

PERSONALIZING THE CONSUMER EXPERIENCE

INTERACTIVE AND PERSONALIZED FEATURES

MARK CORL, TRIVENI DIGITAL

GREG JARVIS, FINCONS

SO VANG, NAB

PETE VAN PEENAN, PEARL TV



PRODUCTION BROADCAST APPS

WHAT'S POSSIBLE!

nextgentv **SUMMIT**

Produced by SMPTE and SBE with support from the NAB and ATSC



and the support of our host, WETA Television



JANUARY 16, 2020



Event Recording courtesy of the following sponsors:

The Telestream logo, featuring a blue arc above the word "telestream" in a lowercase sans-serif font.

telestream

The Panasonic logo, featuring the word "Panasonic" in a bold, dark blue sans-serif font.

Panasonic



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JANUARY 16, 2020



THANK YOU TO THE SMPTE DC, SBE AND NAB TEAM
MEMBERS WHO PRODUCED THIS EVENT

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Alex Snell BCI Digital

Peter Wharton Happy Robotz

WITHOUT THEIR VOLUNTEER EFFORTS THIS SUMMIT WOULD NOT BE POSSIBLE

Morning Program



Afternoon Program

8:00 AM - 9:00 AM	Registration and continental breakfast
8:55 AM - 9:00 AM	Welcome from SMPTE, SBE and AES Fred Willard, SBE Washington Kishore Persaud, SBE Baltimore
9:00 AM - 9:05 AM	Introduction Peter Wharton, SMPTE Membership VP Chris Lane, Chief Engineer, WETA
9:05 AM - 9:35 AM	NextGen TV: Transforming the Consumer Experience Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Madeleine Noland, President, ATSC
9:35 AM - 10:00 AM	Creating New Opportunities with NextGen TV Joonyoung Park, VP and Fellow, DigiCAP
10:00 AM - 10:35 AM	Improved Television Reception for Consumers <i>Implementing NextGen TV Distribution Systems</i> John Lynch, ERI Jeff Andrew, Osborn Engineering
10:35 AM - 11:15 AM	Benefits of a Converged Broadcast and IP Platform Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Content Reception Enhancements Richard Lhermitte, VP Solutions and Market Dev, ENENSYS TeamCast
11:15 AM - 11:30 AM	Morning Break
11:30 AM - 11:50 AM	Consumer Applications for Combined 5G & NextGen TV Networks Josh Arensberg, M&E Business Development, Verizon Media
11:50 AM - 12:15 PM	Case Study: Hybrid Services at "Chicago 3.0" Jean Macher, Harmonic
12:15 PM - 01:20 PM	Buffet Lunch ▶

01:25 PM - 01:45 PM	Protecting the NextGen TV Consumer <i>Advanced EAS and AWARN Capabilities</i> John McCoskey, SpectraRep
01:45 PM - 02:15 PM	Monetizing the NextGen TV Consumer <i>Addressable Advertising and Analytics</i> Rick Ducey & Mark Fratrik, BIA
02:20 PM - 03:20 PM	Personalizing the Consumer Experience <i>Interactive and Personalized Features</i> Mark Corl, Triveni Digital Greg Jarvis, Fincons So Vang, NAB Pete Van Peenan, Pearl TV
03:25 PM - 03:40 PM	Afternoon Break
03:40 PM - 04:10 PM	The Consumer Out-of-Home Experience <i>Mobile & Automotive Applications and FeMBMS (5G Broadcast)</i> Thomas Janner, Product Management & R&D Director, Rhode & Schwarz
4:10 PM - 4:35 PM	The ATSC 3.0 Roadmap Lynn Claudy, SVP Technology, NAB and Chairman, ATSC Board of Directors Madeleine Noland, President, ATSC
4:35 PM - 5:00 PM	The Consumer Technology Roadmap Brian Markwalter, SVP Research and Standards The Consumer Technology Association
5:00 PM - 6:00 PM	Station Group and Industry Deployment Plans <i>Advanced Capability Implementation Strategies</i> Skip Pizzi, VP Technology Education & Outreach, NAB (Moderator) Michael Bouchard, VP Technology Strategy, ONE Media / Sinclair Stacey Decker, CTO, Public Media Group Sasha Javid, COO, The Spectrum Co
6:00 PM - 8:00 PM	Cocktail Reception Busboys and Poets 4251 S. Campbell Ave., Shirlington <i>Heavy Hors d'oeuvres and open bar</i> ▶

THE FINCONS GROUP

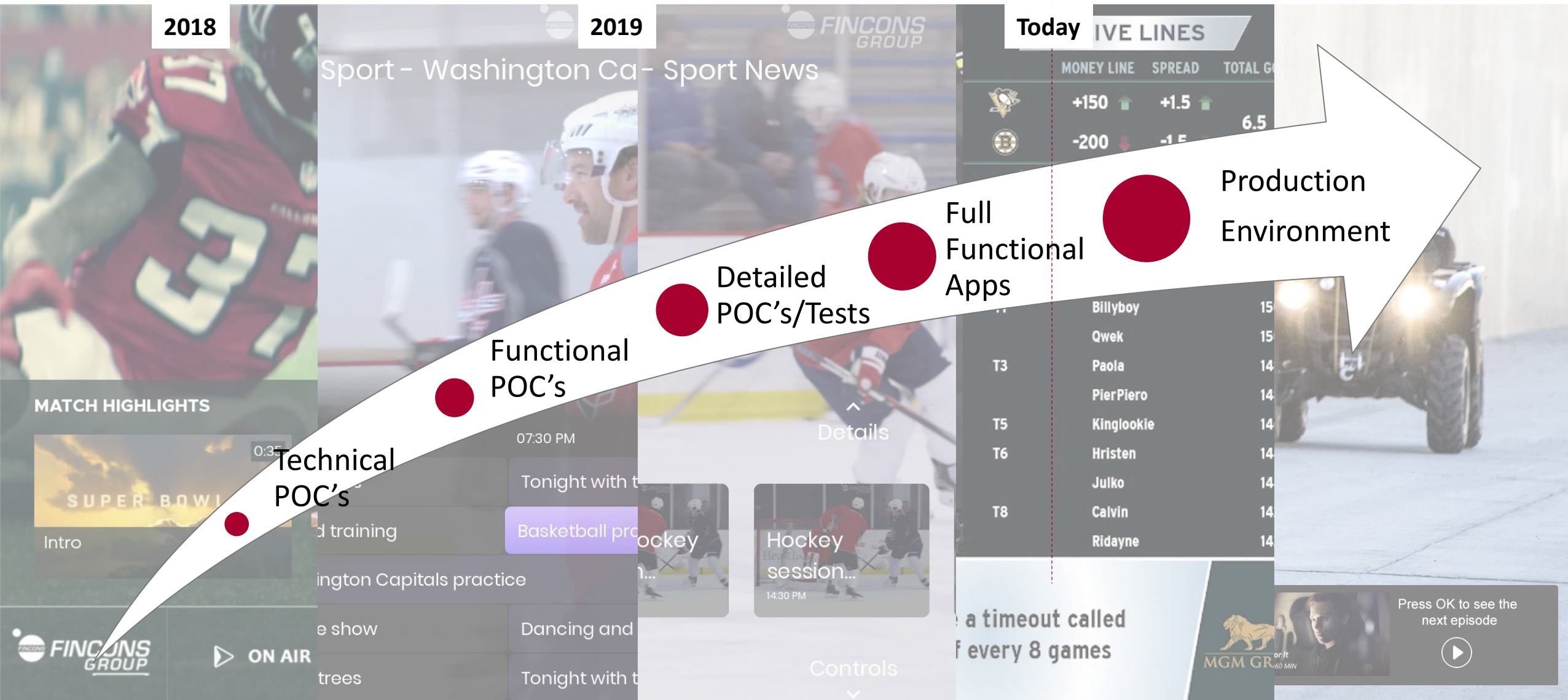
MEDIA PLATFORM SYSTEMS INTEGRATOR

- We design, build and manage Media Platforms & Apps – Hybrid TV, OTT...
- In production using HbbTV, translated to US market 2018 w/ATSC 3.0
- Active member of ATSC
- 37 yr old, 1500+ employees



ATSC 3.0 APP DEVELOPMENT EVOLUTION

PROOF OF CONCEPT DEVELOPMENT IN 2018 TO FULLY FUNCTIONAL APPS IN 2019

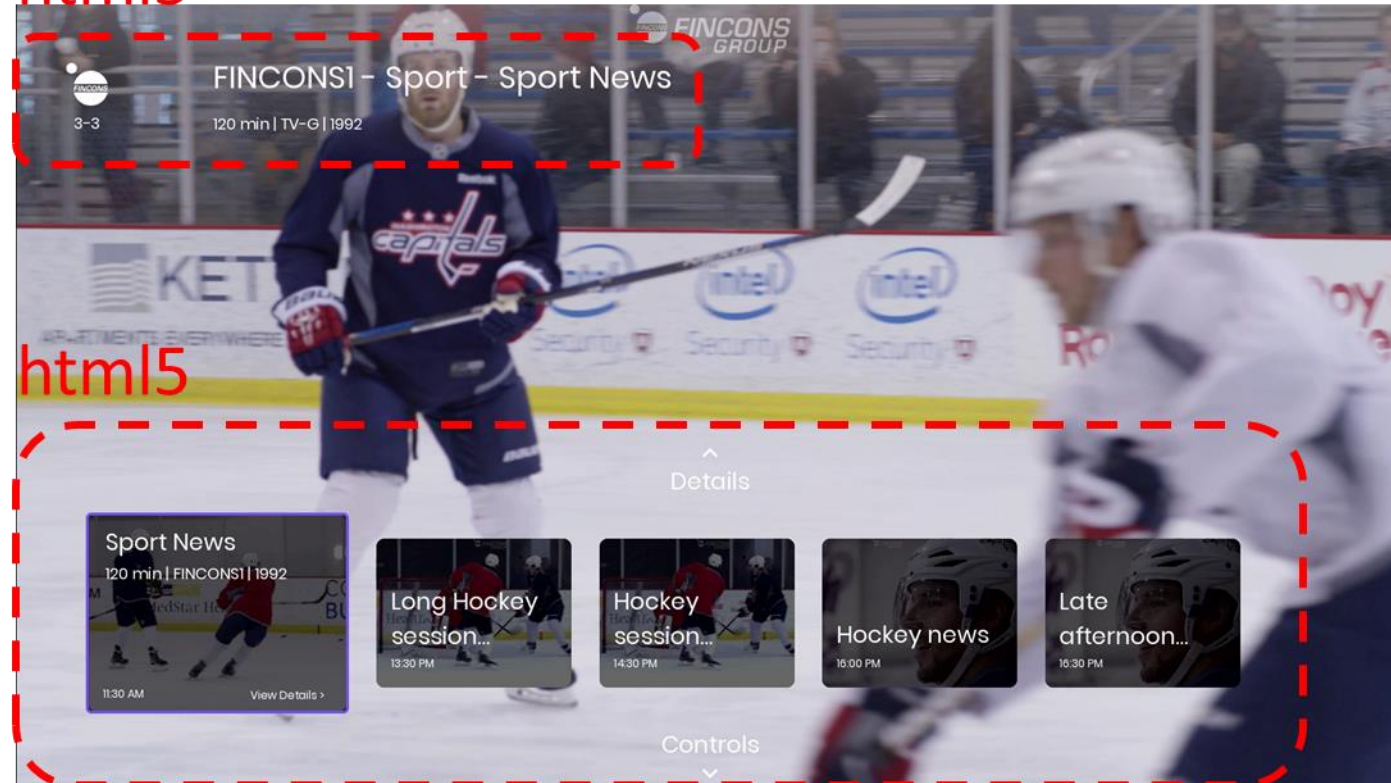


SIMPLY PUT, IT'S A BROWSER...

INTRODUCTION TO BROADCASTER APPS

- Smart TV's have a browser that allows for HTML5 code overlaid on the video
- A new page, or “App”, is loaded with each new channel
- The data comes from both the broadcast feed and a broadband connection

html5



html5

HYBRID TV – NOW ...

CORE FUNCTIONALITY IN-MARKET NOW, AND FORESEEN ATSC 3.0 LAUNCH

MONETIZATION

Display Advertising



Video Advertising

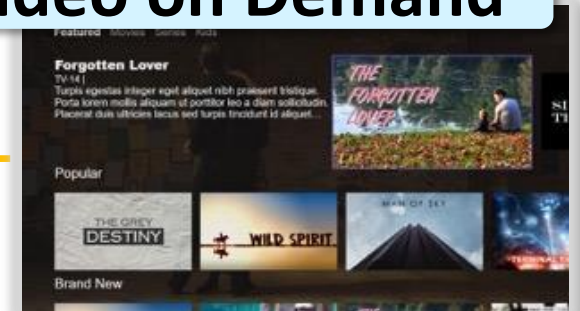
Preroll
7 Seconds

USER ENGAGEMENT

Program Navigation



Video on Demand



HYBRID TV – ... NEXT

ADVANCED TECHNOLOGY LIKE AI/ML: ENABLING A NEW INTERACTIVITY SERVICES

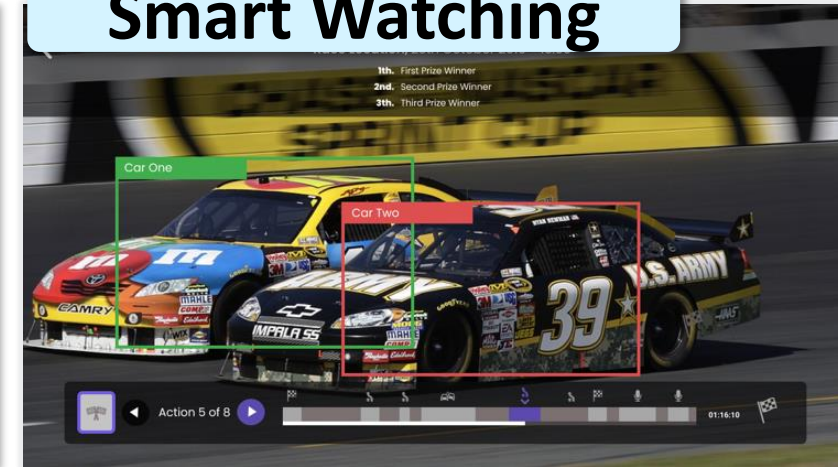
Contextual Ads



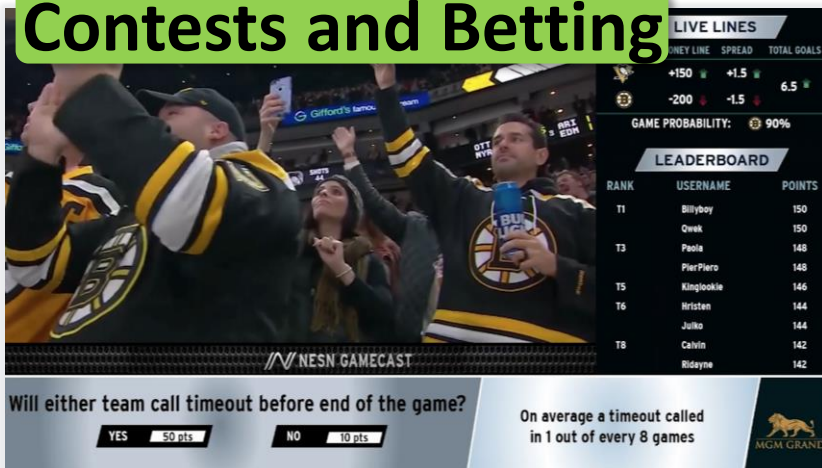
Augmented Overlay



Smart Watching



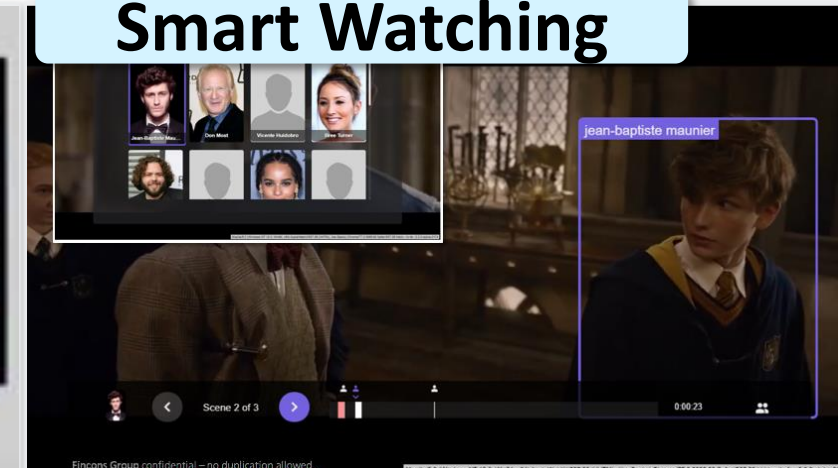
Contests and Betting



eCommerce



Smart Watching



Fincons Group confidential – no duplication allowed

DEMO: SAMPLE APPS

WALK THROUGH OF APPS BUILT AND MANAGED USING FINCONS SDP

All Apps and media platforms built with ATSC 3.0 standard

1. Fundamental navigation and basic Addressable Advertising
2. Advanced Personalization Use Case using AI
3. Event's - build up prior to event and then during event
4. Contests (and potentially betting)



Smart Digital Platform

First ATSC3.0/HbbTV-ready platform for
Broadcaster App management, targeted TV advertising
and AI-based TV personalization



NEXTGEN TV APPS by Fincons

Platform and App
development using ATSC 3.0

Greg Jarvis, EVP & GM

Fincons.US, Inc.

greg.jarvis@finconsgroup.com



MILAN, NEW YORK, LOS ANGELES, LONDON, MUNICH, ZURICH, PARIS,
ROME, BARI, CATANIA, VERONA, LUGANO, BERN

A LITTLE MORE DETAIL

The technical landscape

BROADCAST

- Frame level sync of Real-time data (e.g. Scores, Polls)
- Dynamic metadata to enrich programs (e.g. Notifications)



INBOUND:

- Broadcasted stream
- ATSC App injection
- Metadata provisioning
- PUSH VOD Catalog

HTML5
Application

Overlaid
browser

Stream

- Extended provisioning of data, Linear streams and VOD content
- 2-way communications
- Ability to provide a rich User Experience

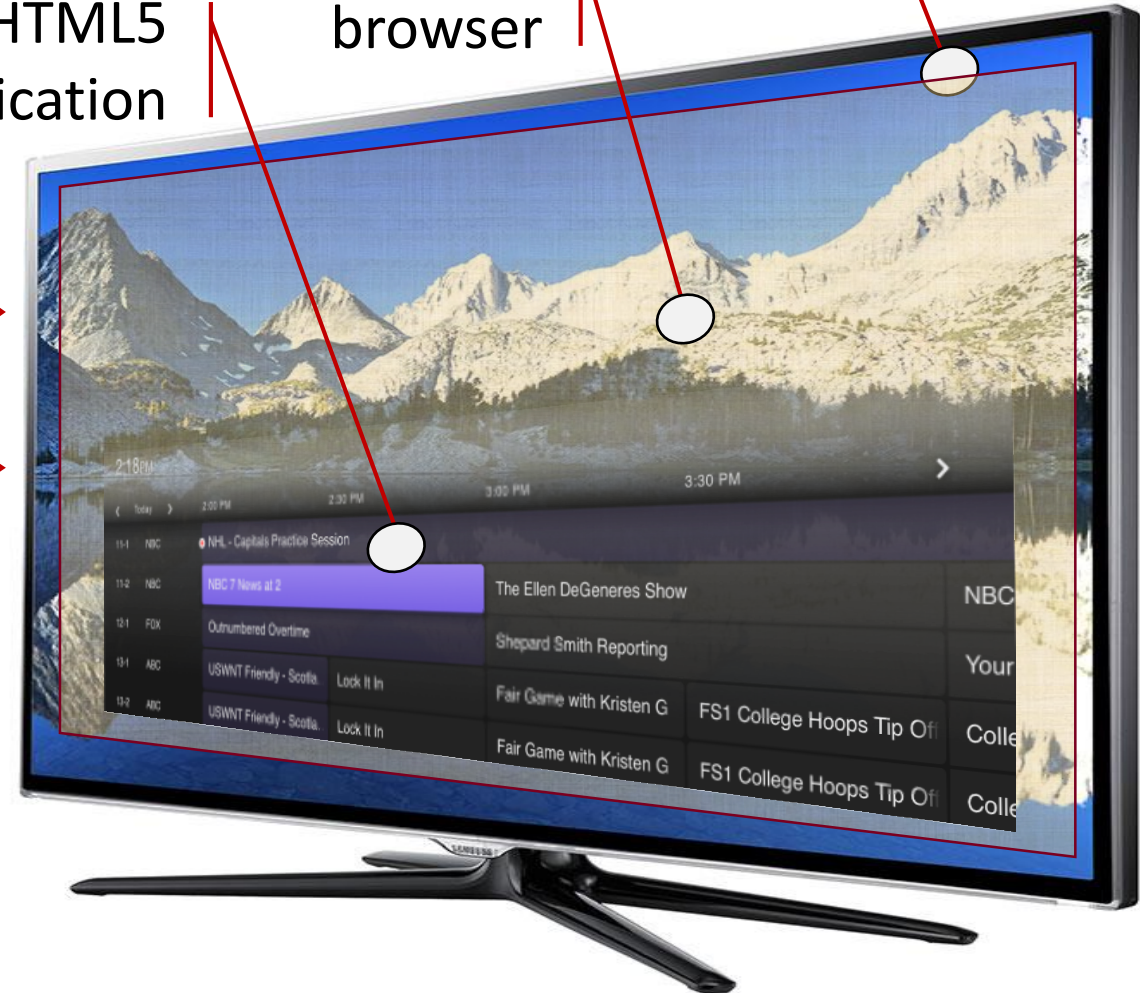
INBOUND:

- Wide set of metadata
- PUSH/PULL VOD Catalog
- ADV integration

OUTBOUND

- User data
- Analytics/Profiles
- Viewer Interaction

BROADBAND



LOVEStv is the new television.
The hybrid experience from:



rtve

MEDIASETespaña.

Ver desde inicio



Últimos 7 Días

Recomendaciones

IN PRODUCTION HBBTV: LOVES TV – SPAIN

LESSONS LEARNED AND CHALLENGES AHEAD



Challenges:

- Reach
- Awareness
- User experience
- Interoperability
- Business
- Evolution

Reach

- 5 Million TV sets
- 430k users/month
- 2,3M videos/month

User experience

- The easier the better:
1/4 of videos played are start over
- Start time is important,
end time even more
- Content is the king,
all of it.

Interoperability:

- Iop LAB
- >80 SmartTVs
- Versions management:
Apps & devices
- Compromise needed:
reach vs evolution

Business

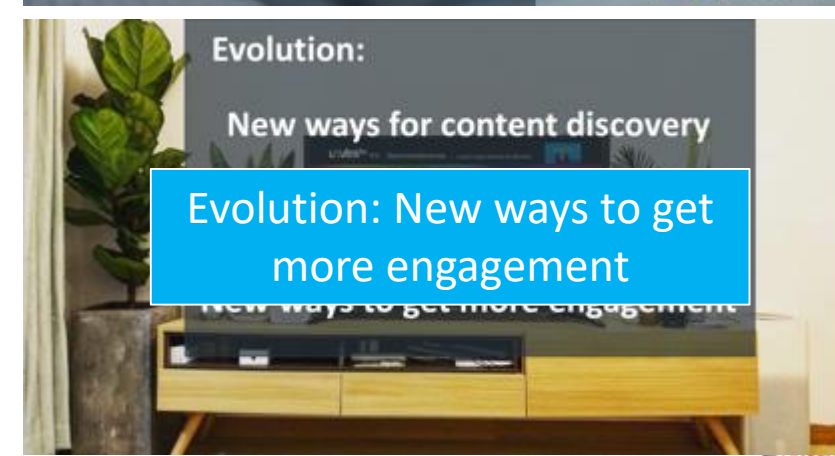
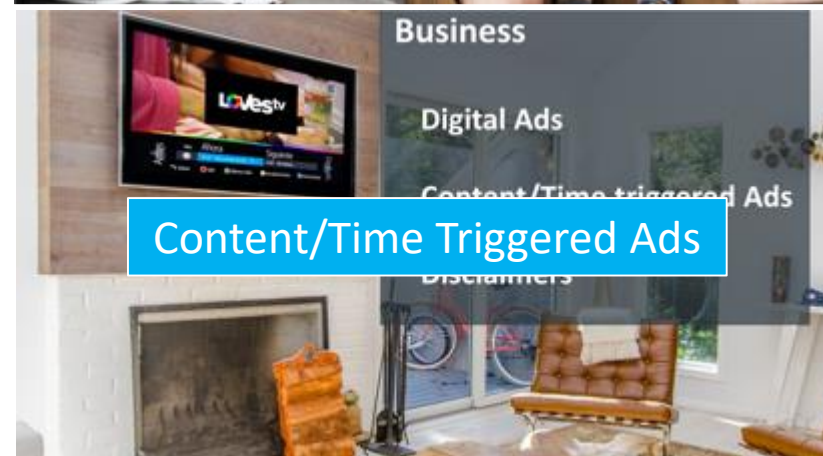
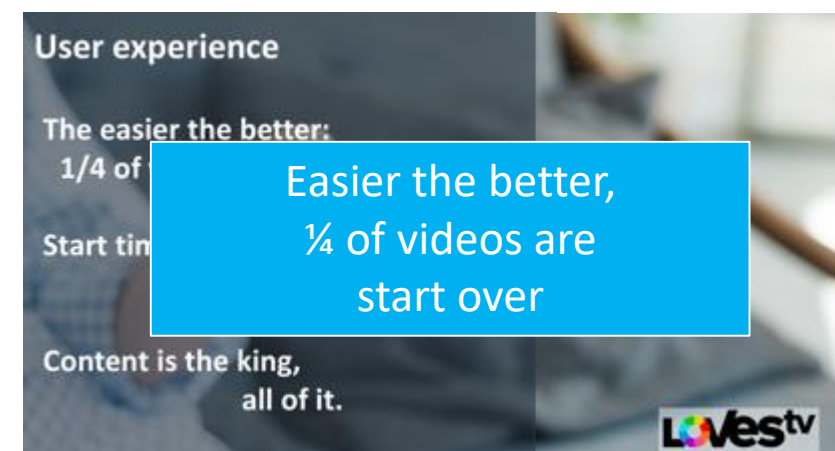
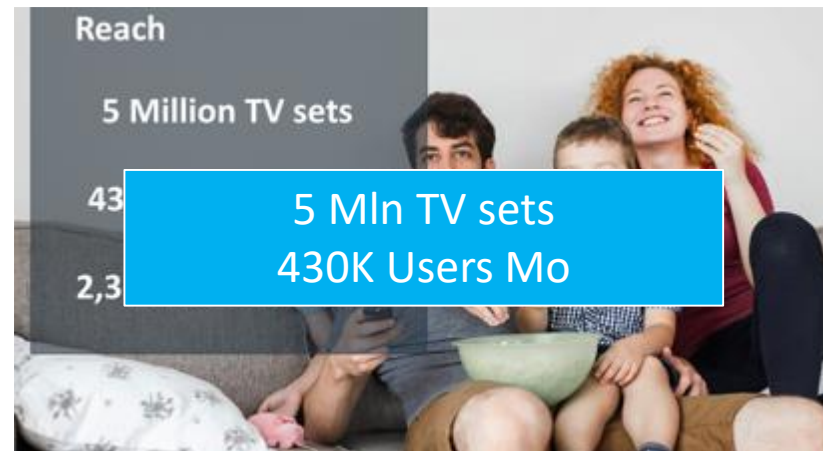
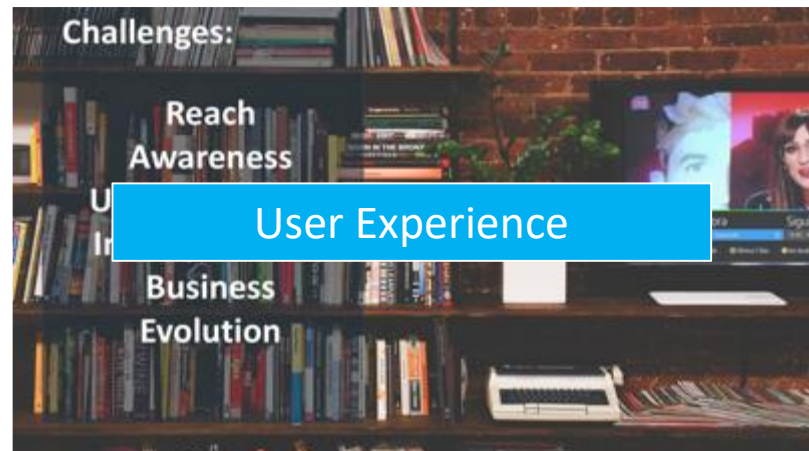
- Digital Ads
- Content/Time triggered Ads
- Disclaimers

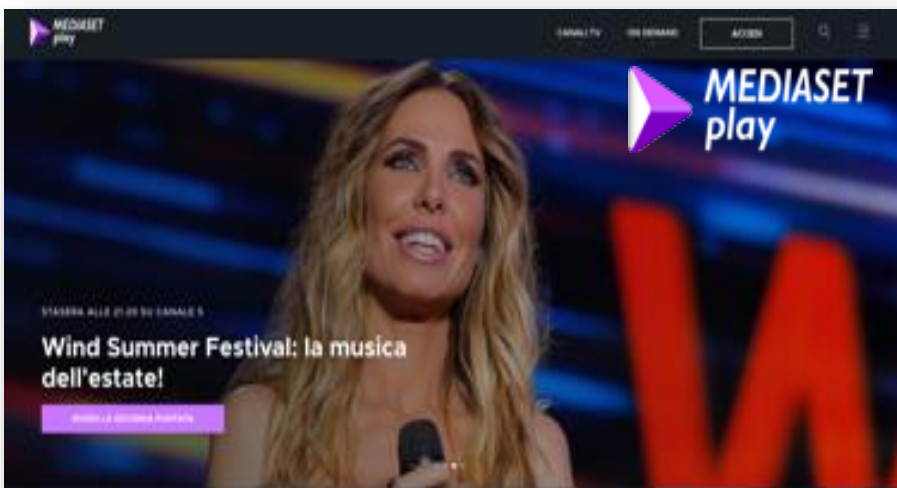
Evolution:

- New ways for content discovery
- New ways to access the service
- New ways to get more engagement

IN PRODUCTION HBBTV: LOVES TV – SPAIN

LESSONS LEARNED AND CHALLENGES AHEAD





IN PRODUCTION HBBTV: MEDIASET – ITALY

LESSONS LEARNED AND CHALLENGES AHEAD

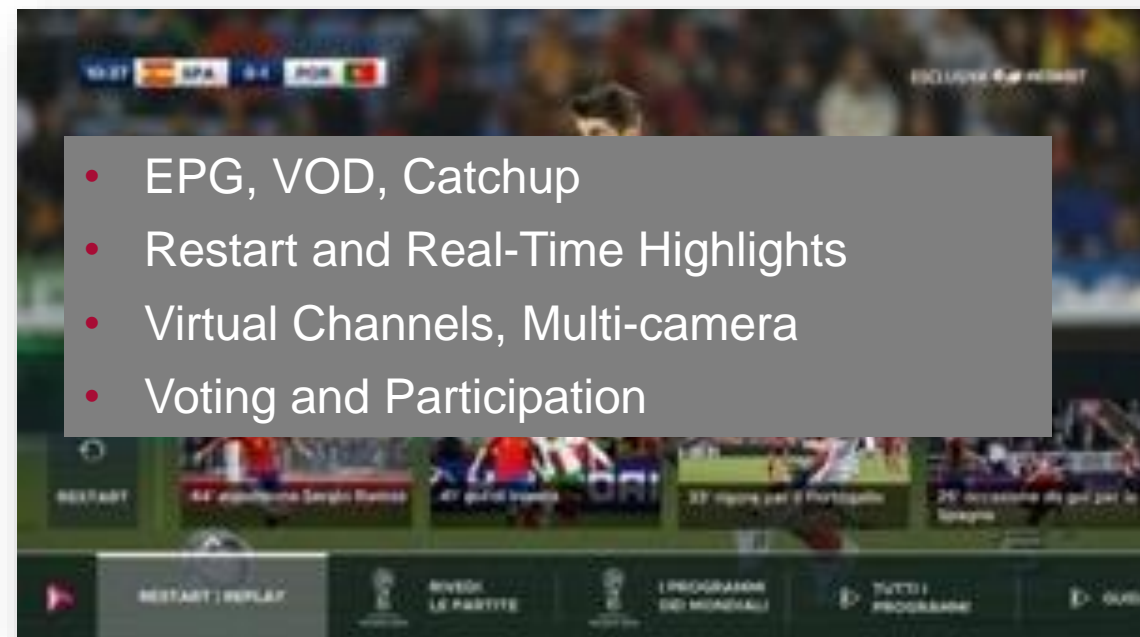


NEW INTERACTIVE ADVERTISING MODELS

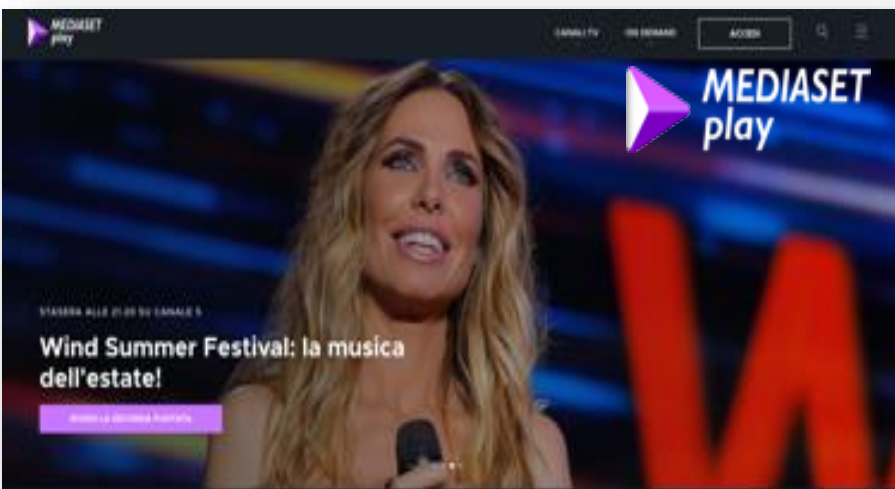


- Interactive & Addressable TV Advertising (Bundled)
- Display and Video Advertising (Bundled)
- **Dynamic AD Replacement (Premium)**

USER ENGAGEMENT: “OBSESSIVE” TRIALS



- EPG, VOD, Catchup
- Restart and Real-Time Highlights
- Virtual Channels, Multi-camera
- Voting and Participation



IN PRODUCTION HBBTV: MEDIASET – ITALY

LESSONS LEARNED AND CHALLENGES AHEAD



NEW INTERACTIVE ADVERTISING MODELS

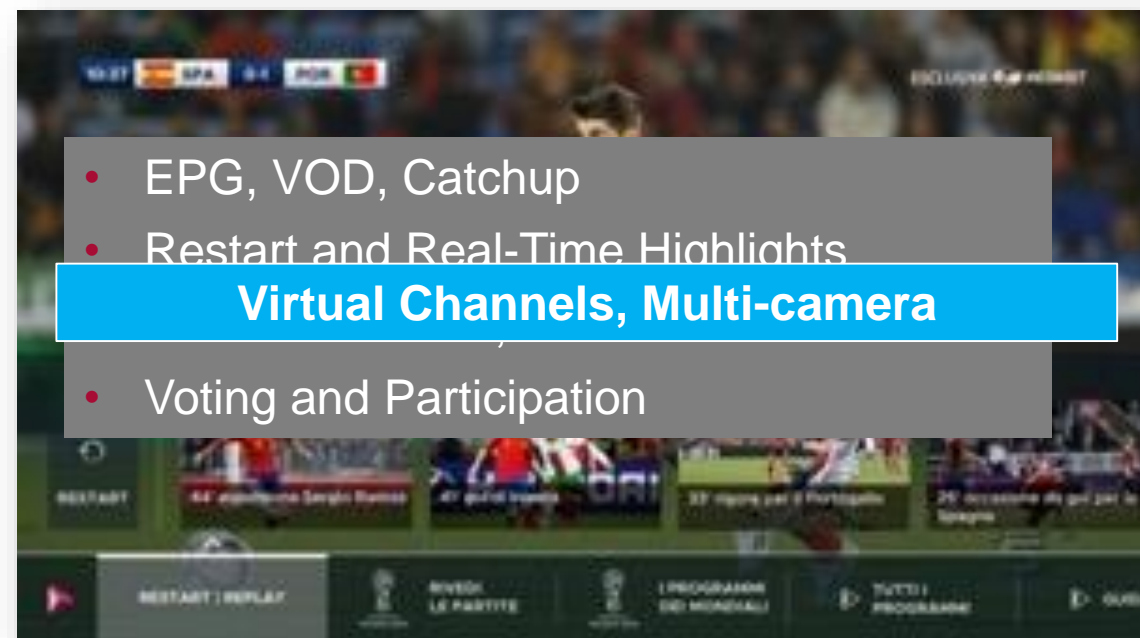


- Interactive & Addressable TV Advertising (Bundled)

Dynamic AD Replacement (Premium)

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USER ENGAGEMENT: “OBSESSIVE” TRIALS



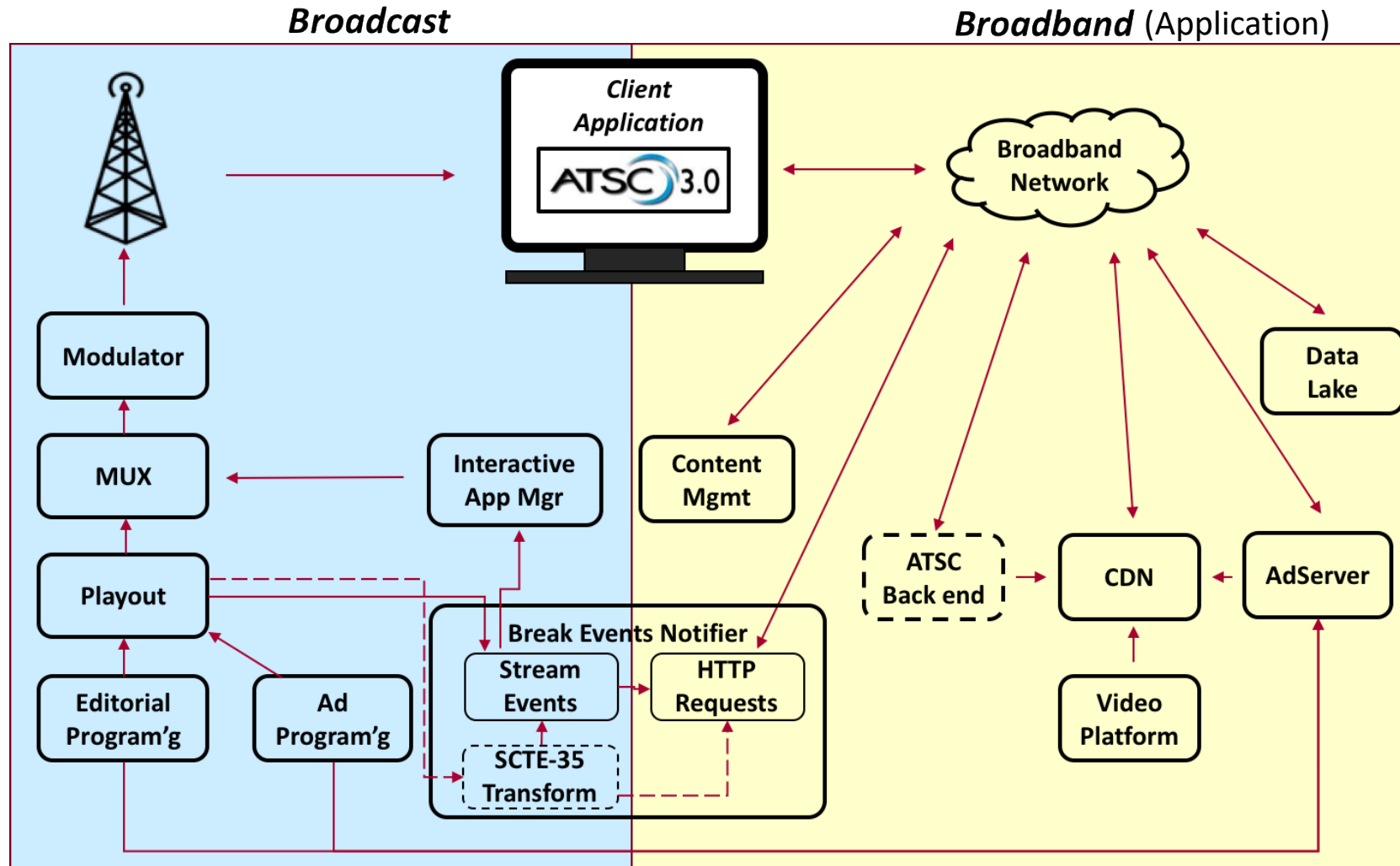
- EPG, VOD, Catchup
- Restart and Real-Time Highlights

Virtual Channels, Multi-camera

- Voting and Participation

TECHNOLOGY: HIGH LEVEL VIEW

View of the components needed for a rich broadband offering



THE NEED OF A PLATFORM

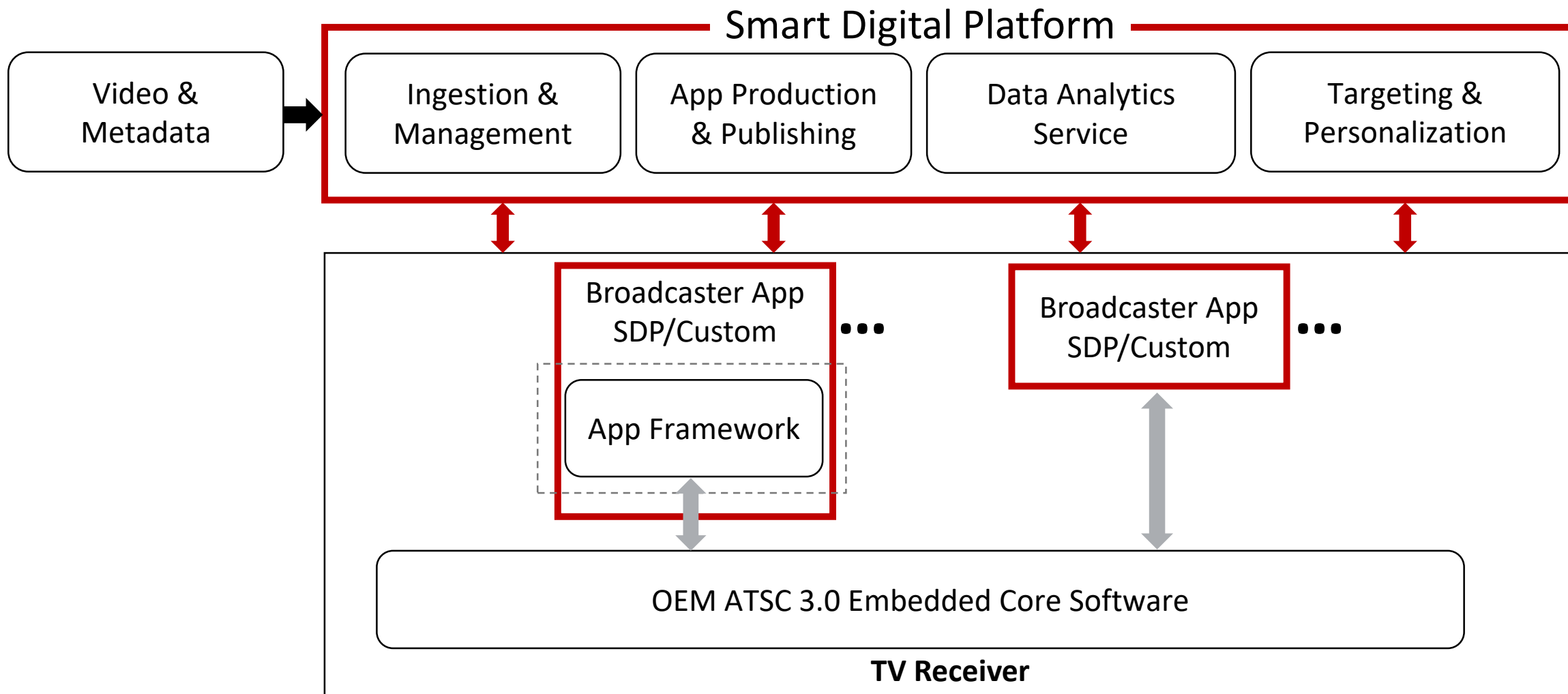
Fincons Smart Digital Platform was built to successfully support NEXTGEN TV

New needs not fully covered by software management tools on the market

- **Interactive TV apps introduce a constantly changing TV environment:**
 - Direct editorial control of the app UI/UX without the need of software development
 - Maintain application quality
- **Multiple content and app platforms need to be managed (local, national, OTT, etc):**
 - Flexible models
 - Use automation to simplify Tech complexity

FINCONS SMART DIGITAL PLATFORM (SDP)

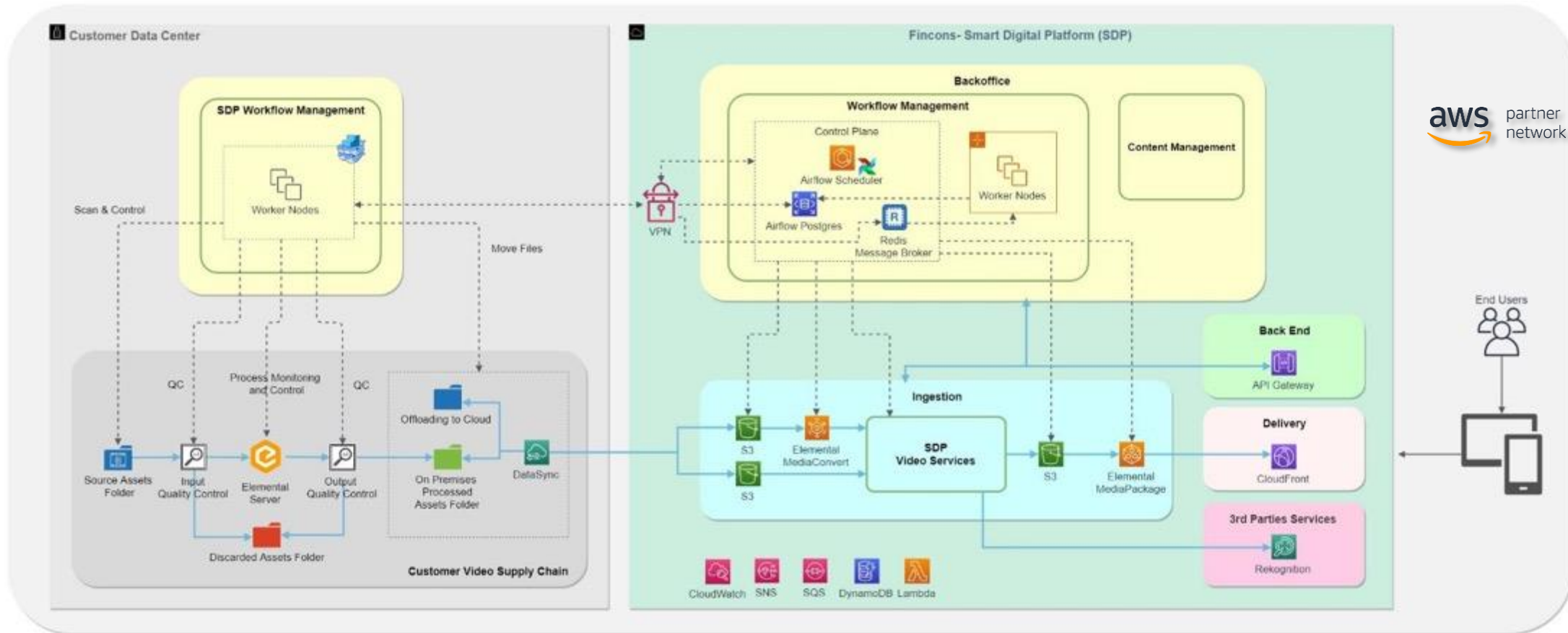
Highlights of Production Tools suite



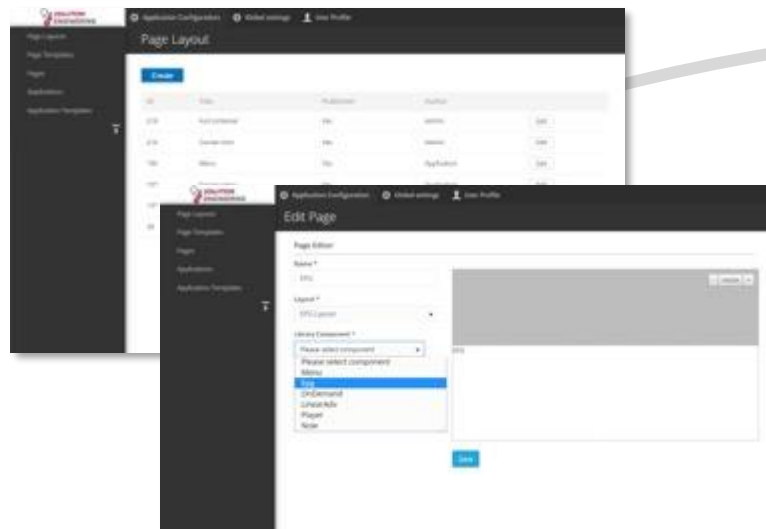
BACK OFFICE: WORKFLOW MANAGEMENT

Broadband management processes can be fully Cloud based, or a combination with On-Premise

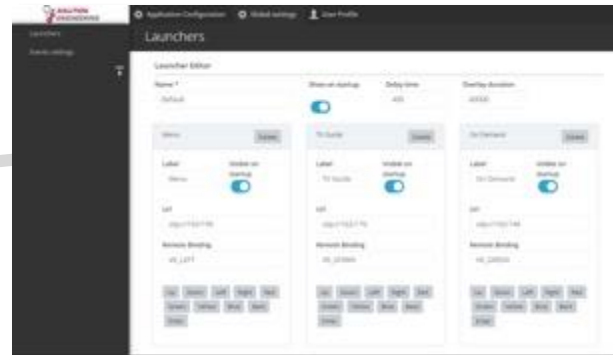
Featured on:
AWS Media Blog



Managing “on premise” and cloud media services through workflow management tools to **optimize existing infrastructure and offload to cloud services** when required, **reducing operational costs**



FEATURE MANAGEM



APP NAV CONFIGURATION



DISPLAY ADVERTISING



WORKFLOW ORCHESTRATION



MONITORING

PRODUCTION TEAM

Example of tasks & team size in Production today for HbbTV

Weekly, based on
key events

Weekly, based on
key events

Weekly or daily,
based on campaign
feedback

APP NAV CONFIGURATION

DISPLAY ADVERTISING

FEATURE MANAGEMENT

Daily/Active

Daily/Active

Digital Team of 4 (P/T):

1. Editorial
2. Production
3. Ad Sales
4. Ad Production

* Mediaset 2019

WORKFLOW ORCHESTRATION

MONITORING

FROM THE SMPTE WASHINGTON DC SECTION

THANK YOU