Judging TV Content:

Cume Counts More Than Ratings

Operators of fiber networks will soon know more about their viewers than Nielsen

By Steven S. Ross Editor-in-Chief

Property owners, cable operators and developers must move beyond today’s most commonly used metrics – rating and share – to maximize profits and minimize trouble from residents and local regulators. They also have to think about the future benefits technology can bring.

What kinds of video content will be most marketable to consumers over the next few years? For sports and entertainment, the road is fairly well marked. We know that the audience will continue to fragment into smaller and smaller niches. We know that there will be an expansion of interactive and multi-player gaming environments, and of HDTV. But we also know that most of what viewers will be watching three, five, even 10 years from now has already been produced. Over 80 percent of today’s programming is recycled from previous showings. That figure is coming down, but slowly.

For news and information, however, the picture becomes more speculative. The technology exists for us to deliver far more news and information, in far more varied ways, than we are actually using. Today’s lessons from the news and information end of the business can help developers and cable operators get a grasp on what is likely to happen in the video business in the near future.

There’s great opportunity in all of this. More Americans are absorbing more news than ever before. But the broadcast TV networks, long the dominant distributors of news and information, have seen sharp audience declines over the past 15 years. Some, but not all, of that audience has gone to the 24-hour cable news networks (Figure 1). Since 1997, for instance, the evening prime-time news audience for the broadcasters fell from about 35 million viewers to 29 million. Although cable prime-time news audiences more than tripled over that period, they made up only 2 million of the 6 million viewers lost by the broadcasters. Their growth has been due more to an increase in available cable subscribers than to any national mood shift in their direction. The Internet is one reason for the drop. Academics looking at the situation suggest that a “convergence” of print, TV, radio, and the Internet is inevitable. But the convergence has lagged the possibilities technology has brought.

This is a national phenomenon across all traditional media. Daily newspaper circulation has also been in decline and the number of dailies has decreased. But weekly newspaper circulation has increased. All weeklies are almost by definition “niche” publications. Print advertising revenue has remained strong, but only because ad rates have increased. Ad lineage in daily newspapers has fallen. Ad revenue has increased overall in broadcast, but is spread among far
more channels; the number of outlets grows monthly.

In this article, we’ll be focusing on TV in general and TV news in particular. Data on news shows is easy to get, and the competition between Fox and CNN has highlighted how viewer statistics are gathered. Also, cable companies feel they must carry Fox and CNN, even if the cable operators feel the fees (about 50 cents per cable subscriber per month) are excessive.

What’s at Stake

The issue has always been critical for property owners trying to maximize revenue and resident satisfaction from access fees they charge cable operators. Now developers have to worry as well, as CLECs and ILECs position themselves to offer fiber to new residents in greenfield developments. The normal greenfield deal, where residents must pay for fiber access whether they use it or not, will be called into question by regulators – at least state consumer protection regulators – if the residents are not drawn to the programming being offered.

It is not immediately obvious, but fiber operators can determine exactly what their subscribers are watching, in real time….This has the potential to replace all other program rating services in the years ahead.

Over the years, the number of Nielsen households with meters has steadily increased, and will be about 10,000 by next year. That’s enough so that when the national sample is split into ethnic, local and regional markets, there will still be enough people in a sample to get reasonably reliable data over time. For instance, the current expansion raises the number of African Americans in the national sample from about 670 to about 1,200. In New York City, the number of African American households rose last fall from 87 (using an older, less sophisticated “Set Meter”) to 150 with People Meters.

Ratings Vs. Cumulative Audience

Statisticians outside the system have always wondered how TV time, especially for local advertising, could be sold to advertisers based in part on error-prone methods such as diaries, small samples, and on measuring atypical stunt-filled sweeps weeks. But trying for more accuracy simply would have cost more than the changes in local ad rates justified.

As People Meters have replaced diaries, the whole ratings system has been upset. Nielsen reports that African American and Hispanic viewership tends to be higher for ethnic shows than had been estimated in the past.
and that substantial numbers of white non-Hispanic viewers are watching “ethnic” shows. The losers have been the staple mass-market shows.

The argument would have stayed confined to the closed world of advertising buyers, except that Rupert Murdoch (Fox Network) saw his overall programming interests hurt by the new numbers. So he sued to stop the new system and tried to build political support for his point of view. So far, he has met with limited success.

Rating and share are the key variables for advertisers. They measure how many people are actually watching when a given ad appears. There is a far more important number for cable operators, property owners and developers, however. It’s called the “cume” and it measures how many subscribers actually watch a given channel on a given day, week, or month – the cumulative number.

Oddly enough, Fox is 30 percent or more ahead of CNN when it comes to ratings, but is behind by about 15 percent when it comes to cume (Figures 2 and 3). CNN ends up with more viewers but lower ratings because each viewer spends less time watching CNN than Fox. And the cume numbers as reported probably understate the real gap, because CNN is far more common on TVs in airports and other public places. Fox dismisses the gap as due to people channel-surfing. But viewers are not counted in the cume unless they stay for at least six minutes.

In the years ahead, fiber operators will be able to calculate their own cume and ratings. But right now, ratings are reported publicly by Nielsen and cume is not. Cume is only reported to programmers such as CNN, who pay for the Nielsen service. This year, it is to CNN’s advantage to let the cume be known, so CNN released the figures. Other programmers are doing the same thing. The three C-Span channels, for instance, are watched by

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28 million viewers each week – close, on average, to the 40 million who watch the three big cable news channels combined.

The hallmark of C-Span programming is that it is long-form. If so many people are so impatient about news that they can only take it in small sound bites, why is C-Span so popular? Also, C-Span has had a more consistent audience than cable news, which bounces up and down with world events. MSNBC came close to the leaders in the summer of 2004, for instance, because of the Olympics. The active large-scale fighting of the Iraqi war led to the largest cable audiences ever, in the spring of 2003. The previous peak, as you might imagine, was on September 11, 2001.

This leads to a key problem for developers and property owners who hope to maintain and grow their revenue from cable and fiber: Programming decisions such as the content of news shows are based on the ratings and not on the cume. The fine-grained decisions developers and system operators might like to make could be based on such factors as local preferences, age of residents, or residents’ ethnicity. Figure 4 shows a split by age, in a 2000 Nielsen survey. It shows that older residents are far more likely to watch TV than younger residents, and that Hispanics are more likely to watch than non-Hispanics. Figure 5, based on a poll done in California in 2004, suggests that Hispanics are more likely to want to watch a show in Spanish. A much smaller (although still substantial) proportion of Asian and Middle Eastern viewers now living in the United States also would like programming in their native tongues.

**About the Author**

Steve Ross has been surveying journalists’ use of the Internet and other new technologies for the past 11 years. The studies were originally funded by Middleberg & Associates and are now supported by Euro Magnet RSCG. His last major look at broadcasting was on exit polling for the Fall 2004 Journal of the National Academy of Television Arts and Sciences; it can be found online at [http://www.tvquarterly.com/tvq_35_1/media/pdf%20articles/TVQ%20Volume%2035-1%20online.pdf](http://www.tvquarterly.com/tvq_35_1/media/pdf%20articles/TVQ%20Volume%2035-1%20online.pdf).
Ten years ago this month, in the weeks after the Oklahoma City federal office building bombing, I put together a scenario — a prediction of how journalists would cover such an event “a decade from now,” given all the new technology likely to be available. The decade is up.

My prediction, written in the form of a little piece of fiction, is reprinted on the following pages exactly as I wrote it 10 years ago. Virtually all of my predictions for new technology have come true. But almost none of the technology is being used to report and explain the news.

When I wrote the scenario, in 1995, the commercial World Wide Web was two years old. When I sent it around for comments, Professor Mischa Schwartz at Columbia University’s engineering school said the only thing he could find fault with was the bandwidth — it would not be likely, he said, that enough bandwidth to run the scenario would be available by 2005. Prof. Schwartz is one of the greatest network researchers of all time. He was one of the brains behind IBM’s Token Ring network. His former students are top researchers now at IBM’s Yorktown Heights lab. But fiber and WiFi proved him wrong.

Prof. Dimitris Anastassiou, who wrote the compression algorithms that are the core of MPEG2, the digital video encoding standard, agreed with my technology forecast. But married to a TV producer, he worried that networks and other distributors of news and information would be unwilling to spend the money to adopt them.

He was right.

Others noted (correctly) that “Jane” in my scenario would need a teammate close at hand to handle the flood of information available to her.

A year after the scenario was written, the Telecommunications Act of 1996 made it easier for broadcasters to buy multiple stations. They had already been freed of most of the responsibility to provide news as a public service that would be considered when their broadcast licenses came up for renewal.

The result: Spending on television and radio news declined. In 2001, ABC, CBS, NBC and CNN all announced reductions in news staff, and declines accelerated after the attack of September 11. Newspaper employment declined as well. It is true that the overall cost of running CNN, Fox, and MSNBC has increased, but money for newsgathering has not. All have closed bureaus and specialized reporting teams. CNN, the only cable news show to have an environmental reporting unit, for example, closed it more than a year ago.

The Project for Excellence in Journalism (see www.stateofthemedia.org) reports that the 24-hour cable networks rarely update stories during the day, and that more than half their content is in the form of extemporaneous, unedited, unscripted questions and commentary.

In that sense, cable news has become similar to Internet blogging, but with a brand name.

The scenario from 10 years ago points the way to what content could be if open-access fiber networks become the norm:

• More reporting will be controlled by reporters and producers in the field, rather than by news desks in New York, Washington, or Atlanta.
• Those reporters will have to work in teams, unlike the scenario example.
• Those reporters will develop enormous local or subject-area expertise, and sell it to national and international news organizations.
• The local reporting teams will build credibility by supplying stories to local or specialized outlets (that’s where open access comes in), and market that credibility to national and international organizations.
• Some of these teams may devote all of their time to the news. Others may be journalism professors and students, combined with local experts, some of them bloggers.
• These teams will report for TV, radio, magazines and the freestanding Internet outlets. The Internet of the near future will include broadcast-quality audio and video routinely, but not on Web sites associated with existing TV or print news outlets.

In short, it all looks like reality TV that’s, well, reality! •

Back to the Future: A Prediction From April 1995

What if we were reporting the Oklahoma City bombing a decade from now with new media tools? A scenario based partly on reality.

The call came in early. At least it seemed early. Jane had been out most of the night broadcasting a council meeting, then preparing the town’s budget analysis for her little station’s on-line arm.

But this was not routine — an explosion had shattered the federal office building in downtown Oklahoma City. Her portable terminal was already recording information sent via sideband and satellite from the scene by emergency crews, local TV stations, wire service bureaus, even a local businesswoman with a video camera and the good — or bad — luck to work a block away.

She tossed her terminal into her car along with the rest of her gear and sped downtown. By the time she arrived at the site a half hour later, a bombing had been confirmed. Her terminal had, in fact,
picked up some other disturbing news, that the attack could be the work of radical Islamic terrorists. THAT news hasn’t been on the car radio yet, she mused, as her terminal sorted myriad competing news feeds, selecting a few to let her know about.

Researching The Basics

Some of the feeds — the ones that originated audio or video — came through with the inflection of amazed eye witnesses. Other feeds, coming into the terminal as text, were converted to speech in a more standard, flatter accent as she drove.

Every once in awhile, she’d talk back herself, asking the terminal to mark some items for retrieval later. “Not bad,” she thought. “But my judgment about newsworthiness is still better than ol’ chiphead’s here, even if his algorithms are based on my past choices.”

“Don,” she said, as she pulled up to the press line. “The building is a shambles. Pull a file clip for me and download, so I can refresh my memory about what it used to look like. I’ve got the feed with the list of agencies housed inside, but can you locate a building plan and some info on the surrounding area?”

Back in the office, Don yelled to his console, “access file footage, Oklahoma City federal office building.” He also accessed Oklahoma City’s GIS files, which included the city’s tax map, utility lines, records of certificates of occupancy, population, even the kind of grass growing in front of the building. He cursed about having to do it by hand. He clicked on the site representing the federal building, and brought up its rough floor plan. He clicked again and linked to the building inspector’s office, downloading the full 3D construction plans and facility management updates to his console and sending them on to Jane’s terminal. A nursery school on the site!

Don noted with some amazement that the GIS files had been accessed only twice that morning, and the building had only once. “We may just beat the GIS files had been accessed only twice that morning, and the building management updates to his console and bringing up its rough floor plan. He clicked on the site representing the federal building, and brought up its rough floor plan. He clicked again and linked to the building inspector’s office, downloading the full 3D construction plans and facility management updates to his console and sending them on to Jane’s terminal. A nursery school on the site!

Jane quickly pulled her video camera out of the car. “Glad we have these new two-pounders,” she thought. “Those five-pound minicams were tough to hold.”

The camera was so light because it fed its digital signal back automatically to the terminal. At the same time, the terminal was accepting two other video feeds from the on-scene wire services. This left Jane free to find her local angle — people from her community, 30 miles outside Oklahoma City, who might have been affected.

The terminal’s “urgent” signal flashed in her viewfinder as she was interviewing a college professor from her viewing area, the University of Oklahoma at Norman. Professor Smith had come downtown to inquire about federal scholarship aid for two of his students; aid was tough to come by since the savage cuts of the mid-nineties, but there had been three presidential elections since then, and some money was coming back.

“Even with all the toys, the personal touch of a face-to-face meeting helps. I’m glad I was a few minutes late, though.”

She had set her terminal to warn her whenever the University — a major part of her beat — was mentioned. A former congressman from the district was claiming, from Washington, that Moolems had to have done the deed. “There’s a large Islamic fundamentalist student group at the University of Oklahoma in Norman,” he said.

“Strange,” she thought. “I don’t know of any such group.” Back at the car, she instructed the terminal to tap into the student newspaper’s home page, and placed a call to the former congressman’s office. Her terminal’s record of all addresses and phone numbers in the country made it easy.

Help From Congress?

“The congressman is out negotiating interview deals,” his secretary said. “But I know he got the information on that radical student group from congressional testimony last fall before the election, a guy named Emshine or something like that.”

Jane hung up and checked the university newspaper’s web site again. No news of any radicals. She left an e-mail message for the paper’s staff, asking about any such groups. She also posted a message to the university’s president, public relations officer, and student union staff.

Next, for the testimony, a quick connection to the Library of Congress Thomas server with the Congressional Record on line. “Check for Emshine or variant, University of Oklahoma, Congressman O’Leary’s committee, last September or October,” she said. The text quickly appeared.

“Hmmm,” Jane mused. “Emsmith is the name, not Emshine. And he didn’t say there was a radical group on campus - - only that a spokesman for a radical group had visited, two years ago. Glad they have a video of the testimony. I’d better get this story on the air as soon as possible. Crazy folks could cause trouble on campus before the truth comes out.”

Working fast, Jane highlighted text of the testimony and sections of the transcript of O’Leary’s live broadcast (automatically converted to text from the video track). That brought up the corresponding video for editing. She started with a view of the site itself before the blast, superimposed the 3D building plan, and morphed the plan into the site now, so viewers could see an animation of what happened. The software created the animation, taking into account the fact that the building was built of pre-stressed, precast concrete panels, and not steel framing or some other structural system.

She then added her “Islamic radical” footage and uploaded the package for broadcast.

“Great work, boss,” said Don a few moments later. “But it wasn’t fast enough to keep some yo-yo from pumping a few slugs into the local mosque a few minutes ago. No one was hurt.”

Jane jabbed a finger at Don’s image on the screen. The wide-angle camera at her end made the finger loom large on Don’s terminal. “Distribute the campus stuff to everyone, as soon as possible,” she said. “Let the competition have it, too, as long as they give us credit. Maybe it will keep the crazies home.”

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