



## FAMIUM – FUTURE WEB TECHNOLOGIES AND STREAMING MEDIA ECOSYSTEM

### Contact

Stefan Pham  
Competence Center FAME  
Phone +49 30 3463-7103  
stefan.pham@fokus.fraunhofer.de

Fraunhofer FOKUS  
Kaiserin-Augusta-Allee 31  
10589 Berlin  
Germany

[www.fokus.fraunhofer.de/go/famium](http://www.fokus.fraunhofer.de/go/famium)

---

### What is FAMIUM?

---

FAMIUM is an end-to-end prototype implementation for early technology evaluation and interoperability testing introduced by Fraunhofer FOKUS' Competence Center Future Application and Media (FAME).

FAMIUM includes a Chromium build with extended features of latest and upcoming standards to allow early prototyping, experimentation, and testing of new functions and capabilities. These for example include W3C Webscreen API, DIAL, Network service discovery, UPnP / DLNA, TunerControl API and many more.

It also includes a framework for the delivery and reception of adaptive bitrate content as well as Digital Rights Management (DRM) protected content. FAMIUM bundles several Dynamic Adaptive Streaming over HTTP (DASH) and DRM related functionalities. FAMIUM's DRM solution is based on the W3C candidate recommendation Media Source Extensions (MSE) and the working draft Encrypted Media Extensions (EME).

---

### FAMIUM comprises the following packages:

---

**FAMIUM Multiscreen:** provides technologies to connect multiple screens together so that applications can make use of and interact (present content) with multiple screens. E.g. implements the W3C webscreen API, UPnP and Dial service discovery.

**FAMIUM DASH:** forms an end-to-end system comprising content composition, transcoding, segmentation, encryption, adaptive streaming and media playback at various endpoints

**FAMIUM DRM:** comprises tools for creation and playback of common encryption (CENC) based content incl. a Content Decryption Module (CDM) implementation for HTML5 based browsers

**FAMIUM Internet of Things:** connects TVs, cars, wearable computing devices, and all of the consumer and business tools to the Internet

# FAMIUM



Multi  
Screen



Adaptive  
Streaming



Digital Rights  
Management



Internet  
of Things



Personal  
Cloud

## Smart Communication

*FAMIUM ecosystem  
and its packages*

**FAMIUM Personal Cloud:** interconnects resources and APIs of multiple FAMIUM instances forming a private cloud of all your personal devices

### Benefits of FAMIUM Multiscreen

FAMIUM Multiscreen provides technologies to connect multiple screens together so that applications can make use of and interact directly with all accessible screens. As a result, applications can provide a better user experience and create a richer content presentation to the user.

### Benefits of FAMIUM DASH

Dynamic Adaptive Streaming over HTTP (DASH) is the upcoming streaming standard for the Web and will harmonize video delivery across the Internet. The FAMIUM DASH solution forms an end-to-end system ranging from content creation to content consumption. It is meant for early technology evaluation and interoperability testing.

The FAMIUM DASH solution contains a comprehensive set of standard as well as cutting-edge features on content creation side. The end-to-end system is ready for installation in your own lab for evaluation or demonstration purposes.

### Benefits of FAMIUM DRM

Digital Rights Management (DRM) is a key factor for Internet-delivered video. For a secure integration into a browser environment a Content Decryption Module (CDM) approach is used to interact with native DRM systems available on several platforms.

### Benefits of FAMIUM Internet of Things

FAMIUM IoT connects TVs, cars, wearable computing devices, and all of the consumer and business tools to the Internet. Let them talk to each other and create innovative applications for them. Easily share the data of your Internet-connected devices with the developer community.

### Benefits of FAMIUM Personal Cloud

The FAMIUM Personal Cloud is an overlay network for all your personal devices. It permanently connects your smartphone, your laptop and your TV and even your car in a secure way with each other. Personal Cloud applications can then access data and features from all connected devices.

FAMIUM supports a great variety of applications for mobile, desktop and connected TVs by facilitating multi-screen presentation, adaptive media streaming, content protection, cross-platform development and content synchronization. Providers and marketers of media content can flexibly manage their advertising using FAMIUM. Both dynamic placement – the advertisement is spontaneously displayed while the content is playing – and static placement are possible. Specific times can be defined at which advertisements should be displayed. 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.

Furthermore, the FAMIUM ecosystem provides many different DASH assets used in various ways in the FAMIUM ecosystem, ranging from live stream to plain on-demand content, static and dynamic advertisements or multi-angle and multiscreen content. As target platforms, the content addresses mobile to desktop Consumer Electronic (CE) equipment as well as TV devices in the scope of HbbTV.

We  
connect  
everything