



FAMIUM DAI SERVICE

Contact

Robert Seeliger
Senior Project Manager
Business Unit FAME
Phone +49 30 3463-7262
robert.seeliger@fokus.fraunhofer.de

Fraunhofer FOKUS
Kaiserin-Augusta-Allee 31
10589 Berlin
Germany

www.fokus.fraunhofer.de

End-to-end solution for server and client side ad-insertion in MPEG-DASH and HLS

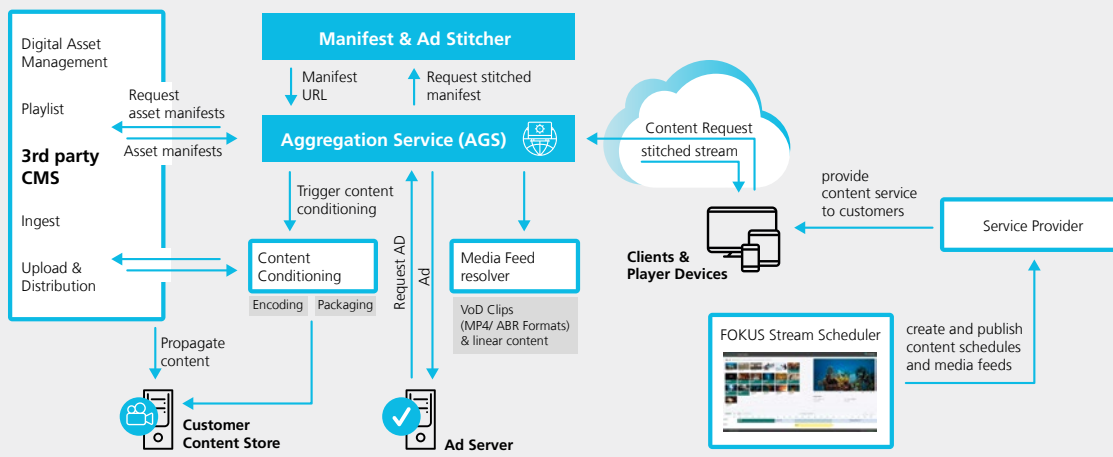
The FAMIUM DAI Service is an end-to-end solution for ad-insertion in MPEG-DASH and HLS. Our flexible technology is composed of multiple micro services, that can easily be deployed and integrate well with existing components and stream delivery infrastructures. Acting as a delivery middleware, FAMIUM DAI wraps the complexity of the ad-insertion process into easy to implement tools, which are manageable through the FOKUS Stream Scheduler.

It supports different ways of ad insertion, namely server-based and app-based ad insertion. The service covers the latest MPEG-DASH ad-insertion techniques like XLink and DASH inline and inband events. Moreover, it has support for ad signaling mechanisms like SCTE35 and ad server standards like VAST, VPAID and VMAP. Our tools can be used to target different platforms, including HTML5 browser, HbbTV 1.5/2.0 devices and native DASH and HLS player running on e.g. Android, iOS, FireTV or Chromecast.

FAMIUM DAI components

Aggregation Service (AGS): The FAMIUM DAI Aggregation Service (AGS) is the heart of the DAI solution acting as aggregator for media feeds, content & ad assets. It runs the business logic to process stream requests, content conditioning and triggers manifest stitching. Furthermore, the AGS provides adapters to integrate with 3rd party services, ad servers and content management systems.

Manifest Stitcher: The FAMIUM DAI Manifest Stitcher performs individual manifest stitching, based on content playlists served by the Aggregation Service (AGS). The



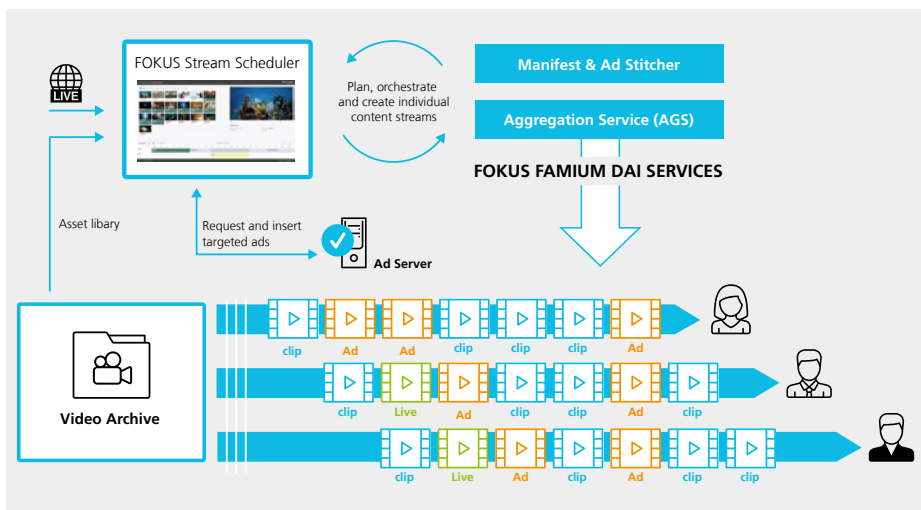
Dynamic Ad Insertion Workflow leveraging Fraunhofer FOKUS DAI components

component creates MPEG DASH and HLS manifests on an individual, per client basis on the fly. The Manifest Stitcher supports multiple manifest variations corresponding to use cases as static playlists, linear playlists, live playlists and mixed VoD and live input sources.

VoD-to-Live Workflows – monetizing large VoD libraries: FAMIUM DAI leverages the monetization of large content libraries through personalized and ad-enabled content streams. VoD-to-Live workflows allows the creation of orchestrated linear content channels out of the vast available VoD titles in large content libraries, which are normally not found and watched by viewers. Our FOKUS Stream Scheduler provides an easy to use tool that straight forwardly integrates with existing content stores and workflows to plan, create and deliver individualized content streams with targeted ads to your customers. As the solution works on manifest level, supporting MPEG DASH and HLS, it seamlessly integrates with established content delivery networks and playlist scheduling like Media RSS feeds (MRSS). If required, content conditioning is supported as well.

At a glance

Our solution enables dynamic ad insertion and flexible over-the-top streaming workflows including VoD-to-Live services across a multitude of devices and platforms via MPEG DASH, HLS and HbbTV. Dynamic digital video advertising can be integrated per user and in real time, in both traditional linear and on-demand content. Content manipulation and dynamic ad insertion is powered by the FOKUS components Manifest Stitcher and Aggregation Service, operating on manifest level in a highly flexible and scalable system architecture. Individual stream management and channel orchestration is available via the FOKUS Stream Scheduler.



Individualized and ad-enabled VoD-to-Live content creation through manifest stitching

Keyfacts:

- tools to manage the whole ad-insertion workflow for MPEG-DASH and HLS
- Flexible service chain to target server-based and app-based ad insertion
- DASH ad insertion techniques like XLink and DASH Inband / Inline events
- SCTE35, VAST, VPAID, VMAP support for ad signaling
- HTML5 browser, HbbTV 1.5 / 2.0, iOS, Android, FireTV and Chromecast
- VoD-to-Live Workflows to monetize large VoD content libraries