



Live

staging of Media Events

**THE OLYMPIC
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The LIVE solution radically improves on linear approaches to TV broadcasting of live events by providing digital technologies and a content format that enable viewers to shape their own personal viewing experience as they watch the broadcast.



LIVE's new revolutionary TV

viewing experience consists of multiple inter-linked channels that are shaped according to real-time viewer feedback. To make this possible on the production side - a semantic-based production system that links multiple information sources that surround an event such as the Olympic Games has been developed.

By merging data about the media event with viewer feedback it is now possible to facilitate a dialogue between the viewing audience and producers in real-time. In short, via interactive questioning and real-time monitoring of viewer behaviour the production team knows not how many viewers are

watching each channel, but also the cumulative profiles of the viewers ("43% of viewers of channel 2 are males between 18 and 29"). In addition, the semantically enriched video material with text-based information (who, what, where, when) is used to provide automatic suggestions of relevant offline and archival material. This empowers the director to create and modify multiple channels of content "on-the-fly" that better match the interests of the engaged viewer.

The LIVE system has been put into practice in a pilot IPTV project during the Summer 2008 Olympic Games.

LIVE Olympic Trial



Trial setup

The LIVE system and new TV format were tested at ORF (Austrian public broadcaster) during the 2008 Summer Olympic Games. To capitalise on the brand recognition of ORF it was decided to label the trial "ORF1 Interaktiv".



The LIVE trial went "on air" over the three weekends of the Olympic Games 9-24 August 2008 from 9am to 3pm on both Saturday and Sunday. The trial used the Telekom Austria aonTV IPTV plat-



form. With their strong support a total of 489 aonTV home subscribers registered for the trial. By using the familiar set-up-box infrastructure it was possible to avoid retooling at the front end.

The ORF1 Interaktiv broadcast consisted of 5 interlinked channels. A simple on-screen menu enabled viewers to easily zap across the channels and with the remote control respond to requests and messages from the ORF produc-

tion team. With the multiple channels LIVE was able to test its "ShapeMyEvent-TV" format. The format is a blueprint for the interactive dialogue between the TV audience and producer made possible by the LIVE production system. By merging advanced multimedia tagging and search systems with a feedback solution - the producer was able to apply interactive elements such as info-flashes, switch alerts, voting and rating to gauge and interpret the interests of his viewers.



Trial results - a snapshot

Acceptance of the new TV format was very high

LIVE was “on air” for a total of 33 hours per channel, in which a total of 254 on-screen interactive elements were produced. On average more than half of all viewers took regular advantage of the interactive elements to switch to dramatic events on another channel or to vote or rate the content on screen.

87% of viewers participated in the trial on at least two weekends. Overall satisfaction with the broadcast was very high. In fact 63% of viewers who participated on all three weekends were very happy with the broadcast. Nearly all of the respondents in the follow-up user survey indicated that they would like to use such an interactive TV service in the future. The high acceptance of the TV format ensured a basis from which the producer could make informed decisions about which sports to broadcast live or

which content of high interest to repeat. Patterns began to form in the voting and rating of content that indicated high interest in the behind

the scenes action of sports events, this also included the behind the scenes of the production broadcast itself.

The result was the production of new content ‘on-the-fly’ such as studio guest interviews, documentaries about sports personalities and interviews with the production team. The use of a dedicated channel for informal and spontaneous

Viewers have their say...

“I personally had the feeling that the broadcaster was responding to my interests..”

“with the onscreen alerts you have the feeling that you are not missing out on any of the action..”

live moderation soon took on the form of a home channel where viewers would return either for a break from the action or for an update on the action across the 5 channels or to hear what the other viewers had to say. The producer also relied on the studio channel for immediate reaction to patterns in viewer behaviour such as a major switch to the medal ceremony involving an Austrian athlete.

The LIVE system put to the test

For the ORF production team the LIVE system was most visible in the form of the LIVE front-end tools: the *Message Console* that provided alerts to action from multiple live events as well as provide an event schedule in real-time; the *User Feedback Console* that monitored the switching behaviour and responses to onscreen messages according to viewer profiles, and the *Recommender Console* which searched the multimedia archive for relevant content.

In a typical hour of the trial the LIVE system processed more than 12 000 messages - messages from the *Sports Information System* about the real-time sports action, messages from the *Automatic Video Analysis System* and high level semantic messages from the *Human Annotation System*. On average 3 500 semantic statements per hour were processed, filtered and visualised on the

Message Console. The production team had immediate access to the related content via the *Recommender Console*.

To make such a large amount of semantic statements relevant in a real-time production environment - the messages were prioritised based on the level of importance. The result on average was 2 high level messages every 10 minutes.

The high level messages guided the team in the production of 8 interactive dialogue elements every hour. Based on viewer feedback the production team would then preset the *Recommender Console* to search the AV archive for relevant content to feed the next production cycle.

The tremendous success of the trial has opened up opportunities to deploy the

LIVE technology and content format for other large broadcast events such as news events (e.g. election night) and cultural events (e.g. music festivals).

Contact

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