

Public Synopsis Document on Initial LIVE Exploitation Plan

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Live Staging of Media Events – LIVE

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Abstract:

This document, Public Synopsis on Initial LIVE Exploitation Plan, is the first step to prepare the LIVE consortium for the exploitation of the project's results. Following this aim, this document provides a first overview on exploitable results and some related market information.

Keywords:

- Exploitation
- Business
- Market
- Project results
- Digital
- Interactive
- Television

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1 Introduction

It is the overall goal of the exploitation work package within the LIVE project to provide partners with continuous market information, analysis and recommendations as required in accordance to their respective research and integration work. In addition, this work package aims to transform the results of its marketing research output into concrete business planning documents that support the preparatory exploitation activities of partners for the purpose of exploitable project results. Analysis entails standard market/sector analysis, competitive analysis and SWOT analysis. All this business research will support the partners to pioneer the new market segment that we have called 'Intelligent television programming and services'.

In order to achieve these goals, all partners of the LIVE consortium will collaborate in the ongoing tasks. All members of the consortium are aware of the need to establish a common exploitation strategy and the need to follow the defined task in order to be able to fully exploit the project results.

This document is the first step to inform the public about the exploitation of the project's results. Following this aim, this document provides a work roadmap for the Phase I & II of the project and provides some initial guidelines for a subsequent Phase III.

Two main objectives of this Initial LIVE Exploitation Plan are:

- to map out the way the consortium can derive commercial benefits during and after the project from the work conducted under LIVE and
- to define the way the remainder of the technical work should be conducted in order to maximize commercial benefits

Beside the basic policy and agreements upon the exploitation for the LIVE consortium and a first roadmap for the exploitation of project results, this public document shows the first definition of the exploitable project results and identification of the level of relevance for each marketing research area.

2 Exploitation policy and agreements

This chapter contains some background information upon the legal agreements related to LIVE.

2.1.1 IPR protection

Within the LIVE project the implementation of the necessary procedures will allow a special Exploitation and Dissemination Panel to monitor the copyrights and patents generated in the activity of the project and to maintain an Intellectual Property Watch list to be used as an early warning mechanism. This covers mainly

- the generation of commercial products
- the commercialization of the LIVE project's results
- any other activity which can be beneficial to the interested partners

2.1.2 Project exploitable result agreement

During the project, each partner of the consortium responsible for any task which will generate a potentially exploitable result has the responsibility for the communication to the persons responsible for exploitation tasks. Moreover, a formal declaration of the exploitable result should be generated. The activities of the LIVE exploitation group will also try to identify exploitable results which are not foreseen by the technical personnel.

Once the exploitable result is identified, the activities of the exploitation group will focus in two tasks. The first task is the development of the necessary exploitation strategy for the mentioned result. This task could also include marketing research activities and analysis.

The second task is the process to obtain a common agreement on the commercialization process of the exploitation result which should be beneficial to all involved parties. These agreements should include a detailed description of the roles and responsibilities that each party will assume in the exploitation phase and the distribution of the revenues generated by the commercial activities.

2.2 Legal framework formalising the principles

The consortium has the intention of formalizing their willingness to exploit the project results. As a first set, the consortium will follow a transparency policy, where all exploitable results and basic plans to exploit project results among two or more partners will be declared.

In order to prepare the Exploitation Agreement, the consortium will prepare a detailed exploitation plan, where the knowledge of the market and the commercial potential of the project results will be included. This Exploitation Agreement will also be based on the information collected during the duration of the LIVE project, which will aid to understand the IPR and exploitable results.

3 Project results commercialisation roadmap

The aim of this research theme is to establish the opportunities and requirements for a widespread use of live staging media events for interactive digital broadcasters and consumers.

This includes the following goals:

- development of business models and revenue channels for the production of live media events
- identification of the customer target groups and the development of new revenue streams
- development of new models for the product and content life cycle and the long term value of broadcasted live iTV events

These issues will be explored by evaluating the commercial and organisational potential during ongoing experiments and especially on the field trial Olympics 2008.

This section provides a brief overview of the exploitation activities defined for the duration of the project. We should understand that this work definition can be changed in the future if the

consortium decides to change the work plan. Beside the project internal work reviews, the consortium also has an Industrial Advisory Board whose recommendations will be taken into account in the re-structure of the work if it is foreseen to be needed. Moreover, the LIVE project is expected to be reviewed by a panel of external experts selected by the EC, whose recommendations can lead the consortium to make changes in their working plans.

We assume our exploitation efforts to mainly run in three major phases:

Phase I: “Foundations & First Analysis”

This phase is to get into the business area and to get first ideas on exploitable results from LIVE. This document partly reflects the outcome of this phase.

- **Project Results**

Identify all possible results from LIVE, that might be suitable for exploitation.

- **Market Watch**

In parallel with a first identification of possible project results, a first market watch takes place to evaluate the exploitation chances for the project results.

- Identification of the needs – who is interested?
- Market analysis methodology – how can we analyse the market?
- Socio-economic overview – how do results influence users and vice versa?

Phase II “Prototype market analysis”

This phase starts, when first prototypes or a clear view of an exploitable result exist.

- **Project Results**

For identified project results, the first concrete preparations for the targeted exploitation will start.

- **Market Watch**

With a clearer image on project results, the market research can be focussed too. Furthermore, we expect that the planned field trial Olympic 2008 should produce a considerable feedback on which results are innovative for live productions.

Phase III “Commercialization preparation”

Finally, for those results that have proved to be exploitable the strategies for their exploitation should be developed.

- **Market Watch**

Again, this phase is accompanied by the market watch to avoid unsuccessful exploitation activities.

- **Commercialization:**

With the exploitable results being proved to introduce new and innovative features to the broadcast market and to conform to the current market, their commercial utilization goes into the final phase including business models, commercialization strategies, etc.

As can be seen in this list, the market watch is an important part occurring in all three phases. This is to ensure that at all phases of an exploitable result, the market watch serves as a controlling instance to modify the results for a best commercialization, to bring in new ideas for new project results or even to avoid further efforts on a result if it was evaluated to be of less importance. Another important controlling instance will be the field trials taking place throughout the project (especially Olympic 2008), because resulting practical experiences will have an immediate impact on the further design of the created tools.

Phase I can be seen as a starting phase and is mainly reflected by the explanations of this document. Phase II and III may vary with the time schedule depending of the LIVE outcomes. They may also run in parallel for different results.

4 Exploitable project results

As described above, the commercialization roadmap is divided into three phases, all of which contain a Market Watch task. Having this in mind, we should understand that the exploitable result is not only software or procedures, but also any obtained knowledge with a possible commercial value. In the same sense, we expect most of the commercial relevant project results to be innovative; nevertheless there could be other project results as well, that could be generated to support the innovative aspects of the LIVE solutions such as knowledge about the state-of-the-art broadcast, which might also have a high commercial value. Owing to the complexity of the LIVE project, a preliminary list of project results will be the starting point for the exploitation plans. Thus, our intention is to build the necessary infrastructure to support the evolution.

4.1 Initial list of exploitable results

So far, the consortium has already identified six potentially exploitable results, or exploitable project result groups. This initial list has been developed to provide the bases for the definition of the project results.

4.1.1 New content production technologies

With the ongoing change to digital production technology, there are new possibilities for production flexibility and more complex data flows that go beyond the typical audio and video processing. For instance, modern video mixing devices rely on an IP network communication. This enables the users to use multiple operating panels in one or several control rooms, remotely configure or maintain the devices, or add further equipment to be integrated into the control of the mixing device. This is a first step towards a more flexible and collaborative work.

Tools needed for LIVE go even further because they address a number of new issues such as to interlink live video streams to each other, to provide metadata to the consumer, or to give feedback to the production team from the recommender system. There is also much more emphasis on the collaborative work being highly desired in LIVE because the increased amount of information during the live staging can only be handled by a team working in close cooperation. Sophisticated tools up to automatic assembling of the output may support their work.

4.1.2 New User Interfaces and Monitoring tools

Another challenge is the new types of user interfaces that support the (probably less hierarchical) team work in a way different to contemporary equipment. Especially because they are supposed to be tested and used under live circumstances and therefore must have their visual focus on an immediate perception of the relevant information, they show new ways for video productions and could serve as a step stone towards innovative broadcast technologies.

Furthermore, special visualisations monitoring the current live situation and background information must be part of these interfaces. They are important to put the production team's attention to critical situations as well as to support them for the best selection of content.

4.1.3 New Media Annotation tools

Another objective of LIVE is the valorisation of broadcast archives that are currently more seen as a permanent storage for documentary purposes. There is already some additional work on recorded and broadcast content done by broadcasters to add information about the rights or some metadata such as keywords, cut lists, etc. This information is currently used for a faster manual retrieval if certain A/V content is requested for a production. Even if the media annotation as developed during the LIVE project will not lead to a perfect support for the live broadcast, they can help support human resources when preparing the content for archiving after the broadcast.

4.1.4 New Intelligent Data Analysis tools

The archive material is so far used mainly in the preproduction phase to pre-assemble existing content for a planned broadcast. However, a direct connection to the production facilities is more or less missing. On the other hand, broadcasters have collected their content for many years, which can be seen as a non-active capital. When made public to the consumers, new business models may be developed. In this case, an intelligent search and retrieval engine is important to help consumers browsing through the stored content and probably give meaningful hints or associations. The experiences from LIVE (e.g. the Intelligent Media Framework) may also be transferred to archives that originate from other areas of business.

4.1.5 Tools for adaptive content creation

Finally, the feedback from the personalisation tools leads to content that is permanently adapted to the preferences of the consumer. This, in turn, improves the quality of service and therefore offers a competitive advantage to the broadcaster. Beside this direct return during the live broadcast, analyses on the consumer behaviour may also lead to conclusions for the long term creation of content replacing and improving the current audience rating tools.

In general, we expect that the experiences and results from the planned trials will lead to purposeful tools that can be brought to all markets that have to create one or several streams out of a considerable number of inputs that deal with archive material of different media and observe consumer behaviour for market analyses. Needless to say, broadcasting is the main focus for this project. However, particular results may also be addressed to other areas of business. Finally, the experience made throughout LIVE may also be of importance as such.

4.1.6 Exploitable Services

The know-how achieved from LIVE may be used for consulting services in different ways:

- Broadcasters or other content providers such as telecommunication companies promoting IPTV or WebTV applications, for example, could be accompanied for the creation of new and innovative content or even for the restructuring of their production facilities and work flows.
- Manufacturers of broadcast equipment could be advised for new innovative devices.
- Experiences from the LIVE project could also be used in other areas such as live events or shows with audience where collaborative work improves the performance.

5 Market Watch

The market research activities are focussed to determine the target market (to whom we will sell) and the delivering services to those markets. During this first phase, the consortium focuses its efforts in the process of gathering and analysing data for the decisions that should be taken. The following sections contain the current results from this investigation.

5.1 Technology Market Watch

Technological advances in television/broadcasting distribution and production have had a major impact on the media industry worldwide. Television broadcasters are now offering Internet, broadband video, mobile video, on-demand television, interactive television, enhanced television, multi-channel digital television packages and in the future specialised services for personal video recorders. At the same time technological advances change the way audiences consume media and television services. This is a difficult situation of change, innovation and market re-definition in the European digital television industry. Europe at present takes the lead in digital interactive television production and services, but this is threatened by developments in the USA and in Asia-Pacific, in particular South Korea. The commercial impact of the LIVE project on European digital interactive television will ensure that Europe's current clear lead in this market will be further extended and strengthened.

The digital television sector is a major segment in the overall market for digital content. The digital television sector has two main sub-sectors:

- Linear digital television and programming across all digital platforms.
- Interactive television programming, content and services.

The LIVE project's commercial impact will be primarily on the market for interactive television services. This market entails at present to major segments:

- Permanent, stand-alone interactive television services.
- Enhanced television services.

Taking into account the current situation, the LIVE project results are largely related to the enhanced television segment. After conclusion of the project in 2009, the LIVE results will represent a new segment: intelligent television services, which is clearly distinguished from graphical overlay and multi-stream enhanced television today. The project will have a significant impact on the future development of this market segment in Europe and internationally.

The impact on the development of digital television in Europe Datamonitor forecasts that the European digital TV market will grow from 31 million households at the end of 2003 to 89 million households at the end of 2007, with most growth coming from digital cable and terrestrial services. The European market will exhibit a strong growth over the next few years, growing over three-fold by the end of 2008. With the US market growing by only 36% during this period, Datamonitor expects Europe to take leadership in the digital TV sector. The UK will retain its position as the most developed digital TV market in Europe, with continuing growth of Sky's satellite platform and the success of Freeview combining to boost digital penetration to 82% by the end of 2008. At present direct-to-home satellite is the most dominant digital television platform in Europe, but digital terrestrial television is developing and will catch up with digital satellite in leading countries from 2008 (e.g. in the UK).

The commercial impact of the LIVE project from 2009 in the market for interactive television services (as shown above) will have a significant impact on the further growth of digital television penetration in Europe. Current experience in leading European countries shows that the penetration of digital set-top-boxes and integrated television sets is clearly driven by compelling and affordable digital television services. After the initial introduction of digital pay television packages with over 200 channels, consumers are now increasingly attracted by novel enhanced television services (e.g. Olympics Interactive) and affordable high quality television channels. These - and not necessarily pay television packages – drive the take-up of digital television in Europe.

The LIVE project work will also impact on emerging digital television market sectors by analysing to what extent these are relevant for or impacted by intelligent video technologies and the new LIVE television content format:

- Broadband television
- Mobile television
- Personal video recorders
- High Definition Television
- Digital terrestrial television
- Interactive television advertising and commerce
- Interactive television event programming today

The Olympics in 2004 were the first to entail significant interactive television elements as this type of sports event is ideal for interactive coverage (multiple events at the same time). Major sporting events are increasingly competitive, not only for athletes, but also for broadcasters. Television broadcasters now need to provide up-to-the-minute, multimedia and interactive coverage from multiple locations on multiple distribution platforms. Consumer demand for fast-moving, compelling and comprehensive coverage is increasing, which means that broadcasters have to provide rich and in-depth viewing experiences on different devices and media platforms (television, mobile, broadband, etc.). This applies to all types of major media events, such as elections, major national events or even catastrophes. The Olympics and other major sport events represent currently the most prominent example of interactive event programming.

Olympic programming is also an important driver for High Definition Television (HDTV). In the US the broadcaster NBC has already covered 400 hours of HDTV programming for the Athens Olympics in 2004. The next Winter Olympics in 2006 are to be fully broadcast in high definition. It can be expected that the next Summer Olympics in 2008 will be broadcast in high definition by most European and international broadcasters.

This type of enhanced Olympics television service, however, does not represent a new concept, but a popular simple service.

5.2 Digital interactive television

In mature interactive television markets, the respective value chain is a complex web of market relationships and stakeholders. This 'value web' is still evolving, in particular in less developed digital television markets. A simplified value chain for the interactive television sector involves the following components:

- Broadcasters and Operators
- Content aggregators and broadcast channels
- Content and service providers
- Interactive application providers
- Media and advertising agencies
- Middleware vendors
- Content, production and management tool providers

The LIVE project will have an impact on all value chain components and at all levels of the chain. The tools and technologies developed by the LIVE project will be marketed to interactive television tool providers or directly to broadcasters and operators. Tools will need to be compatible with other interactive applications and middleware. The LIVE content format will be marketed to broadcasters, content aggregators and broadcast channels as appropriate. The television production will involve content providers and/or broadcasters.

The LIVE project will develop a particular relationship with major broadcasters and content providers, in particular public service broadcasters. Major broadcasters are more important customers for the live staging of major events than niche television channels. The success of new television formats is driven by the demand for new content from the content commissioning side and the availability of powerful tools and solutions that stimulate new content propositions. Despite the driving role of technology, however, final decisions for the broadcasting of new television formats are made by programme directors, channel controllers and content commissioners.

Independent production companies also have an important role in proposing novel television programmes to the commissioning broadcaster/channel. The LIVE exploitation strategy will therefore involve all components in the value chain, including broadcasters and content providers.

5.3 Video and iTV technology

The market for interactive television services is now maturing in developed European digital television markets such as the UK. Previous factors that constrained the development of interactive television in Europe include:

- Viewer interest
- Unsuitability of TV sets for text/image display
- Lack of open technology standards
- Hardware limitations
- Controlled distribution channels / operators
- Industry fragmentation.

These factors are being increasingly overcome in many European markets. The increase in digital terrestrial television penetration also supports interactive television development in less developed country markets. During the LIVE project (2006-2009) interactive television will leap forward across Europe. Interactive television is also supported by the fact that digital

viewers are an attractive customer segment for advertisers. Relevant iTV authoring tools and content production tools (e.g. Sky's WTVML) are increasingly available and open middleware standards are now further progressing (e.g. Java MHP and derivative standards).

Today two types of services dominate interactive television: 1) Enhanced television and 2) Standalone permanent interactive services. Enhanced television and/or participation television is directly related to television programming and events, e.g. entertainment shows, factual programmes or sports events such as Wimbledon or the Olympics. Permanent interactive television services offer gaming, betting/gambling, shopping, news, weather, sport, learning, programme information and other services alongside all television services on a permanent basis. These services often replace former text services.

Enhanced television services entail one or more of the following features:

- Multiple streams/coverage of events
- Additional information
- Play-along and sing-along services for quiz/music shows
- Voting and messaging
- Alternative audio commentaries/ audio streams.

In advanced countries interactive television services are now available across all digital television platforms. Programme makers have to take all these options and challenges into account when devising new television programmes. Broadcasters are looking for enhanced programmes where

- Interactivity is a core component of the programme
- Interactivity is closely integrated with new programme ideas
- Interactivity is added to existing successful television programmes.

The following features are important in order to make enhanced television a success:

- Effective promotion by presenters and on-air invitation to 'press red'
- Clear benefits and simple usage (e.g. karaoke service)
- Single option services (e.g. voting or alternative audio commentary)
- 'Bite-size' information rather than screen pages of text
- Highly selective and relevant 'additional' content.

Viewers are notified of available programme enhancements or programme related interactive services by an on-screen 'red button' in the top right corner of the screen. This may include text that indicates which type of enhanced content is available, e.g. 'choose event' for services where different sport actions/events can be selected or 'Come and Play' for games. Viewers are also made aware of interactive services through overlay menus where they can select available services.

5.4 Consumer monitoring system

The work to be done under what has been called "Consumer monitoring system" is aimed to gather all the information directly related to the socio-economics aspects of LIVE commercialisation. In order to complete the commercialisation roadmap it is necessary to

have taken into account the socio-economical aspects and therefore the foreseen behaviour of the customers in relation to this kind of solutions.

The work within this task has the following main goals:

- To identify the socio-economical factors and parameters that may act as indicators within the observed market.
- To analyse the existing market tendencies from a user point of view. To have a broader picture about the market situation.
- To analyse the potential social impact of the new proposed solutions. It is necessary to know if the solutions may mean any kind of new social situation (not very possible) or a modification or any other (as for instance any consumption habits)

The work should do a detailed observation about the potential consumer habits and tendencies considering the existing services and products. The idea is to find the most suitable place for the future solutions and to open from it a new market segment for them.

Another objective is to watch during the whole project lifetime the evolution of all the identified characteristics and tendencies. This may help to find the best directives for our results.

All the related activities will be done in parallel to the work carried out for other aspects related to the market watch.

6 Conclusion

This document depicts the first result of an exploitation plan for outcomes of the LIVE project as well as results from the first market watch. Obviously, the exploitation activities should always run in parallel with other work package activities to be able to influence each other and optimize the final results with respect to a possible commercialization. The three phases of the commercialization roadmap describe a first idea how to accompany the creation of project results and how to prepare the commercial utilization. However, like the experiences from the exploitation activities such as the market watch might influence the project results, it might also become necessary to revise these exploitation plans. A more concrete idea for the exploitation depends on the type of the particular project result and is supposed to be developed and adapted throughout the project.