

The largest interactive screen ever put into use: 27 metres of real-time images for the inauguration of the 8th conference on gastroenterology (EUGW) in Brussels

ECCO, the organisers of the 8th European conference on gastroenterology, had just one aim in mind: to immerse all 4000 participants in their opening ceremony into the atmosphere of the Brussels Grand'Place.

On the stage, the Chair and Vice-Chair of the conference 'played out' their welcome speeches like actors, placing particular emphasis on the setting of the conference in Brussels. The backdrop, *de pinxi's* virtual Grand'Place, 'followed' them, creating the illusion that they really were speaking from this prestigious location.

The high point of the show came when the actors were 'carried' up to the pinnacle of the (virtual) Town Hall following which acrobats suspended along the main tower completed their descent. The *de pinxi* real-time technologies used allowed for perfect synchronisation at all times between the acrobats' performance and the backdrop of the Grand'Place.

For the remainder of the evening, while the buffet was being served, the computer chose different clips at random, offering unseen views of the Grand'Place that no other medium would have been able to generate. A production was put together offering 4 hours' worth of images to create a unique atmosphere lasting the whole evening.

The interactive computer-generated imaging techniques developed by de pinxi at the heart of the spectacle

The image of the Grand'Place was entered into the computer in 3D and integrated into an aerial view of the city of Brussels so as to create a coherent virtual world. Shots of all of the building facades together with over 600 photographs were needed to create this virtual environment.

The virtual world thus created was operated from within the software package *argo*TM, developed by *de pinxi*, which allows for entirely independent, interactive navigation. One operator using joysticks was responsible for directly controlling the images (a virtual camera) ensuring the live correspondence between the backdrop and the performance of the actors and acrobats on the stage.

The virtual backdrop was projected onto a 27-metre-wide, 9-metre-high screen so as to reproduce a scale of 1:1 for those parts of the show played out by the actors. Two Barco R12000 projectors covered the surface of the panoramic screen.

The virtual worlds were viewed on an SGI Onyx graphics station which is able to generate a 2000 x 1000 point image in real time with incomparable resolution and clarity.

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de pinxi

Winterthur Belgium got off to a uniquely interactive start for the year 2000:

1000 employees in control of a spaceship negotiating the twists and turns of Kegopolis, the city of the future ... the future of the company.

Auditorium 2000, the entire personnel of the Belgian branch of the Winterthur group are gathered for the almost annual start-of-year meeting. During a 2-hour session Mr Desseille, company President, will present the development plans for the coming year ... nothing unusual about that?

Right from the beginning, questions begin to be asked. A sealed envelope is handed to each participant containing carefully packaged items – the envelope must not be opened before the signal is given.

The presentation begins with two staggering films on a giant, 11-metre screen. The President takes stock of the year past making use of additional large screens showing figures, graphs, animations and more.

Then, suddenly, the tone of his speech changes - it turns towards the future of Winterthur and the commitment that will be required from each member of staff. And to place even greater emphasis on their involvement, ***the floor is handed over to the entire audience*** who are now in control of an interactive experience, a three-dimensional presentation of the choices that have to be made to take the company forward.

How it worked

An 'event leader' positioned herself on the stage at the foot of the giant screen to give the long-awaited signal to open the envelopes.

The envelopes contained two light sticks – one green and one pink. These were what enabled the whole event to progress; the pink stick was used to mean turn left and the green stick to turn right.

The desires of the audience then determined the route taken by a vehicle travelling through Kegopolis, a virtual world, a city where all of the roads were designed in the form of hair-raising roller-coaster rides.

The vehicle changed direction according to the exact proportions of pink and green shown by the audience. A camera analysed the wishes of the audience in real time and transmitted these movement pulses 20 times per second to the central computer that then generated the image.

The task of the audience was to travel through Kegopolis, a virtual city. Along the way, they came to various crossroads showing choices to be made to determine the future of Winterthur. President Desseille gave advice to assist the members of the audience in making their decisions. On the screen, the accurate transmission of the information allowed the audience to view the trend developing instantaneously, i.e. whether in favour of the road on the left, or the right.

Technical note.

The Winterthur 2000 event was organised by William Tchang, B&S, in co-operation with Jean-Pierre Dazun, Cyberforce.

The project was developed on the basis of the simulation and virtual reality techniques used by flight simulators, for example.

The software used to run the event, the audience analysis system, the virtual worlds and the sound effects were created in their entirety by *de pinxi*.

The central computer used was a Silicon Graphics Onyx IR graphics station generating a very high resolution image (1280 x 1024 points) in real time, with 60 images per second and incomparable clarity and antialiasing.

A Barco R12000 DLP projector was used with the 11 m screen, providing a cinema-standard image. The projection equipment was developed by John Kemp, Renting + Development.