Time to adjust the set

Advertising Although web and set-top box data can provide precise details of viewing habits, audience measurement in America remains reliant on consumer panels – but that may change, writes **Kenneth Li**

Three years ago, Alan Wurtzel, president of NBC Universal media and research development, strode on stage at the Culver City studio lot near where *Gone With The Wind* was filmed, braced for the scepticism he expected to face from the hundreds of advertising executives gathered for their sneak peek at the US broadcast network's latest shows.

A battery of studies and forecasts suggested traditional television had lost its grip on once captive viewers now distracted by new entertainment sources. But Mr Wurtzel and counterparts at rival networks had discovered new technology had not killed off the dinosaurs of media after all.

By piecing together internal studies and outside research, NBC had learnt that in aggregate more people were spending more time than before in watching its shows across television sets, computers and hand-held devices. "While [advertisers] understood this was an attempt to better understand how we were moving across [media] platforms, people were thinking, 'Oh you're trying to increase the ratings'," he recalls.

But at least some in the audience embraced Mr Wurtzel's idea that the new world of media demanded new ways to track viewers across TV and the internet. The question has become just how that will be accomplished.

Since its advent in the 1940s, those who subsidise American commercial television – companies hawking everything from laundry detergent to prescription drugs – have struggled to find precise correlations between showing off products with a jingle and a punch line, and the impact of that airtime on sales. The dirty little secret of media is that no one really knows with as much certainty as they would like who is watching what and for how long, let alone the extent to which consumer demand is influenced by seeing a commercial.

Advertisers and media companies alike have long groused about imperfections in the techniques that Nielsen, the world's largest media and retail measurement company, has used since it standardised the science of audience tracking and, with it, forged the very definition of market share. Finding something better, whether from Nielsen or a rival, will not be easy. But now, it is being tried.

About $70bn (€48bn, £43bn) of advertising spending annually – as well as which shows will be produced and which will not return for another season – relies on Nielsen's carefully curated panel of respondents that determine US television ratings. Despite the barrage of criticism and a long string of failed competitors, its system remains the currency of the US television advertising business.

Unlike other markets including the UK, where so-called joint industry committees pick measurement sources, antitrust laws prevent the US television industry from doing the same, executives believe – even though Nielsen has long enjoyed a near-monopoly.

But the rise of the internet has agitated those who see panel measurements such as those used by Nielsen as a weak surrogate for a true accounting of viewership. Website publishers can track every mouse click, every video viewing, every song download with precision over millions of users. But Nielsen's panels are also outdated, say critics, compared with the possibilities presented by the near-census level of information that pours in daily from cable or satellite digital set-top boxes, connected to 90 per cent of US homes, that can track second-by-second habits.

Jack Wakshlag, head of research at Turner, a division of Time Warner, says of current measurement techniques: "We're living in a world which is still the way it's been in the past."

So it should have been little surprise when in August the creation was announced of the Coalition for Innovative Media Measurement, a grouping of the largest content producers, advertisers and advertising agencies intended to "explore new, high-quality ways to measure audiences" across screens, following media consumers wherever they go.

Cimm's membership is a formidable list of advertisers, such as Procter & Gamble and Unilever; media companies including Time Warner, News Corp and NBC Universal; and Starcom MediaVest and WPP among agencies. "What we're doing here is starting with a whiteboard," says Mr Wurtzel, who led the formation. "Nielsen has been doing this for decades. They have a model. It's human nature. They see that the way to move ahead is through a particular path."

Single source: the viewers of 1957. Now, broadcasters and advertisers are seeking to capture the habits of people who watch video on a range of devices Getty

Over about two years, following a conversation between Jeff Zucker, who as chief executive of NBC Universal is Mr Wurtzel's boss, and Peter Chernin, Rupert Murdoch's former number two at News Corp, the mathematics geeks of media corralled 14 of the industry's top decision-makers to lay the ground for a mass protest, if not quite a palace coup.

Mr Wurtzel says their mission has nothing to do with killing off Nielsen. As an industry, they are to sift through the deluge of data and methodologies already used by media buyers and sellers. Clients complain that tracking the same audiences with different tools yields different results. Cimm's goals centre on evaluating the use of set-top box information to measure television viewing and finding ways to track consumers across multiple devices rather than measure each separately. Patti Wakeling, media team leader at Unilever, stresses the need for better tools: "Our consumers don't consume media in silos any more. It becomes important for us to measure their consumptions across all channels," she says.

What Cimm hopes to discover could determine how advertising dollars, euros and pounds are spent for years to come – and help to dictate the development of online video and other new media forms.

Measuring traditional television helped spawn Nielsen's $5bn-a-year business. Discovering the interplay between TV, PC and cellphone video viewing could be a goldmine for the private equity owned Nielsen, or, someone else. But in a world of fragmented audiences and media sources, tracking people across an ever-growing number of devices is like "trying to measure something that requires a micrometer with a crude yardstick", says Gale Metzger at at Knowledge Networks, a survey research company.

This "single source measurement" is a mythology passed on from one medium to the next, Mr Metzger maintains. "None have succeeded; none will succeed," he wrote this month on MediaPost, an industry information website.

Mr Metzger can be excused his pessimism. Considered one of the most gifted minds in research of his time, the former Nielsen employee took on the measurement giant for 11 years with a rival system called Smart – until 1999 when his backers, including the big four broadcast networks and 26 other sponsors, pulled out.

AGB of the UK, which introduced television people meters in the US in 1987, suffered a similar fate in the 1990s after being invited to create an alternative to Nielsen in the US. (AGB and Nielsen then formed a joint venture in 2004 to measure ratings in Asia and Europe.) Mr Metzger counts no fewer than 20 failed attempts at single source measurement, beginning with Arthur Charles Nielsen senior. The man who founded Nielsen gave Mr Metzger a signed hardcover book in the 1960s, in which he discussed the single source challenge.

The most ambitious recent failure ended in February 2008. Nielsen and Arbitron, a measurement company in the radio industry, formed Project Apollo, a joint test that sought to determine the shopping habits of 5,000 US households carrying portable electronic meters. Seven big advertisers including P&G, Walmart and Unilever supported the project. "What happened was it worked," says one TV executive. "It gave them what they wanted. But it was so expensive to build a panel that was large enough."

To compensate for missing data, researchers employ regression analysis models similar to the ones used by economists or scientists to determine the statistical correlation between two or more variables. But the potential for larger sample sizes, such as the nine out of 10 US homes that pay for television received over a set-top box, could take the guesswork out of measurement and move closer to tracking cause and effect directly, executives involved in Cimm say.

Companies such as TRA, whose initials stand for "true return-on-investment accountability", believe they have cracked the code by licensing set-top box data from TiVo, the digital video recorder maker, and shopping data from other sources. With a large enough sample size, statistical anomalies can be eliminated, says Mark Lieberman, chief executive of TRA. "The lack of confidence and accountability in the current system is causing dollars to leave TV and go to the internet," he adds. "This is to keep the dollars in television."

Mr Lieberman demonstrates how his clients can, with a few mouse clicks, determine how purchasing commercial airtime during a narrow time of day on one network generated a fourfold increase in sales among women in one region of the country who had been on the fence about picking the client's products. TRA's viewership data covers about 1.5m households but shopping habits can be tracked in only 370,000 homes.

Executives at Nielsen and other media companies that are testing the use of set-top box data say the methodology is less reliable than what Nielsen can offer. For instance, most cable TV customers never switch off their boxes, which to a measurement firm would indicate a particular TV channel is being watched even though the television set itself was off.

Mr Lieberman and other companies such as Rentrak, which also employs set top-box data, say they use editing rules and algorithms that filter the information with a "fairly high level of precision as to whether someone in the room is actually watching".

In all likelihood, television executives say, the new world of media measurement will combine sets of tools rather than seek a direct replacement of Nielsen's currency. To secure its position, Nielsen has invested $1bn over the past few years buying companies at the forefront of research. "We continue to work on those strategy with a broad set of clients," says Susan Whiting, president of its Nielsen Media unit.

Her company has also invested $10m to create the independently run Council for Research Excellence, whose charter looks remarkably similar to the goals of Cimm. "I don't think there's any disagreement of the potential for set-top data and cross-platform [tracking]," Ms Whiting says.

Be careful what you wish for, cautions Bob Barocci, chief executive of the Advertising Research Foundation, a group representing 400 advertisers, agencies, research and media companies. "The better the data gets, the more likely some media outlets may not look as good as they thought," he says. "The big fear is: 'How much money it will cost me?'"

Tuning in, dropping out

Source: Nielsen

'People don't consume media in silos any more. It becomes important to measure across all channels'

How Nielsen watches the viewers

The quest to solve the Wanamaker conundrum moves to the web

The lament of John Wanamaker that "Half the money I spend on advertising is wasted; the trouble is I don't know which half" has guided the quest for accuracy in advertising measurement for more than a century. Fittingly Nielsen, the company responsible for untangling the mysteries of global television advertising effectiveness, is based in the New York site of his former department store.

Since the 1950s Nielsen's panel of a few thousand homes, now 18,000, has reflected what 114m households in America watch – and what they buy after viewing. The TV industry uses this "currency" to set advertising airtime prices.

Nielsen's meters are installed in the television sets of members of the panel – randomly selected and changed every two years. An "active" part tracks codes inserted every three seconds by programme creators into the broadcast. A "passive" gauge acts both as back-up and also as a means to identify viewing of a show – using digital video recorders, for example – after its initial airing. Homes are given a special remote control with buttons to identify who is watching.

At 2am, data from the homes are sent via phone lines to Nielsen's information centre. Overnight ratings are available to network executives from 7am, followed by a more concise report at 4pm.

In addition to viewing data, Nielsen generates almost half of its revenue from tracking retail trends. Here, another army of consumers fills out surveys and scans the bar codes of their daily purchases. The company aims eventually to link this information to viewing data.

Jim O'Hara, who heads Nielsen's media products side, says the company can "fuse" different databases, identifying common factors such as age, location and education, to see whether particular commercials online or on television lead to higher sales among certain groups. "Is it perfect? No. But cost-wise it makes sense. And it's pretty good." Instead of buying advertising space in shows aimed at women aged 18 to 34, advertisers can target women who are likely to buy a particular product.

Nielsen has tracked video viewing across TV, internet and mobile devices for about two years, and one of its more promising endeavours involves TV Everywhere, a pay-TV industry initiative that will increase the number of TV shows online, but only to subscribers. Using software meters installed in personal computers, the company is tracking the way viewers switch from PC to TV or watch both at the same time – in 375 of its homes at the moment, although it has met TV companies to discuss accelerating the roll-out.

The online shows will run the same commercials as their broadcast counterparts, conceivably allowing Nielsen to incorporate online viewing into the national ratings system – and to compare directly the effectiveness of TV and online advertising.