

# "Video Search" by Howard Greenfield

Article from EuroMedia Magazine, May, 2005

(for readable text, see page three)



What if you could Google your favourite TV programme and instantly watch any news or entertainment video clip you wanted? Until recently, this might have sounded futuristic. But text, music, and video spread the widele across the Internet, and the race to make all that content searchable is heating up. At stake is the loyalty of audiences who demand quick access to information they want, and advertisers who will pay for that audience's attention.

Web portals are working to differentiate themselves by allowing consumers to seek out and manage their personal video content. After that, who can say - maybe the integration of IPTV and VoIP? Regardless, telecom, broadcast, and ISP providers who deliver services that connect any of the dots between video, Internet, and voice (the sought-after triple-play) are bound to enjoy commercial and competitive rewards.

Video search is not new. In the Nineties, when Internet adoption and digital media were dawning, companies such as Viagra, Broadcast, and TechMam hosted video index and search. Such applications were

designed to improve video production workflow, bring video content to mass home audiences, and put speedy access at the fingertips of producers and advertising agencies. However, in prac-

The ability to trawl the Internet and instantly download video clips may be one small step for search, but one giant leap for convergence, suggests

**Howard Greenfield** examines the strategies of three sector pioneers.



about its strategy. However, the industry signal is that Internet video applications have come of age and there will be more and more integrated services over time.

Experts are starting to acknowledge the power of this function and its place in the convergence of video, Internet, and voice. Among those at the forefront is Yankee Group's Patrick Mahoney who believes the consumer is seeking this functionality regardless of whether it comes from the big Internet players or start-ups. "Search is ubiquitous. Enough so, consumers are demanding more specific functionality. So, you have Google and Yahoo with a phenomenal base of technology developers and thought leadership, and then there are niche companies like iStock that came out with some of the technology first."

**FAST SEARCH.** Mahoney characterises the trend as a benefit for the consumer and a commercial play for the providers. "When we move from a broadcast 'one-size-fits-all' approach to local search, it's better for the consumer and there are more revenue streams for search companies. Google... may not always be in the lead but can always be a fast follower. As

communications to the user to new. "Video search was around five years ago but there was no mass market for it until now. There was not enough broadband, and nobody familiar with the Internet. There is also a logical stepping process in consumer acceptance, adjusting to new technology. The required mass market for product and content is there now."

Mahoney compares the various players' merits. "iStock is smart in getting their placement out there with iStockLink. Other services will take note. The advantage for Yahoo and MSN is their content properties. For Google, their advantage is being better proven technology innovators in the search market. And they



**"Convergence is not about smashing the TV and PC together, it's more about making it 'my media' as opposed to 'mass media'."**  
- Bradley Horowitz, Yahoo

## Go fetch TV, the portals' pitch



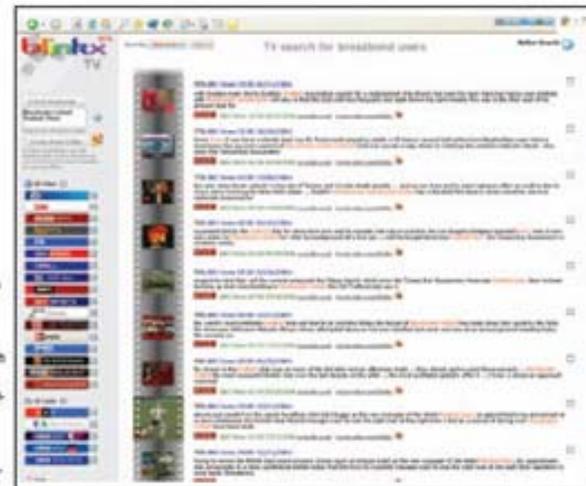
**"What Google did for the web, Google Video aims to do for television."**  
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tive, it was never widely adopted. Until now. What has changed? **TREASURE ISLAND.** The answer is content, technology, and cost. In the past, there were only small islands of users with limited network environments and large, expensive-to-manage digital files. Today, that has all changed, with the arrival of widespread and affordable broadband, digital video tools, storage, and connectivity. Hand in hand has come the increasing use of the Web at home and at work by millions to access news, information, and entertainment. So, along comes the need for consumer video search.

Google Video was announced by co-founder Larry Page who claims it demonstrated how searching television can work today. "Users can search the content of TV programmes for anything, see relevant thumbnails, and discover where and when to watch matching television programmes. We are working with content owners to improve this service by providing additional enhancements such as playback." He even went so far as to say, "What Google did for the web, Google Video aims to do for television." Beyond those remarks has come little from Google

for as Google plan, they tend to keep most things close to the vest and as very tight-lipped."

He admits that video search is not entirely new from a technology standpoint, but contends instead that the packaging and external



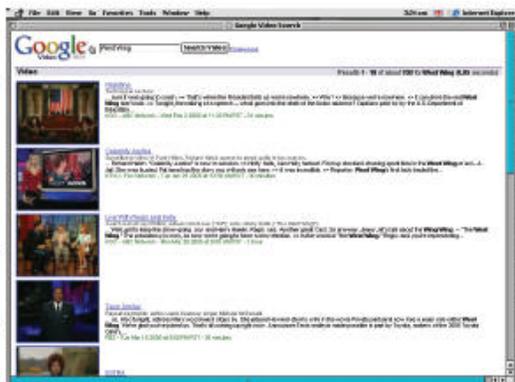
will get more consumers to use their services, and then it's harder for followers to attain these customers."

**CONTENT KING.** Bradley Horowitz's credentials as Yahoo's director of media search (Music, Image, Desktop) trace from his experience as Autonomy's CTO and prior to that as founder of video cataloging innovator Vraga. "What Google did with their TV search," says Horowitz "is what we did in 1999 at Vraga. Nothing

new there, it's not a technology problem, that's why I'm at Yahoo, a company interested in content owners."

According to Horowitz, several factors distinguish Yahoo's content positioning. "You have to look at all the parts of Yahoo we bring to bear on this problem. So, there's everything from a group focused on mobile, to a group focused on the living room or set-top experience to very strong search expertise, to broadband relationships we have with folks like SBC, and the music products with Yahoo Music Group."

"So you see many touch points from distribution to content and technology - a very broad reach to literally hundreds of millions of users. That's unique when you look across these three companies and you look beyond the kind of products that are on the market today. You need to think about which of those companies are going to be well positioned to solve more than just the technology problem but the relationship issues that are raised as well. It's not about a magic algorithm. It's the aggregation of all of these relationships, talent, product, properties that really



Google Video beta enables searches across closed captioning content of a growing number of TV programmes.

speaks to Yahoo's opportunity in this space. I think that convergence is not about smashing the TV and PC together. It's more about making it 'my media' as opposed to 'mass media'."

**HEADS OR TAILS.** Expanding on Yahoo's content philosophy, Horowitz suggests that both Google and Blixx technologies are valid. "It's less about the technology for us. What I'd also say is that both those

other companies are focused on 'head' content, by which I mean the 'blockbuster stuff'. That is, content that reaches carriage on 500 cable or satellite channels - stuff that is mass media. We are also focusing on 'tail' content such as Media RSS (Really Simple Syndication), an extension of the RSS format for media tagging. This is a means of creating a market for individuals and small organisations to reach large audiences through the power of search."

Horowitz notes that Yahoo is creating mechanisms by which small and independent publishers can participate in this ecosystem through submission via the RSS, "something we've embraced across Yahoo", he claims. "Many of the early pioneers in RSS are at Yahoo now. So, if you go to our home page, instead of just putting the London or New York Times or weather.com, you can also add thousands of other third party modules from any site that supports RSS - micro sites to the big [broadcast] guys can all get equal billing on your page. In Horowitz's opinion, "that's really the democratisation of media - taking into consideration creating tools that work for the major 'Viacoms' of the world, and so on, but also enabling independent publications to have a means of creating an audience as well."

"Our content distribution agreement with Movielink will allow users to search, watch trailers and download movies of their choice."

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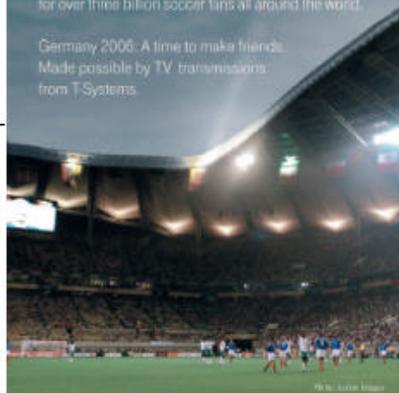
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**USABLE CONTENT.** blinkx has involved in video navigation, according to co-founder Suranga Chandratillake. "Previously it was fairly easy to tag and describe things, but the more content there is the harder it gets - with broadcast studios, blogging, personalised pod-casting - there needs to be an enable-like keyword search to make it all available on the web. That's what blinkx is doing. The manual process doesn't scale, so we're the only player with an automated approach - making content usable through audio transcription licensed from Autonomy with a contextualisation engine built on top. The power is in capturing content: it's speaker-independent, large vocabulary based, and continuous (better than real-time)."

He explains the challenge of making content usable. "We've mastered the problem by applying context - it's in two passes: one converts the stream into phonemes (vowel noises) then the second converts that into words. The problem is converting phonemes to text because there is normally so much body language, lip reading, and context hints (from the person, the history) that allow us to better guess what someone said."

According to Chandratillake, when someone talks, the brain catches up with a 'secondary process'. "As an example, take the term 'second nice beach'... it's context that can distinguish those two completely different meanings."

**ENGINE POWER.** He suggests that while Google and Yahoo have built their businesses around Boolean and keyword search, blinkx has built its engine around contextual search and implicit query. "In the area of TV and video search, where others rely on metadata or at best closed captioning to search, blinkx has developed a superior technology that uses sophisticated transcription and voice recognition technologies to deliver precise results," he claims.

This function fundamentally changes the nature of accessing and experiencing video, suggests Chandratillake. "You no longer have to select a channel and then be slave to that channel's programming decisions. Instead, much like the web, you can express what you want and dip into the content that is relevant to you. Also, for the provider, you suddenly know why (or from what angle or take) your user is viewing the content from."

This, in turn, raises many questions about the existing business models that are used with television content and whether they can be changed to be more effective - both for the advertiser and the consumer. On the commercial front, Chandratillake says, "our content distribution agreement with Movielink will allow users to search, watch trailers and download movies of their choice."

**BRIDGEHEAD REVISITED.** Search is a bridge between video and the Internet that will generate new commercial content services. As broadcast programming is increasingly broadcast through telecom and ISP channels, it will be delivered in ways previously unimagined. Yahoo Group's Mahoney thinks these developments foster many possibilities. For instance, he says, "a 100 type service from Yahoo! would marry well with the triple play, especially given their arrangement with SBC." Among the host of new features for Internet users will be personal video management enabling broadband subscribers to rapidly find a trailer, music video, sports clip, or home-shot family video. There are many more trials, errors, beta attempts and killer applications to come. But we're bound to see growing traction for video search functions in the months ahead and for them to become a key feature of the convergence proposition.

# Go Fetch TV: the Portals' Pitch

By Howard Greenfield

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-- Larry Page, Google co-founder and president of Products.

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Web portals are working to differentiate themselves by allowing consumers to manage their personal video content. After that, who can say--maybe the integration of IPTV and VOIP? Regardless, Telecom, Broadcast, and ISP providers that deliver services that connect any of the dots between video, Internet, and voice (AKA triple-play) are bound to enjoy commercial and competitive rewards.

Video search is not new. In the Nineties, when Internet adoption and digital media were dawning, companies such as Virage, Excalibur, and TechMath touted video index and search. Such applications were designed to improve video production work-flow, bring video content to mass home audiences, and put speedy access at the fingertips of production groups, advertising agencies, marketers. However, in practice, it was never widely adopted. Until now. What has changed?

The answer is content, technology, and cost. In the past, there were only small islands of users with limited network environments and large, expensive-to-manage digital files. Today, that has all changed with the arrival of wide-spread affordable broadband, digital video tools, storage, and connectivity. Along with an increasing use of the Web at home and at work by millions to access news, information, and entertainment comes the need for video search.

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### **Industry Analysis**

Experts are starting to acknowledge the power of this function and its place in the convergence of video, Internet, and voice. Among those at the forefront are Yankee Group's Patrick Mahoney who believes the consumer is seeking this functionality regardless of whether it comes from the big Internet players or start-ups. "Search is ubiquitous. Enough so, that consumers are demanding more specific functionality. So, you have Google and Yahoo with a phenomenal base of technology developers and thought leadership; and then there are niche companies like Blix that came out with some of the technology first."



Mahoney characterizes the trend as a benefit for the consumer and a commercial play for the providers: "When we move from a broadcast 'one-size-fits-all' approach to local search, it's better for the consumer and there are more revenue streams for search companies. Google . . . may not always be in the lead but can always be a fast follower. As far as Google's plan, they tend to keep most things close to the vest and are very tight lipped. "

Mahoney admits video search is not entirely new from a technology stand point "but the packaging and external communications to the user is new. Video search was around five years ago but there was no mass market to utilize it until now. There was not enough broadband, and nobody familiar with the Internet. There is also a logical stepping process in consumer acceptance, adjusting to new technology. The required mass market for product and content is there now. "

Mahoney compares the various players' merits: "Blinkx is smart in getting their placement out there with MovieLink. Other services will take note. The advantage for Yahoo and MSN is their content properties. For Google, their advantage is being better proven technology innovators in the search market. And they will get more consumers to use their service, and then it's harder for followers to attain those customers."

### **Content King**

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Several factors distinguish Yahoo's content positioning he goes on to say: "You have to look at all the parts of Yahoo we bring to bear on this problem. So, there's everything from a group focused on mobile, to a group focused on the living room or set-top experience to very strong search expertise, to broadband relationships we have with folks like SBC, and the music products with Yahoo Music Group."

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Horowitz goes on to explain Yahoo’s content philosophy: “Regarding Google and Blinkx, I think both those technologies are valid . . . It’s less about the technology for us . . . What I’d also say is that both those other companies are focused on ‘head’ content by which I mean the ‘blockbuster stuff’. That is, content that receives carriage on 500 cable or satellite channels—stuff that is mass media. We are also focusing on ‘tail’ content such as Media RSS (Really Simple Syndication), an extension of the RSS format for media tagging. This is a means of creating a market for individuals and small organizations to reach large audiences through the power of search.”

“So, we’re creating mechanisms by which small and independent publishers can participate in this ecosystem through *submission* through the RSS--something we’ve embraced across Yahoo. Many of early pioneers in RSS are at Yahoo now. So, if you go to our home page, instead of just putting the London or New York Times or weather.com, you can also add thousands of other 3<sup>rd</sup> party modules from any site that supports RSS—micro sites to the big [broadcast] guys can all get equal billing on your page. That’s really the democratization of media – taking into consideration creating tools that work for the major Viacom’s of the world, and so on, but also enabling independent publications to have a means of creating an audience as well.”

### **Blinkx has seen it**

Blinkx has innovated video navigation explains co-founder Suranga Chandratillake: “Previously, it was fairly easy to tag and describe things, but the more content there is now the harder it gets—with broadcast studios, blogging, personalized pod-casting—there needs to be an enabler like key word search to make it all available on the web. That’s what blinkx is doing. The manual process doesn’t scale; so, we’re the only player with an automated approach – making content useable through audio transcription licensed from Autonomy with a contextualization engine built on top. The power is in capturing content: it’s speaker-independent, large vocabulary based, and continuous (faster than real-time).”

He explains the challenge of making content useable: “We’ve mastered the problem by applying *context*—it’s in two passes: one converts the stream into phonemes (vowel noises) then the second converts that into words. The problem is converting phonemes to text because there is normally so much body language, lip reading, and context hints (from the person, the history) that allow us to better guess what someone said. When someone talks, the brain catches up with a ‘secondary process’. As an example, take the term *recognized speech*: If oil tankers *recognized speech* -- or if oil tankers *wreck a nice beach*” -- it’s context that can distinguish those two completely different meanings.

“Further, where Google and Yahoo have built their businesses around Boolean, keyword search, Blinkx has built its engine around contextual search and implicit query. In the area of TV and video search, where others rely on metadata or at best closed captioning to search, blinkx has developed a superior technology that uses . . . sophisticated transcription and voice recognition technologies to deliver precise results.”

As Suranga says, this function fundamentally changes the nature of accessing and experiencing video. “You no longer have to select a channel and then be slave to that channel’s programming decisions. Instead, much like the web, you can express what you want and dip into the content that is relevant to you. Also, for the provider, you suddenly know why (or from what angle or take) your user is viewing your content from . . . This,

in turn, raises many questions about the existing business models that are used with television content and whether they can be changed to be more effective -- both for the advertiser and the consumer."

### **Completing the search**

Search is a bridge between video and the Internet that will generate new commercial content services. As broadcast programming is increasingly brokered through Telecom and ISP channels it will be delivered in ways previously unimagined. Yankee Group's Mahoney thinks these developments foretell many possibilities. For instance, he says, "a VoD type service from Yahoo! would marry well with the triple play, especially give their arrangement with SBC."

Among this host of new features for Internet users will be personal video management enabling broadband subscribers to rapidly, efficiently find a trailer, music video, sports clip, or home-shot family video. Another reference point is Microsoft and Alcatel's recent software, telecom IPTV alliance. They say "the deal is definitely also about the triple- and even about the quadruple-play . . . it's always been part of our vision . . .to integrate those services across the television set, the PC, the mobile phone and the landline phone."

There are many more trials, errors, beta attempts and killer applications to come. But we're bound to see growing traction with video search features in the months ahead. So, even though it hasn't put a man on the moon yet, I think it's safe to wax poetic about the future and call it one small step for search, one great leap for convergence.

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### **About Howard Greenfield**



Howard brings over 20 years of writing, technology, and business expertise to various publication audiences. Howard has held senior executive positions with world leaders such as Sun Microsystems, Informix Software, Apple Computer, British Telecom (BT), Europe Online, and others. Howard has a passion for the influence of technology on culture and global business practices.

At Sun Microsystems, Howard created the company's first Media Lab and led co-development of projects between Sun Labs, Xerox PARC, and Stanford University. He also worked in Apple Computer's Advanced Technology Group on e-Learning.

Howard is a frequent contributor to leading industry publications, and serves on the board of Cal-IT, and BlueVoice.org, an Internet media non-profit dedicated to protecting ocean life & habitats. Howard received his Masters Degree from Stanford University and his Bachelors Degree from the University of California. To contact Howard, email him at [howard@go-associates.com](mailto:howard@go-associates.com). For more details, go to [www.go-associates.com](http://www.go-associates.com).