

## MediaWeek

### Cracking the Set-Top Box Code

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It's become clear to any research executive in the television business these days that what's good for the viewer may not necessarily be good for the business. Take the digital video recorder. Its time-shifting and ad-skipping properties have helped its penetration skyrocket to one-third of the TV viewing universe in the last five years. Yet it's those very appealing qualities to the couch potato that are causing an outbreak of headaches among researchers.

Now, the very technology that created the headaches—the digital set-top box—may deliver the relief. In next few years, set-top box (STB) data could become an integral part of the TV ratings currency.

Mining audience data from STB devices that deliver TV content via cable or satellite is turning into the digital equivalent of the Alaska gold rush. A growing number of research and technology companies—including Nielsen (which owns AdweekMedia), TNS Media Research, TiVo, Rentrak and **TRA**—envision a promising business that can deliver audience viewing data of unparalleled precision based on millions of households. If those companies can crack the code, they may soon produce TV audience data using samples that dwarf Nielsen's current 18,000 national people meter panel.

"People have always accepted Nielsen as the default. But as technology improves, there are other sources in the marketplace and we can get beyond minute-by-minute [data] and go second by second," says Chris Allen, vp and video innovations director for Starcom USA, a big proponent of STB data that currently subscribes to TiVo and TNS. "Everyone agrees that the people meter sample is too small and is unable to measure smaller, niche networks."

For years, planning, buying and selling TV commercial time has depended on one provider, one currency—Nielsen's. The traditional approach relied on a laboriously built and relatively small representative panel of consumers. But recruiting and maintaining those panels doesn't come cheap. Many would-be TV ratings providers (such as SMART, AGB and Arbitron's ScanAmerica) have been crushed under the competitive challenge of building expensive panels in the hopes the industry would support them.

Now the industry has the potential to tap vastly larger panels pre-built and subsidized by viewer

subscription dollars. The potential is hard to resist: buckets full of audience data that is there for the taking at very little marginal cost. For the first time in 50 years, alternatives to conventional TV ratings are not only possible, but they're also probable.

"The biggest barrier to entry in TV measurement is gone except for getting access to the set-top box data," says David Poltrack, chief research officer for CBS. "There is a chance for an entrepreneur to make a mark and establish a place in the marketplace for the first time."

"It's hard to say what will come out of this," says Donna Speciale, president, investment and activation, and operations for MediaVest, which hopes to use TRA's product-purchase ratings as a secondary guarantee in next year's TV upfront. (TRA is fusing STB data with info from shopper loyalty programs.) "Our goal is to get more accountability. We're working real hard to have a currency based on intent. But CPMs aren't going to go away anytime soon."

## A HOST OF CHALLENGES

TNS Media Research in late 2004 became the first research firm to dive deeply into the STB data pool, setting up a trial with Oceanic Time Warner in Hawaii to provide the cable system with a usable data stream it could sell locally. By 2006, TNS offered the industry the first syndicated commercial service based on STB data from Charter Communications in Los Angeles, which has since done partnership deals with every research firm exploring the STB measurement business. Only last week it announced a deal with interactive program guide company Rovi to create proprietary STB measurement data.

"Given the dominance of [Nielsen], we knew trying to compete using a traditional approach would be very difficult," explains George Shababb, president of TNS Media Research. He sees STB data as a disruptive technology that "changes the parameters and requirements for what audience measurement means today. We have the opportunity to change the definition of measurement and integrate with other sources, whether it's linking audience data to consumer information, purchase information or other segmentation breakouts."

Other firms, including Nielsen, have since begun developing STB research services ([see chart](#)).

# The Miners...and Their Claims

A listing of the syndicated research offerings based on STB data from the five major players

COMPANY	PANEL SIZE	GEOGRAPHY	STB PARTNERS	CLIENTS
Nielsen	330,000 STBs	Los Angeles	Charter Communications (LA), DirecTV, Comcast, Verizon	National Geographic Channel, plus two local clients
Rentrak	3.8 million STBs	48 markets	AT&T, Charter Communications (LA)	Inspiration Network, HDNet, WealthTV, Home Shopping Network, Sprout, DISH
TiVo	300,000 STBs by fall 09	National	TiVo	Omnicom Media Group (OMD & PHD), Starcom, Carat, Interpublic, MPMA, Crispin Porter & Bogusky, Media IQ, Euro RSCG New York
TNS	100,000 STBs	National	DirectTV (Directview)	Discovery Communications, Scripps Networks, Starcom, plus other companies not announced publicly for a total of 12 clients
	330,000 STBs	Los Angeles	Charter Communications (LA)	Starcom
TRA	2.1 million STBs 54 million household loyalty panel 370,000 household single-source panel	National	TiVo, plus two unnamed cable systems	MediaVest, CBS, Discovery, three packaged-goods brands, four other networks, two other agencies

Source: Company reports

But the nascent business has its challenges. Nielsen, whose TV ratings have served as the reigning currency since the first TV ad was sold, is quick to point out all the pitfalls of STB measurement— technological, methodological and financial. “People assume a larger sample is a better sample. Set-top box data has many potential uses, but also many limitations,” says Manish Bhatia, Nielsen’s president of advanced digital services.

“That doesn’t mean it won’t be solved over time.”

With the exception of TiVo, which designs, builds and distributes its own boxes, cable system boxes manufactured by third parties like Scientific Atlanta were never designed to collect and process viewing data. “If you think about all the measurement problems, it’s usually a technology problem and controlling the software in the box. We’re the only company that can write the software that goes in the box; everyone else has to live with what comes out,” says Todd Juenger, vp and general manager of audience research and measurement for TiVo.

Not only are the internal workings of the cable boxes different system to system, but there are also multiple generations deployed within each system. That leads to a long list of issues that need to be addressed, not the least of which is figuring out if the TV set attached to the box is on or off. According to Nielsen, 10 percent of STBs never get turned off over any monthlong period; about 30 percent of

boxes remain on for 24 hours on any given day.

Signal latency is also a tough challenge. Households that have multiple TV sets know all too well that two sets tuned to the same channel are never in sync. “If the lag is 5, 10 or 15 seconds, that’s a lifetime for an ad,” says Jack Wakshlag, chief research officer for Turner Broadcasting, which subscribes to TNS’ service based on Charter’s L.A. data.

Just because the sample is huge doesn’t necessarily mean it is representative or projectable to the universe. Cable systems do not conform to market definitions and may skew toward certain regions or demographic makeup. For example, Charter’s L.A. system, whose data is being used by all the STB researchers, reflects an ethnic skew not seen in most of the country. “We believe Charter has a particularly unusual concentration of Chinese-speaking viewers,” notes Wakshlag, not to mention a disproportionately high Latino audience.

Even services that purport to be national, such as Rentrak (which pulls data from AT&T), TiVo or TRA (which uses TiVo and two cable systems it declines to identify), are not necessarily producing ratings that are representative. Though TiVo has more clients than any of the other services, researchers agree the service is limited to an understanding of the viewing behavior of DVR households, a distinct subset of about a third of all U.S. TV homes. “We’re only measuring TiVos—we’re not a good candidate for national currency, and we don’t claim to be nationally projectable,” explains Juenger.

Perhaps at the top of the list of challenges is finding a way to capture demographics. None of the STB systems can directly measure viewing beyond the household level. “This is very hard stuff and very hard to do,” says Alan Wurtzel, president of research and media development for NBC Universal. “These companies have been asking subscribers to foot the bill for the research and development. They all have strengths and weaknesses. It’s a shame you can’t put them all together. This is like the first flight of the Wright brothers.”

At the end of the day, it’s difficult to imagine a set-top box service without panel measurement or mathematical modeling to fill in the demographic blanks. Even TNS, which has been the most aggressive STB data developer, sees a role for panels. “I don’t think panel services will go away, but they’ll be used differently. Today, panels provide absolute measurement in a quantitative sense. In the future, panels will be used in a qualitative sense, but it won’t be the absolute number,” says TNS’ Shababb. “Five years from today we’ll be talking about a totally different marketplace.”

## **GAME-CHANGING OPPORTUNITIES**

Regardless of the challenges, the business implications of a shift or a change in the currency could be staggering. One truism in media market research is that different methodologies produce different ratings. And differences in ratings can mean millions of dollars won or lost if a new methodology is adopted.

A recent analysis by Nielsen comparing estimates from STB data with Nielsen’s national people meter panel reveals the winners and losers if there is a change in the ratings currency. Cable networks would fare much better in wired digital cable homes, with many networks enjoying a 20 percent audience lift. Fox would hypothetically get a 4 percent ratings lift, while CBS might lose up to 6 percent of its audience. Ratings for ABC’s *Desperate Housewives* would climb 12 percent in wired digital cable homes, but sink 6.5 percent in satellite homes.

NBC conducted a similar ratings analysis for the April finale of NBC's struggling Monday drama *Heroes*. The difference between the highest and lowest rating was 6 percent. "That variance is worth about \$400,000, so we're talking about some serious money," notes Wurtzel.

In the end, STB data may be too much of a good thing. "The current measurement system we have has its flaws, but we're doing \$65 billion worth of business off of it," continues Wurtzel. "To me, a census is not a good thing. It's too much data. When they take your blood, they don't take all of it."

Despite all the challenges, all the potential problems, not to mention the financial investment, all parties believe STB data is worth pursuing. Two industry committees were recently formed to explore the options and help develop standards. The first is the Nielsen-funded Center for Research Excellence, which formed a 15-member Set Top Box Committee earlier this year. The other is the Collaborative Alliance Set Top Box Think Tank, organized by Mitch Oscar, executive vp of televisual applications at MPG. More than 50 companies representing all interests have agreed to participate in the alliance, including researchers, suppliers, agencies, media companies and consultants.

"Right now all these companies look at set-top box data in a different way," says Oscar. "It's very complicated. There are no rules. And it's very competitive. If we can get involved in the process before these companies sell their services, we'd be more likely to purchase it. We're trying to direct the game."

It's early in the game for both industry committees. The Alliance has asked companies to provide data so it can analyze it and suggest best practices. The CRE committee is in the process of reviewing all the services and preparing a white paper.

For most in the business, STB data has a ways to go. "I don't see it being a replacement anytime soon. A lot of things have to be worked out," says Shari Anne Brill, senior vp and director of programming for Carat, who is participating in both committees.

Solving those technological and methodological challenges may be the easy part. But the business challenge—getting access to cable systems' data—could be the thorniest. Clearly, the operators will want some compensation in exchange for the data stream they're providing. The formation of Canoe, a consortium of the six largest cable companies, may help pave the way, giving the research firms a single point of contact for partnerships and business deals. While addressable applications seem to be the top priority, the other more simple goal is to bring STB data to market.

"They've focused on addressability, but I'm optimistic that in the end, cable companies will find it in their own self interest," says CBS' Poltrack. "The fact that no one needs all of them for a viable service will keep access open and affordable."

So for now, the STB gold mine remains relatively untapped, guarded by a gatekeeper that hasn't given the industry the secret password to unlocking its audience data.

"The discussions we've had with Canoe have been productive," says TNS' Shababb. "This is still in the early days. We're going through a development period, but we believe the industry will go forward with development."

Shababb and his cohorts all plan to keep digging.

## MEDIAVEST, TRA TO BRING NEW STB DATA TO UPFRONT

Two years ago, the multibillion dollar TV upfront marketplace was changed forever when agencies began using C3 ratings as part of the negotiations. Next year, MediaVest hopes to advance the evolution of the upfront using a metric from TRA that links TV ratings to product purchase behavior.

TRA (which stands for True ROI Accountability) is a hybrid among the companies developing audience research services based on set-top box (STB) data. Instead of pursuing a pure ratings application, TRA developed a single-source approach that uses STB data as a jumping-off point to integrate it with other databases, initially, with product-purchase data from supermarket loyalty cards allowing advertisers to target programs by the products they purchased.

Because TRA takes an intentionally different approach, it may be the first STB service to break into the actual buy-sell process. "Set-top box data on its own is interesting, but probably not that important. For our consumer packaged-goods clients, the added benefit of knowing what they viewed and what they bought is very exciting," says Jim Kite, president of connections research and analytics for MediaVest, whose clients include major advertisers like Procter & Gamble, Coca-Cola, Mars Inc., Kraft, Walmart and Wrigley.

For a long time, advertisers have coveted single-source measures of consumers that link all their media and purchase behavior. Most have tried and failed in the marketplace over that span, from Arbitron's ScanAmerica in the 1980s to the Project Apollo, a recent joint venture between Arbitron and Nielsen (AdweekMedia's parent company). Those services were exorbitantly expensive and required consumers to do a number of tasks in order to produce the data.

TRA's approach takes advantage of current technology to provide single-source measures of consumer behavior. "In both cases, the [past attempts] were dependent on paying people to do too many tasks. The equipment was expensive," explains Bill Harvey, TRA president and co-founder. "We use data that already exists. For us, ratings is the starting point. We're not trying to displace ratings; we're going to co-exist."

TRA's offering combines STB household data from 2.1 million subscribers with household purchase data from 54 million supermarket loyalty cards to come up with a household panel of 370,000 consumers. "[Traditional] ratings are just a proxy; it gives you the number of eyeballs. But what advertisers are interested in is the call to action," says Mark Lieberman, chairman, CEO and co-founder of TRA. "We live in an age of accountability. Everything needs an ROI component."

MediaVest has studied some five months of TRA data, says Kite, who thinks it may help the agency better target heavy swing purchasers who are likely to buy their clients' products ([see chart](#)).

## Beverage Brand Heavy Swing Purchaser Analysis

Program (Network)	HH Universe Rating	Brand HSP Rating	Overdelivery
<b>Sports Game (Broadcast)</b>	<b>0.57</b>	<b>0.96</b>	<b>+67.9%</b>
<b>Cable Show A</b>	<b>0.13</b>	<b>0.20</b>	<b>+52.3%</b>
<b>Cable Show B</b>	<b>0.17</b>	<b>0.23</b>	<b>+39.8%</b>
<b>Cable Show C</b>	<b>0.34</b>	<b>0.40</b>	<b>+19.0%</b>

Source: TRA

“For the same amount of money, you can reach 20 percent more of them. We want to reach proportionally more consumers that are going to buy the product,” Kite says.

While the TV networks have been skeptical of STB data’s role in the negotiation process anytime soon, they take a different view of correlating product-purchase data with TV ratings.

“The attraction of using TRA in the buy-sell process is that...the seller can identify the advertisers for which their programming has the greatest value and sell it with some kind of premium, and the buyer can develop a schedule that delivers more target purchasers,” says CBS chief research officer David Poltrack, who is in conversations about doing experimental deals incorporating TRA data. “We’re not there yet, but we’re starting to get some track records.” —*Katy Bachman*