



HbbTV Testing and Certification in the UK

James Jackson, Technology Director

Digital UK

Overview of Freeview Play

History + Tech

Launched 2015; HbbTV 2.0.x HTML5/DVB-DASH from day one

Consumer Proposition

Delivers free to view VOD from all UK PSBs and other major advertising funded broadcasters



Manufacturer and technology partnerships

Integrated into 70% of new TVs (and STBs) sold in the UK each year



The service also integrates with all major global TV operating systems providers:

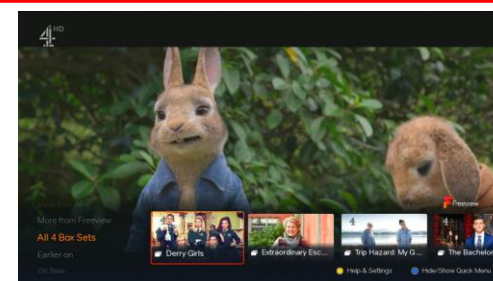
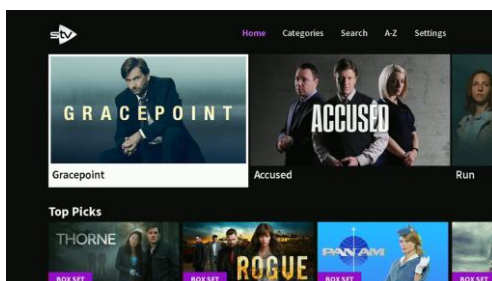
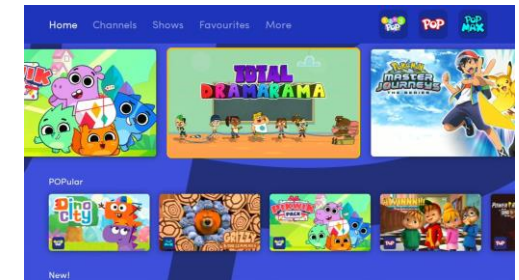
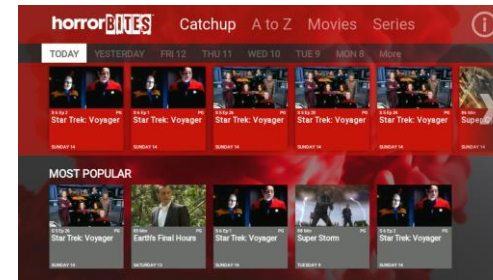
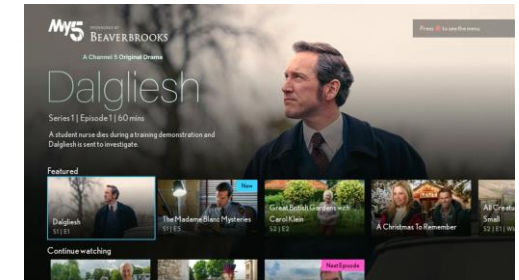
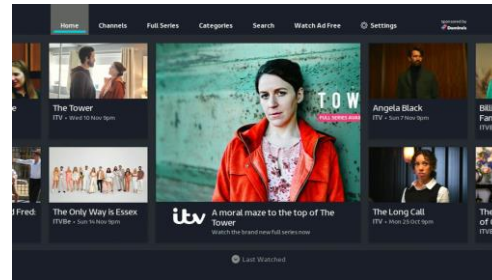
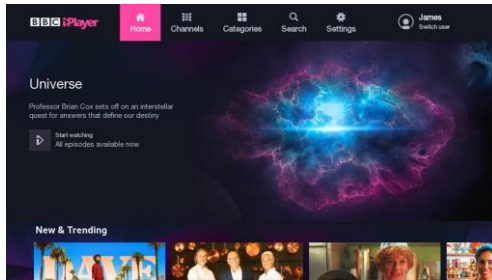


Distribution

More than 15m certified devices sold ⇒ 10m active connected devices

Freeview Play certified devices are compatible with all apps

Separate HbbTV VOD player and interactive apps from PSBs and free to view broadcasters

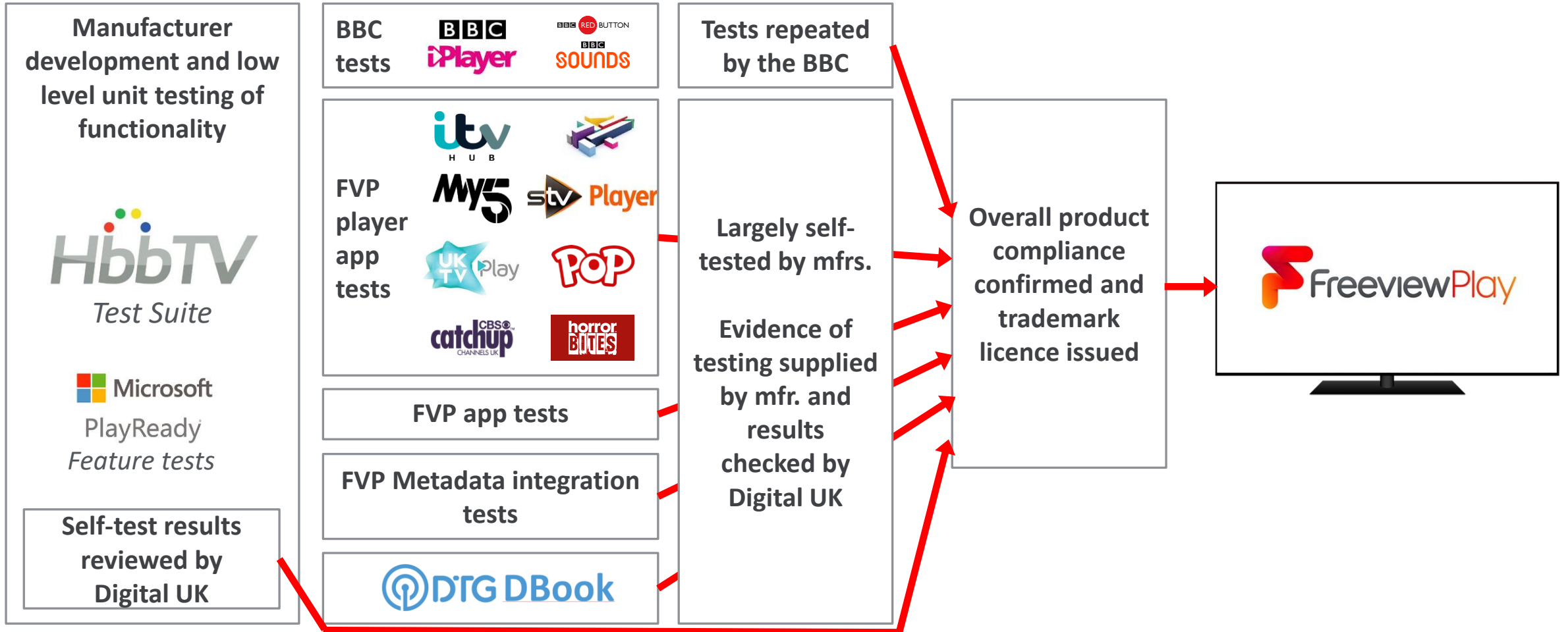


Complemented by HbbTV Freeview Play content discovery apps

Device testing and certification process

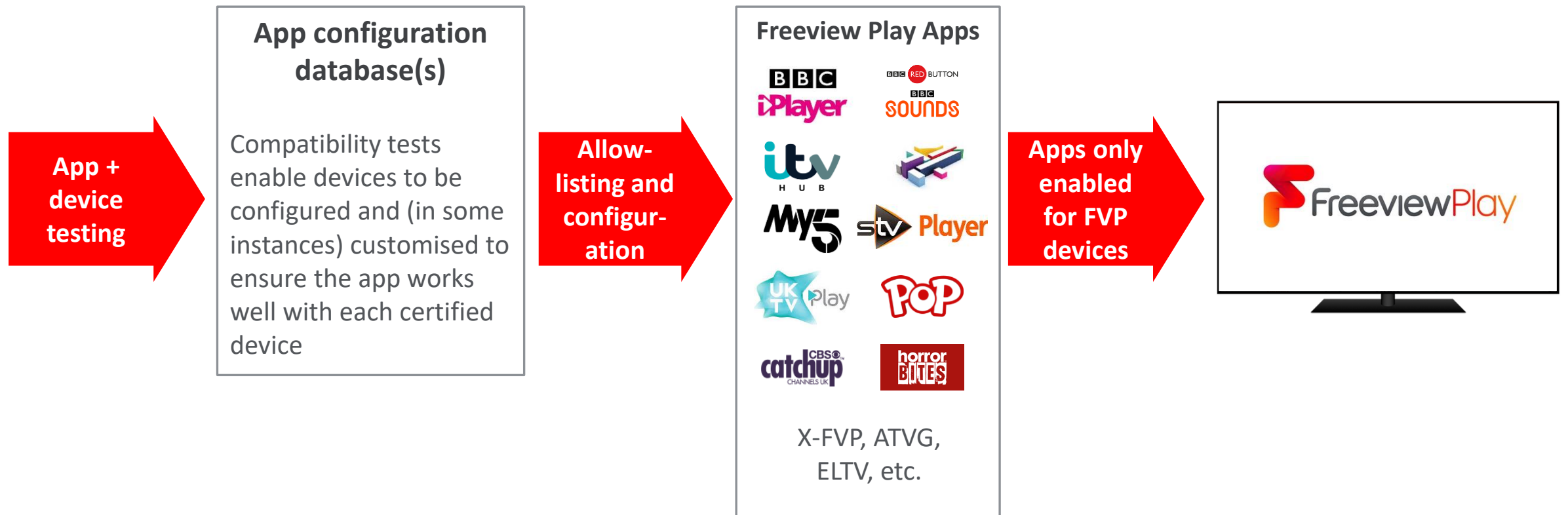
Global product development & testing

UK specific integrated app & device testing



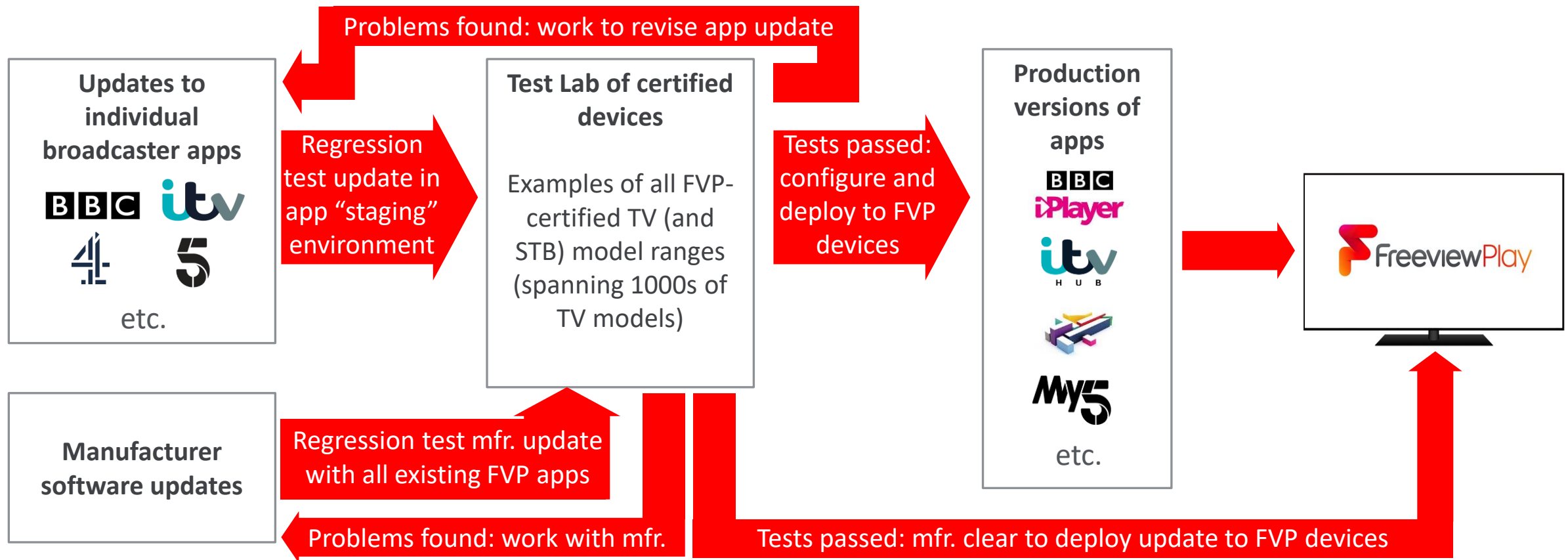
All Freeview Play apps include some form of “allow listing”

This ensures that these HbbTV apps only run on those devices which they have been tested to be compliant with and where the broadcaster is able to deliver a reliable and high quality of service to the viewer



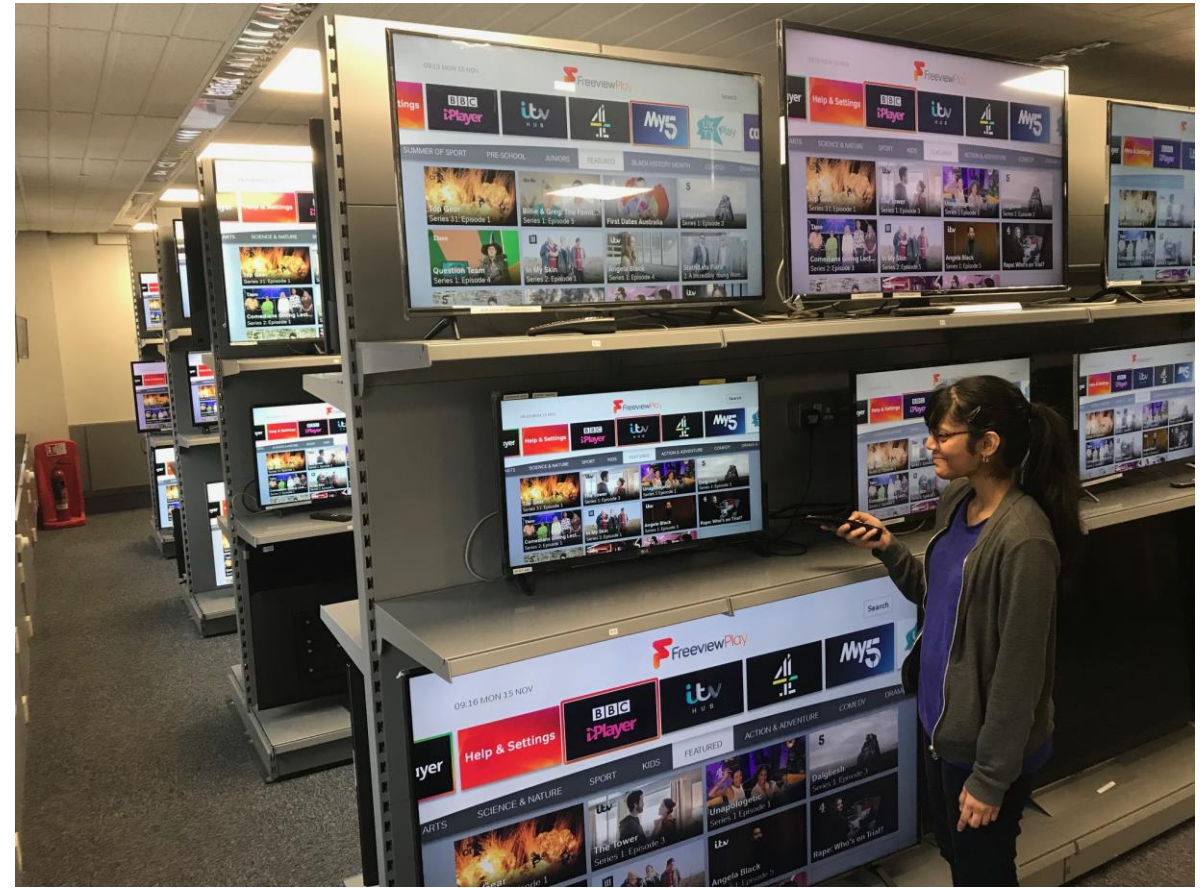
Regression testing of both app and manufacturer updates

To ensure that viewers experience reliable Freeview Play app behaviour it is essential to test both broadcaster originated HbbTV app updates and manufacturer software updates with all apps before these are deployed

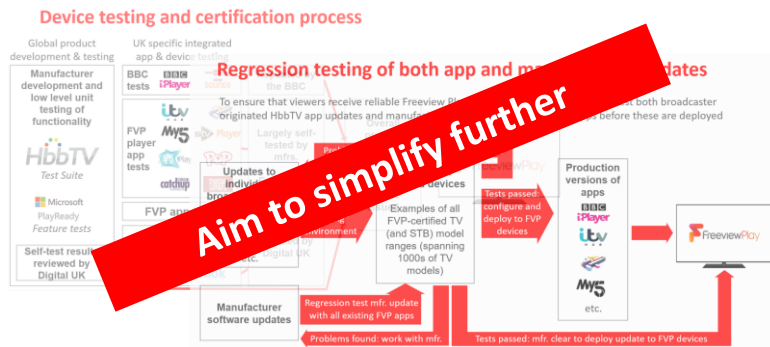


We deliver this regression testing using a dedicated test lab

Over the last 6 years we have built a test lab containing examples of over 100 model ranges of FVP-certified TV



Some suggestions for reducing the cost and time needed for HbbTV testing and certification



Digital UK recognises that even the largely self-testing approach which FVP supports still generates significant UK-specific work for mfrs. Internally, we also find it hard to support updates to HbbTV apps which are often not compatible with all legacy devices

Suggested approaches

Greater standardisation of HbbTV apps within the UK (and ideally other markets)

Less UK-specific customisation but still deliver UK requirements via HbbTV apps

Automate more testing through integrated end-to-end tests apps

International standardisation between HbbTV service operators

Digital UK has always required FVP apps to use newer HbbTV (2.0.x) solutions but device compatibility would be even better were apps from different providers to use even more similar technical solutions

Digital UK is keen to use HbbTV OpApp features to remove the cost and complexity for mfrs. of implementing UK-specific features

We support HbbTV's work to create new test apps and are exploring creating our own UK-specific E2E test apps to further assist testing

We all face similar problems with growing app and device regression testing and cooperation between operators could be helpful to all



Thank You

