TALENTSPOTTER.EXE
The top five automated talent spotters

FINE TUNE
Music Xray is a computer algorithm that measures the mathematical properties of songs. A neural network – software that can remember information and learn from it – then compares the song's data with that of past hits and determines the likelihood that the new track will be a hit. The software reassured a doubtful Warner Music that they would recoup their investment with Gnarls Barkley’s 2006 single Crazy, which duly topped the UK singles chart for nine weeks.

DOWNLOAD MINER
Professor Yuval Shavitt and his student Noam Keenigstein, at Tel Aviv University, have developed a system that can predict the hit bands of tomorrow. It uses the file-sharing network Gnutella, which allows members to access music stored on each other’s computers. The software logs the location of each MP3 download to spot bands that are gaining a regional following – a good sign they're destined for national success. It's accurate up to 50 per cent of the time.

SCORE THE SCRIPT
UK-based company Epagogix uses neural networks to advise Hollywood on the commercial potential of movie scripts. Human readers assign scores to hundreds of variables in a script’s content. The neural net then compares these scores to those of previous movies with known box-office receipts to forecast how much a production of the new script is likely to make. Epagogix predicted that the 2007 movie Lucky You (left) made for $50 million, would tank. It made just $5.7m in the US and Canada.

MOVIE MARKET
The Hollywood Stock Exchange (www.hsx.com) also aims to predict a movie’s success. The site lets anyone buy and sell virtual stock in new releases. Market forces push up prices of movies anticipated to do well, and drive down the suspected turkeys. A movie’s trading value doubles as a forecast of its box office performance in millions of dollars. It’s remarkably accurate. The Da Vinci Code was predicted to earn US$72.3m in its first three days – it actually made US$777m.

VIRAL VIDEOS
Professor Didier Sornette and colleagues, at the Swiss Federal Institute of Technology, have a system that can spot future viral videos on YouTube. The team saw how viral videos grow slowly as word of mouth spreads across social networks, but then enjoy huge long-term popularity. The team were able to isolate the tell-tale signs in the early growth of a video that’s set to go viral – enabling them to predict YouTube’s biggest hits with 80 per cent accuracy.