We go back to the future to see how many of the new ideas we've reported on became a reality.

Past, present, future

We at *PCW* are always looking ahead to new technologies, making sure you get a sneak peak at ideas that might change the way you live your life. So on the eve of the millennium we take a look back to see how many of these ideas have been put into practice and which fell by the roadside.

We have not had a bad success rate: we predicted MP3 back in August 1997, the onslaught of Linux for web servers at a time when many people assumed it was only for technofreaks (June 1996) and interactive broadcasts long before Sky started using the idea for the footie (September 1996). In June 1997 we eagerly awaited 3D audio, which finally turned up in products a year or so later. And we reported on a few ideas that were outlandish at the time, but now seem old hat, such as cheap 3D graphics accelerators which would soon be in every PC, and a wonderful idea of Demon's to provide local rate calls to your ISP, allowing you to surf the world for the same amount it would cost to call your next door neighbour. Similarly kids' TV has never been the same since we talked about fully computer-generated cartoons.

▲ONE IN THE EYE: CASH POINTS WHICH SCAN YOUR IRIS TO CHECK YOUR IDENTITY ARE ON THE HORIZON

There have been two clear threads to all the research that is going on: how we interact with our computers and how we build the supercomputers of the future.

We first looked at biometrics in March 1997. This is the use of our physical characteristics to identify ourselves. After all, PIN numbers can be hacked and signatures forged. You will also soon be able to safely forget your PIN number, as iris scanners, reported in May 1998, are fitted to cash machines. These scanners take a picture of your iris and check its characteristics against a database. This system has been trialled and could come to a cash point near you soon.

You may have to wait a little longer before thermograms of your face, as reported in March 1998, will let you into your building. We all get hot in different places on our faces and a heat-sensitive camera can take a picture and identify us from our hot spots.

We have also looked at different ways of interacting with our computer, ditching the mouse and the keyboard. How would you like to wave your hand around in the air instead of using a mouse, as we reported in February 1998, or use gestures to navigate a virtual reality environment (June 1998)? Or you could use your facial muscles to control a computer (December 1997) – no this does not mean acquiring a series of facial ticks, but rather fixing a few sensors onto your forehead and under your eyes to detect which way your eyes are looking. More scary is the report in the same article of implants under the skull which monitor the brain's activity and pick up any signals intended to induce movement. This has been successfully used in trials for those with artificial limbs, who can just think about moving their leg or arm and the artificial limb will respond.

A little more Orwellian was the project reported in November 1996 to have a silicon chip implanted at the back of the eye that would record everything we saw throughout our life.

Perhaps some of the most interesting developments have been in the building of computers of the future. We reported on Quantum computing in September 1996 and have featured several types of molecular computing using everything from nerve cells to DNA to build a living computer. The most promising technology, though, is nano-technology, which we first looked at in July 1996 and is now the buzzword in computing circles.

Sadly some of the best ideas never came to fruition, such as the flat speakers which were going to appear on every notebook, being stored behind the screen and pulled out when needed. Self-repairing computers (April 1998) have yet to solve those little hardware niggles, and 3D images suspended in mid-air and viewed without glasses have also yet to appear. And of course that old chestnut the wearable computer is still a long way off.

However, there is much to look forward to, especially in the way we interact with our PCs. Here's to the next millennium of innovation.

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