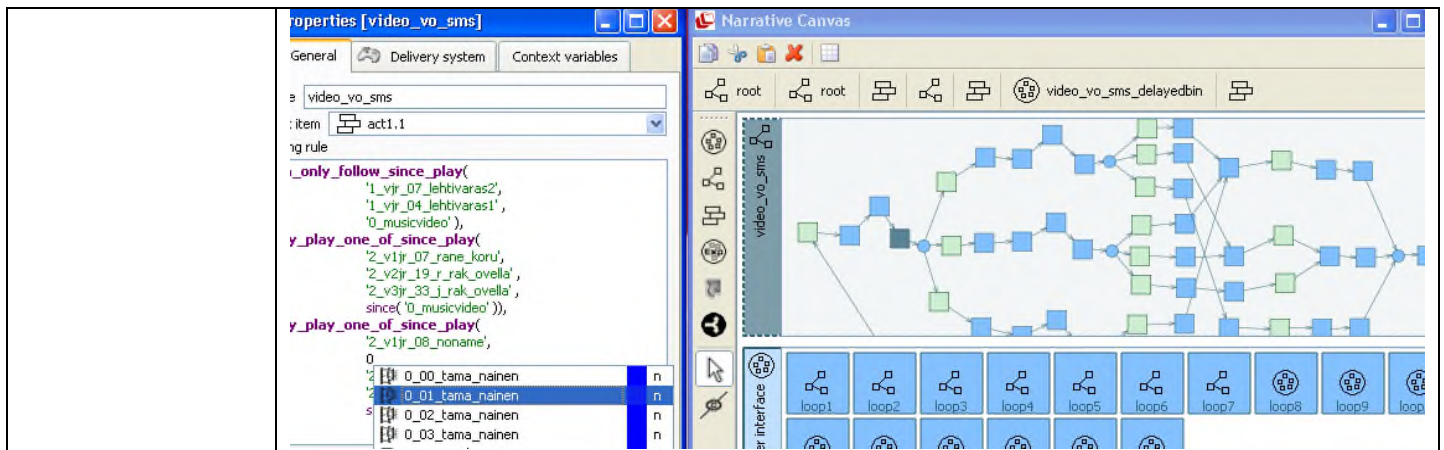


2014 YCCSA SUMMER SCHOLARSHIP PROJECT SUBMISSION

This form is for prospective project supervisors to submit their projects to be included in the YCCSA Summer Scholarships Programme for 2014.

It is the purpose of the Summer School that any projects submitted are interdisciplinary in nature.

Date	20/02/2014
Main Supervisor's Name and Department	<i>Prof. Marian Ursu Professor of Interactive Media Department of Theatre Film and Television</i>
Co-supervisors' name(s) and Departments	<i>Dr. Daniel Kudenko Department of Computer Science</i>
Project Title	Authoring Interactive TV Programmes
Project Description	<p><i>Traditionally, video narratives, such as films and TV programmes, are not interactive: the viewer receives the story without having the ability to influence it. At the other end of the spectrum, games are highly interactive, but the interaction is not framed within a tight story space. Film and TV are about telling stories, whereas games are about interaction. In recent years, however, the two disjoint areas started to move towards each other, with TV programmes displaying forms of interactivity through back channels such as SMS, Twitter and Facebook, and with games starting to be concerned with storytelling. The space in between them is very rich and this space is the target of this project.</i></p> <p><i>Taking as starting point TV, we ask the question whether TV programmes could be crafted in such a way as to be able to respond, as they are shown, to input from active viewers, whilst at the same time maintaining the continuity of the story as a traditional programme does. For example, could a soap opera allow audiences to comment on what is going on, understand some of what is being said, and adapt its story to reflect these comments? Could it make us feel as if we are part of the story? Could a documentary allow us to express points of interests and, in response, drive the story towards them? Could news programmes allow us to ask questions and, in response, insert answers and points of view? A large European project (http://www.ist-nm2.org/about_nm2.html), in which national broadcasting companies and TV and film producers collaborated with software developers, found that the answer is "yes". This project produced a number of interactive TV programmes (see http://www.ist-nm2.org/media_productions.html and [Ursu et al. 2008a]) and a software toolkit for the authoring of such productions (see http://www.ist-nm2.org/production_tools.html and [Ursu et al. 2008b]). This is the starting point of the current project.</i></p> <p><i>Authoring interactive TV programmes requires the creation of a representation, which we call narrative space, which holds the recipe of all the possible stories that could be told as a response to the different possible interactions (see below an illustration), or, in other words, of all the possible ways in which the available audio and video clips could be combined.</i></p>



The current project proposes the following three directions of work, from which you will have to choose one as your main objective (of course, should you want to choose two, this would also be possible):

1. Perform a review of the current state of the art in the authoring of interactive TV programmes and, more generally, of interactive video narratives, comparing and contrasting with the approach referred to above.
2. Develop of a basic authoring tool – a graphical user interface (GUI) – for narrative spaces. The design follows that sketched in [Ursu et al. 2008b], but a more detailed documentation will be provided upon the start of the project. However, you will be encouraged to critically assess the current design and make suggestions for improvements.
3. To develop a set of methods that would allow authors to “debug” narrative spaces. Such methods are necessary as authors are not able to verify and evaluate all the possible stories that could be generated from one narrative space. They could have the form of debugging queries, such as determining whether a clip could occur in one part of the narrative space or whether two clips could ever follow each other, will complement the current implementation.

Required skills

- Critical analysis and synthesis (if 1, above, is chosen as main objective)
- GUI programming (if 2, above, is chosen as main objective)
- Understanding of recursive data structures (if 3, above, is chosen as main objective)

Ideally, the implementation work will employ the following technologies: HTML5 and Javascript for the GUI and OWL for the data store. However, other technologies will be accepted, should you prefer them.

Project dates

Starts Monday, 14 July 2014 and finishes on Friday, 12 September 2014.

Other information

References

*Ursu, M.F., Thomas, M., Kegel, I., Williams, D., Tuomola, M., Lindstedt, I., Wright, T., Leurdijk, A., Zsombori, V., Sussner, J., Maystream, U., and Hall, N., 2008a. Interactive TV Narratives: Opportunities, Progress and Challenges, **ACM Transactions on Multimedia Computing, Communications and Applications**, 4 (4) : Article 25, pp. 25:1–25:39.*

*Ursu, M.F., Kegel, I., Williams, D., Thomas, M., Mayer, H., Zsombori, V., Tuomola M.L., Larsson, H., and Wyver, J., 2008b. ShapeShifting TV: Interactive Screen Media Narratives, **Multimedia Systems Journal** 14(2), pp. 115–132, ACM/Springer.*

When complete, please email the form to sarah.christmas@york.ac.uk