



Striking up digital video search

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Google, Microsoft and Yahoo are quietly developing new search tools for digital video, foreshadowing a high-stakes technology arms race in the battle for control of consumers' living rooms.

Google's effort, until now secret, is arguably the most ambitious of the three. According to sources familiar with the plan, the search giant is courting broadcasters and cable networks with a new technology that would do for television what it has already done for the Internet: sort through and reveal needles of video clips from within the haystack archives of major network TV shows.

The effort comes on top of Google's plans to create a multimedia search engine for Internet-only video that it will likely introduce next year, according to sources familiar with the company's plans. In recent weeks, Mountain View, Calif.-based Google has demonstrated new technology to a handful of major TV broadcasters in an attempt to forge alliances and develop business models for a TV-searchable database on the Web, those sources say.

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What's new:

Google, Microsoft and Yahoo are quietly developing new search tools for digital video.

Bottom line:

Video is in the spotlight as the Internet begins to mature into an entertainment platform and becomes a viable companion for television, convergence devices that combine PC and TV features, and the networked home.



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"Google's trying to bring TV to the Web the same way they're bringing books to the Web," according to a media executive who asked to remain anonymous.

Google declined to comment for this report.

While Google is immediately aiming to cater to the broadband market, Microsoft has its sights on the interactive TV market for cable providers, being ushered in by convergence devices like its Microsoft Media Center PC software. It is building technology that will let people with a Media Center PC or Internet-connected TV comb through and find specific video files available over the Internet, broadcast and video-on-demand networks, according to a source. The software giant is expected to showcase the technology at the Consumer Electronics Show (CES) in January, the source said.

Yahoo is picking lower-hanging fruit. The Sunnyvale, Calif.-based Web portal is planning to introduce a [multimedia search engine](#) and is working with Web entertainment and news aggregators to index video clips that are already online. According to one source, the company plans to introduce its service in the first quarter of 2005.

America Online also will be a player in audio and video search. Earlier this year, the company [bought audio-search company Singingfish](#).

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--anonymous source

Video is in the spotlight as the Internet begins to mature into an entertainment platform and becomes a viable companion for television, convergence devices that combine PC and TV features, and the networked home. As nearly 30 million U.S. households get wired with broadband Internet, more people are getting comfortable using multimedia online, giving TV audiences more choices than ever about how and when they consume programming.

That's poised to open up access to vast new video libraries that will require new search technology to organize and make content relevant to viewers, much like Internet search engines have made sense of billions of disorganized Web pages.

Cable operators, phone companies and satellite companies are also upping the ante for video, bringing interactive, on-demand services to the television through enhanced set-top boxes, personal digital video recorders and convergence PCs.

Search is the glue that will one day bind these services and help consumers navigate the increasing amount of available content, media executives say. Already interactive programming guide makers have moved to make search more advanced, and companies like Comcast are beginning to sign up for those services. Comcast recently inked a partnership with Microsoft's ITV division to use its interactive programming guides.

For Google, Yahoo and even AOL, offering searchable video is an extremely attractive new market because it not only keeps them relevant to consumers hungry for multimedia, but it helps them appeal to brand advertisers, which spend about \$60 billion annually on commercials. Major TV advertisers are comfortable with the effects of commercials, and they're likely to wake up to Internet opportunities once on-demand video is ubiquitous.

Still, navigating the complexities of broadcast will likely be a significant challenge for Google and others in search. Business models for broadcasters online vary widely, and securing broadcasting rights over broadband could be sticky.

For example, if Google and Yahoo want to host and play video from their Web sites they must clear those digital rights with broadcasters. And broadcasters themselves must secure Internet rights with actors, producers and musicians, as well as clear spectrum signal rights with affiliates.

Being careful of existing business models is an issue, too. For example, CBS News offers video for free online, while ABC News offers subscription and paid video services for the likes of AOL and SBC Yahoo. CBS may want to boost traffic in order to sell advertising, but ABC may want to promote its subscription services via video search.

Search technology also must make vast improvements in order to find relevant audio and video. Currently a Web surfer inputs a search query into an engine to receive thousands upon thousands of results, and most people abandon the site if they don't find what they're

looking for in the first 10 listings. But with clips of audio and video, that discernment will only increase, because each clip might be 15 seconds to several minutes.

The Goog tube

Google's project for TV search is ultra-secretive; only a handful of broadcast executives have seen it demonstrated so far. To build the service, the company is recording live TV shows and indexing the related closed-caption text of the programming. It uses the text to identify themes, concepts and relevant keywords for video so they can be triggers for searching.

The software allows people to type in keywords, such as "Jon Stewart," to retrieve video clips of the comedian's TV appearances, marked with a thumbnail picture with some captioning text, for example. Refining the search results for the show "Crossfire" would display a page that looks similar to a film reel, with various still images paired with excerpts of closed captioned text of the now-infamous [fight between Stewart and CNN's "Crossfire" hosts](#). The searcher could click on and watch a specific segment of the show.



Google has approached broadcasters to determine business models so that it does not incite copyright lawsuits from rights holders. Google itself can pair relevant advertisements next to video search results. But a broadcaster may wish to use search to drive sales for DVDs, subscription-content services or to sell advertising that would run before and after the video rolls.

"The business models are too soon to tell, but everyone is interested," a source said. "First, the meetings are about, 'Don't sue us for nicking your closed captioning,' and then it's the commercial possibilities."

Other companies have tried similar services and failed. Los Angeles-based FasTV--whose service lets people search for video clips, trailers and music videos--ran out of money and closed during the dot-com bust, despite strong ties to content providers. It had content-licensing agreements with the likes of MGM, Reuters and the American Film Institute. Virage, too, developed technology for searching video and audio, but some executives say its software was weak.

Google has filed patents related to video search and the display of relevant advertising. For example, in September 2003, Google co-founder Larry Page filed a seemingly broad patent application for a "method to search media." Its system relies on stored data sets, or text "metatags" that represent published content or media, to retrieve and match multimedia to query terms. "Publishers provide authorization to display copyrighted materials through a permission protocol," according to the patent application.

More immediately, Google has been [working with National Public Radio and others](#) to index transcripts of audio already on the Internet so that clips can be searchable from its news search engine.

The 800-pound gorilla

Microsoft is betting on search technology for the Internet, with plans to introduce its own engine next year. But more broadly, it's developing search technology that will be platform agnostic, meaning it will allow people to find text and video from various mediums like broadband, broadcast and set-top boxes. It aims to do so by creating a specialized index for traceable programming labeled with metatags, or keywords.

It also is testing a system for inserting commercials into video that would be contextually relevant to the programming.

A Microsoft representative would not confirm the company's video search plans, but said that its Asia labs are working on projects surrounding annotating video for search purposes. The representative added that the company is not pre-releasing product plans for CES.

"The ways in which we navigate video is underwhelming for people," said Alan Schulman, chief creative officer of Brand New World, an advertising and new media company. "The Web is spoiling us with customization and personalization. We have to offer the same way to navigate video whether it's in broadband or television."

Yahoo's video play

Yahoo also is trying to index Web video available online today and broaden the reach of its search-related advertising program.

The Web portal plans to collect XML feeds of video content from third-party publishers. That way, it can index programming and make it searchable to visitors. Yahoo's database will rely on the title and description of video content to deliver relevant results, as opposed to actual language within the video.

The copyright questions are more clear in this proposition: Internet content companies looking to drive traffic to their video can likely sell more TV-like advertising if it works.

Yahoo spokeswoman Stephanie Iwamasa would not confirm the existence of a Yahoo video search service.

"We have not announced any launch plans for multimedia search and do not have relationships (feeds or otherwise) with video search aggregators," she wrote in an e-mail. "Furthermore, we do not comment on rumor or speculation."

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