

**SOLUTION BLUEPRINT**  
Intelligent  
Social Display  
Retail Solutions



# INTELLIGENCE IN. AMAZING OUT.

## Intelligent Social Display Solution Increases Brand Engagement

### EXECUTIVE SUMMARY

Venue owners and advertisers know they need a presence on social media in order to increase customer interaction, but it's often too costly, and they don't have the budget. An affordable solution is Phocabby\*, an intelligent social display that attracts and entertains visitors in a way that leads to literally thousands of branded photo postings on social media sites, like Facebook\*. Customers walking up see themselves on a high-definition display, and after choosing a fun theme, they take a picture that is automatically content screened, sent to the cloud and posted online without requiring any venue input. Afterwards, they can interact with the photos through social media on their tablets, phones and desktop devices, again without assistance from the venue.

Some businesses now have hundreds of thousands of photos of smiling customers supporting their brand and location - photos that were created and posted in a low-touch and cost-effective manner. This solution blueprint discusses how this intelligent social display solution, a product from Phocabby Holding BV, can help venues and advertisers attract attention, go viral, increase their customer understanding and generate on and offline repeat business.



## Table of Contents

Executive Summary .....	1
Key Business Objectives .....	2
Who Will Benefit From This Solution ..	2
Meeting New Market Demand .....	2
The Business Challenge .....	3
Solution Overview .....	3
Technology .....	7
Summary .....	9
Resources .....	9

## KEY BUSINESS OBJECTIVES

Expanding offline and online customer reach, driving interaction and engagement on social media, connecting with customers, and promoting brand and location to drive conversion in a simple and easy to use way.

## WHO WILL BENEFIT FROM THIS SOLUTION

Phocabby, an intelligent interactive social display solution, integrates various advanced technologies, including consumer analytics and cloud-based management, that provide many benefits to venues, advertisers and customers.

- **Venues** can boost their social media presence in a way that creates real customer connections and encourages repeat business, while being entertaining, cost-effective and low maintenance.
- **Advertisers** can take customer demographics into account in order to deliver targeted messages, and use market segmentation to support narrow- and crowd-casting strategies that improve brand recall.
- **Customers** have a fun and personalized experience when taking themed photos and sharing their memorable moments - all free with no registration required.

## MEETING NEW MARKET DEMAND

For anyone wondering if social media marketing is right for their business, the verdict is in...it's a great way to drive repeat business and to attract new customers. Social media has changed the way people connect, discover and share information,<sup>1</sup> according to Constant Contact\*, a marketing services company focusing on engagement marketing.

Confirming the important role social media can play, a survey of more than 12,000 U.S. consumers "found that 81 percent of them are influenced by their friends' social media posts, while a comparable 78 percent are influenced by vendors' posts."<sup>2</sup> The study, conducted by Market Force, a worldwide leader in customer intelligence solutions, suggests that company-driven social media content is surprisingly powerful in driving purchase decisions.

Despite the potential benefits, some venue owners and advertisers may feel the cost and time to implement a program is prohibitive. In reality, small business spending for social media varies from fairly low to high, with a median external expense of around \$2,500 (USD) annually and a significant number spending \$100,000 or more, according to the SMB Group Social Business Study 2012.<sup>3</sup> Still, these figures do not include internal staffing costs, which may be considerable since social media campaigns can be very time consuming.

## THE BUSINESS CHALLENGE

Venue owners and advertisers investing in social media programs face diverse challenges, including how to:

- **Attract Attention:** As venues and advertisers venture beyond traditional marketing channels with social media, they'll need to find ways to cut through the clutter in order to stand out in this congested space.

The social media market place is already crowded and becoming more so. According to Nielsen and NM Incite's 2012 Social Media Report, total time spent on social media in the U.S. across PCs and mobile devices increased 37 percent to 121 billion minutes in July 2012, compared to 88 billion in July 2011.<sup>4</sup>

- **Go Viral:** An effective social media strategy requires much more than a Facebook page; it's about creating the right experience and content to attract and involve consumers.<sup>5</sup>

"Going viral is the ultimate goal of any social media campaign. It's equivalent to those proverbial '15 minutes of fame,'" according to Ali Goldfield, owner of ADR Social Media.<sup>6</sup> "The frustrating truth of the matter is that most content will not go viral; no matter how hard you try."

- **Increase Customer Understanding:**

For most businesses, success depends upon knowing what customers want and what matters. Taking this to a new level, consumer analytics is helping businesses segment their customer base more granularly (i.e., gender, age range, visit frequency), allowing them to target advertising and promotions in order to increase marketing effectiveness.

"Marketing wisdom says that if a campaign delivers the right message to the right people, assuming they are in the right environment at the right time, success will result. Various forms of analytics exist, breaking down consumer activity and behavior," says Steve Arel, contributing writer, [DigitalSignageToday.com](http://DigitalSignageToday.com).<sup>7</sup>

- **Generate Repeat Business:** Venues and advertisers that focus all their energies on winning new business, rather than servicing existing clients, may have their priorities the wrong way round. Repeat customers are less costly than new ones since the hard work is already done, according to [www.startup.cp.uk](http://www.startup.cp.uk).<sup>8</sup>

"Furthermore, a repeat customer can become an ambassador for your brand, spreading the word about your company among their friends and partners."<sup>8</sup>

## SOLUTION OVERVIEW

Looking at Phocabby, one sees a large, high-definition display with big colored buttons below in a physical wrapping designed to promote a venue or product. See Figure 1 for an implementation example. When people walk by, they are attracted by the red-blue-green buttons and compelled to come closer, at which point they will see themselves in the display, surrounded by a theme. The theme could be anything, like a soft drink, the venue's logo or a sporting event. Intel® Audience Impression Metric Suite (Intel® AIM Suite) is used to instantly retrieve logos or branded themes from the Phocabby database that matches the demographic or gender for the audience in front of the unit. This is an effective way to instantly connect location, brand and customer.



Figure 1. Phocabby implementation example.

## Intelligent Social Display Solution Increases Brand Engagement

Realizing their image is on the display, people try to interact with the machine by pressing the buttons – green and blue buttons change the theme, and the red button initiates a countdown prior to taking the picture. No instructions are needed. Next, the photo is sent to the cloud, and the content is screened and posted to the venue’s social media page. Between 20-35 percent of the time, people will go to the website to see how they look and interact with the photos: liking, tagging, downloading and sharing them.

When no one is nearby, Phocabby plays targeted digital advertisements for the venue or a third party. These advertisements are driven by a powerful analytics database that has location, social and demographic information combined with information generated by Intel AIM Suite, all used to target the audience surrounding the unit, thus generating an incremental revenue stream for the venue owner. Similarly, Phocabby can be programmed to play advertisements at certain times, like at the top of the hour.

### Other Usage Model Examples

Phocabby allows venues and advertisers to get creative, as described in the following usage examples.

- **Send a birthday email:** When customers tag photos, their Facebook pages typically list their birthdays, enabling the venue to send them a timely birthday greeting and perhaps a special promotion.
- **Conduct an interactive poll:** While customers are waiting three seconds for their photo to process, the venue or advertisers can ask a quick question, such as “Do you like pizza with tuna or sausage?” Afterwards, it’s possible to send them a promotion for pizza based on their answer, while also collecting valuable marketing information. A clothing manufacturer may want to ask a question about the color of a dress showing on the screen, “Do you prefer red or blue?”

- **Provide free Wi-Fi:** Venues can encourage participation by offering free Wi-Fi to customers who take a picture of themselves using Phocabby. This can be done rather easily since Phocabby is configured with a wireless router.
- **Run a sweepstake:** It’s possible to increase engagement by running a competition that awards a prize to the customer whose photo gets the most likes over a defined period of time.

### Key Benefits

Phocabby is designed to help venues and advertisers grow sales, increase reach and improve brand recall. This is achieved by creating a fun and entertaining experience that connects with customers and creates a high level of engagement. The photo taking generates exposure on social media, along with positive customer interaction leading to likes, comments, tags and shares. Overall, Phocabby is a multi-faceted marketing tool, as illustrated in Figure 2.

Phocabby offers a large number of additional benefits, such as:

- It’s simple and easy to use.
- There are no barriers to entry for venues and advertisers.
- The high conversion rate makes it an effective marketing tool.
  - > Less expensive than buying “likes”
  - > Greater appeal than static billboards
  - > Lower marketing cost than other social media approaches
- The system is fully customizable.
- The promotion results are measurable.
- The maintenance effort is low since the system is managed through cloud.



Figure 2. Phocabby\* helps achieve multiple marketing objectives.

**How it Works**

Phocabby combines offline and online marketing, media and advertising. This is achieved by converging private and public clouds, as illustrated in Figure 3. Phocabby connects to the Phocabby private cloud, giving it access to downstream media, like advertising Flash and HD media clips, and allowing it to send upstream branded impressions in the form of customer photos. The private cloud also stores media, processes consumer analytics and screens photos for obscenities, if requested, before publishing them to standard social media sites in the public cloud. In summary, the solution brings together offline marketing through targeted venue and advertiser media, and online marketing via top social media franchises.

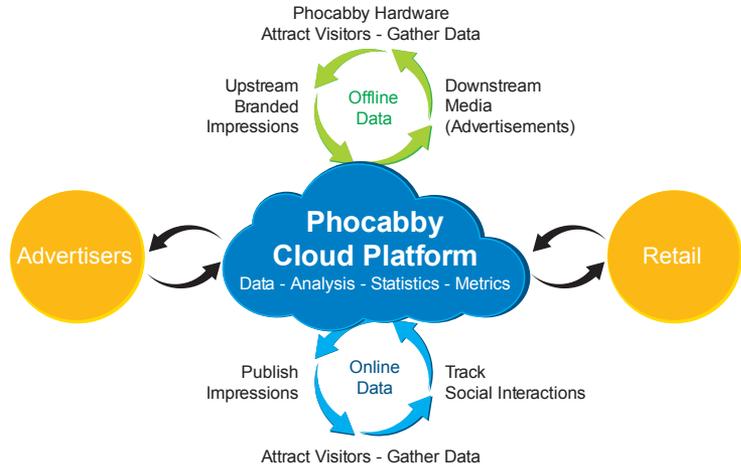


Figure 3. Phocabby\* converges online and offline marketing.

**Consumer Analytics**

The solution integrates anonymous viewer analytics (AVA) technology used to process images captured by an optical sensor mounted to the front of the Phocabby. The technology, delivered by Intel AIM Suite, collects customer demographic information and dwell times – all detected anonymously and while respecting viewer privacy. This gender and age range information can be used to target advertisements, as in showing advertising content that is of interest to the person standing in front.

Moreover, venues and product manufacturers get access to quantitative data that indicates the effectiveness of promotions such as impression counts, viewer demographics, the amount of time people viewed the content and foot traffic. This capability, as well as common metrics used by advertisers, such as proof of play and proof of impression, is supported by Intel AIM Suite running on Intel® processors.

One example of the demographics data generated by Phocabby is the social graph shown in Figure 4. Here, customer visits are segmented by gender and age range, allowing venues and advertisers to better understand the demographics of those using Phocabby. This information can also be analyzed over time intervals, enabling advertisers to target different customer sets at various times of the day.

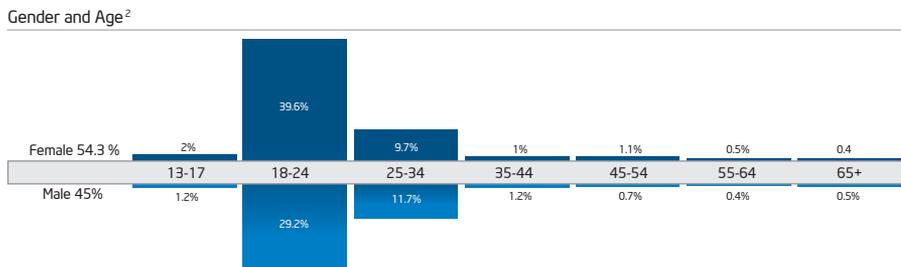


Figure 4. A social graph provides a breakdown of visitors by gender and age range.

## Intelligent Social Display Solution Increases Brand Engagement

Phocabby Holding BV also uses the capability to anonymously read the media access control (MAC) addresses of cell phones in the vicinity, enabling Phocabby to detect repeat visitors. Using this capability, it's possible to determine how many customers returned and how often, as shown in Figure 5.

### Real-World Results

On average, one Phocabby machine delivers between 3,000 and 10,000 photos per month. Thus, in some instances, millions of viral impressions associated with a venue's logo, location and theme were produced and posted on different social media sites. The photos typically have a 20 to 35 percent online interaction rate, meaning a large portion of customers are tuned into brand ambassadors through likes, comments, and photo tagging and sharing.

In the real-world example presented in Figure 6, a venue experienced a 14 times increase in reach in less than four months. The green line indicates the number of photos uploaded per week; the blue line shows the weekly reach as measured by people on Facebook talking about their page; and the red line represents the cumulative number of likes. The weekly reach soared from around 500 per week to upwards of 7,000 over this period, while 'likes' grew nine fold to 900.

The Phocabby interactive social display solution helps address several challenges facing venue owners and advertisers who decide to implement social media programs.

### ▪ Getting customers' attention (ATTRACT)

Expect some noise and excitement as crowds of people gather around the eye-catching Phocabby, which is fully branded to blend seamlessly with the style of the venue. Visitors will stand around the screen, see themselves posing with their friends and then press the big red button to start the countdown to snapshot.

### ▪ Going viral (CAPTURE)

Once their pictures have been taken with Phocabby, an impressive 20-35 percent of patrons go online to view them on the venue's Facebook page. As a result, some businesses now have hundred of thousands of photos showing customers who are enjoying their brand and location – all captured without any effort on their part.

### ▪ Increasing customer understanding (CONNECT)

Phocabby provides valuable metrics to retailers, brands and media companies that were previously unavailable, enabling them to better understand audience characteristics such as actual impressions, length of impressions, potential audience size, and gender and age range demographics. This is possible because Phocabby incorporates the Intel AIM Suite and can sense individual customers via the Wi-Fi signals from their smart phones.

### ▪ Generating repeat business

Phocabby is Wi-Fi enabled, so venue owners can entice customers to opt-in for free wireless connectivity. Once they opt in, for either Wi-Fi or photo access, it's possible to send targeted messages about special events and offers that will get them to return.

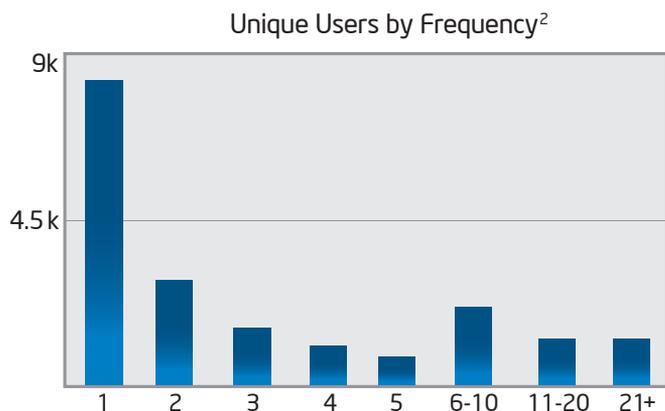


Figure 5. A histogram shows the number of unique customers by their number of visits.

**TECHNOLOGY**

Phocabby is an all-in-one intelligent digital signage solution consisting of an onsite hardware platform and a proprietary cloud-based management platform. The cloud management platform runs on Intel® Xeon® processor-based servers.

**Phocabby Platform**

The machine has a large display, three buttons and two high resolution cameras: one for taking pictures and the other for consumer analytics. The simple user interface does not require a touchscreen. The hardware platform is powered by the Intel® Core™ i7 processor, which has the computing and graphics performance needed to simultaneously drive the display, capture images, and run viewer analytics software and the interface to the cloud.

To maximize reliability, Phocabby has no moving parts. This includes the hard disk drive that is based on Intel® Solid-State Drive (Intel® SSD), which are more reliable and faster than rotating HDDs since there is no mechanical movement. Phocabby connects to the Phocabby private cloud via Ethernet (wired or 3G/4G mobile broadband). The machine can optionally route Wi-Fi service to customers and employees. When Phocabby is installed, it will send a homing signal across the Internet and retrieve configuration for setup - all provisioning is done automatically.

**Advanced Remote Management**

Venue owners will appreciate the management capabilities of Phocabby that allow it to be remotely managed by the Phocabby private cloud. This capability is enabled by Intel® Active Management Technology (Intel® AMT),<sup>9</sup> a proven solution integrated into many embedded Intel processors and chipsets with the goal of driving faster repairs and lower system support costs.

Taking remote management to a new level, Intel AMT allows consoles to fix a wider range of systems issues, even when the operating system is down. For example, it's possible to repair corrupted drivers, application software or the operating system for a non-responsive retail system that won't run or boot. This is achieved through a capability called out-of-band (OOB) management, which works over Ethernet, Wi-Fi and 3G/4G networks.

This out-of-band link employs a dedicated manageability engine, which provides control over non-functioning systems. In contrast, most traditional remote management consoles use an in-band link that requires the system to perform networking functions - in other words, have a working operating system, CPU and network drivers. When a system fails, the in-band approach has the drawback of relying on the continued operation of many system components, significantly limiting the types of problems or failures that can be fixed remotely.

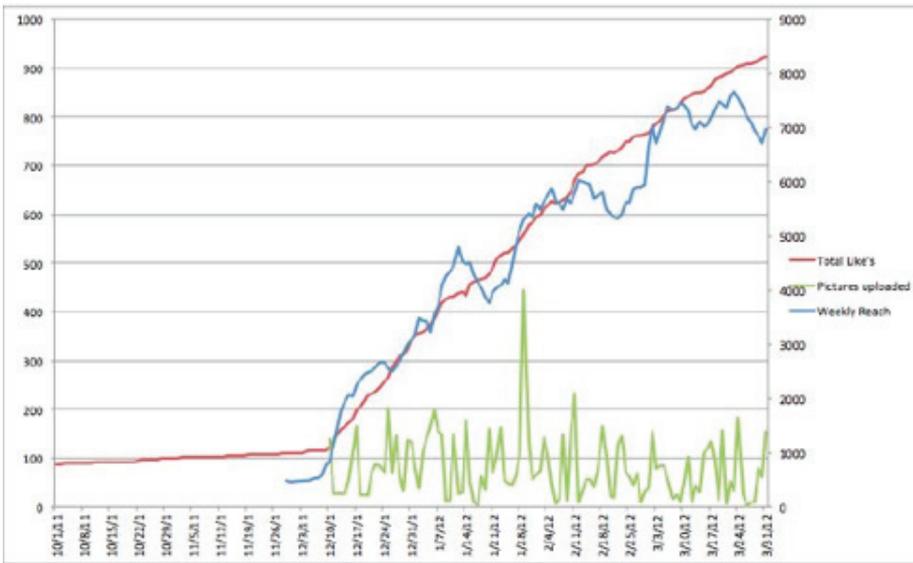


Figure 6. Actual results produced by Phocabby.

### Anonymous Viewer Analytics (AVA)

What you can measure, you can improve and optimize. Using Intel AIM Suite technology, Phocabby can be used to gauge the effectiveness of the displayed content both online and offline. The solution measures how much time people spend looking at the display as well as the length of their online engagement, which is an indication of the effectiveness of advertisements. This information allows brands and retailers to tailor advertising content based on audience behavior and characteristics, helping to show the right message to the right people at the right time. Intel AIM Suite makes it possible for advertisers to quantify and maximize the return on investment (ROI) for their digital signage campaigns.

The underlying technology for the Intel AIM Suite capability is Anonymous Viewer Analytics (AVA) technology, which utilizes Intel processors and small optical devices connected to a digital sign. Intel AIM Suite software contains anonymous face detection algorithms to determine how many people looked at the advertising, how long they watched, and their gender and age bracket. Intel AIM Suite does all of this while maintaining total anonymity and complete respect for people's privacy as outlined in the 7 Foundational Principles of Privacy by Design.<sup>10</sup>

### EMPOWERING A NEW WORLD OF RETAIL INNOVATION

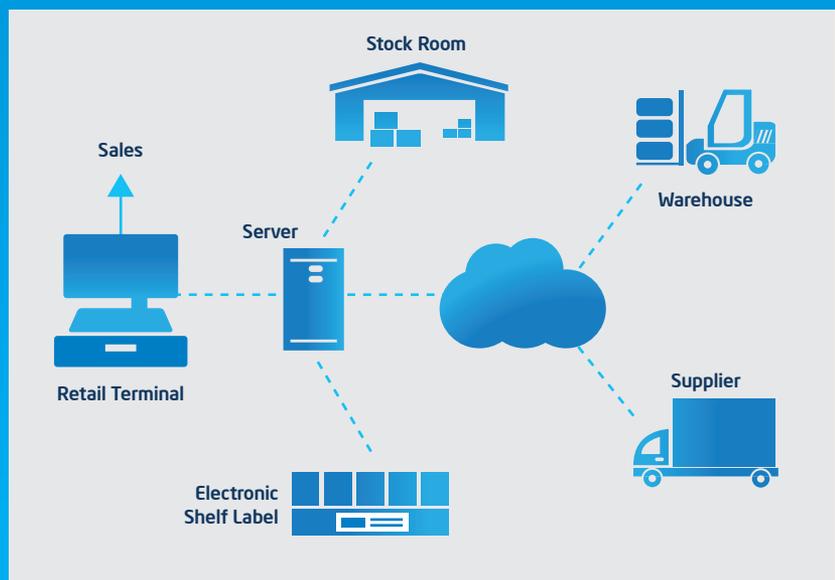
The retail industry is in the midst of a dramatic information revolution that is laying the groundwork for new consumer experiences, enhanced productivity, reduced inventory distortion and brand optimization. Intel is addressing this transformation with the Intel® Intelligent Systems Framework, a set of interoperable solutions designed to facilitate connecting, managing and securing devices in a consistent and scalable manner.

What can emerging intelligent retail systems do? Imagine an intelligent store where incoming weather data indicates a severe storm approaching. The store's digital signs and kiosks immediately begin promoting items commonly purchased during storms, like umbrellas, and prices are adjusted to reflect the predicted increase

in demand. Price updates are transmitted to electronic shelf labels and the back office. Data from checkout confirms umbrella sales are increasing, causing immediate alerts to the stockroom. The store's warehouses and key suppliers send shipments to replenish the shelves.

The Intel Intelligent Systems Framework helps simplify the deployment of intelligent systems and enables retail OEMs to shift their investments from achieving interoperability to unlocking the value of data. The framework features fundamental capabilities, delivered by components that address connectivity, manageability and security, including software and middleware from Wind River\* and McAfee\*.

For more information, visit [www.intel.com/content/www/us/en/embedded/intelligent-systems.html](http://www.intel.com/content/www/us/en/embedded/intelligent-systems.html).



## SUMMARY

Phocabby enables venue owners and advertisers to not only increase their presence on social media in a fun and entertaining way, but also to connect location, brand and consumer. The solution provides the opportunity to generate many thousands of branded viral impressions with relatively low effort and cost. It's possible to combine online and offline marketing, as well as consumer analytics, thus creating synergies that otherwise would require expensive marketing programs. Phocabby takes advantage of high-performance yet power-efficient Intel Core i7 processors, anonymous viewer analytics technology found in Intel AIM Suite and advanced remote management capability enabled by Intel AMT.

## RESOURCES

### Intel® Retail Solutions Partner Network

Redefining what's possible, leading solution providers have come together to address the specific needs of retailers, whether it's consulting, content creation and management, retail systems, hardware customization, deployment support, network management or cloud-based services. The Intel® Retail Solutions Partner Network provides one-stop shopping for cutting-edge technologies that deliver new consumer experiences, enhanced productivity, reduced inventory distortion, brand optimization and more. To learn about member solutions, visit [intel.com/retailsolutions](http://intel.com/retailsolutions).

<sup>1</sup> Source: "Why Social Media Marketing?," [http://www.socialquickstarter.com/content/1-why\\_social\\_media\\_marketing](http://www.socialquickstarter.com/content/1-why_social_media_marketing).

<sup>2</sup> Source: "Market Force Study Shows Companies Wield Comparable Social Media Influence to Friends," May 1, 2012, <http://www.marketforce.com/press-releases/item/research-social-media-influence>.

<sup>3</sup> Source: "Yes, Some Small Businesses Have Social Media Budgets over \$100,000," by Anita Campbell, Founder, CEO and Executive Editor of Small Business Trends, January 3, 2013 <http://smallbiztrends.com/2013/01/small-businesses-social-media-budgets.html>.

<sup>4</sup> Source: <http://blog.nielsen.com/nielsenwire/global/social-media-report-2012-social-media-comes-of-age/>

<sup>5</sup> Source: <http://www.simplehrguide.com/why-is-hr-social-media-strategy-important.html>

<sup>6</sup> Source: "Make That Go Viral, Please," by Ali Goldfield, October 2012, <http://socialmediatoday.com/adr101/958861/make-go-viral-please>.

<sup>7</sup> Source: "Video Analytics for Digital Signage Deployments," by Steve Arel <https://aimsuite.intel.com/sites/default/files/resources/White%20Paper%20-%20Video%20Analytics%20for%20Digital%20Signage%20Deployments.pdf>.

<sup>8</sup> Source, "Top 10 ways to generate repeat business," <http://www.startups.co.uk/top-10-ways-to-generate-repeat-business.html>.

<sup>9</sup> Intel® Active Management Technology (Intel® AMT) requires the platform to have an Intel AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. With regards to notebooks, Intel AMT may not be available or certain capabilities may be limited over a host OS-based VPN or when connecting wirelessly, on battery power, sleeping, hibernating or powered off. For more information, see <http://www.intel.com/technology/manage/amt>.

<sup>10</sup> Source: [www.ipc.on.ca/images/resources/7foundationalprinciples.pdf](http://www.ipc.on.ca/images/resources/7foundationalprinciples.pdf), [www.privacybydesign.ca](http://www.privacybydesign.ca).

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked "reserved" or "undefined." Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request. Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order. Copies of documents which have an order number and are referenced in this document, or other Intel literature, may be obtained by calling 1-800-548-4725, or by visiting Intel's Web site at [www.intel.com](http://www.intel.com).

Copyright © 2013 Intel Corporation. All rights reserved. Intel, the Intel logo, and Intel Core are trademarks of Intel Corporation in the United States and/or other countries.

\* Other names and brands may be claimed as the property of others.

06/13/DM/DM2/MB

