

# LIFE WITHOUT CABLE



## ONE MAN'S VIEW OF AN UNTETHERED FUTURE

ISTOCKPHOTO.COM

by PAUL STRASSMANN

IN OCTOBER 2005, *MULTI-channel News* asked: "Is Google Cable's Next Nightmare?" My answer was an emphatic "No."

"The Internet Search Giant Isn't About to Set Up the Largest Video-Over-Fiber Network in the World. Not Yet Anyway," was the headline on my response.

This assessment holds up today, except that the arrival of Web TV, not to be confused with Microsoft's *www.webtv.com*, is now getting closer. And it just may not be Google who delivers such capability: It may be NBC Universal and News Corp., with Hulu, or somebody yet to emerge.

What seems safest to say is we are now only five to 10 years away from being able to view cable programs as effectively — or in some ways, more so — than on our current TV sets.

Right now, you can watch what Apple, Joost and a few others are offering. It gives a clue what the future looks like. Even though its Apple TV box has not been a hit on the order of the iPod, Apple can do now what cable cannot, even with a digital video recorder or one of its successor devices attached. It can display a richness of available video that the limited scope of TV cannot achieve.

Even in its infancy, Apple offers a rich menu for locating video sources. And on May 1, it announced it

will add movies from 20th Century Fox, Paramount Pictures, Lionsgate and other major studios.

The fact is that video viewing is in the process of becoming bifurcated. On one hand, you have those who are used to pushing buttons on remote-control key sets to choose what to see. They choose from a menu of prescheduled, preprogrammed and predigested shows that are then delivered mostly at set times. That makes the process of choosing relatively simple and straightforward, but the choices are necessarily limited.

On the other hand, you have those who are using a mouse or mouse-like devices to pick what to view. They can search, find and then access an infinite number of videos that are neither prescheduled nor preprogrammed.

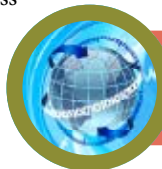
With a mouse, you can find videos that are in historical archives. On cable you cannot. With a mouse, your choices have no limits.

Of course, a computer has the capacity to display prescheduled personal preferences for easy use, by offering menus from a TiVo look-alike screen. That would serve the audiences who wish to have quick and simple access to scheduled programs. You use a mouse to click on your choices. You do not need remote-control buttons to do that.

After one has viewed scheduled events, the mouse can then take the

computer into an infinite collection of video in various forms. It allows plunging into a Google-like global database for exploring and then locating what could be of interest. That can't be done with cable, because of the inherent limitations of the buttons as a search and exploration device.

It is only a matter of time what's accessible by mouse will take a significant share of viewing over what



### TV & BEYOND: COMMENTARY

today is accessible on cable or a satellite dish.

The future of cable will be driven by the viewers' quest for locating a variety of media and for giving them the ability to make choices about what to see. Cable providers and satellites, communicating serially on a channel with limited capacity, are too constrained to accomplish that. And there is no way a cable headend can match locally what an enormous, centrally managed database can offer. Only computers, connected via the Internet to exabytes of organized video files, can tap into the universal libraries of all of the video that has ever become available.

Sure, there's switched digital video, where a cable operator stores programming in a big database at

a central point. But even switched digital video ends up delivering a bit stream to a TV set — a TV set with inconvenient navigation.

The operator also can feed programming to a computer instead of a TV. However, the offerings are likely to be limited and do not offer the breadth of what ultimately will be delivered over the Internet — and, in many ways, already is.

Cable operators may well find ways to harness the full offering of the Internet, and pass the results straight through to a TV set or set-top box.

A cable leader such as Comcast is one of the operators that may actually be on the brink of fomenting the switch to the Internet. What's holding back video services on the Net now? Bandwidth. Few viewers can stream full-size video at realistic speeds. "High-speed" service is often at 5 Megabits per second. But when the 100 Mbps service that Comcast calls "wideband" starts to roll out, the picture — literally — changes.

The world of the remote-control keypad is constrained. Cable providers operate in local markets. Cable firms must operate a very expensive transmission system to reach their customers, whether it is by cable or by satellite. You must construct ground stations and pay for satellite transponders. The customer must invest in one or more television sets, and rent add-on control devices.

Using cable can be complicated. Cablevision Systems provides 37 control buttons plus a twelve-button keyboard for a digital video recorder. To see a TV show in a cable-provided or computer-generated form, one must manage the video display and switch into the computer mode, which requires 38 control buttons, plus another twelve-button keyboard.

To look at DVDs, one needs a DVD player, which has 32 control buttons and a twelve-button keyboard. All told, it takes instructions to use correctly 107 control buttons and inconsistent keyboards to operate cable in this manner. There are three separate instruction manuals accompanying each remote control device, with 67 pages of instructions.

Directions on how to open and then view a single telecast was a page listing eight paragraphs of typed instructions.

What do we get for all this complexity? For \$121.99 plus tax per month, exclusive of Internet access, Cablevision delivers programming on 250-plus channels, each with a fixed schedule. Using a limited search capability, one can identify programs scheduled one month ahead, each labeled with only a short description. There is no way to search backwards to find prior shows. TiVo and DVRs do offer look-ahead search capabilities, but these are not easy to use and require

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**FUTURE**, from page 101

considerable effort to locate a show.

In addition, cable offers a limited selection of movies on-demand, generally costing \$4.95 plus tax apiece. To subscribe to scheduled sports events requires an elaborate sign-on process so that one can add another \$5.95 plus tax to the monthly bill.

I estimate the monthly total of Cablevision programming at about 200,000 hours. With an average viewing habit of leaving the TV on for three to four hours per day, this suggests that only 0.06% of what is provided is actually selected by customers from a fixed menu of programming choices. Most of the content cable spends money to provide is wasted.

For the time being, cable works well because people have set viewing habits. With the exception of occasional TiVo and DVR customers, their viewing offers instant access only. Cable, so far, excludes customers from all Internet-accessible video. Even now that likely exceeds billions of hours of recorded information.

**THE EXPANDING MOUSE**

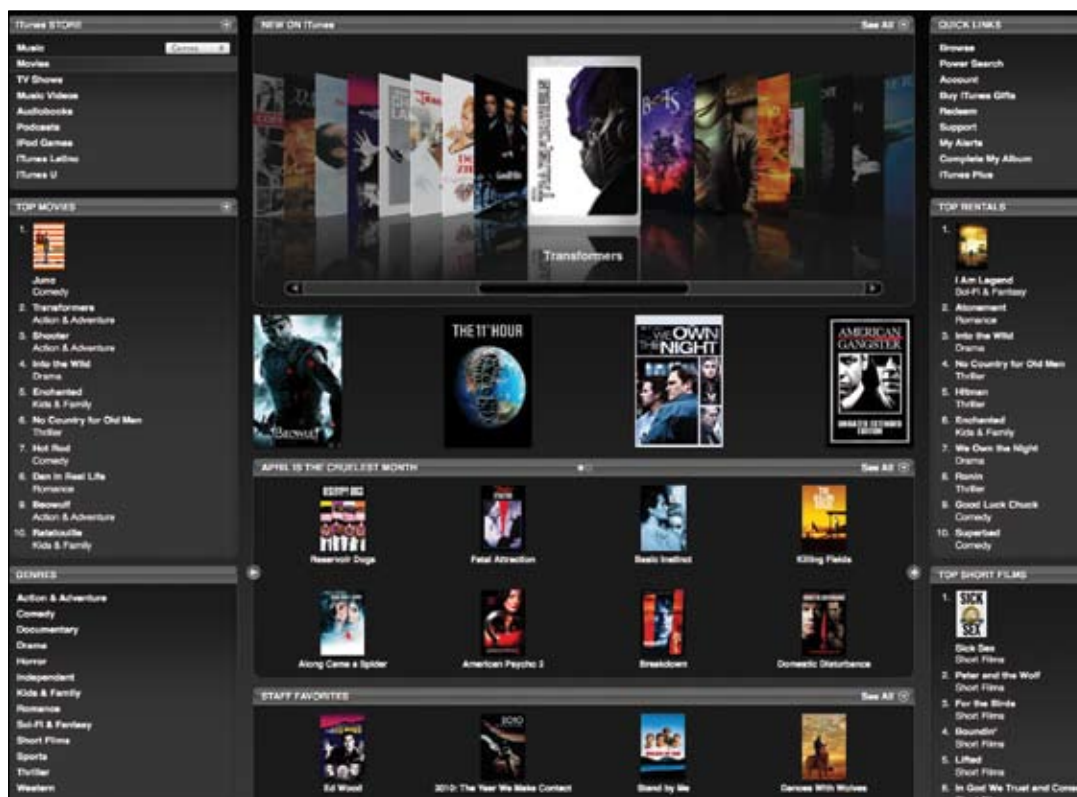
The world of the mouse is global, unlimited and expanding exponentially. It is unconstrained by content, language or format. The transmission system as well as the entire infrastructure for the Internet has been already paid for.

Ultimately, that transmission system reaches everywhere, including via wireless connectivity, which is important for undeveloped countries. Since every computer is enabled with Internet access, a customer can have the same viewing experience whether traveling on an airplane or sitting at home.

Whether a video display is a 56-inch LCD or an iPhone handset does not matter. Every display screen is potentially a computer and can become an Internet-connected device.

For instance, when you connect a \$256 Apple TV device or a \$599 Apple Mini to your LCD (by means of a HDMI plug), it becomes a fully featured desktop computer for viewing TV channels or for examining any of the millions of video sources now readily available. In the future, Apple TV and Apple Mini add-ons can be easily included in the circuitry of every computing device for a small expense.

A software-defined TV screen that could be controlled by device-independent software, such as Google's Android, will manage whatever viewers can pick up from a wall-mounted display, from their



Apple TV offers a rich menu of video choices to its users.

cell phones or from any computing device in between.

This is not a plug for Apple. But, with the Apple TV, an iPod-style clicker the size of a piece of chewing gum gets you to a crisp menu that displays diverse choices of movies, TV shows, YouTube clips, music, podcasts and photos.

There is a rich set of details that supports each of these choices. For instance, "Movies" offers 14 genres, such as comedy and drama. You can also have your pick of 10 "Top Movies," "Top Rentals," "Top Short Films" and "Top Documentaries."

One can browse visually through stacks of "thumbnail" pictures depicting each title. If you click on an item you will get a detailed plot summary, actor and production credits and customer reviews, as well as access to a well-done trailer. Movies can be rented or seen by episode for \$1.99 or sometimes at no cost. Entire seasons of some TV series can be bought for \$3.98. All of the transactions are instant and simple, as long as you have an account with the iTunes store that accepts all credit cards as well as PayPal.

For instance, one can purchase for \$3.98 a 29-day permission to view *No Country for Old Men* on iTunes, which otherwise would cost \$5.69 in a local video rental store

plus the inconvenience of a car trip, or \$4.95 for 24-hour viewing privileges on Cablevision.

There are many options available in the "TV Shows" section, which are accessible through the iTunes Store. In addition to a browser that can locate shows through keywords or names of actors, you can also find top-rated TV episodes, reviews of past TV seasons and shows that are categorized according to their production studios (such as 20th Century Fox, MGM or Warner Bros.). TV shows can be also identified according to originating networks, such as A&E Network, ABC, CBS, Fox or Disney. The simplicity and the ease of access to various media sources are truly amazing. Whenever a show is retrieved, there is also a wealth of supplementary information available such as references to the habits of prior viewers or popularity rankings.

Apple TV can also access music videos, as well as something that is quite unusual, namely iTunes University, which features free videos from Duke, Massachusetts Institute of Technology, Carnegie Mellon, Stanford and 50 other educational institutions.

How long does it take to get to the program you want? Four clicks in the worst case.

By contrast, Comcast, Cablevision and Time Warner Cable deliver choices through menus that are chronologically arranged and have extremely limited search capability, to date, if any. There is not the flexibility and variety that is available on a computer menu.

**LIFE WITHOUT CABLE**

There is no question that the TV device, lashed to a cable company by wire or satellite, is not sustainable in the long run, except where people will retain simple TV-viewing habits. It is only a matter of time when the more flexible, adaptable and much cheaper computer-based video will take over.

That will happen when someone, like Hulu ([www.hulu.com](http://www.hulu.com)) will duplicate what Google has already done. By scouring the Internet, Hulu has already the capability of presenting the results of its discoveries in a variety of forms.

All it would take now is for a well-funded venture — such as Hulu, which already has \$100 million of venture capital — to proceed with the accumulation of tens of thousands of available videos that are accessible to everyone on the Internet. The chances are that the efficiency of online micropayments would make such a venture attrac-

tive, as well as satisfy digital rights management needs.

Note that Hulu's research and development work is done in China. The likely scenario is that Web TV will be launched, on a massive scale, in the rapidly advancing Pacific region. Web TV offers a shortcut to the distribution of videos without incurring the costs of laying into place a costly cable infrastructure.

Wireless Internet is most likely to be the means by which the market penetration of life without cable will take place. Already, wireless connectivity in a limited area, like a house, can match the speed of hard-wired connections to the Internet; and can be far cheaper.

By 2012, almost 50% of the world's Internet population will live in the Asia-Pacific region, which makes it unlikely that they will wish to expend the capital for laying coaxial cable or optical fiber to reach a highly concentrated population.

**LIFE WITH CABLE**

The technical feasibility of life without cable is more a matter of timing and of a business model than of capability. Life without cable is already present to a significant extent today (see related story, page 103). What will hold up the evolution in this direction will be the habits of a large number of people who are accustomed to remote key sets and who will continue preferring a few buttons rather than the variety offered by a mouse-controlled screen.

Consumers are right now investing in digital TV and buying expensive LCD and Plasma screens. It is unlikely that they would be inclined to immediately dump their large displays in favor of smaller computer screens. Internet-based TV is most likely going to be adopted by customers who will bypass the costly upgrading of their TV sets. Of course, at Amazon, an Internet-connected HP SL4278N 42-inch 1080p MediaSmart LCD HDTV at the start of May 2008 is only \$1,199.99, with free shipping.

The likely change from TV to computers will be initially slow in the United States. The U.S. cable industry can breathe with relief that cable's worst nightmare has now been deferred for another few years.

But it has not gone away. ■

**"It is only a matter of time what's accessible by mouse will take a significant share of viewing over what today is accessible on cable or a satellite dish."**

*Paul Strassmann is a former general manager of information services for Xerox Corp.; former director of defense information for the U.S. Department of Defense; and is currently an information technology consultant based in New Canaan, Conn.*



# TV WITHOUT CABLE

**I AM GETTING CLOSER TO STOPPING MY** payments of \$99.15 per month to Cablevision Systems. Why should I be pay for 233 cable channels when I view only nine?

I want to see only what I like, when I need it. Right now, I cannot easily pick and choose what to view. I am pleased to pay \$44.95 per month for a 3-plus Megabits-per-second connection to the Internet to get whatever I want, but paying for content I do not use makes no sense.

The options now available for getting TV programming directly to my 46-inch HD Sharp LCD or to the screen of my 30-inch Macintosh are becoming more numerous. Life without cable is enjoyable, not merely endurable.

My nightly TV routine begins with BBC News (<http://news.bbc.co.uk>). Instead of viewing 60-second edited excerpts, I can select topics of interest, which the BBC features in sufficient depth so that one can gather an understanding of the issues involved. the BBC also displays news items from prior days where current developments would now make past reports relevant. Such a capability to examine past events does not exist on cable.

Next I turn to ABC's *World News With Charles Gibson*. It covers stories in much greater detail than what is offered on the nightly TV broadcast and reports on events as they happen rather than on a programmed schedule. A clever menu consisting of visual representations of prior broadcasts lists topics available for viewing which the half-hour news program would not have the capacity to accommodate.

For more dramatic domestic developments, I turn to Fox News Channel at 7 p.m. Unfortunately, during a one-hour broadcast, I have to listen to topics and long commercials that are of little interest because Fox News is unpredictable as to what it will offer. On the Web, I can pick and choose only the topics that I want to hear.

After getting filled up with one to two hours of often unsavory or unwanted news, my wife and I turn to travelogues or nature reports. Our favorite is PBS, with its enormous selection of interesting videos.

To get this video takes quite a bit of scrolling through the computer. The PBS site is not set up for easy online viewing, though the video content is available and accessible.

If the PBS offering does not suit us we can always switch to National

Geographic Channel, which offers a rich collection of "Latest News," "Animal Stories," "Environmental Stories" and "History News," as well as "Space and Tech News," from which to select 10- to 60- minute stories.

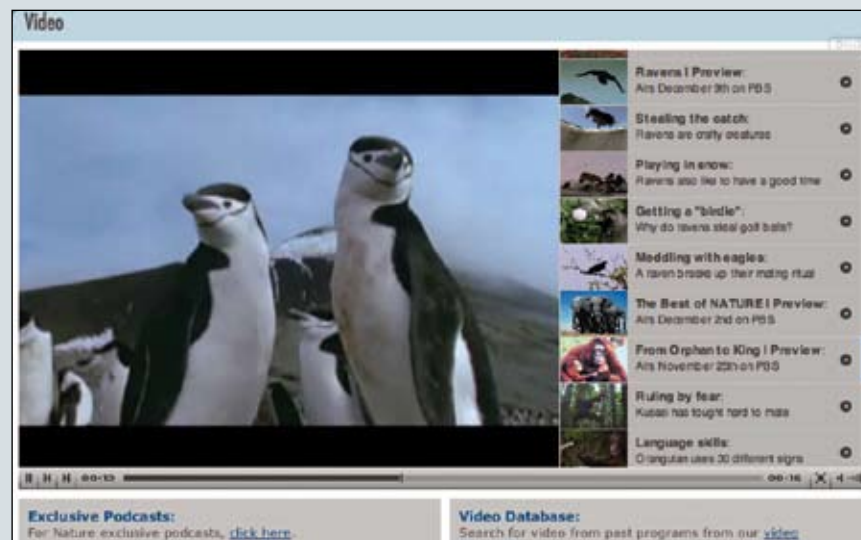
There are many other sites that offer downloadable videos that we occasionally find of interest after discovering such material using Google Search. However, my favorite is NASA (<http://www.nasa.gov/multimedia/videogallery/index.html>), which offers videos from an extensive library. They also make available videos through NASA Media and Education Channels, which are not available on Cablevision.

After we are satisfied with news and science (and if time is still available), we can click to Google Video (<http://video.google.com>), which contains

hundreds of thousands of shows submitted by individuals. To pick our way through such a large collection Google offers a wide range of search options, such as videos by country of origin, most of the shared videos as well as a rich list of "Google Search" terms where key words, language and duration of the video can be specified. Results can be also classified according to various definitions of relevance.



Strassmann lectures on Google



PBS



ABC News



National Geographic

My own University hour-long lectures (at George Mason University) can also be found on Google Video by looking up my name.

Google Video offers a varied set of statistical information that could be useful in judging the worth of a talk, such as viewing frequency and the number of downloads of a video for personal use. Such insights about a presentation are not available on cable.

One of the most entertaining sources of video material on the Internet is the Onion News Network (<http://www.theonion.com/content/onn/history>). It is fun to watch, because one can never tell what it will present. My wife and I switch to Onion when we get tired of too many earth-shaking discussions.

Then there's Joost, which is a system for distributing TV shows over the Web using peer-to-peer TV technology. It offers a large variety of video sources, including a large collection from Europe; and even top-flight entertainment from CBS, such as clips from its popular series *CSI: Crime Scene Investigation*.

There are many other offerings like Joost. A problem is finding them because each of these services is accessible through separate addresses. Someday, somebody will provide a Google-like composite view of the video space. Meanwhile, my viewing habits are moving away from the limited stock and schedule of TV to the unlimited capacity and choice of the Internet.

— Paul Strassmann