SOLUTION BRIEF
Intel® Core™ i7 Processors
Intelligent Digital Signage

Intel® Intelligent Systems

Intelligent Digital Technologies Empower the Bank Branch of the Future

Banks are transforming the branch experience using digital technologies that enable new ways for banks to engage and service customers.

"Like brick-and-mortar retail stores, banks are innovating to encourage people to come into their branches at a time when more and more transactions are conducted online."

– TRO Australia, Experiential Marketing Agency

EXECUTIVE SUMMARY

The role of bank branches is changing dramatically. Transactions are moving to the Internet, giving customers fewer reasons to visit branches. In addition, new technologies, such as social networking and personal financial management (PFM) tools, are transforming the relationship with customers, forcing banks to develop new ways to create the right customer experience while empowering customers and giving them more control.[1]

Given that bank branches are often located in premium, high-traffic areas, banks are motivated to get a better return from these properties; hence, they are reinventing them as the "Bank Branch of the Future." If branch visits are less frequent, they must become more valuable and more interesting. One example is an interactive game the National Australia Bank* (NAB) placed in the front window of their most central bank location in Melbourne. The game featured an indigenous brand of football, the leading sport in Australia; thus, it attracted very large numbers of passersby who played the game at all hours of the day. It was a highly successful experiment to see whether the public would engage with NAB in an innovative way and attract new customers.

Globally, NAB has more than 12 million customers and 40 thousand employees, operating more than 1,800 stores and business banking centers. This paper describes how NAB created an engaging game with digital signage that also provided totally anonymous demographic information on those who played, while maintaining complete respect for their privacy, and allowed the bank to measure the reach and effectiveness of its marketing campaign.

Figure 1. The Handball Challenge attracted passersby.

The Bank of the Future

Banks are seeking to create a more pleasant and interactive new consumer experience, and branches that feel stodgy or impersonal are being redesigned and refurbished. Instead of first encountering lines of sterile teller windows, consumers entering branches today are likely to be greeted by a concierge or digital wayfinder that steers them to the appropriate bank employee. Some banks are also encouraging visitors to access websites or check their email using Internet-connected tablets and computers that help create a more casual atmosphere.

Another change in branches is the extensive use of digital signs, as many as 12 per location, to promote interest rates and other financial products. Animated digital content attracts many more viewers than equivalent static posters – four to six times more viewers, according to a study conducted at the Venetian Hotel in Las Vegas.[2] When coupled with anonymous viewer analytics, digital signs can determine the demographics (e.g. gender and age range) of the individuals standing in front. This information enables banks to play relevant advertisements, such as credit card offers to young people or life insurance policies to seniors. Viewer analytics can also be used to ascertain when a customer has been alone for awhile, which could trigger a bank employee to offer assistance.

Business Objectives

As a way to contribute to the community, NAB established the popular NAB AFL Auskick program, which lets kids get out and play football like their favorite professional stars. Looking to create a marketing campaign based on this national program, NAB selected the TRO Group to develop and implement a digital game that would grab the attention of people passing its Collins St. branch in the heart of Melbourne.

The promotion was the first in a series of innovative projects created to engage consumers by delivering a connected IT experience with the goal of ultimately achieving the following objectives:

- Increase consumer traffic at branches
- Customize messages to customers
- Increase the return from the bank property
- Measure the interest level in campaigns for financial products

Interactive Branch Window

NAB and the TRO Group developed the Handball Challenge, a game that passersby could play, and compete with friends and family. The game was projected on the front window of NAB's main branch in Melbourne, so it could be played from outdoors any time of the day, as shown in Figure 1. In fact, it was common to see groups of visitors gathered outside the bank all hours of the day, including after midnight and early mornings.

The game was based on handball and the NAB Auskick program, and visitors completed hand passes to animated players with a flick motion on the window glass, which had a special film applied on the inside to turn it into a touch screen. Points were awarded based on the accuracy of the passes. The game was projected on the front window by an Intel® Core™ i7 processor in a media player.

Compared to a typical video wall application, the Handball Challenge was far more compute-intensive since the Intel processor had to simultaneously capture and process visitor hand gestures, run the game in real time, and display rich, multi-zone graphics.

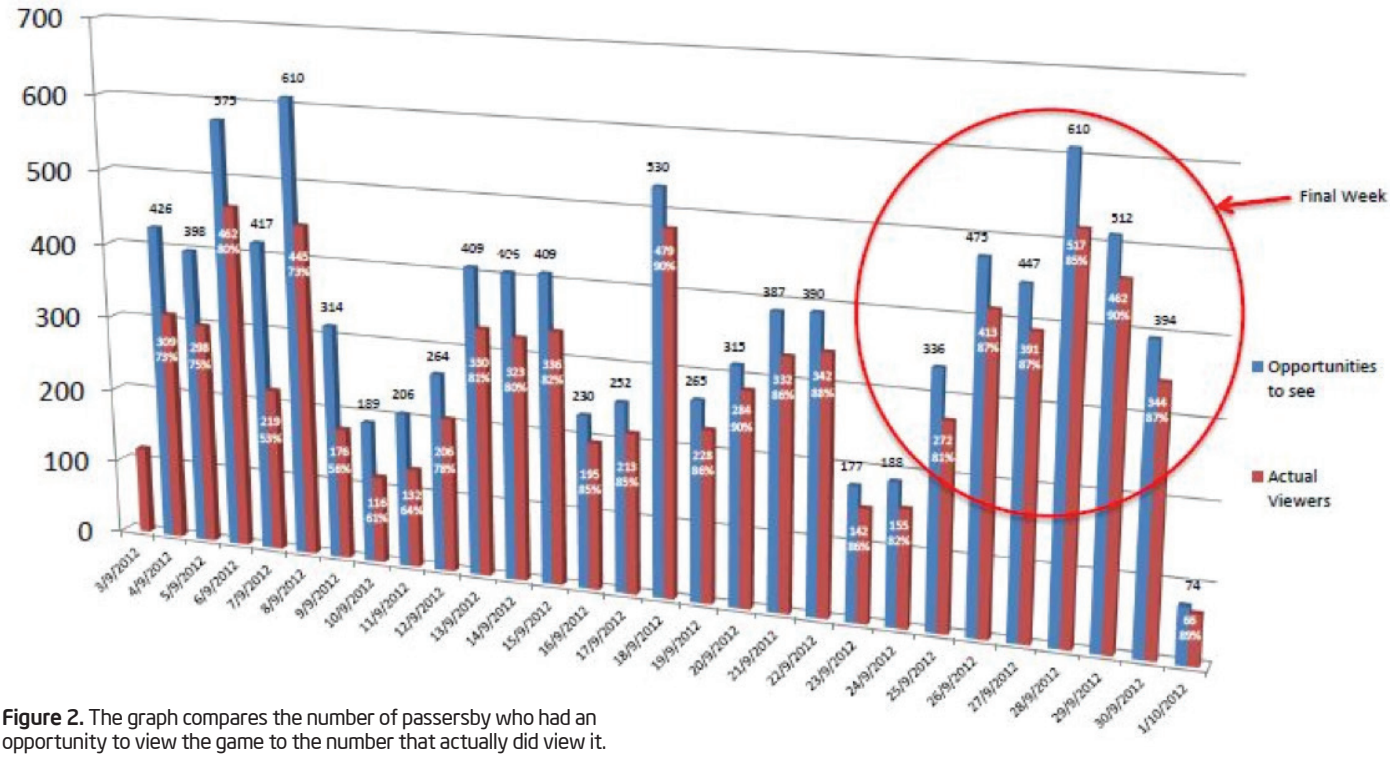

Figure 2. The graph compares the number of passersby who had an opportunity to view the game to the number that actually did view it.

Audience Measurement Technology

The Handball Challenge game provided an opportunity to test out Anonymous Viewer Analytics (AVA) technology, which provided information about viewers and their engagement level. The game had an optical sensor mounted to the front of the digital sign, enabling images to be processed using anonymous facial detection algorithms in the Intel® Audience Impression Metric Suite (Intel® AIM Suite). The software generated data on how many people looked at the game, how long they watched and interacted, and their gender and age bracket. All this was done while maintaining total anonymity and complete respect for people's privacy as outlined in the 7 Foundational Principles of Privacy by Design.[3]

The following summarizes some of the viewer and participation results.

Viewer Conversion Rate

For data collected over a four week period, 10,205 people had the opportunity to see the Handball Challenge, meaning they were in the immediate vicinity of the front window. Of those, 8,313 of them actually looked at the window, which is an exceptional conversion rate of 81 percent. The daily conversion rate is shown in Figure 2.

Gender

The gender split of viewers was almost even between males and females for the duration of the campaign; but in the end, it was slightly higher for females, as shown in Figure 3.

Age Range

The game was most popular with the Adult and Young Adult age groups, which can be attributed to the game being located in the central business district. Next were Children, which increased in the last 2 weeks of the campaign, followed by Seniors (Figure 4).

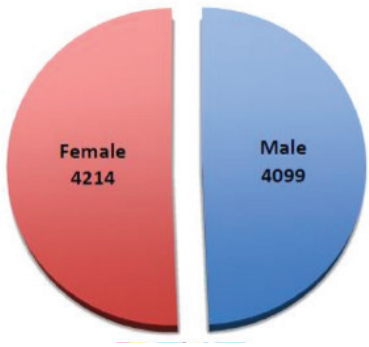

Figure 3. Intel® Audience Impression Metric Suite (Intel® AIM Suite) generated anonymous data about the gender distribution of the game viewers.

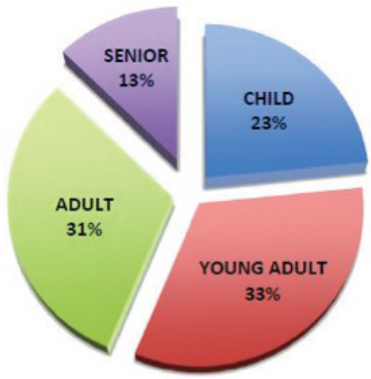

Figure 4. Adults represented nearly two-thirds of the viewers.

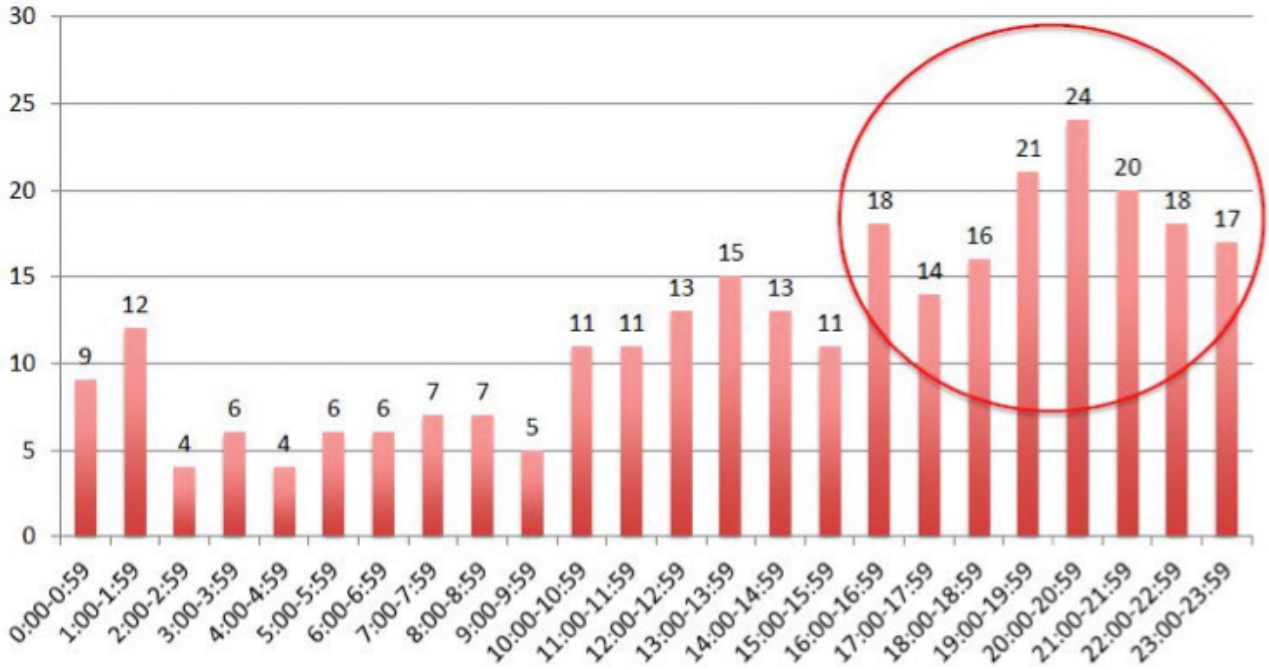

Figure 5. Audience viewer count data spiked after 4 p.m.

Viewer Counts by Time of Day

The viewer counts data in Figure 5 show the game attracted the biggest crowds from 4 p.m. (16:00) to midnight, possibly because it was when people started to leave work.

Player Conversion Rate

The chart in Figure 6 shows how many people who viewed the game were actually converted into game players. The final conversion from viewers to interactions for the campaign was about 26 percent, and the average increased over the final two weeks of the campaign. It is worth noting that a lot of people who played the game were likely groups of two or three (e.g., a parent with two children), so more viewers were effectively interacting as they stood alongside family or friends to watch them play; therefore, the engagement rate underestimates the level of participation.

Powerful Tool

Intel AIM Suite adds powerful data collection and audience measurement tools to a digital signage network. By providing valuable metrics that were previously unavailable, banks and other businesses can better understand audience characteristics such as actual impressions, length of impressions, potential audience size, and gender and age range demographics. It is also possible to measure the amount of time visitors remained in front of the display, which is an indication of their interest level.

This information has many practical uses, such as anonymously identifying the demographics of someone in front of a digital sign and using this information to play a relevant advertisement or other marketing messages. For instance, the sign could be configured to play different advertisements for loan offers based on the age of the viewer, such as one version showing a sporty car to young adults and another showing a new home to older adults. The effectiveness of the advertisements can be measured using the Intel AIM Suite, which reports the length of time customers stood in front of the sign and watched the advertisement.

These metrics can help marketers determine the best locations for displays, tailor screen content based on audience characteristics and understand audience engagement levels. Intel AIM Suite enables marketers to objectively measure advertising effectiveness – information that can be used to identify actionable steps to boost their return on investment (ROI).

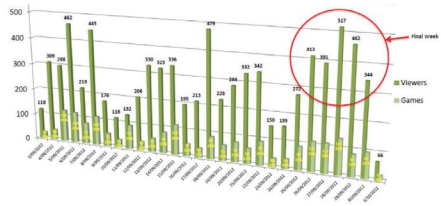

Figure 6. About 26 percent of viewers played the game.

Increasing Customer Engagement

The Internet age has increased the competition for consumer mindshare. Helping to address this shift, banks are redesigning branches to make them more approachable and to give consumers more reasons to visit. Along these lines, the National Australia Bank (NAB) and TRO Group created a captivating digital signage-based game to engage consumers and used the Intel AIM Suite to measure its effectiveness.

For more information about Intel digital signage solutions, visit **www.intel.com/retailsolutions**

[1] Source: The Bank Branch of the Future, Microsoft whitepaper.

[2] Source: "A Report on a Field Trial of Anonymous Video Analytics (AVA) in Digital Signage," pg 4, https://aimsuite.intel.com/sites/default/files/resources/White Paper - A Report on a Field Trial of Anonymous Video Analytics (AVA).pdf

[3] Sources: http://www.ipc.on.ca/images/Resources/7foundationalprinciples.pdf, http://www.privacybydesign.ca.

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