

Multimedia concert “Shells”

1. General information

Site: Palazzo Novellucci, Prato, Italy

Date: July 6th, 2003

Context: Multimedia Concert organized by EU Project AGNULA

Involved partners: DIST - EM

Involved artists: Esther Lamneck (interpretation of the notated score and improvisation), Robert Rowe (composer, Cypher audio routines, live electronics), Douglas Dunn (dance improvisation), DIST - InfoMus Lab and Eidomedia (EyesWeb audio analysis and interactive video processing).

2. Aim

The aim of the event was twofold: (i) to test the new version of MEGASE (EyesWeb 3.2.1 and related software library prototypes) in a real performance involving real-time audio analysis and generation of interactive video, (ii) to present the MEGA outputs to the general public and to people from other EU Projects: the event was planned in the framework of the BYOL workshop (held at Palazzo Novellucci, Prato, Italy, on July 3-6 2003) organized by the EU-IST AGNULA project. The BYOL workshop collected people from several projects and research institutions working together and sharing ideas.

3. Concept

“Shells”, a piece for Tarogato (a traditional Hungarian single-reed wind instrument) and interactive music system, was first written in 1993 by Robert Rowe in collaboration with Esther Lamneck. The piece, about 10 minutes long, was part of a concert lasting for about 1 hour. The Tarogato part includes notated and improvised material. A dance improvisation is also performed on the music. The computer analyses the Tarogato performance and adds drones, ostinati, and counterpoint as the pieces progresses. At the same time, audio analysis generates visual feedback by expressively manipulating both pre-recorded images and the live images of the player and the dancer during the performance.

4. Relation with MEGA

- Test some research outputs from MEGA WP4 (real-time analysis of music performances) and WP5 (real-time generation of visual content) in an interactive context (mapping of features of the Tarogato player’s performance onto generation of visual feedback).
- Verify the appreciation of this technology both from multimedia experts (the BYOL workshop attendants) and from the general public.

5. Technical description

The EyesWeb open platform was employed for audio analysis and for generation of visual content in real-time. The visual content consisted of expressive manipulation (e.g., in term of colors, deformation, application of filtering techniques) of both pre-recorded material stored in avi files and live images of the player and of the dancer gathered by a webcam. The application was distributed on two laptops connected by an Ethernet network: the first one responsible of audio analysis and the second one devoted to video processing. Robert Rowe’s Cypher system carried out a parallel analysis of the music performance and was employed for real-time generation of audio content.

6. Performance evaluation

More than 60 spectators attended the concert. The performance was highly appreciated both by the public and by the experts participating to the workshop. It was an occasion for disseminating the

results of the project and for contacting people potentially interested in exploiting the technology produced by MEGA (namely, EyesWeb and the MEGASE).

Excerpt from the interactive video part controlled in real time in EyesWeb (Matteo Ricchetti, Eidomedia).

