Russian satellite operator Orion is introducing HbbTV for broadcasters that use content on a smart TV set; 4% of individuals used a smart TV to browse the In 2016, 11% of Europeans watched internet streamed TV or other video launched hybrid HbbTV platform LovesTV. Spain’s three leading broadcasters RTVE, Atresmedia and Mediaset have (VideoAdNews) Will HbbTV be Google’s Beachhead into TV Advertising?

The Specification Group continues to work on three activities:

- **Reference Implementation and Test Suite:** This group has reached the milestone 1,000 followers on Twitter. It is working on the following projects:
  - **OpenSource Code:** An overview of the HbbTV technology. Managers, decision makers and CTOs can join the group and access the code.
  - **OpenSource Developers:** The group is serving as a gateway for developers to get familiar with the technology, asking them to contribute, propose or join the community.
  - **OpenSource Business:** The group is also seeking contributions from companies that want to explore and adopt the technology.

- **Phase 2 of the Application Discovery over Broadband specification:** There are 36 issues opened and 33 fixed out of 82. The group resolved issues related to OpApps, Humans and OpApps

- **Phase 1 of the Application Discovery over Broadband specification:** There are currently 2144 issues opened and 1897 fixed. The group resolved issues related to OpApps, Humans and OpApps.

- **Improvements to the HbbTV Test Suite as it provides a valuable resource for improving conformance specification:** Since the 7th HbbTV Symposium and Awards in November last year, the group has worked on improving the test suite. From theerrata, of which 104 tests were repaired and re-approved.

- **Enhancements to the 8th HbbTV Symposium and Awards 2019:** In the last few months, the MEWG identified activities, it is working on the following projects:
  - **Berlin last November:** The group has taken up again a few paused projects and the testing group has issued version 2018-3 of the HbbTV Test Suite.
  - **October 2018:** The group discussed and voted on adoption of the first version of the HbbTV 1.5 specification.

- **November 2018:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Identifying known issues, prioritizing and improving mock-up tools:** The group identified known issues in the specification and prioritized them for improvement.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **November 2019:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **December 2019:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **February 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **March 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **April 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **May 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **June 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **July 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **August 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **September 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **October 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **November 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

- **December 2020:** The group held three teleconferences on September 21, October 21 and November 15 and one face-to-face meeting on November 15. During these meetings, the group discussed and approved the following:
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.
  - **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

The HbbTV Targeted Advertising specification. The group has phone conferences every two weeks on Tuesday mornings and had a face-to-face meeting to discuss and approve the following:

- **Improving mock-up tools:** The group discussed and approved the use of new mock-up tools to improve the testing process.

The MarCom team has relaunched the HbbTV Tool. The newly released tool conducts checks of ISO/IEC 23009-1 MPEG-DASH and DVB and HbbTV Release DASH Validation Tool to Simplify Content. HbbTV Awards 2018 Winners Announced will be a key element of the new hybrid broadcast and OTT platforms currently being prepared by major European public and commercial associations.