QUIZ SHOW

Never mind gongs, dartboards and black chairs – game shows have moved into ever more technical realms. **Jenny Sanders** looks at how computers have revolutionised the industry (although you could still win a speedboat)

Does anybody else remember The Price Is Right? The one with the guy falling off the edge of a cliff, and the big spinny wheel with all the numbers on it, and Plinko? What do you mean, it's still on? And they're still using Plinko? Are you mad? Haven't things moved on a bit?

In the case of The Price Is Right, no. And some would argue that it's gone very much backwards. But there are plenty of other shows out there flying the flag for the new millennium – and some no longer with us that were doing it way ahead of their time. Chromakey studios, CGI, artificial intelligence, contestants that the audience can't actually see...yes, things have come a long way since Sale Of The Century.

Let's get into the time machine and zip back into what could be classed as a golden age for game shows – the nineties. Several major franchises were up and running, and people were starting to realise that glamorous women and giant playing cards/swimming pools/clocks just weren't necessary anymore. It's good, but it's not right...

Say What You See

It's the Godfather of all game shows, the one that just about every generation can quote extensively from – it's Catchphrase.

Running from 1986 to 2002, the Dingbats-style quiz relied pretty much completely on its use of computer graphics, giving away insane amounts of money, and a multitude of extra catchphrases provided by host Roy Walker. And I'd take out the bell and reveal all about the show if it weren't for the fact that no one will admit to making it. I can tell you, however, that creator Stephen Radosh is doing very well for himself and is far too famous to be interviewed. So let's look at something that ended up relying entirely on computers for its success...Knightmare.

Surely the only programme on television that could legally show a child being killed by a giant scorpion, Knightmare got itself into a small amount of bother with Mary Whitehouse before she realised that it was class.

The idea was that teams of four children went into a castle to defeat Lord Fear, some crazy guy down in the dungeons. One would be blindfolded by means of a big helmet, and directed around by the other three who stayed in the studio with Treguard, the host. By means of problem-solving, strategy and very quick feet, the 'dungeoneer' would progress through several levels before escaping by means of the Causeway, a bridge made of hexagons that collapsed upon an incorrect move. The storylines and puzzles changed every series, but they all came back to the same, basic idea – don't die.

Illusion runs the **Knightmare.com** website, the most comprehensive guide to the show (and possibly any show) ever made. Because of its repeats on Challenge TV, the faithful following it built over nearly ten years of broadcast can be joined by those who were unlucky enough to miss it the first time around.

The dungeon was produced through a huge studio made entirely of chromakey (blue screen) materials, onto which the various backgrounds and effects were superimposed via a man with a Commodore Amiga 2000 and a graphics tablet. An artist called David Rowe painted the rooms, which were then adjusted as and when necessary by Robert Harris, who produced the 'live' aspects such as things appearing on the walls. You can see the process from beginning to end at **www.knightmare.com**

There has been some interest in making the show again from an American company, who rather bizarrely want the dungeoneer to be able to see. Not quite sure who that's going to work – badly?

Into the twenty-first century now, once again with two completely different shows. You may know this first one.

Who Wants To Be A Millionaire?

Well, behind the scenes, anyway. I can't win you the million – I'd be lucky to win the grand – but I can tell you how it's all done thanks to Hamish Barjonas at Cat & Mouse, the Cardiff-based company who provide 'show control solutions' for many major programmes such as Test The Nation, Fame Academy, National Lottery: Winning Lines and just about anything with the word 'poker' in the title.

Hamish himself has quite a background in these solutions, having been responsible for the systems that display scrolling text and schedule information on digital TV stations, and allow listeners to text into radio shows. He's also the designer of SendTo: Air, the software that means that viewers' pictures can be shown live on air minutes after they were sent in. The show this was first used on was 'Johnny and Denise: Passport to Paradise' – although the technology has since migrated to rather more classy programmes such as Nolan Live, an award-winning phone-in show in Northern Ireland.

Together with Carl Blundell, the man behind Millionaire, and Simon Lucas, Cat & Mouse are responsible for a huge amount of what you see on your screens. So, if you've ever wanted to find out what's on Chris Tarrant's screen (I have, for years!), read on...

graphics. Logic software is used to make sure that all of these run smoothly and in co-ordination. Although all of this could be run wirelessly – and is, at corporate events – studio-based equipment needs to have the reliability factor, and is done with standard cabling.

For Fastest Finger First, and other shows needing a direct link to contestants, form factor is the biggest issue. Mini ATX is used because it can be fitted into small gaps more easily, such as under

"Uh-uhhhhhhh!"

Yes, Family Fortunes! Another show which has been disowned by its makers but is mysteriously still on, it relied entirely on a huge computer screen and the sheer stupidity – I mean, nerves – of its contestants.
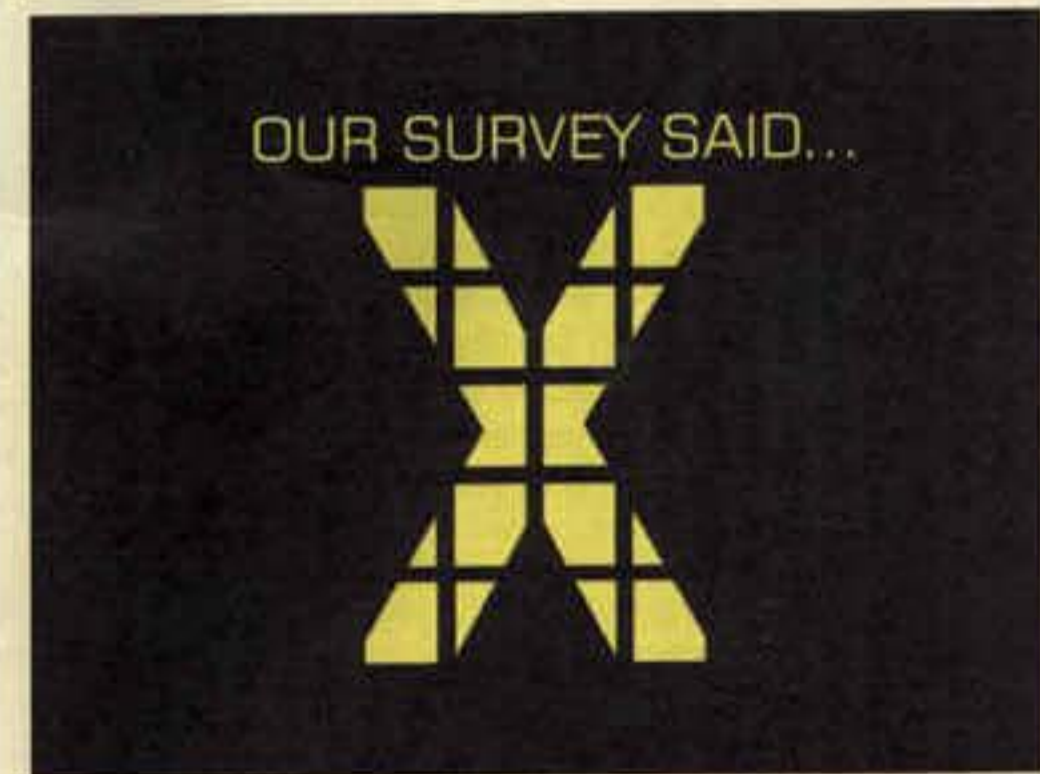
Produced by William G. Stewart, who most of you will recognise as the host of Fifteen-To-One, the spectacularly popular programme ran for 26 years if you count various spin-offs and comebacks. It was also responsible for some of the craziest answers ever given in a game show. All I can tell you about it computer-wise is that the computer was nicknamed 'Mr. Babbage' after Charles Babbage – but just for your entertainment, here are some of those crazy answers:

"Not including cutlery, name a type of fork."
"Banana."

"Name something a cat does."
"Goes to the toilet."

"Name something you might take from a hotel as a souvenir."
"The lamps."

"Name a non-living object with legs."
"A plant."

OUR SURVEY SAID...

▲ *TellyTunes.com has this as a desktop wallpaper, and you know you want to*

> **Knightmare was surely the only programme on television that could legally show a child being killed by a giant scorpion**

We begin with the hardware used, and, as you can imagine, there's plenty of it. For starters, everything is PC-based – no Macs here. Within the studio, a relatively permanent 'standing' set-up, are several dual-core Intel Xeon machines with Matrox cards for handling the graphics (since these cards are now moving into 'obsolete' territory, they're looking to upgrade). Higher-powered PCs are used for recording high-definition shows, because the pixel count is much higher. Yes, HDWWTBAM? could soon be on your telly, HDCP notwithstanding.

These main computers are used to control the individual components of the show: such as lighting, voting, the data that appears to the contestants and the host, score-tracking, and live

desks – the units C&M use are smaller than a shoebox. Fanless systems cut down the likelihood of any noise interrupting filming – and before you ask, they don't need cooling because they don't use enough power. In non-standing studios that need dismantling, tablet PCs are employed to make setting up quicker.

The software used (Roar Graphics) is proprietary and on the 'top-secret' side, but that didn't stop me asking the all-important question: what can Chris Tarrant actually see?

Hamish reveals all: "On his screen is the money tree, to show which question the contestant has reached, and information on how far they would fall if they got the next one wrong. After filming of hundreds of shows

▲ *Say what you see!*

▲ *A Knightmare contestant fights Orcs*

it's inevitable that you'd get it wrong from time to time, so all the working out is done automatically via one of the computers and displayed on his monitor.

"When a contestant has given their 'final answer', there's a subtle indication of whether they're right or wrong – this is kept very small so that audience members can't see it. The host cannot see the correct answer before that point.

"There are also 'explanations' – extra information and facts connected to the correct answer, along with pronunciation help." (I did comment that Anne Robinson could do with this, but Cat & Mouse don't do The Weakest Link.)

That's the secrets of Millionaire revealed, but the company also deal with shows that require a large amount of audience participation. In the case of Test The Nation, this can mean up to ten million people using independent web and mobile phone services to submit their responses. All of the data have to be appropriately aggregated and sent to the right places – and that's a big job. Thankfully, unlike Millionaire, Test The Nation has yet to break into the 25 other countries to which C&M provide support for Celador's programme.

If you want to check out Cat & Mouse's other projects, or you have a sudden desire to hold an event where TV graphics or audience voting on a mass scale is required, head on over to www.catandmousr/tv.

Bam-what?

Things took a turn for the weird when the BBC came up with FightBox, a game show in which the audience couldn't see anything in front of them. Although the parent show didn't last very long (Robot Wars being the 'in' thing at the time), it spawned a very popular children's version called BAMZOOKi.

The concept behind both shows is very Robot Wars in its premise,

▲ One of David Rowe's original pieces of artwork for Knightmare

▲ The Cat & Mouse team are behind several major shows including that horrible one where Anne Robinson tells you how thick you are

▲ This is what Millionaire will soon be

▲ It still goes, and uses no computers for any of the games

as teams develop creatures to fight the inventions of others. However, in BAMZOOKi there's a twist – it's all computer-generated. Although the battles are 'played out' in front of a studio audience, what you see on your TV isn't what appears in real life.

Team Canary Woolf, from Norwich, are one of the most successful teams to be on the show. Captain Joshua Kerridge and his father Alastair talk a little about what participating is like.

Joshua says, "I came across the BAMZOOKi website by chance when I was looking through the

CBBC website. I had seen the shows a couple of times, but when I found out you could create your own Zooks I dived straight in. I asked my dad if I could download the Zook-Kit – which is free – and started 'zooking'. I was only just nine at the time, but I got the hang of it pretty quickly. Then I applied through the official BAMZOOKi website for the chance to appear in Series III. I got together with three of my schoolmates, as you needed to be a team to take part.

"On the 8th of June, Team Canary Woolf was interviewed by the BBC at our school as part of a national tour, in order to select contestants for the third series to be filmed later in the year. We were really excited as it seemed to go very well. They seemed impressed with the quality of our Zooks and thought that Trancheley was the quickest Zook they had ever seen. On the evening of the 15th we heard that we got through the preliminary rounds and we'd be on the next series. From 700

Does Anybody Remember... The Satellite Game?

No, me neither, but it was the first show to use 'live' 3D graphical effects and made by the people behind Knightmare. Tim Child is the CEO of Televirtual MediaLab, the Norwich-based company who began as Broadsword in 1986.

"In 1991 whilst searching for a system to empower 3D monsters with direct live speech, I came across the Simgraphics VActor (virtual actor) system. Simgraphics would only sell this to me for Knightmare if I agreed to be European distributor and sell it to other production companies and broadcasters. I therefore founded Televirtual as the vehicle to do that. Televirtual then started developing software to succeed VActor. When Broadsword ceased production in 1995, I switched all activities into Televirtual.

"The Satellite Game is really best forgotten. Its only a milestone because it was the first ever featured use on TV of real-time 3D software running live from a computer. We used an early version of Superscape, which we went on to use in Cyberzone and finally Virtually Impossible. The computerised characters like Ratz the Cat (a virtual presenter) for the BBC were operated with VActor software. A combination of both were used for Salute Serge (BBC). Both SimGraphics and Superscape proved unsuitable for TV production which led to the development of in-house software by Televirtual. This became the RAP system in 2005, although an early version was used by us to execute Karaoke Fishtank for Channel 4."

entrants down to 36 teams – that was pretty cool!"

I asked what software and/or materials you need to take part. As Alastair is paying for this side of things, he got to give me the reply. "To take part at home you will need a reasonable spec PC (with a 3D graphics card) and, of course, the Zook-Kit, which is free to download from the BBC website: www.bbc. co.uk/cbbc/bamzooki/. Anyone can get involved – Joshua's younger brother started making Zooks when he was six, and Joshua was pretty much a professional by the age of nine. The kit has broader appeal, though, and I count myself as one a number of 'big-kids' who tinker with the kit."

I've always been under the impression that people in the BAMZOOKi studio can't see anything, but I stand corrected. Joshua told me, "The studio is much bigger than it seems on TV – there is the big Zook table in the middle where most of the action takes place and loads of cameras

▲ The ceiling of the BAMZOOKi studio boasts loads of high-tech equipment

▲ The BAMZOOKi studio is huge
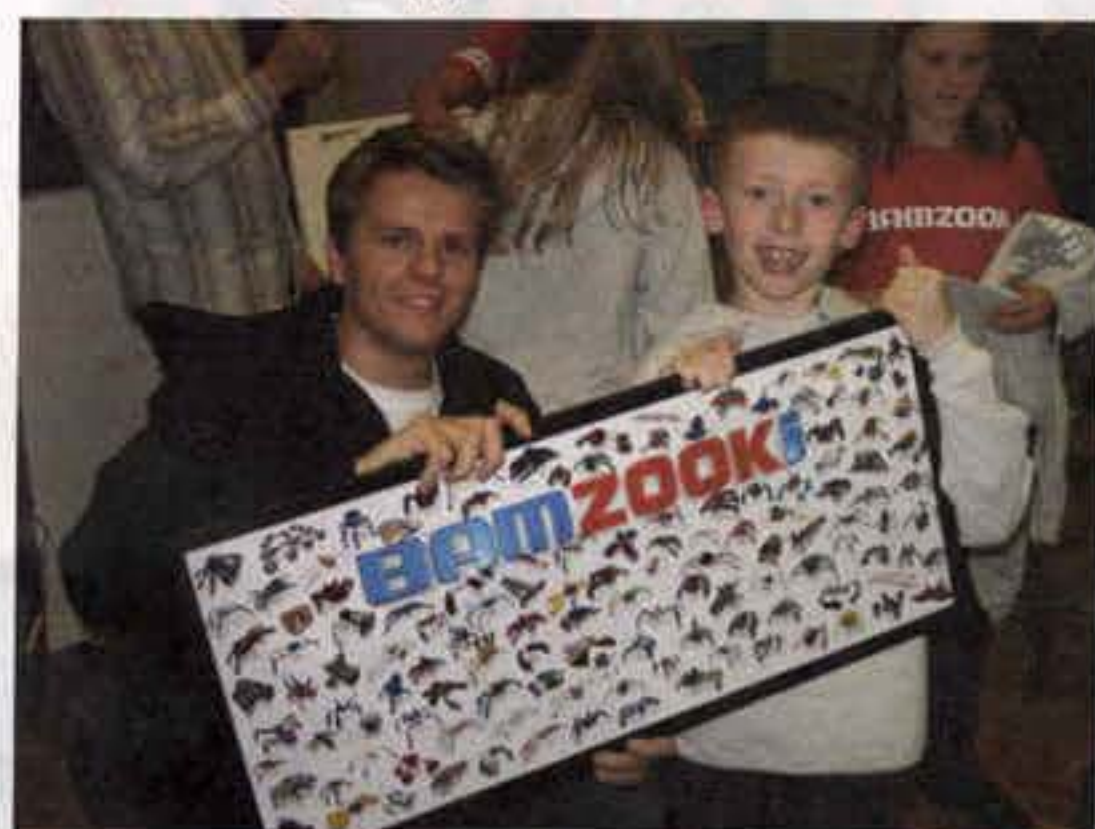
▲ Joshua with presenter Jake Humphries

▲ Team Canary Woolf celebrate their success

and lights. There are hundreds of black and white discs on the ceiling and apparently this tells the computers where the cameras are pointing and where to 'project' the computer generated images. Apart from those, and a load of people on PCs, that's about it.

"Everyone thinks that we had to 'act' as if the Zooks were

I Want My Computer To Sound/ Look/Act Like A Game Show

All I'll say is...www.celebrityscreensavers.com. If you have a desperate need to create your own WWTBAM? desktop theme, you can buy the soundtrack CD. I know this, because I own a copy.

And if you really want to go all-out, try www.buzzers.com (if you don't believe me, check). I think Maplin may sell similar equipment...
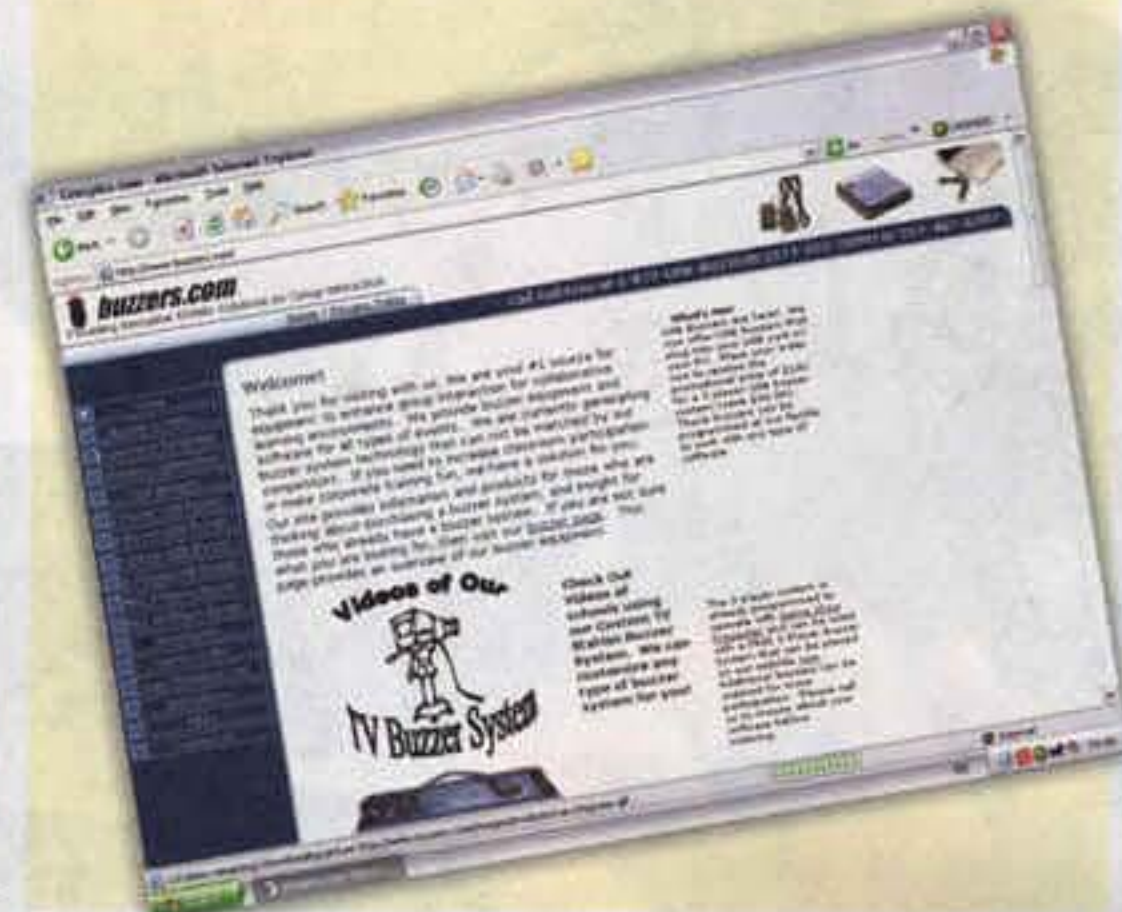
of programme being the future of game shows – after all, the use of such technology is spreading. Alastair was positive: "Everyone seems to be crying out for another series and I don't think that there is any shortage of budding contestants! You'd need to keep an eye on the website if you want a

intrigued by technology, and that, mixed up with fun and teamwork, is a recipe for success. The BBC has tried in the past with FightBox but I felt that it wasn't really cutting edge enough. With so many new digital channels I think it is only a matter of time before the competition heats up."

> **Everyone thinks that we had to 'act' as if the Zooks were there, but you really can see them**

there, but you really can see them. It's not like a hologram or anything, but you can only see the Zooks in 2D as they are projected from above. They look a little weird being squashed l ike that!"

As they have experienced the show first-hand, I wondered whether they could see this kind

chance to take part. I would love it if there was an adult version – kind of a CGI Scrapheap Challenge, where teams would compete in a given time to build their characters or creatures to battle it out at the end of the show.

"Augmented Reality is the next step and it looks really exciting, mixing CGI with the real world in real time! People are amazed and

Want to find out more? Go to Canary Woolf's website at www.bamzooki.org.uk "Not only will you find the team zooks but plenty more beside including Dalek, R2-D2, Ferrari F1, AT- AT, and a T-Rex! There is also a BAMZOOKi forum where you can talk with other 'zooksters' and take part in the challenges to find the Ultimate Zook."