Approach: A platform product



Our Approach: A platform product

BBC RED BUTTON+

News

Sport

iPlayer

Featured

Weather

Lottery

Settings

● Close menu



Rio 2016
Choose Event



Rio 2016
Catch-Up



Frank Skinner
With Ricky Wilson

Our Approach: A platform product

BBC iPlayer

Home

Channels

Categories

Search

Settings



Find a
Programme



Your
Favourites



Recently
Watched

NEW SERIES



People Just Do Nothing
Series 3: 1. Dubplate



Match of the Day
2016/2017: 20/08/2016



Most Popular

40 Programmes



Newsbeat Documentar...
Brought up on Porn



Robot Wars
Episode 5

● Open menu

Our Approach: A platform product

BBC SPORT

⚙ Settings

nd

England

Other Sports

Rio 2016

Home

Football

Formula 1

Cricket



Catch Up
46 Events



Coming Up
1 Event



Today's Live
6 Events



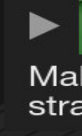
Olympics Playlist: Catch up on Joyce going for...



Japan PM as Super Mario - closing...



Read the latest headlines
11 Articles



Ma
stra

USA
last

Our Approach: A platform product

BBC NEWS

Settings

gy

Entertainment & Arts

EU Referendum

< Home >

World

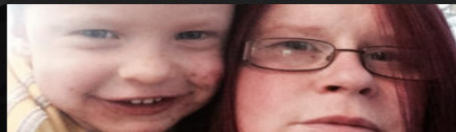
UK

England

Scotland



▶ Watch magnificent Mo do 'double double'



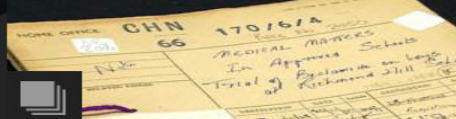
▶ Rooney 'angrier' after seeing BBC relay video



▶ 26 miles, a slip, then a few press-ups



▶ Sussex school fire 'challenging'



▶ Read the latest headlines

10 Articles



▶ The gig that broke Canadian hearts



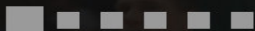
▶ CHTE SPEAKS OUT AFTER RIO SCANDAL
Lochte: 'It was my fault'

● Open menu

Our Approach: A platform product

Basketball: Men's final - United States win gold

SILVER - Boxing: GB's Joyce beaten by France's Yoka in super heavyweight final



Men's Final - USA v Serbia

Full coverage. America looks good for a third gold in a row having seen off old rivals Spain. But challengers Serbia...
⌚ Duration: 153 mins

● Open menu

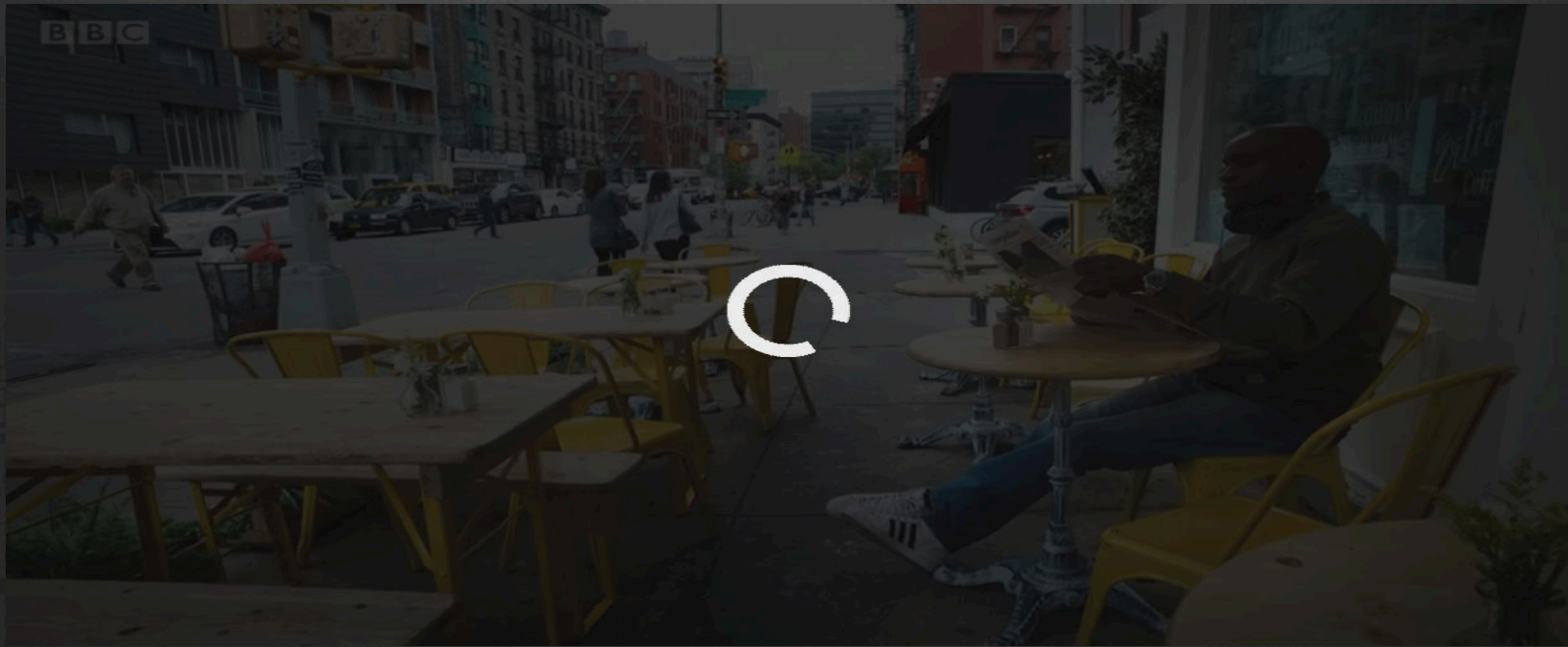
Future: Beyond MHEG



Future: Audience expectations



Future: Audience expectations



Future: Cross device integration



Summary

- HbbTv with its linear broadcast integration is a compelling offering
 - Standards and adherence to them are vital for a vibrant ecosystem
 - People expect a broadcast quality experience from a TV
- Content producers have to think multi-platform