



Live
Staging of Media Events

Fact Sheet



LIVE Staging of Media Events

The Story

Shaping tomorrow's live iTV broadcast experience

The LIVE project attempts to radically improve on the linear approach to TV broadcasting of live sporting events by delivering digital technologies and a content format that enable viewers to shape their own personal and highly interactive viewing experience as they watch the broadcast.

The LIVE solution is a production support system that hooks into a broadcaster's production infrastructure to enable contextual search and recommendation of multimedia content in a real-time production environment across multiple sources and formats.

So what can the viewer expect?

The viewer can expect access to multiple story streams that are created in real-time in response

to the action unfolding as well as the shifting interests of the viewer. They provide alternative views of the action where possible, and unique story perspectives of the sporting event, such as historical footage of the sports-person, commentary on parallel action related to the event, as well as audiovisual mixes of live sport action.

The quality of drama is maintained by orchestrating a viewing experience (the 'show') in which viewers switch between story streams without being cut off from the main action of the live sporting event.

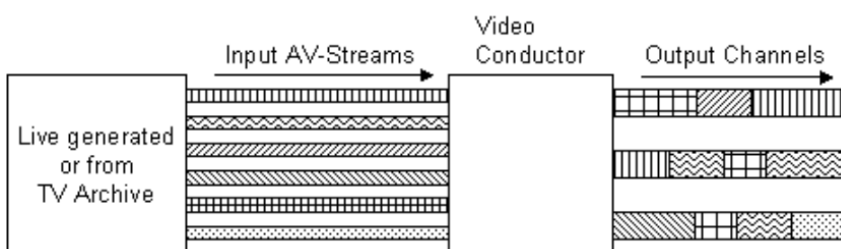


What distinguishes our approach from other approaches for interactive TV?

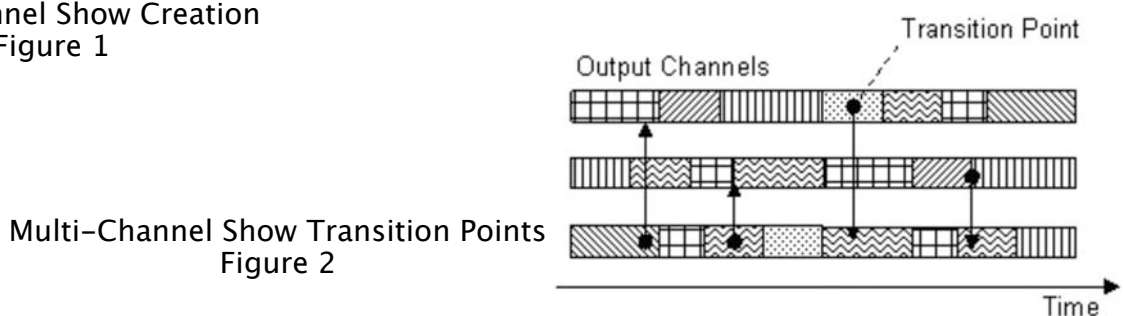
We do not only want to produce several live audiovisual streams beyond the main stream, but in addition create transitions (switching points), where the consumer is invited to switch to another sub-channel. Thus our aim is to prevent a mere “zapping” between channels and instead guide the consumer to navigate through the content of a live show of interlinked streams with a coherent overall dramaturgy. Events such as the Olympic Games, offer the perfect scenario for multiple points of view on one and the same sports event.

New TV Content Format Interlinked Multi-Channel TV Shows

The creation and composition of the multi-channels is done by the “video conductor” (VC), who may be a single human or a whole team at the production site. Content on which the work of the VC is based can come from live AV streams or from the broadcaster’s archive. The VC has to combine and stitch the streams together to produce several AV streams in real-time (Figure 1) which can be received by consumers. As mentioned above one of the key innovations in LIVE is that the VC not only produces one or several live AV streams, but in addition also creates transition points, where the consumer is invited to switch to another channel (Figure 2).



Multi-Channel Show Creation
Figure 1



Multi-Channel Show Transition Points
Figure 2

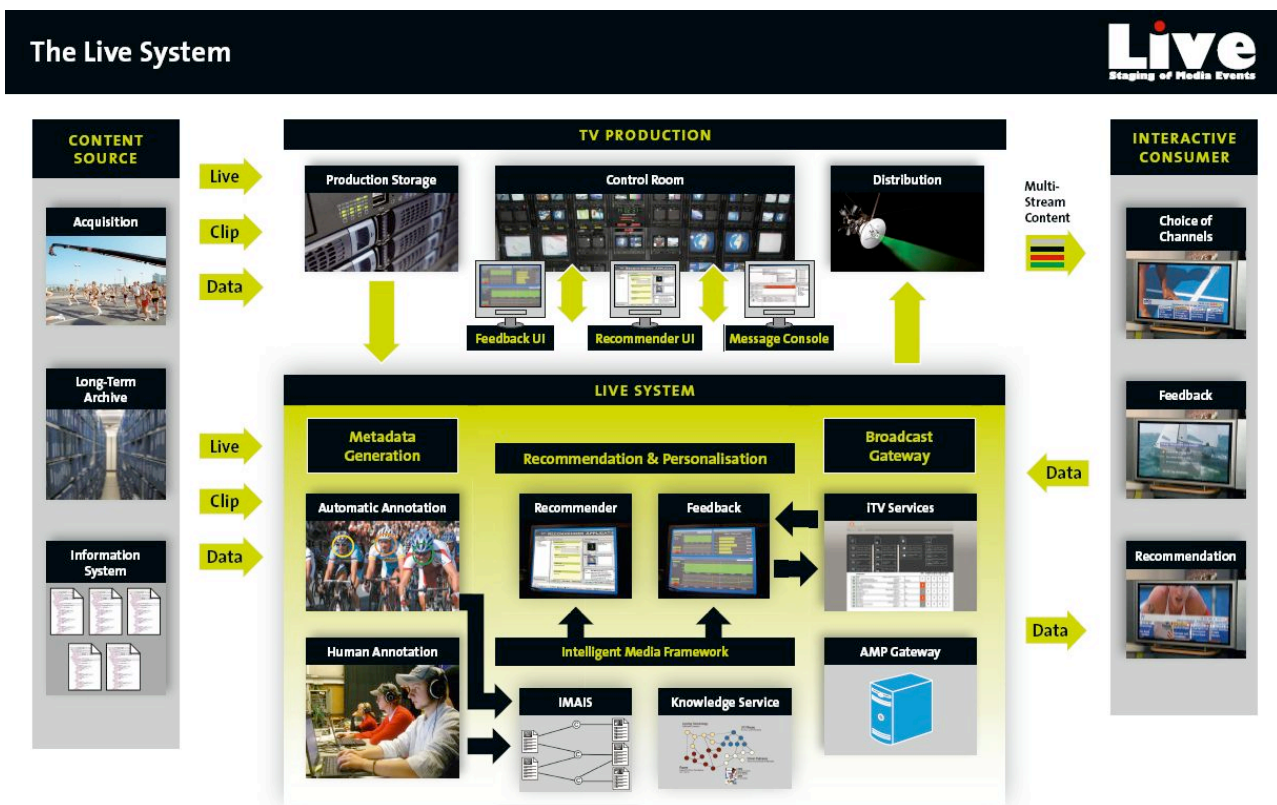
Multi-channel output requires management of the channel information. The content of the channels and their interrelations will be defined within the Staging Concept for multiple channels. The Staging Concept will define for each channel its specific content and form. This might include the specific topics of the selected channel, it might include the specific format or content types included (for example, the genre), or it might include the specific audience the channel is devoted to. Through the Staging Concept each channel is assigned a specific Channel Profile which is used by the Content Recommender to find a suitable set of recommended content.

New Production Tools

The LIVE Support System

The LIVE system consists of content analysis tools, an intelligent media framework, a recommender system and special services dedicated to the production of multi-channel TV shows. The LIVE console in the control room serves as the front end to support the production process according to the LIVE staging concept.

There are four main types of information sources that are analysed and processed in the system: live event multi-stream video feeds; related event database services; relevant archived material (clips); and consumer feedback data. Content analysis takes place within the Automatic and Human Annotation components which analyse and annotate the incoming multi stream audio-video content from the event.



The goal of the Recommender and Personalisation System on the other hand is to provide automatically a selection of suitable content from the pool of available archive content. The content selection procedure will primarily focus on the selection of semantically annotated audio-visual materials from the TV archives according to the preferences of the professional user, the concept of the event and the profile of the target audience.

The Intelligent Media Framework (IMF) supports the data and information integration of the LIVE system: The IMF ensures that the meaning of and the access to information across the system is formalised and managed. Therefore it provides controlled vocabularies and content related knowledge on the one hand and collects event and content related information on the other hand.

To guide the viewer through and to enhance the multi-viewing experience iTV Services are provided. They comprise an interactive TV application presented on the viewers' end device and several tools to control the application and to collect implicit and explicit viewer feedback.

Project Facts

LIVE the Project

European Initiative

LIVE is an integrated, multidisciplinary initiative that will contribute to the IST strategic objective 'Semantic-based Knowledge and Content Systems' and 'Exploring and bringing to maturity the intelligent content vision'. The LIVE project results aim at the development of semantic-based and user/content-aware systems to pioneer intelligent self-describing iTV content by creating an intelligent media framework.

LIVE Innovation

The LIVE project promotes a new, third market segment in the digital interactive television sector that does not exist today: intelligent television programming and services. This means creating non-linear, multi-stream and real-time content formats related to major media events, which adapt to the interests of the consumer. For this goal classical AV oriented media needs to be enriched with sophisticated metadata up to intelligent semantics, archive material and live streams have to be properly linked together in real-time, and TV consumer feedback has to be considered for convenient programme adjustments.

The Facts

- Project duration is 45 months commencing January 2006.
- Coordinator is Fraunhofer IAIS, St. Augustin, Germany
- The overall budget is approx. 11.3 million euro.
- The consortium consists of nine partners from five European countries.
- Project manager: Jobst Loeffler, Fraunhofer IAIS,
 - jobst.loeffler@iais.fraunhofer.de
- Technical Coordinator: Dr.-Ing Joachim Köhler, Fraunhofer IAIS,
 - joachim.koehler@iais.fraunhofer.de
- Website: <http://www.ist-live.org>
- Project email address: info@ist-live.org

Project Consortium

INSTITUTION	CONTACT	COUNTRY
(Coordinator) Fraunhofer IAIS	http://www.iais.fraunhofer.de/	Germany
Academy of Media Arts	http://www.khm.de/	Germany
ORF (Austrian Public Broadcaster)	http://www.orf.at/	Austria
ATOS Origin	http://www.atosorigin.com/en-us/	Spain
School of Informatics, University of Bradford	http://www.bradford.ac.uk/external/	UK
University of Ljubljana	http://www.bradford.ac.uk/external/	Slovenia
University of Applied Sciences Cologne	http://www.fh-koeln.de/fh_www/hochschule/welcome/english.html	Germany
Salzburg Research Forschungsgesellschaft	http://www.salzburgresearch.at	Austria
Pixelpark	http://www.pixelpark.com	Germany



Univerza v Ljubljani



Fachhochschule Köln
University of Applied Sciences Cologne

salzburg|research

pixelpark

This document contains material, which is the copyright of certain LIVE consortium parties, and may not be reproduced or copied without permission. The commercial use of any information contained in this document may require a license from the proprietor of that information.

Neither the LIVE consortium as a whole, nor a certain party of the LIVE consortium warrant that the information contained in this document is capable of use, nor that use of the information is free from risk, and accepts no liability for loss or damage suffered by any person using this information. Neither the European Commission, nor any person acting on behalf of the Commission, is responsible for any use which might be made of the information in this document.

The views expressed in this document are those of the authors and do not necessarily reflect the policies of the European Commission.

© LIVE Consortium. 2008. All rights reserved.

For further information concerning this document or about the LIVE project please send and email notice to the editor John Pereira at info@ist-live.org



“...intelligent television programming
and services...”

www.ist-live.org