

ONCE MORE WITH FEELING

At first glance, the online game appears straightforward. Inside a virtual restaurant you play either a waitress trying to squeeze a tip out of her customer or a ravenous diner.

Behind the scenes, though, every move you make and word you utter is being recorded. Your responses will be used to teach virtual characters how to behave more like real people.

Most research in the games industry has focused on generating cinema-quality graphics at the expense of characters' speech and behaviour, says games developer Jeff Orkin, who is a student in the Cognitive Machines group at the Massachusetts Institute of Technology. This is because their reactions are pre-programmed, leaving them unable to respond to unpredictable situations. "Wooden

would be a complimentary term," says Orkin's supervisor Deb Roy.

The Restaurant Game (<http://therestaurantgame.net>) has been designed to change this. Participants act out their roles and chat by typing words that immediately appear on the screen.

Roy and Orkin will then feed this information into software designed to learn how characters react to specific situations. After training the software on thousands of examples, the pair will use it to develop a second game they are working on, also based on a restaurant scene. The software's new-found knowledge will help it govern how characters behave in similar situations. "You give characters goals and they work out how to achieve them," says Roy. The game has been played around 1600 times since its launch in February.



JEFF ORKIN

Can I have a better script?

Step forward for internet privacy

GOOGLE is no longer to store as much personal information on us.

To help it personalise searches and target adverts, Google keeps an indefinite log of all searches and the IP addresses of the users who make them. Those logs will now be made anonymous after 18 to 24 months, making it harder to connect records to individuals, the company said last week.

"It's an important concession, but we hope it's just a first step," says Kevin Bankston, a lawyer for the privacy group Electronic Frontier Foundation, based in San Francisco. The move is likely to put pressure on rivals Yahoo and Microsoft to follow suit. Yahoo says it keeps search data for "as long as it is useful". Microsoft says that while it does not link searches to IP addresses, it maintains both indefinitely and can connect the two if instructed to by the courts.



SOURCE: P-HAN WANG/GOOGLE RESEARCH

Farewell fuzzy fingerprinting?

THE police could have a new ally – a reliable technique for revealing fingerprints on porous surfaces.

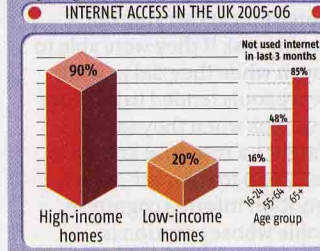
At the moment, prints on surfaces like paper are revealed by adding a watery suspension of gold nanoparticles that stick to skin oils. Add a silver solution and the gold catalyses a reaction, leaving the print outlined in a black silver compound. But the

nanoparticles can clump together, leaving uneven, inaccurate prints.

Now Daniel Mandler and colleagues at the Hebrew University of Jerusalem, Israel, have found a way to keep the gold particles separated, by adding long-chain carbon molecules to them, and suspended them in an organic solvent for stability. The silver solution can then be added as usual, revealing the print more clearly than before (*Chemical Communications*, DOI: 10.1039/b618966k).

DIGITAL DIVIDE

There is a vast gap in internet use between the young and wealthy and the old and poor



SOURCE: OFFICE FOR NATIONAL STATISTICS

GIZMO

Astronauts living on the moon might extract water, oxygen and other useful materials from the lunar soil. However, trying to collect it might throw up a lot of potentially toxic dust, so researchers at the University of Tennessee, Knoxville, are developing a flexible tube with magnetic coils spaced along it to suck up the iron-rich soil instead. The magnetic field channels the soil and dust along the middle of the tube to keep it from collecting on the walls.

A robot that can hurl hand grenades is being developed by military technology firm Elbit Systems of Haifa, Israel. Dubbed VIPeR, the portable robot will throw grenades using a robotic arm. It can also carry a sub-machine gun. "VIPeR is undeterred by stairs, rubble, dark alleys, caves or narrow tunnels," says an Elbit spokesman.



"If our enemy wants to do something insane, it will be surprised"

Iranian army chief Major General Ataollah Salehi, on the country's announcement that it has developed an air defence system that can shoot down two missiles simultaneously. Iran's state radio said the system has been tested successfully (IRNA/AFP, 16 March).