CCMA HbbTV
Towards an interactive and innovative TV
About the CCMA

- Corporació Catalana de Mitjans Audiovisuals (CCMA) is the Catalan public Broadcaster.

- Its audiovisual offer includes:
  - TV: TV3, 33, Super3, 3/24, Esport3 and TV3Cat.
  - Radio: Catalunya Ràdio, Catalunya Informació, CatMusica & iCat.cat
  - Digital Media: website, mobile apps, Connected and Hybrid TV, social networks, etc…
The CCMA and Interactive Services

• Since the beginning of DTT broadcasting, the CCMA has been very aware to latest technologies to offer interactive services.

• CCMA has developed and progressively deployed interactive services, since firsts mhp TV applications to nowadays “TV3alacarta” service on proprietary platforms such as PS4 or proprietary SmartTV markets.

• Thanks to the introduction of HbbTV, CCMA has deployed new innovative services including VOD and accessibility services to the TV audience. Nowadays CCMA is working in a new multicamera service project.
HbbTV opportunities on CCMA services
HbbTV opportunities on CCMA services

• **HbbTV is an industry standard, an open platform, non proprietary**
  • HbbTV allows broadcasters direct access to their audience to offer new and enhanced services

• **Flexibility and Dynamism**
  • Time to publish new apps and updates dramatically reduced

• **Broadcast/Broadband Synchronization**
  • Allows the activation of interactive services scheduled and synchronised with broadcast events.

• **Innovation**
  • Allows deployment of improved services like VOD, EPG, voting, interactive advertising, etc.

• **Accessibility**
  • Allows too development of accessibility services (captions, AD…).
CCMA’s deployments since HbbTV 1.0

- 2011 - Catchup service “TV3alacarta”
- 2014 – Access Services
- 2015 – Multicamera Project
CCMA “TV3alacarta” Catchup service

• 2011 - “TV3alacarta”
  • VOD service with alphabetical content searcher and direct access to “most seen” & “last week” programs and special contents.
  • Accessible from channels TV3, 33, 324, Esports3 and Super3
CCMA “TV3alacarta” Access services

- 2014 – Improved service with Access Services
  - EBU-TT-D Subtitling and Audiodescription

- CCMA participates in the European project Hbb4All that addresses media accessibility possibilities in the new hybrid broadcast-broadband TV (HbbTV) environment.
CCMA “TV3alacarta”
CCMA “TV3alacarta”
CCMA “TV3alacarta” Catchup service

- Growing Audience due to
  - Increase number of Connected HbbTV SmartTV’s
  - Changes in the behaviour of the audience watching TV
  - TV3 leadership in the catalan audiovisual market

CCMA “TV3alacarta” Catchup service

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![VIDEO CONSUMPTION - PLAYS & HOURS](chart)

- Achieved 100,000 hours of HbbTV video consumption
CCMA Multicamera Project

- 2015 – Live and VOD Multicamera Service
  - Objective: deployment of multicamera TV programs for SmartTV’s based on HbbTV V1.5.
  - Developed within the scope of European TV-Ring Project that involves 3 different pilots in three countries: Germany, the Netherlands and Spain.
CCMA Multicamera Project

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• Improved Multicamera Service
  • Multicamera monitoring and control through 2nd Screen
CCMA Multicamera Project

• Deployed pilots:
  • Cultural events (Castellers, folklore music concerts)
  • Entertainment programs (Oh! Happy Day)
  • Sports programs (Champions League)
  • Parliamentary Elections
  • Debates
CCMA Multicamera Project

- 24N Champions League – FC Barcelona vs AS Roma football match
  - CAM 1 – Live program
  - CAM 2 – Messi, Neymar, Suárez camera
  - CAM 3 – Luis Enrique
  - CAM 4 – Attack camera
CCMA Multicamera Project

- 24N Champions League – FC Barcelona vs AS Roma football match
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• Analisys Multicamera Pilot - FC Barcelona vs AS Roma
  • Positive feedback from users through social networks
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- Analisys Multicamera Pilot - FC Barcelona vs AS Roma
  - Positive feedback from users through social networks
  - Some negative feedback from users with SmartTV problems
    - Camera switching was too slow
      - Nowadays developing a new solution with better switching time.
    - Blackscreen on some SmartTV’s
CCMA Multicamera Project

• Conclusions  
  • TV-RING Multicam project has been a success:  
    • Great audience acceptance.
    • CCMA has seen the project as an opportunity to offer new innovative services.
  
  • But nowadays multicam based on HbbTV 1.5  
    • is not 100% working on all HbbTV SmartTV’s. Interoperability issues.
    • usability is still an issue that needs improvement  
      • Camera switching is too slow
      • 2nd screen video synchronization is not possible
CCMA Multicamera Project

• Conclusions
  • Next steps
    • Better camera time-to-switch
      • Testing a new streaming format
    • Better compatibility
      • Achieve more HbbTV SmartTV’s models. Improve interoperability.
  • Capture user feedback
    • Social Networks real-time feedback, Living lab, Workshops...
    • Improvements based on user preferences & experience

• HbbTV 2.0 will allow great improvements
  • HbbTV and 2nd screen video synchronization
  • Improved synchronisation broadcast & broadband contents
  • Better video quality at low bitrates with HEVC
Thank you very much
Feedbacks, questions and comments are welcomed.
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