



A KNIGHT TO REMEMBER

You're standing face-to-face with a fire-belching dragon, its silver scales shimmering in the dim light. You lost your sword a couple of rooms back when you were forced to give it to an orc. All you have left is a dwarvish dagger and you know your stamina is low. In front of you lies a perilous chasm crossed by a rickety, rotting rope bridge. If you attempt to fight the dragon you probably won't survive, but if you try the bridge . . . ? The dragon snorts with impatience and lifts one of its lethal claws. It takes a step forward – you feel the hot breath fanning your cheeks. There's a horrible stench suggesting lingering death. You hear a thud as the claw hits the wall – just missing you.

► **What now?**
Throw dagger

► **But you haven't got the dagger**

The dragon steps forward and engulfs you in flames. You feel the blood in your veins boiling and your heart pounds in a final painful convulsion. The light dims.

► **You are dead.**

Whether you're an ardent fan or just a casual adventurer you'll know how frustrating a response like that can be. When you've only got 8 or 16-bits and a host of computer-controlled characters to play with, there are bound to be limitations. You can only have so many surly dwarves, fire-breathing dragons or smiling kangaroos, and their reactions (spiteful, helpful or murderous) will always be exactly the same.

So – wouldn't it be great if you could have goblins and wizards unpredictable enough to fry you to a frazzle one minute and buy you a Big Mac (plus extra fries) the next? If you didn't have to rely on wordy descriptions or blocky graphics to really get the feel of a game? If there was more than one solution to an adventure, each of which depended entirely on your own abilities and the route you chose to take?

If you've tuned into Anglia TV's *Knightmare* recently, you'll know that you can have all these things and more. Based on the concept of the computerised adventure game, it transports a fully interactive dungeons and dragons scenario – complete

with real-life characters, simulated dragons and astoundingly convincing special effects – to your TV screen.

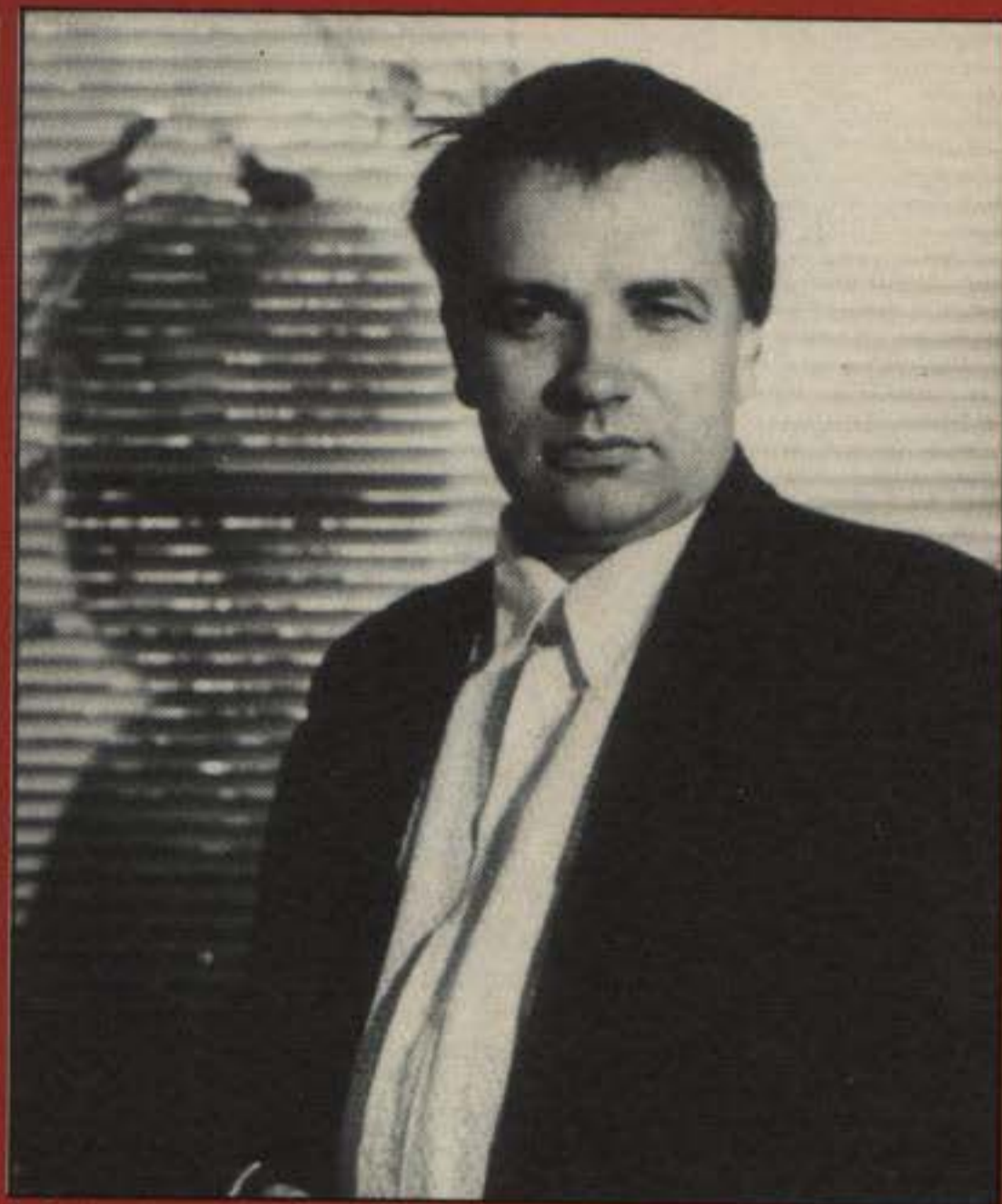
Each quest is tackled by a team of four contestants aged between 11 and 14: an almost blindfolded dungeoneer wearing the 'helmet of justice', is guided through an underground maze by his team-mates who watch the whole thing through a 'magic mirror' in the relative comfort of the dungeon's ante-room.

As if wearing a helmet that restricts your field of vision to what's directly in front of you and listening to three friends all shouting conflicting advice at the same time isn't enough, you also have to cope with a bewildering array of men, mages, maidens and monsters. As you're a bit of an alien runt, with a thing that looks like an upturned ice-bucket on your head, they're not exactly going to be brimming over with respect. More likely they'll ask for a gift, the answer to a riddle or a spell. On the other hand, blood dripping from a dragon's jaw, a devious grin on an axeman's face or a snake with a rattling sting in its tail might be a sure sign that it's time to run.

The characters are played by actors. As they can't tell in advance how a dungeoneer is going to react, they can't simply enact their script as they would in a play. Wizards, dragons, knights and halflings must decide on the spur of the moment whether to accept a bribe, offer help, ignore or attack. It can get pretty nerve-racking – if they make an inappropriate reply the painstakingly reconstructed fantasy illusion simply crumbles. What seemed like a sinister world of dark and dimming passageways suddenly turns back into an ordinary TV studio filled with technicians, actors, empty coffee cups and lights.

To prevent such dislocation, each adventure, which is usually transmitted in two or three parts, is actually played right through in one long go. Not only that – Treguard, the Dungeon Master (played by Hugo Myatt), is always on hand to interrupt with useful advice or a timely warning. He watches the proceedings at every turn with a discerningly... er... well... Dungeon Masterish eye.

The outcome of each quest is completely open-ended. No more actions you can't perform, no more words that the computer won't understand. As each team progresses through the



► Robert Harris, who worked on *Hitchhikers Guide* before *Knightmare*

dungeons' increasingly difficult levels, the only factors they are bound by are the dungeoneer's waning strength and the design of the dungeon. The rest is up to them...

The pilot series, devised by Tim Child and designed by Robert Harris, which was shown for the first time last year, ran to eight episodes – each one grossed an audience of around four million. The effects were of such high quality that they won the Parisian Jean D'Arcy Award for Video Production. Not bad huh?

Generally, the TV industry has a pretty suspicious view of home computer entertainment; with the latest horizontally scrolling shoot

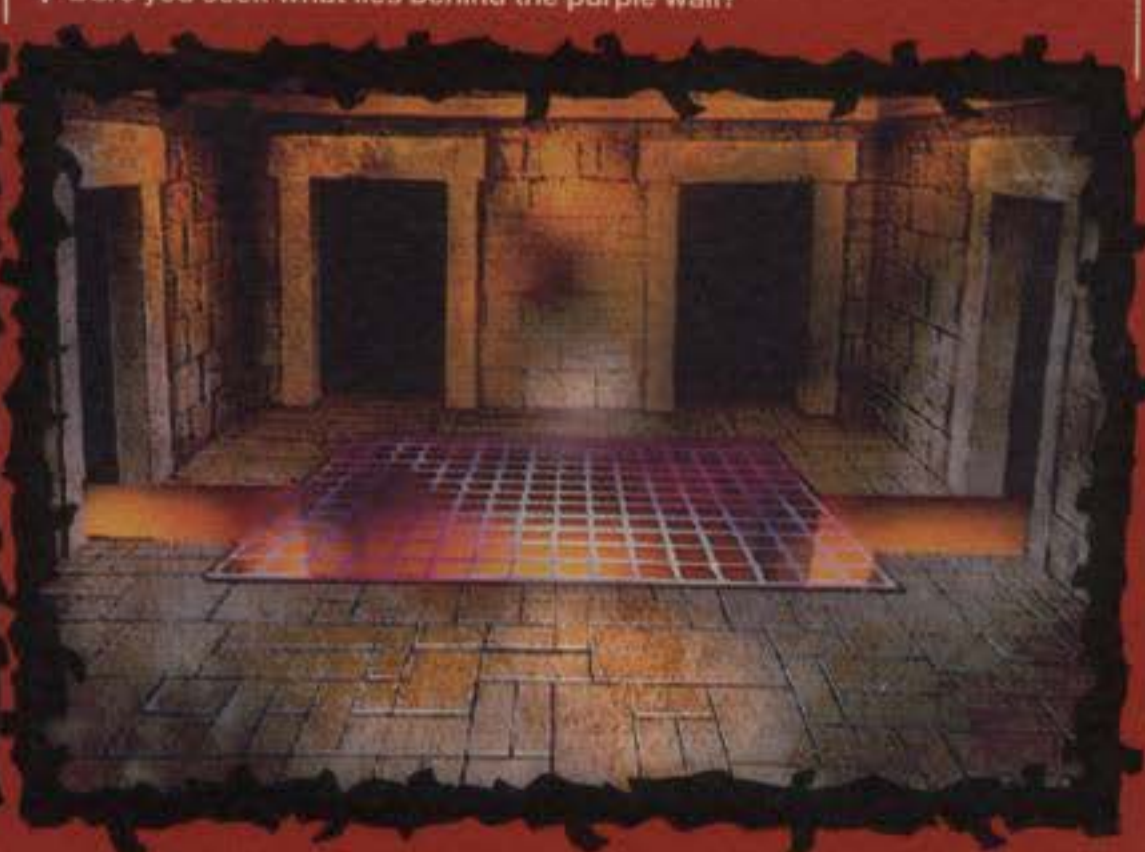
'em ups taking up more and more of young people's time (wouldn't you prefer *Wizball* to *Bullseye*?) it has obviously cost them one or two viewers – especially in the afternoons, when *Knightmare* is screened. It took Tim Childs several attempts to persuade Anglia to view the computer industry positively and consider that a show based on a PC game might actually work.

So – how does it work, then? Like Santa Claus (you didn't believe all that naff stuff about the reindeer, did you?), it's all a cleverly constructed illusion. It's made possible by Chromakey. In the studio, the actors perform against the background of a blue screen. Meanwhile, the director

▼ Hugo knows where everybody goes



▼ Dare you seek what lies behind the purple wall?



superimposes a signal from another camera over the blue. Though the dungeoneer and the actors can't see the finished effect, back in the dungeon ante-room and on your TV screen, it looks exactly like the real thing. Sounds neat – but only if you're careful. The perspective of the scene has to match with the angle of view – otherwise you could end up with all sorts of discrepancies. To avoid problems, the chamber is drawn to a strict grid while the camera stays fixed in a single position all the time.

Right – now you've grasped the technicalities (you have, haven't you?) get out your sticky-back plastic and your empty washing up bottles and wait for a step by step guide on how it's done (by the way – you'll need a basic budget of at least £100,000).



▲ Deciphering the curse of the Scarab Room in Anglia TV's new series of *Knightmare*

◆ First, draw your picture

The paintings that comprise the backgrounds correspond with the predetermined grid pattern. Each damp staircase, creaking doorway and dripping passage starts out life as a written brief from the production team to the artist, Dave Rowe. He begins by drawing pencil roughs which ultimately develop into the finished paintings. For help with some of the stone effects David makes use of a library of slides comprising shots of cathedrals and churches. For a more realistic end result, he tries to incorporate as much texture as possible.

◆ Add Robert Harris

Well, Robert Harris and his 24-bit Spaceward Supernova, to be exact. Robert, who used to work on the TV version of *Hitchhiker's Guide To The Galaxy*, turns David's pictures into computerised images which can be called up from the Supernova's potential store of 1024 hi-res frames. It allows Robert to alter the texture and colour of particular paintings by drawing over them using an electronic pen and pad. Scenes can be changed at the touch of a button. At points where the dungeoneer has to choose between one of several doors all the producer has to do is hit the appropriate key and the correct backdrop appears without any loss of continuity. No wonder it cost around £85000!

◆ Throw in some animation

Robert has devised a personalised technique. Purely using the computer would involve creating a model and storing its movements as an animated 3D pattern. Instead, Robert makes use of an animation studio: a monster is made out of clay and animated through a movement cycle. Each step is shot by video camera and digitised. Using this method all sorts of fantastic illusions which make incredible use of the quality of light can be created. Practically no luminous snake, slimy stick insect or headless gorgon is too complex for the Supernova.

◆ Keep thinking

As preparations for the first series progressed Robert was able to introduce more and more refinements. Digitised skeletons and monsters were manipulated to perform more and more complicated actions – even the sets were given a bit of extra depth. To the endless sheets of blue cloth, stairs and cut-out objects were added: now, when his team-mates see him ascending a cold, dank, castle staircase, the dungeoneer at least has a proper set of steps to climb. Obviously, the more complex the set feels, the more realistic the *Knightmare* becomes.

Robert Harris' work on the programme has been so successful that he's now set up his own mobile computer graphics studio – The Travelling Matte Company. In a Mercedes truck fully equipped with Supernova, Sony 3000 rostrum mounted video camera and Sony Video Printer, he travels the country dealing with, among other things, corporate conference work for a variety of large companies.

However, it's in TV and fantasy projects that the real scope for innovation lies. In a situation where you can create your own backgrounds and aren't restricted by a specific budget, the only thing you're limited by is imagination. *Knightmare* is only the beginning – who knows what fearsome and fantastical productions the future may hold.

► The machinery behind the *Knightmare*

