Measurement is the Bottom Line

Retail, says Paris based Quividi, is becoming a battlefield where brands compete for awareness, preference and ultimately purchase. Large brands are redirecting large budgets to in-store communication and many agencies are working on optimising marketing to achieve that last mile. Yet, little is known about the efficiency of the communication in public spaces as we do with other media.

Combining standard digital devices, advanced, real time image analysis technologies and strong data mining abilities, Quividi's stock in trade is just that, delivering software solutions to measure and optimise the visual impact of all organisations that communicate and sell in public spaces around the world. Marketing in store and more generally in public places, it says, will now be as efficient and accountable as it is on the Internet.

Quividi, whose UK distributor is Bath based BlueSight Systems, works with integrators, manufacturers, publishers, research companies and marketing agencies to deliver its easy to use, trusted solution that marketing for retail, and in particular the digital signage industry, can rely on and use to grow the technology into a major media. Its solutions provide superior technology, delivering rich information and performing constantly well in public environments. Moreover, with a low total cost of ownership and strong return on investment, it strives to build a community of partners around its solutions that do not record images or nominative data, to respect privacy.

Proprietary image processing algorithms at the heart of Quividi's technology analyse video flows from a sensor, in real time. The algorithms detect and qualify human faces and can tell if they are facing the sensor. Once detected, they are tracked visually in space and time to an accuracy of 0,1s and, provided the sensor is placed just above or below the point of interest, such systems measure the real exposure of all passers-by to products or messages within the digital signage content.

The algorithms also model the scenery and compute the total number of by-passers that may have been exposed, thus calculating OTS, the opportunities to see. Different algorithms then classify faces according to gender and age group.

From the detection process, a locally written audience report lists event times, exposure duration, the duration of the global presence within the field of view of the sensor, sensor distance and the gender and age group of each person detected. Reports are uploaded to a back-office data centre where they are aggregated with other reports from other machines for comprehensive audience analysis.

What do we buy into when we install digital signage? What is the payback in terms of who takes notice? There's only one to find out for sure and that's with audience metrics. We take a close look at what Quividi has to offer.

For each event – a new person entering the field of vision, for example, or a head moves – a trigger is sent in real time to third party applications, thus empowering a range of content adaptation applications.

No Big Brother here!

Far from being Big Brother, Quividi's solution records no image and extracts no uniquely identifiable data, thus complying with data protection legislation. The system works and reports in real time, measuring all people passing into the system sensor's field of view, providing rich qualitative information and respecting privacy. And calibration is not required, says the company, you just position the sensor, launch the software and go!

Within the Quividi system, VidiReports client software includes all the detection, tracking and classification algorithms. It only requires standard, low cost hardware to run, consuming often as little as 25% of the PC's CPU power. And a simple consumer webcam runs just as well as supported sophisticated cameras. VidiReports can thus be installed on available PCs near the points of interest to be measured. It runs in the background on the PC, often alongside other applications such as digital signage players.

VidiCenter, Quividi's hosted service, instantly displays in a graphical dashboard the audience data generated by each VidiReport. Key indicators are presented in a single display including number of viewers, numbers of OTS, conversion ratio, attention and dwell time splits, demographic break-outs, comparisons between locations and time spans.

Easily customisable VidiCenter charts are generated on the fly using the latest data uploadad from local machines. A monitor-
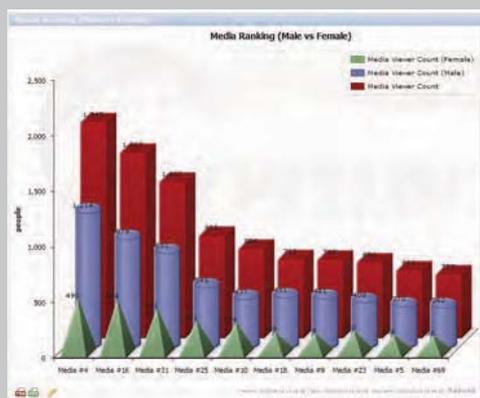
Two Quividi screen captures: the main dashboard, right, and left, a typical chart showing the number of viewers per medium, per gender.

A mobile phone boutique installation by Quividi's partner Supertec, incorporating a smart display and Quividi system that also detects when a mobile phone is picked up.

ing module alerts abnormal behaviour such as absence of input, unusually low figures or low upload frequency in the reporting boxes, and the service also lets the customers cross audience data with easily uploaded third party data such as shop visits and sales to compute conversion rates, or play logs to identify the audience of specific content played on digital signage.

Quividi can also customise and develop its modules to supplement solutions, for example, when customers require classifiers for extra visual features such as presence of glasses, type of hair. Data automation can also be integrated into third party applications which can adapt Quividi systems for specific cameras.

For digital signage, the increasing use of screens is shaping a new media industry, says Quividi who brings audience measurement and content adaptation to the fold.

Audience measurement by delivering metrics, improves the worth of digital signage by adding value to the media for advertisers. VidiReports and VidiCenter combine to reveal rich information at a micro-level, says the company: how did this ad perform last Friday in this shop? And at the macro-level almost in real time: how many people walked past the screens of a complete network over a month?

Content adaptation is triggering the right content for the right audience, in the right place. VidiReports sends information to the player engine to show specific content to specific profiles or to people whose behaviour matches a certain rule.

Shopper behaviour analysis

Knowing customers and how they shop is key in improving the performance of in-store merchandising, says Quividi. By installing tiny video sensors and mini PCs running VidiReports across shopping areas such as shop windows, shop entrances, end caps and shelves, retailers and brands can assess their performance and address specific questions such as which mannequin do people watch most in that apparel shop window? Do men enter perfumeries? Does this new PoP material in the category attract people's attention?

Crossing those results with other data such as footfall counts or sales receipts, will, says Quividi, further enhance the optimisation of retail merchandising.

For out of home TV audience analysis, by installing screens with a PC running VidiReports in bars and other public spaces, audience measurement institutes can conclusively complete surveys of who watches what. Quividi says its technology is perfectly suited to TV viewing in public spaces as it requires no co-operation from the audience, as opposed to most other in-house TV audience technologies.

Quividi boasts providing real advantage to its customers. It provides a complete solution, with VidiReports reporting OTS, real viewers, attention and dwell times and demographics such as gender and age. The easy to use open platform solution runs out of the box requiring only a single camera and covering most needs without customisation. It runs on small to large networks with modest CPU requirements, standard webcams and no calibration, meaning low deployment costs.

For one DIY retailer in France with over 100 superstores needing to rejuvenate its in-store communication strategy, Mirane installed Quividi on over 20 screens in each of two pilot stores. Data, regularly uploaded to VidiCenter, was presented to the retailer by Mirane on a regular basis and the retailer approved the solution.

Screens at the DIY stores have been measured 24/7 since June 2008, resulting in millions of audience data records. Results include OTS, number of viewers, their dwell and attention times and associated demographics. To cope with the large number of sources, different dashboards were created within VidiCenter, grouping screens by placement type and allowing for balanced comparisons.

Site-level dashboards were then added to aggregate and compare the performance of groups of screens. Mirane presented these results to the retailer on a quarterly basis, with Mirane further making use of the data for fine tuning recommendations in terms of programming, screen placement and business models.

With the Quividi solution, Mirane was able to quickly, easily and affordably deploy an exhaustive audience measurement solution. By accessing the data in real time, Mirane provides insightful and timely recommendations to its customer whilst relying on Quividi's expertise to define data dashboards which highlight key metrics for the screens. Mirane is now deploying the Quividi solution in other superstores in France and around the world.

www.quividi.com