

TIMEGATE

iTV virtuosity

Televirtual's sophisticated VR production suite has been put to use on a revolutionary interactive adventure game set in a sword-and-sorcery world the size of a large English county and as unpredictable "as a Beirut street," says its chairman

20 years ago, dragons used to kidnap celebrities, and transport them by London Underground to the planet Arg, where they would be made to play games for the entertainment of an angry aspidistra.

Patrick Dowling's concept for BBC2 cult hit *The Adventure Game* introduced the idea of interactive puzzle-solving and fantasy to a TV audience.

If the set and graphics were primitive (titles were created on a BBC Micro computer), the format, including the "virtual death" of participants who failed to cross the Vortex space-bridge, signalled the emergence of a new genre.

East Anglian production company Televirtual (formerly Broadsword Television) has been pioneering such dramatised gameshows ever since.

Its *Knightmare*, an ITV children's show which ran for 8 series (1987-94) made extensive use of Chromakey (blue screen) technology. *Cyberzone*, commissioned for BBC2's *Def II* slot by Janet Street-Porter, was the world's first virtual reality TV show.

"The technology restricted our ability to reproduce proper VR worlds either in the studio or on screens," chairman Tim Child admits. His new project *TimeGate* "is the coming-of-age of our virtual production techniques," the culmination of six years of research and £4m of investment (including substantial EU funding).

A pair of contestants must interact with the world's inhabitants using whatever clues they find to perform a series of tasks on the way to picking up a cash prize.

One player resides in a museum-style studio set with a "god's view" of the VR world via an immersive table top (actually a Barco Baron).

They communicate verbally with a partner or "dungeoneer," who only appears as an avatar and is hidden off camera. They get a much more restricted first-person view of the world.

Not all creatures are there to help. "Combat could result in the player's death and elimination from the game. It's a dangerous world, so they must



Through the looking glass (top left). *TimeGate* houses human avatars, goblins, elves and wizards

forge allegiances with other characters." What sets *TimeGate* apart is the degree of interactivity accorded to up to 30 virtual characters, plus the maturing of techniques that are used to "virtually clone" a real person.

"We could have used motion-capture rigs or body suits, but we wanted to make the whole system accessible to TV producers without the aid of computer programmers," Child observes.

Using a process called photogrammetry, a 3D electronic representation of a contestant's face can be built in under two minutes from just two still images. The head is attached to a series of body-

movements and walk-cycles captured offline.

"It was as much as we could do to control one character in 93; now we can control multiple characters. Unlike conventional computer games, players can't easily predict their response," he says. "We've pre-programmed a series of movements and gestures for each character, since it would be too complex to puppeteer them live, but their dialogue is directly connected to the scene via a natural language programme."

A broadcaster could also choose to enhance the interactivity by choosing a different character's view of the scene.

All this information, along

with a library of non-speaking characters, lighting effects, lip-sync and sound are processed through a proprietary PC-based real-time animation pipeline (RAP).

But the practicalities of production are governed by factors that exist in any soap: scene construction, performance/rehearsal-time and equity fees," Child adds.

The pilot for the 60 minute show was co-produced with Fremantle-Thames, and includes an online revenue stream. "Building the graphics costs a lot of money, but if the online community is also paying to play an online version of the game, production costs become feasible." ■

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