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NM2 tool prototypes tested in NM2 productions

The first working release of the NM2 tools prototype is now being applied by the NM2 production partners. They are busy preparing the next NM2 productions using these tools. The following two productions are the most advanced; four more productions will follow.

Accidental Lovers demonstrated to Finnish broadcaster YLE

The NM2 tools are being used in the production of a number of experimental productions addressing genres as diverse as news, drama and documentary. One of these, called *Accidental Lovers*, is intended for commercial broadcast either late in 2006 or early in 2007.

In *Accidental Lovers*, text messages from viewers are interpreted as encouraging an on-screen love affair to develop in different ways (tragic, unrequited, fulfilled, etc.). The production adapts itself, in response to the aggregated sense of the messages, to affect the development of the plot. On the screen, some of the text messages can be displayed. They will be seen to be “answered” by playing apposite voice-overs chosen according to rules with the NM2 system. Changes in the plot can thus be affected at both a micro and a macro level by the viewers. Furthermore, since each act is constructed by assembling a selection of all the possible scenes that can be used, the programme can be broadcast many times, even if the overall plot arc remains the same, tragic for instance. How it works: different sequences are assembled for each act, different text messages are displayed, and different voice-overs are used to respond to the text



Mika “Lumi” Tuomola directing Kristiina Elstelä (Juulia) in a conclusion music video “Poikkisahattu nainen” (“Die zersägte Dame” by Friedrich Hollaender, Finnish translation by Vesa Tapio Valo) of *Accidental Lovers* (Crucible Studio / University of Art and Design Helsinki 2006, dir. Mika Tuomola). The young Fates (Mia Renwall, Minna Rimpilä) get into their characters. Production still by Kebede Mergia.



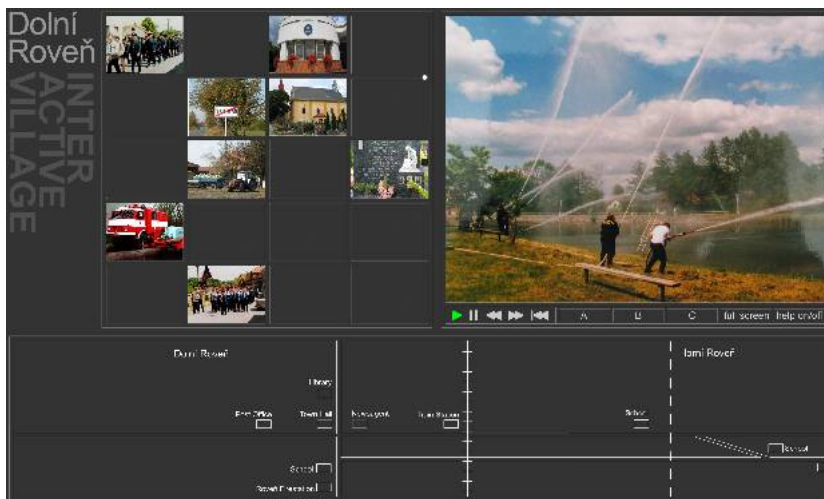
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messages. The contrast would be even greater if the overall plot trajectory changes to become a fulfilled or unrequited love affair. This means that the same programme can be replayed several times and the viewers will experience very different stories. This is important as it begins to redress the usual legitimate criticism of non-linear narratives that they are expensive and inefficient. In this case, whilst production costs may be higher than usual, we anticipate that the total viewing time has increased several-fold, thus overcoming any increase in production-cost per broadcast-hour; and of course there is the revenue from the text messages.

In May this year, the NM2 team demonstrated the delivery system for *Accidental Lovers* to the Finnish TV broadcasting company YLE. The demonstration and related tests were successful. Although there is still a lot of work to do, the team is very confident that the production will be a big success. "With *Accidental Lovers* we are developing compelling new media forms, and hence we deliver the stuff dreams are made of!", said Mika Tuomola, Artistic Director of Crucible Studio, University of Art and Design, Helsinki.

***Interactive Village* gaining shape**



Screenshot of the *Interactive Village* user interface

Interactive Village is based on village life in Dolní Roveň in the Czech Republic. Through a web interface, the NM2 system will build different documentaries based around specific places within the village. These can be selected on the map at the bottom of the screen, or based upon topics represented by selectable thumbnail images in the square array in the upper portion. Thus the users can select content based on topics such as the social life in

the village, or location-based items, such as the town hall. These documentaries are constructed according to well-defined documentary storytelling structures.

This production is due for delivery in September this year. The production teams have finished shooting and are now using the NM2 tools to create the generic documentary story structures. In parallel, the technical teams from the Production Tool and Delivery System work packages are working hard to construct what will be the first version of an end-to-end system for the delivery of flexible content over broadband networks.



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NM2 tools and Middleware: NM2 producers work with the latest release

NM2's prototype productions provide an excellent vehicle for non-linear narrative research and testing its application to a wide range of genres. However, the project's most enduring output should be the tools that are used to create these productions. The tools have been developed through close consultation with the NM2 producers and are built to support the innovative narrative forms the productions want to represent.

The creation of a novel set of media tools is a major task and, just as Rome was not built in a day, neither will the tools provide all the desired functionality from their first release. Production requirements are continuously recorded and updated, and the implementation of tool features to meet these requirements is prioritised and agreed in accordance with production schedules. The software development team uses a shared Subversion source code repository and Bugzilla bug tracking system to help manage a regular programme of major and minor releases. However, at these early stages it is thanks to the adventurous spirit of the production teams that it is possible to 'road-test' the prototype tools whilst they are still relatively unrefined.

At the time of writing, the next major release of the NM2 Tools is being prepared. It will coincide with the final stages of authoring and testing of the *Interactive Village* production, and will introduce several major new capabilities, including:

- The ability to author user interaction directly on the narrative canvas
- A new preview tool for interactively testing narratives
- A playlist composition and rendering pipeline which mirrors the client-server delivery system which will be deployed for most productions
- A totally revised ontology storage subsystem with improved performance and flexibility
- Several improvements to usability based upon feedback from the production teams

The NM2 Tools include a number of functionalities not usually found in the traditional production environments, and it is worth emphasising that they are not intended to replace existing non-linear editing systems – but rather to work alongside them.

With new tools comes the need for new workflows, which are essential to support the creation of television with narratives that can be shaped by the viewer. The NM2 partners are actively studying the effects of introducing these tools on the production workflows for each different genre, and expect to publish their findings in the near future.

The link to the viewers: The NM2 user interfaces

The main focus of NM2 is on the production tools and its eight prototype productions. However, the project has to deal with another important subject: user interfaces. Without proper user interfaces, the end users, or “engagers”, as we call them, would not be able to view and control the personalised, interactive NM2 productions.

We had reported in the last Newsletter that the first NM2 production *Gods in the Sky Choice* was designed for Microsoft Windows Media Center Edition, whose interface includes TV output and a



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relatively simple remote control device. In *Gods in the Sky Choice*, the material can be reconfigured according to a topic in each of the three available modes entertainment, education, information. Topics include culture, planet, god, historical period, scientific discovery, and a number of other themes.

Now the NM2 team has started to plan the user interfaces for the remaining productions. Several of these are also intended for use on the Windows Media Center platform, and are being developed using a combination of AJAX, Adobe Flash and Shockwave components.



Gods in the Sky Choice as a living room experience

The NM2 production *Gormenghast Explore* will be pushing the boundaries even further by employing an exciting 3D navigable user interface which will incorporate personalised video streams. The 3D interface will be developed using the open source real-time 3D rendering engine OGRE and will represent the spatially organised content of the drama. The engager will be able to move around the castle where event-triggering zones will launch reconfigured narrative video sequences streaming from the Delivery System.

Come and see NM2 at Ars Electronica, IBC or IST 2006

We are proud to announce that NM2 will be present at several international key events:

- **Ars Electronica** on 31 August to 5 September 2006 in Linz, Austria. Ars Electronica is a festival for art, technology and society; this year's motto is "Simplicity, the art of complexity" (<http://www.aec.at/en/festival2006/>)
NM2 partner Crucible Studio, University of Art and Design, Helsinki will present their work, including their NM2 production *Accidental Lovers*
- **IBC 2006** on 7-12 September 2006 in Amsterdam. IBC is one of the largest events for everyone involved in the creation, management and delivery of content for the entertainment industry (<http://www.ibc.org>). NM2 was granted a stand in the "New Technology Campus", which provides an opportunity for non-commercial organisations to demonstrate their systems to all IBC visitors. NM2 will show its production tools and selected NM2 productions, and will also be involved in the IBC conference, where it will present a paper on "Shape Shifted TV: A Real Opportunity For Broadband?"
- **IST 2006** on 21-23 November 2006 in Helsinki. IST 2006 - Strategies for Leadership – is the most important European event in the field of Information Society Technologies. This year it will coincide with the launch of the EU's Seventh Framework Programme for Research and Development (http://europa.eu.int/information_society/istevent/2006/index_en.htm). NM2 will present the latest version of their tools, and their Finnish production *Accidental Lovers* on a stand in the IST exhibition area.





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NM2 in the public eye

NM2 has been present at various events to present results.

- NM2 partner University of Thessaloniki presented “NM2 in general and Cambridge City Symphony in particular” at Fournos Centre for the Digital Culture in Athens, Greece, 11 April 2006 (<http://www.fournos-culture.gr/site/English/NewsandEvents/interactivefilm.html>).
- Doug Williams from NM2 partner BT presented the NM2 production “Gods in the Sky Choice” at a BBC led conference on future of media to high profile audience of CEOs of media companies, London, 3 May 2006.
- Doug Williams and Ian Kegel from NM2 partner BT also presented results of the project to executives from Endemol in a private meeting and are exploring ways in which the principles of flexible narratives could be exploited by this influential production company.
- Michael Hausenblas from NM2 partner Joanneum Research talked about semantic issues of NM2 at the European Semantic Web Conference (ESWC2006) on 11-14 June 2006 in Budva, Montenegro.

About NM2

NM2 is an Integrated Project of the European Union’s 6th Framework Programme Thematic Priority 2 (Information Society Technologies). It was submitted to the second call of the programme and addresses the strategic objective “Cross-media content for leisure and entertainment”. The project is co-funded by the European Union through the IST programme under FP6.

NM2 is running from September 2004 to August 2007 and has an overall budget of about 7.5 million euro. 13 partners from 8 European countries are involved in the project.

NM2 unites leading creative and technology experts from across Europe to address a great opportunity for businesses and consumers in the near future: how to develop compelling new media genres, which take advantage of the unique characteristics of broadband networks. The project will create new production tools for the media industry that will allow the easy production of non-linear broadband media genres which can be personalised to suit the preferences of the individual user. Viewers will be able to interact directly with the medium and influence what they see and hear according to their personal tastes and wishes.

Further information is available at: <http://www.ist-nm2.org/>

The next NM2 Newsletter is scheduled for January 2007