

#### FRAUNHOFER INSTITUTE FOR OPEN COMMUNICATION SYSTEMS FOKUS



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### What is FAMIUM?

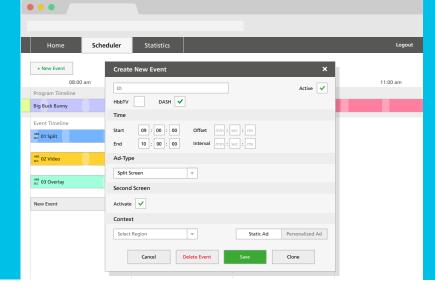
FAMIUM is an end-to-end prototype implementation for early technology evaluation and interoperability testing developed by Fraunhofer FOKUS' Competence Center Future Applications and Media (FAME). FAMIUM facilitates multi-screen content presentation and synchronization, adaptive media streaming and content protection.

FAMIUM includes a Chromium build with extended features of upcoming Web and streaming standards to allow early prototyping, experimentation and testing. These for example include W3C Presentation API, DIAL, Network service discovery, UPnP / DLNA, W3C TunerControl API, W3C Media Source Extensions (MSE) and Encrypted Media Extensions (EME). Furthermore, FAMIUM supports Dynamic Adaptive Streaming over HTTP (DASH) and Digital Rights Management (DRM).

### **TV & OTT Playout**

The FAMIUM Multiscreen Advertisement solution addresses the needs of broadcasters and content providers to schedule and distribute media content (on-demand or live) to multiple platforms easily. By supporting the HbbTV standard, as well as MPEG-DASH, devices from both worlds can be reached from one Web-based management interface. HbbTV is available on Connected TVs and MPEG-DASH playback only requires an HTML5 browser (desktop, smartphone, tablet etc.).

Platform-specific inband signaling is used to insert advertisement into the media content. This is to ensure time-accurate playout of the advertisement. In the management interface various options exist to insert advertisement. For example, ad slots can be scheduled or dynamic triggering of ads during live events.

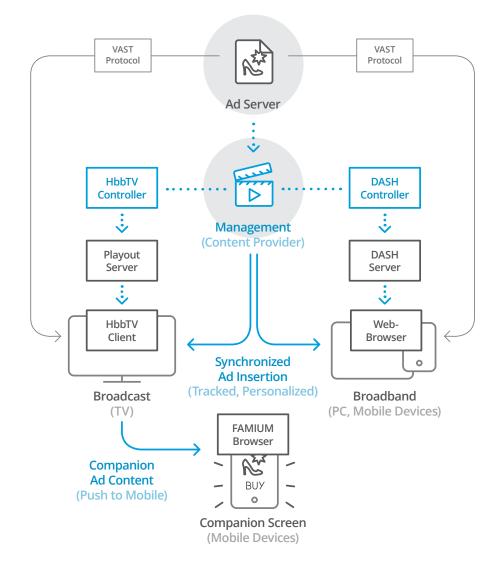


Video content can be delivered across a multitude of devices and platforms via DVB, HbbTV, and DASH. A special highlight is the dynamic integration of digital video advertising, which can be integrated in real time, in both classic linear and on-demand TV content.

#### Ad-insertion

Different types of standardized ad formats (video or display ads) can be selected in the management interface. The cross-platform client framework is integrated into an HbbTV or DASH player app to interpret the ad signal, display the ad and send tracking information to the Ad server. The clients support the VAST standard for video ads.

In contrast to traditional broadcast TV ads, IP-based ads allow for direct measurement of each client. Furthermore the FAMIUM solution is able to offer context aware ads based on this data (e.g. personalized or location-based ads).



## At a glance

We show how video content can be delivered across a multitude of devices and platforms via DVB, HbbTV, and DASH. A special highlight is the dynamic integration of digital video advertising, which can be integrated in real time, in both classic linear and on-demand TV content.

Through the integration of features of the HbbTV 2.0 standard, the technology supports second screen functionality and links video elements and inserted advertising via the HbbTV technology standard. A DRM system can be integrated in order to encrypt content and make it available only to a certain target group, such as for premium services.