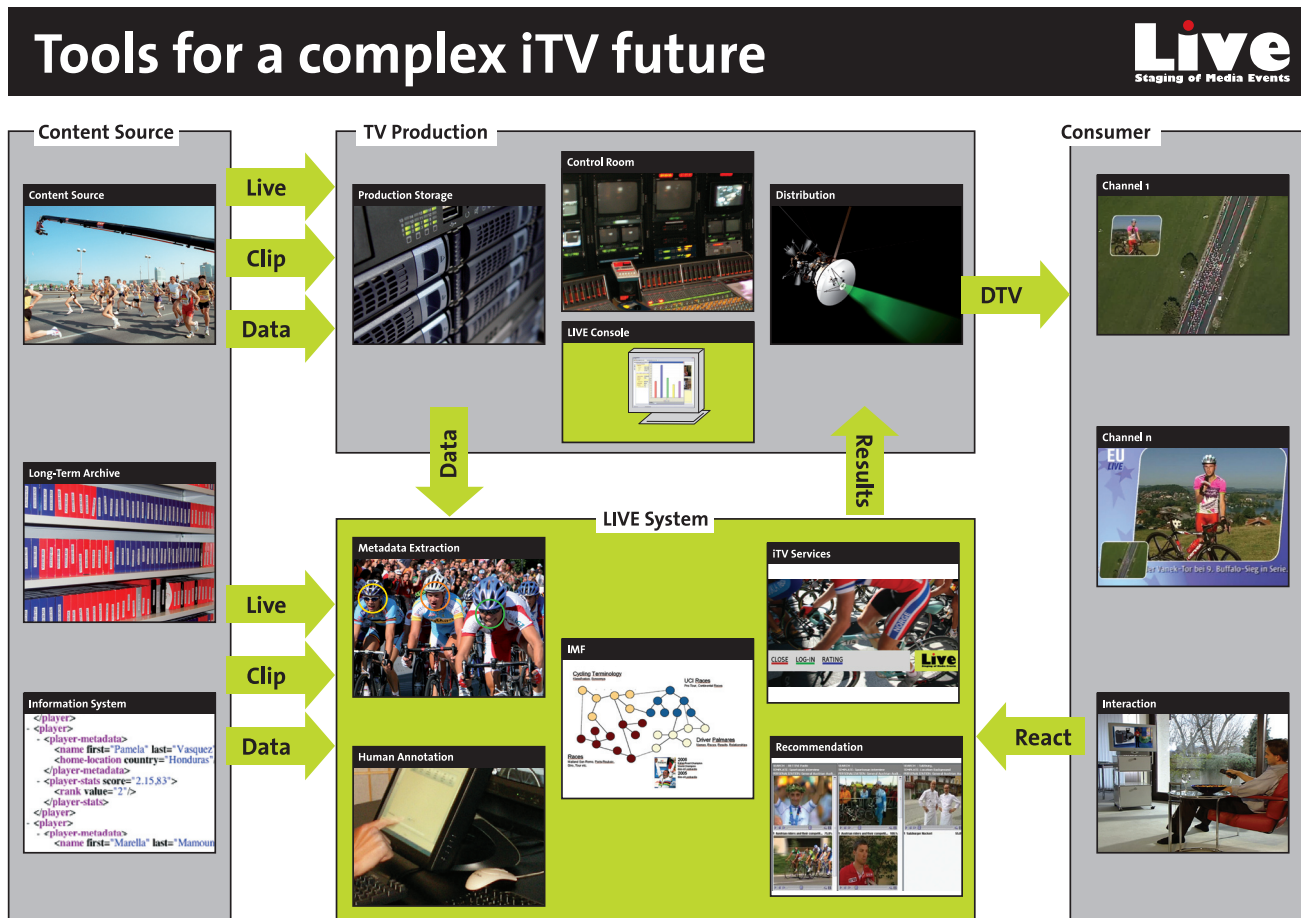# There is always more than one story to tell

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, rules of the sport, and other stories related to the event location. 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. Novel triggers include a moderated teaser (soft trigger) or split-screen announcement (hard trigger) asking the viewer to rejoin the main story thread to watch an unexpected event.

Tools for a complex iTV future

Live — Staging of Media Events

Content Source
- Content Source
- Long-Term Archive
- Information System

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    - <player-metadata>
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```

Live · Clip · Data

TV Production
- Production Storage
- Control Room
- LIVE Console
- Distribution

DTV

Data · Results

LIVE System
- Metadata Extraction
- IMF
- Human Annotation
- iTV Services
- Recommendation

Live · Clip · Data

React

Consumer
- Channel 1
- Channel n
- Interaction

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.

It consists of an intelligent media framework (IMF) to formalise and manage the semantic connections across the system, semi-automatic annotation tools to index multiple incoming video streams, information databases and AV archives, and a recommender system to analyse and visualise consumer feedback that is delivered over a back channel mechanism.

New Content Formats and Production Methods

The transition from linear TV formats to interactive TV formats will have an effect on the content, the production process and professions in the broadcasting industry as well as consumption habits. New content formats for live interactive TV events will have to be developed along with new ways of producing these formats, new occupational fields such as the 'Live Video Conductor' will also arise.
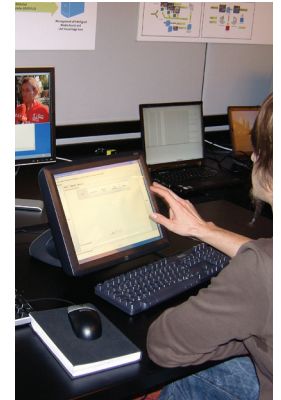
New content formats currently underdevelopment include the definition of staging roles, user profiles, and presentation concepts for switching between streams such as split screen, picture in picture or moderator-lead switching between story streams. The new production methods include guidelines for collaborative work processes between the camera team, editors and video conductor/s.

Live
Staging of Media Events

New Technology Infrastructure

To detect, extract and annotate content in a real-time production environment semi-automatic metadata generation tools will be required. The task of metadata generation systems is to add descriptive information to audiovisual essences (i.e. archival video material and live broadcast streams). At the "meta level" the information about the content represents the descriptive features of the content object (e.g. features related to the creation or to the encoding of an essence). At the "subject matter level" the information describes the different levels of abstraction: the "meaning" of the content. The metadata is used in the intelligent media framework to give it relevant information on how to process, recommend and interrelate the material.

The intelligent media framework is a robust framework for the creation, management and delivery of so called intelligent media assets under real-time conditions. In order to achieve the envisaged "intelligence" of both, the media assets and the framework, the various descriptive schemes for the content, the staging concepts and the users have to be semantically integrated. The content is aligned along an intelligent content model classifying the levels of meaning (i.e. the "semantic scope"). The staging concepts describe how an event is to be staged and include a definition of the target audience. User profiles are developed for various actors of the staging process, e.g. automatic annotators, human annotators, editors and video conductors.

For the personalisation of the viewing experience the recommender system will automate methods to track consumer information behaviour. This information will help to identify related audio-visual content from the archives, and enable the production team to react to live events.

Going LIVE! The exhaustive testing and development phase will culminate in a demonstration of the LIVE technology within the context of the 2008 Summer Olympics in Beijing to a defined group of TV viewers in Austria.

LIVE Consortium

The coordinator is the Fraunhofer Institute Intelligent Analysis and Information Systems with the partners: Academy for Media Arts Cologne, ORF, Atos Origin, School of Informatics University of Bradford, University of Ljubljana, University of Applied Sciences Cologne, Salzburg Research and Pixelpark

Fraunhofer Institut Intelligente Analyse- und Informationssysteme IAIS

Kunsthochschule für Medien Köln
Academy of Media Arts
École Supérieure des Arts et Médias

ORF

Atos Origin ™

UNIVERSITY OF BRADFORD

Univerza *v Ljubljani*

Fachhochschule Köln
Cologne University of Applied Sciences

salzburg | research

pixelpark

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 to deliver digital technologies and content formats that enable viewers to shape their own personal and highly interactive viewing experience as they watch the broadcast.

http://www.ist-live.org