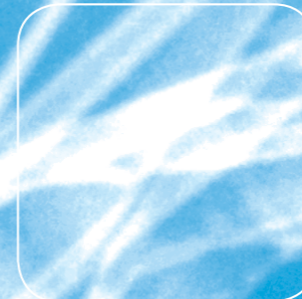


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Case study:  
**Measuring audience response to advertising**



from imagination to impact...

## National ICT Australia

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### The challenge

Every year the advertising industry spends millions of dollars trying to capture the attention of potential customers. Public spaces are full of marketing messages, placed everywhere from the sides of buses and cabs to large roadside billboards.

But business enthusiasm for display advertising is becoming one of its downfalls. An increasingly crowded market means the average person is subjected to hundreds of messages everyday. For many, the 'noise' becomes too much and they switch off – becoming oblivious to all but the most eye-catching of creations.

This trend has created a challenge for advertisers. They desperately want their messages to stand out from the crowd, but have no accurate way to measure how effective particular advertisements are in reaching this goal.

To date, many have relied on customer response mechanisms such as 1800 numbers and return SMS messages. While these work to a degree, they cannot be regarded as an accurate measure of whether a particular message is reaching its intended target market.

### The NICTA approach

A NICTA research team worked with a number of advertising companies to determine exactly what type of information they required in order to gain an understanding of how effective their campaigns were being.

The team attended a range of industry events, including a New South Wales Enterprise Workshop.

Researchers then related this feedback to an existing NICTA project focused on the development of video analysis technology. This software-based technology can scan video footage and extract information based on preset parameters.

Specifically the software is able to detect human faces and determine their orientation. By using sophisticated NICTA-developed algorithms, the software can make real-time scans of live video footage and determine and provide accurate data on people's behaviour and movements.

### The results

By linking the video analysis software to a small camera, the NICTA research team has created a monitoring system that can be embedded into advertising billboards.

The camera monitors people who come within a few metres of the billboard and the software analyses their response. Called TABANAR (Targeted Advertising Based on Audience Natural Response), the system can determine whether or not they look at the advertisement and the length of time they spend doing so.

Under certain conditions, the software can even determine which areas of an advertisement have succeeded in attracting attention, providing valuable feedback to designers and advertisers on what types of messages and visual elements work.

Through the aggregation of a large number of responses, advertisers can build an accurate picture of how effective their display campaigns have been. If a billboard is able to scroll through multiple advertisements, direct comparisons can even be made of the relative effectiveness of each.

The NICTA research team is now focused on enhancing the video analysis software to allow it to gather even more information. Future versions will be able to recognise whether people looking at the advertisements are male or female, their approximate age and other demographic information.

### Commercialisation opportunities

Early feedback from advertising companies has been particularly strong. NICTA is working with a number of parties to implement a small-scale trial of the technology to assess its effectiveness in real-world environments.

The development presents two potential business models for the future. The video analysis software could be packaged with cameras and sold directly to billboard owners. The information gathered could then be provided to advertisers as a value-added service.

Alternatively, a company could be established that provided the system as a managed service, delivering gathered information to interested advertisers.

Future versions of the system could also be used to analyse television-based advertisements, opening up another large market for the technology. Potential also exists within the computer gaming industry, where the technology could be used to improve the interactivity of video games.

