'Quaero' becoming a reality

March 20 2006

Nearly a year after its launch, the European multimedia search engine "Quaero" looks more like a high-tech reality than its critics had initially taken to be.

Following the recent launch of the European Institute of Technology, the Quaero initiative is the latest in a series of initiatives by EU nations to compete with both the current technology leaders -- America and Japan -- and the emerging economic powers of China and India.

In April 2005 the German and French heads of state, Jacque Chirac and Gerhard Schroeder, announced their plans to create and launch a search engine through a public-private initiative that would rival Google. Despite the references to previous similar and successful European initiatives such as Airbus, eyebrows were raised. Critics voiced concerns, questioning how a government-funded project could ever rival the likes of the "American giants," as Chirac termed them.

A year later, the tone has turned from disbelief to recognition that Quaero might be everything that its founders hoped it would be. Calling the venture "daringly ambitious," the Economist highlighted the advances already made by the researchers at the institutions involved.

In creating Quaero, the French and German governments have targeted one of the most pressing issues surrounding use of the Internet. With new users coming online and more data being uploaded each day, there is a seemingly endless sea of information to be found on the Net. Filtering the valuable material from the useful is becoming increasingly

necessary. Aided by increased access to broadband, the volume and use of audio and video files online has also swelled. This has led to what industry observers and software experts have called "information overload," whereby it becomes easy to create and upload data but much harder to find it again later. Without an effective means of searching through all the differing types of online information in all its various formats, the Internet has the potential to lose its value.

Although current search engines can be used to hunt for text, sound-files, videos and images, these searches are limited in that they can only be conducted using keywords rather than by the actual nature of the files. A search for a picture of an elephant will only retrieve images that are currently tagged with "elephant" keywords. Quaero aims to change that. By introducing the ability to search by a "query image" and "query sound clips" instead of just basic keywords, users will be able to search by images and sounds as well as text. Through a process of "image mining," software that recognizes colors and shapes will be able to identify pictures and videos containing images similar to the query image. "Keyword propagation" will also be used: When Quaero finds a descriptionless image containing some or all elements of a properly labeled image it will append the description from the labeled image to the unlabeled one, creating faster searches. By introducing image and audio components to online searches, Quaero is looking to not just rival Google but to take a major leap forward in the entire field of search-engine technologies and capabilities.

Quaero's development has been an international networked endeavor: French institutes are researching the image-searching aspect of Quaero, with Paris-based LTU Technologies supplying the "image mining" software to the project. Quaero's audio-search components are being investigated at the University of Karlsruhe, where, using European Commission funding, researchers are developing voice-recognition and transcription technology. Further organizations that have also become

involved include the public institutions of the National Centre for Scientific Research in France and the RWTH-Aachen University in Germany. Private corporations in the consortium include France Telecom, Siemens, Exalead and Deutsche Telekom.

In developing Quaero through a public-private consortium, Chirac and Schroeder have aimed to bypass the problems inherent in private, business-driven technology innovation programs. Online technology expert Nicholas G. Carr has commented on how the major search-engine providers -- Google, Yahoo! and Microsoft -- all have complex business interests extending well beyond search, which Quaero does not. This lack of diversions already seems to have driven Quaero's creation; although academic papers about multimedia online searches have been widely published since Google itself was launched in 1998, none of the commercial search engines have yet incorporated content-based search capabilities into their software. In the light of the upcoming launch of Quaero (predicted to be by the end of 2006), it has been noted by search-engine consultancies that Google has now put the development of multimedia search technology in the "as-soon-as-possible" research category.

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https://phys.org/news/2006-03-quaero-reality.html