Attack of the Eurogoogle

Mar 9th 2006
From *The Economist* print edition

Search technology: Can an ambitious new European search engine, backed by the governments of France and Germany, challenge Google?

"WE MUST take the offensive and muster a massive effort," said Jacques Chirac, the president of France, who went on to warn of the dangers of losing the battle for "the power of tomorrow" in a speech made last April. Standing beside him was Gerhard Schröder, then chancellor of Germany. In response to the formidable challenges posed by America, Japan and the emerging powers of China, India and Brazil, the two men announced that they had decided to step up their co-operation in a technological programme of vital strategic importance. A new fighter jet, perhaps, or a satellite surveillance system? No, the two heads of state were endorsing a plan to build a Franco-German internet-search engine, to be called Quaero (Latin for "I seek").

The project would, said Mr Chirac, be undertaken with the help of government funds "in the image of the magnificent success of Airbus". In a series of further speeches over the past few months, he has warmed to his theme: "We must take up the global challenge of the American giants Yahoo! and Google"; "Culture is not merchandise and cannot be left to blind market forces"; "We must staunchly defend the world's cultural diversity against the looming threat of uniformity"; "Our power is at stake."

In July Mr Chirac noted that while French research has traditionally been good, it "now needs encouraging". The following month the French government, the main financier and developer of Quaero, duly created the Agency for Industrial Innovation (AII), based in Paris, largely to oversee the project. The AII received an initial endowment of €1.7 billion ($2 billion). Michel Lemonier, a senior administrator at the AII, refuses to discuss how much of the budget is being allocated to Quaero because, he jokes, the leaders of other AII-funded programmes

would be "very jealous". Quaero is expected to be finished before any of the other planned AII projects, and may be online before the year is out.

The magic of Quaero, say its supporters, will be in the ambitious capabilities of its tentacles. Today, internet searches are performed using keywords. Of course, search engines can retrieve image, audio and video files, in addition to text documents. But this is done by matching the user's keywords to a text description of the image, audio or video content. Quaero users will be able to search the internet with keywords in the usual way; but in addition, researchers at Quaero's public-private consortium, led by Thomson and France Telecom in France and Siemens and Deutsche Telekom in Germany, are developing technology that will allow users to perform searches using pictures and sounds as query terms. "It's beyond Google," says Marie-Vincente Pasdeloup of Thomson.

Quaero will allow users to search using a "query image", not just a group of keywords. In a process known as "image mining", software that recognises shapes and colours will then retrieve still images and video clips that contain images similar to the query image. (The software is being supplied by LTU Technologies, a firm based in Paris, which already supplies the technology to law-enforcement agencies for use in sifting through surveillance footage.) When Quaero finds an image without a description that matches a properly labelled image, it will append the description from the labelled image to the unlabelled one. This technique, called "keyword propagation", will enrich the web linguistically: image descriptions in French, for example, will spread as they are tacked on to similar images, so that those images can also be retrieved by users who type in French keywords.

Meanwhile, in Germany, researchers at the University of Karlsruhe are developing Quaero's voice-recognition and translation technology, with funding from the European Commission. The idea is that this software will find audio files—such as political speeches or radio broadcasts—and then automatically transcribe and translate them into a number of European languages. The original audio files can then be found using keyword searches. In addition, speaker-identification software will allow users (via computer microphones) to search the internet for audio clips recorded in their own voices, or those of other speakers.

These are stunningly ambitious goals, and some of the audio features may not be ready by the time Quaero is launched. Yet they show that Quaero is intended to be far more than just another would-be Google, but a leap forward in search-engine technology. "Google is so hegemonic that no one even wonders about other interfaces," says François Bourdoncle, the chief executive of Exalead, a French search engine that has taken on the task of integrating these various technologies under the Quaero umbrella.

Even so, the most striking difference between Quaero and Google is not technological, but ideological. Quaero is a classic example of European state-funded industrial policy, while Google is the very embodiment of American free-market techno-capitalism. The use of government funds to back Quaero has raised eyebrows, even among its supporters, who worry that it might fall foul of rules that prevent governments from using state aid to give favoured firms an unfair competitive advantage.

But so far no formal complaints against Quaero have materialised. The project is a public-private partnership, and the private firms involved are also committing considerable sums to it. The government funds, meanwhile, are being carefully distributed via a complex system of favourable loans, interest-free cash advances, forgivable loans and grants for pre-competitive research, all of which are allowed under international trade rules. The project is further

protected by the fact that big public-research organisations, including France's National Centre for Scientific Research and Germany's RWTH-Aachen University, are also involved.

When Angela Merkel took over as German chancellor in November, there were rumblings that she might not match Mr Schröder's commitment to the project. In fact, her dedication to Quaero is even greater, says Jean-Philippe Touffut, the secretary-general of the Cournot Centre for Economic Studies in Paris, who co-ordinates collaboration between the project's French and German participants.

How will Google respond? Brad Fallon of SEO Research, a search-engine consultancy based in Atlanta, says Google has put the development of multimedia search technology into its "as-soon-as-possible" category, since it now offers only text-based searches. At the moment, however, "Quaero appears to have the edge," he says. But when Google and the other big American search engines unveil their multimedia search features, they are likely to provide interfaces in foreign languages, just as they do today with text-based searches. So simply by existing, Quaero will make the cut-throat search-engine business even more competitive.

Google, of course, makes its money from advertising, and Quaero's backers hope that it too will produce substantial advertising revenues. But Quaero's chief aims are cultural and political, rather than commercial. Alexander Waibel, a research leader at the University of Karlsruhe who sits on Quaero's steering committee, offers an emotional justification too. "Europe wants to secure access that does not have to be channelled through American technology," he says. And an official close to Mr Chirac adds that "the goal surpasses by far the industrial stakes."