Market, market, on the wall

Technology trends: If prediction markets are so good at making forecasts, why not use them to identify emerging technologies?

The technology industry loves a prediction, and keeps legions of forecasters and futurists in business. But many predictions are wrong, technologies often arrive late, and very few live up to the hype. Why, then, are technology firms not keen users of internal prediction markets? These harness the collective brainpower of employees by giving them virtual trading accounts and virtual money, and letting them buy and sell “shares” in such things as project schedules or next quarter’s sales. What are, in effect, elaborate computer games might help tech firms spot trends and make more accurate forecasts. Yet, oddly, hardly anyone is using them in this way.

Hewlett-Packard and Intel pioneered the corporate use of prediction markets, but neither seems to be using them other than experimentally. Todd Proebsting of Microsoft says the software giant has run a dozen or so such markets, and that they quickly and cheaply capture employee sentiment on project deadlines or software quality more accurately than any other measure. Google recently said it is also using prediction markets. But such markets are typically used to predict internal matters, rather than to divine broader technology trends—which is, some argue, a missed opportunity. “At the moment, it’s a sad that companies are trying out,” grumbles Robin Hanson, an economist at George Mason University who popularised the concept of corporate prediction markets and believes they could be a powerful tool.

But can prediction markets really spot broader industry trends? There have been some attempts to find out. Perhaps the oldest technology-oriented public prediction market is the Foresight Exchange (www.ideosphere.com), which launched in 1994. Ken Kittlitz, one of its co-founders, says it has an accuracy rate of about 70% on technology questions. Among its best calls: it said a computer would beat Garry Kasparov at chess two years before it happened. But it was too bullish on demand for videophones.

Another prediction market, operated by NewsFutures, ran for a while on the website of Technology Review. Most of its predictions, says Emile Servan-Schreiber, NewsFutures’ boss, concerned financial matters. But the market did make a few accurate predictions about technology trends: it concluded that products based on ultrawideband technology would not be commercially available by July 2004, and correctly forecast the take-up rate for internet telephony.

Even so, says Justin Wolfer, an economist at the Wharton School at the University of Pennsylvania, it is still unclear whether prediction markets really can spot tech trends. That is why he is among those closely watching the latest experiment, being carried out by Yahoo!, a big internet portal and search engine, in conjunction with O’Reilly & Associates, a publisher of technical books and organiser of technology conferences.

In March, the two firms launched the Tech Buzz Game, “a fantasy prediction market for high-tech products, concepts and trends”. Users buy shares in technologies they think will do well; the share price of a technology depends on the frequency with which Yahoo! users perform web searches for it. Yahoo! hopes to use the answers to predict search trends that will be popular in future, so that it can sell advertising against them. O’Reilly wants an inside track on hot topics for future books and conferences. In the spring, the market identified “Ruby on Rails”, a programming environment, and Flickr, a photo-sharing site, as hot picks. But the game has not yet been around long enough to assess its track record for longer-term prediction, says David Pennock, a senior researcher at Yahoo!.

The most important thing about the Tech Buzz Game, says Mr Wolfer, may be that people are actually playing it, because it is so well designed. Encouraging employees to use prediction markets has always been a challenge. Mr Proebsting says he believes it is just a matter of time before Microsoft starts using predictive markets to predict external as well as internal events. Perhaps he could use the technology to estimate when...