

# Extending the PPM: passive measurement of emerging media

The PPM is proving to be a flexible tool for audience measurement across a range of media, say **Dan Ames** and **Neal Bonner**, Arbitron

FROM ITS INCEPTION, Arbitron designed its Portable People Meter™ (PPM) system to provide audience measurement that kept up with the consumer, no matter what media technology was being used. While we could not have predicted the impact new technologies and digital media would have on how consumers are entertained and stay informed, our PPM technology is not only keeping pace, but leading the way in audience measurement in a complex media environment.

The PPM technology that introduced passive, electronic audience measurement for major media is now measuring digital, place-based and other emerging media, and allowing advertisers to compare audiences directly to those of TV and radio.

## In-store audiences measured

While numerous retailers produce their own in-store broadcasts to promote their goods and services, obtaining any objective measure of these broadcasts has been difficult. InStore Broadcasting Network, which produces programming for the Walgreens drug store chain, saw the PPM system's ability to encode and track any audio broadcast as a way to measure its customer-focused broadcasts.

Arbitron worked closely with InStore Broadcasting Network, one of the largest retail media networks in the United States and Canada, in conducting exhaustive technology and research methods trials at 200 Walgreens stores in Houston, Texas, using panellists' data from the existing PPM radio ratings panel.

Initial data pointed to a significant audience for the in-store network. For example, during one three-month period in 2007, an average of 1.25 million people 18+ were exposed to the Walgreens Network. During that period, the Network reached 30% of the overall adult population and about 34% of women 18+ on a monthly basis.

In autumn 2007, InStore Broadcasting Network contracted Arbitron to provide monthly audience estimates in Houston. IBN is now using such intelligence as daypart exposure, demographic data and time spent listening to establish the value of the commercial inventory for the Walgreens Radio Network in that market. Because the service uses the same measurement infrastructure used for radio ratings, the in-store audience estimates are directly comparable to conventional average quarter-hour ratings used for radio and TV audience measurement.

## Taking full advantage of a single-source panel

The benefits of using an existing audience panel for additional media research, as is being done in Houston, are obvious but sometimes not advisable. The passive PPM technology, however, neatly sidesteps any concerns about panel fatigue or reducing response rates by measuring additional media.

PPM panel members are asked to carry a device, about the size of a small mobile phone, with them throughout their day. The "meters automatically detect any

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encoded audio signals that the panellists are exposed to each day. Because the inaudible PPM codes can be embedded into any number of broadcast streams, from radio and TV to cinema and digital signage, there is practically no limit to the different media that can be passively tracked by a panel.

As a single source, the panel can provide in-depth data on multiple media, including the following.

- Who watches local evening news?
- Who watches morning news?
- Who listens to morning drive radio?
- Who does all three?
- Who doesn't watch local news?
- Who is exposed to in-store media?

## At shopping malls, too

Arbitron and the Mall Radio Network recently completed two successful test pilots that demonstrate the PPM system's ability to track the time shoppers are exposed to content and commercials broadcast in shopping mall concourse areas.

The first trial determined that the system could detect encoded mall media in all parts of the enclosed shopping centre environment. In the second trial, every nth mall shopper was recruited throughout the day to carry a PPM that detected exposures to encoded media. The shoppers returned the meter as they exited the mall (see Figures 1 and 2).

FIGURE 1

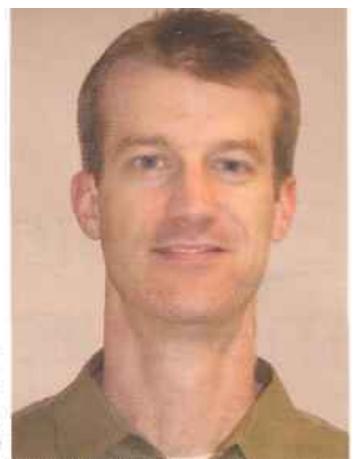
Persons 18+ exposed to mall radio 44% of time spent in mall



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Shoppers who participated in the test also completed a short survey. Promotions or advertising played in the common areas appeared to have a strong influence on purchases made in the mall. Almost 50% of survey participants planned to make a purchase based on promotions or advertising played in common areas.

The test not only confirmed that exposure to audio broadcast in malls can be tracked in the same fashion as exposure to terrestrial radio, but also demonstrated that the audience metrics for the mall radio broadcast would be comparable with the radio audience measures used by national and local advertisers.

### Auditing digital signage

Digital signage is another form of place-based media that needs reliable third-party measurement in order to maintain credibility with the advertising community, and here, too, the PPM technology is being used to address the issue of the accountability of out-of-home advertising.

BroadSign International Inc., a leading worldwide provider of hosted software for managing digital signage networks, is currently testing the technology with the goal of obtaining third-party audits of BroadSign's proof-of-play reports.

Initial tests in store environments verified that the meters could accurately detect Arbitron's inaudible code embedded in the loop of media files played on digital screens in real store environments. Not only were the codes detected, but the

times of the code detection reported by the PPM devices precisely matched the media file play times in the BroadSign reports. This high level of matching indicates that the programming loop and all its components played as scheduled during the test period.

Additional tests are now under way to verify that Arbitron's proof-of-play audits can become a commercial service.

### Add print measurement to the mix

Arbitron is also exploring how the technology can help overcome the limitations of today's recall-based readership measurement and elevate readership measurement to the electronic domain.

In a series of laboratory and field tests, Arbitron has demonstrated that the PPM can work with Radio Frequency Identification (RFID) technology to electronically measure magazine readership. We have shown that encoded information contained in the microscopic RFID tags inserted in a variety of magazines can be detected and recorded by the PPM system. Future research in laboratory settings with different tag technology, and in the field with human subjects, will offer even greater insights into the potential for passive print measurement.

From traditional and in-store media to digital signage and magazines, the PPM is proving to be a most flexible research tool in tracking how consumers are interacting with a wide variety of media in and out of the home.

### Tracking out-of-home TV viewers

In the United States, the technology is also being used to track out-of-home television viewers as a supplement to traditional TV ratings. Arbitron research indicates that 35% of television viewers in the United States spend some portion of their weekly viewing hours at a location other than their own home. Heavy TV viewers (reporting 5+ hours in the last 24 hours) are more likely to watch television away from home. The PPM technology is ideally suited to track this out-of-home TV exposure. A number of television outlets in cities where the PPM radio ratings service is being deployed are taking advantage of having additional insights into this significant audience.

### Looking at radio audience behaviour

While PPM technology is being used to provide ratings in nearly a dozen countries, the depth of the audience data being captured in the United States is now being used in a new way to analyse listeners' behaviour.

Arbitron recently signed an agreement with Media Monitors, America's leading broadcast monitoring and verification service that allows Media Monitors to link Portable People Meter minute-level audience data with Media Monitors airplay information in a new service called Audience Response.

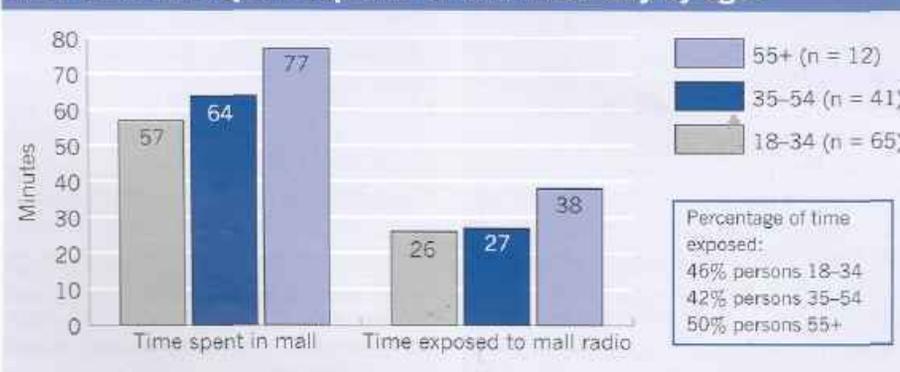
Audience Response analyses the PPM data and Media Monitors airplay information to help programmers hear what was playing on the air when they observe changes in the audience.

### Answers in a complex environment

Arbitron is just beginning to find new applications for its proven Portable People Meter technology. We are working closely with broadcasters, digital entrepreneurs, magazine publishers, the out-of-home advertising industry, as well as with advertisers and agencies, to deliver new insights into consumers as they connect with media in a digital world. ■

FIGURE 2

### How does time spent exposed to mall radio vary by age?



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