Pretty robots are the future

Traditional models of advertising – online and offline - are slowly dying a death; but content providers still need to generate revenue if their businesses are to endure. The solution could just be a new kind of intellectual asset

By **Dan O Figueroa**

After more than a decade at Sony PlayStation, I have been researching where to go from here. I have been thinking about what I am passionate about and whether this coincides with the future of technology and business.

I was recruited back to Sony because it was about to take the PlayStation 2 games system online and I was doing among the most current dotcom technology, content and and partnership agreements. At the time, I was working at AltaVista, where we were launching the company's portal play and multimedia search. Some of the first image-search results on the Web came from crawling the databases of Corbis and Getty Images. However, in exchange for populating our index quickly with high-quality images, we had to display the photos with a watermark. That would be completely unacceptable now, but back then, searching for "tiger" and getting a picture of a tiger as a result was cutting-edge. It was an exciting time for the Internet and technology in general.

Down the road from AltaVista were two guys who had created a search engine that looked very unlike most web portals. We thought their spartan home page with a search box – and a silly name – was so "un-dotcom". It turned out that being un-dot.com was the right thing to be. Sergey Brin and Larry Page were on the verge of the next big thing: Google had low overheads and provided the search results that people wanted.

Our engineers said that AltaVista's search results were better than Google's because ours were purer; Google was factoring popularity into its algorithms. The pure results mattered to our engineers, but not to the masses. The average person searching for "apple" wanted search results for Apple computers, not Fuji apples. The masses have spoken and now Brin's wealth is estimated at US$18 billion and Google is one of the most powerful and influential companies in the world. Meanwhile, AltaVista is all but dead and my 80,000 shares are worthlessly floating in the ether.

Print, music, television, video games, apps and the Internet are all essentially about the same thing: content that people seek out. In reflecting on the evolution of how, what and where we consume content, it is clear that all of these areas intersect. If you are in any of these businesses, you need to be in all of them to some degree, as people on the move consume content from all of these places. Technology has freed them from the tether of a device cable, but in doing so has made it more difficult to reach these freed people. Only "pretty robots" can solve this dilemma, which makes them the next big thing. And so I decided that I wanted to make pretty robots.

Traffic equals money

In order to understand what the next big thing will be – and how and why – we have to understand how today's big things came to be valuable intellectual assets. Brin and his counterparts at Facebook and YouTube are vastly successful. Their companies represent some of the most valuable intellectual property in the world and owe their value in large part to high levels of traffic. In 2011 I wrote an article about how companies are creating valuable intellectual property with user-generated content (UGC) (see "Growing IP with UGC", *IAM Magazine*, issue 48, July/August 2011, pages 53 to 56). It is a red-hot trend in video games, television and the Internet.

Many of the world's most popular and valuable internet companies are fuelled almost entirely by UGC that is freely provided to the host company by end users. However, the internet companies are interested not in the UGC, but in the traffic from people coming to the websites to create it. YouTube, Google and Facebook are perhaps the most famous online examples of this strategy, but it is also used in other industries. Video-game players design new levels, characters, features and settings, then upload them for others to download. The game generally becomes far bigger and broader than it was when it was shipped. This ultimately results in more sales, thanks to the contributions of the people who first paid for the game. In television, UGC can take the form of viewers' videos or votes cast for a favourite talent-show act, which sends a message to programme producers about what their audience wants to see. The UGC on YouTube is the videos that people make and upload; the traffic comes when people visit the website to watch them. The UGC on Facebook is the information that people post for the entertainment of their friends and family. The UGC on Google is more subtle: it is the searches that we make in exchange for the search results that we want.

In each instance, a company has created a place or vehicle that makes people want to come back and participate in something that they care about. In general, internet companies are not interested in the ownership of UGC - the last thing that they want is to own the potentially libellous, infringing, incriminating or obscene content of a mobile upload made in the early hours of the morning.

Internet companies primarily care about the enormous volume of traffic being generated on their websites. In the era of newspapers, traffic was called "circulation" and dictated the price of an advertisement. This straightforward business model transferred to radio, television and the Internet. The NFL Super Bowl has the highest viewership on US television, so it commands the highest price for an advertising spot. Similarly, Facebook's user base and rate of traffic are among the highest on the Internet; so too are its valuation and advertising rates.

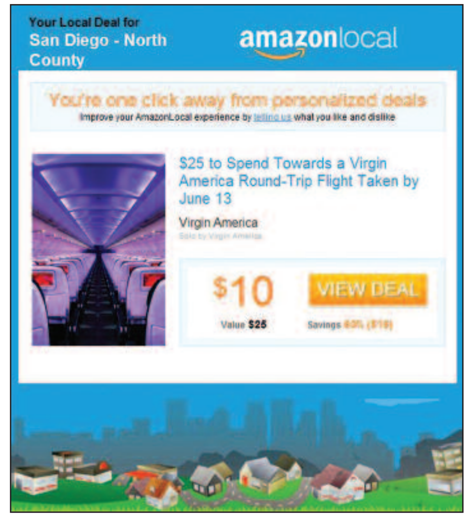
Gathering large numbers of people to one place is the goal of print media, radio, television and the Internet, although they approach it differently. To get 100 million people to the same place, event or programme generally requires mass appeal. However, YouTube, Google and Facebook work on the opposite premise. Traditional media thrives (or dies) by its ability to create content with broad appeal, whereas YouTube, Google and Facebook succeed because of their ultra-narrow appeal. Very few people care about the photos of kindergarten graduation that you posted on Facebook, the shoes that you searched for on Google or the cookery video that you watched on YouTube, but they are all important to you and to a few people you know. Generating vast traffic from content with very specific appeal is something that print, radio and television cannot do.

Google, YouTube and Facebook are the three most visited websites in the world. They have found a way to get most of the world's internet users to visit their websites – faithfully, happily, daily.

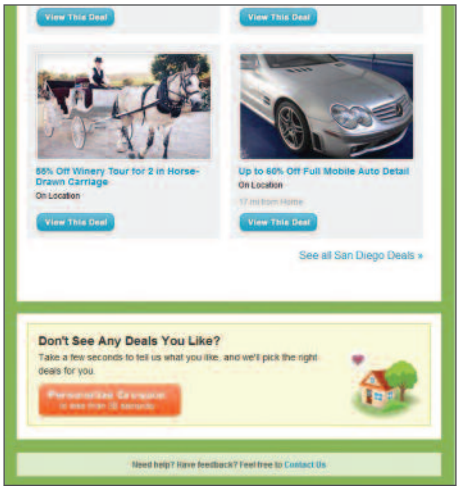
These companies dominate because each gives people something that they want or need, and does so better than its competitors. A simple formula does not mean that success is easy: it would be difficult to offer a better search than Google or to be better than Facebook at creating a searchable online photo album to share with friends. However, even if rivals cannot compete directly, they may find another way. There will always be a new big thing – just ask Kodak, Nokia, AltaVista, AOL or Myspace.

Age-old problem

Dominant online companies face the same problem as print, radio and television: as technology evolves, so do its users. They have come to ignore banner advertisements, even those which move or have eye-catching graphics. We recognise advertisements and unless they are directly related to what we came for, we ignore them, even if we have to interact with them to find the "skip this ad" button that



Saving money the Amazon way



Personalised service from Groupon

allows us to return to our content. Internet users have become good at ignoring advertising – and therein lies one of the biggest weaknesses of Google, YouTube and Facebook.

The human reaction of ignoring advertising is an even bigger problem for television. A digital video recorder (DVR) allows viewers to fast-forward through commercials in a pre-recorded programme. This problem began with the video cassette recorder, but skipping breaks was not the primary purpose of the invention; rather, it was a by-product that evolved from viewers' desire to watch the content that they had recorded, not the adverts forcibly diced into their beloved film or series. Today, people want to ignore commercials so much that almost everyone has a strategy for avoiding them.

Making matters worse

Instead of trying to solve the problem, Dish Network is exacerbating it. Since the television market – like the mobile market – is nearing saturation, cable, phone and satellite companies are battling to steal subscribers from one another. Recognising the universal impulse to ignore commercials, Dish Network has built a new feature into its set-top boxes. AutoHop identifies the commercials in a programme and automatically fast-forwards through them. The issues at stake are reminiscent of the Sony Betamax time-shifting lawsuit, and broadcasters Fox, CBS and NBC recently sued Dish Network over its feature, alleging that the playback of their programmes without the commercials amounted to a re-broadcast in violation of their agreements with the networks. A Fox spokesman is reported as saying that Dish Network has the "clear goal of violating copyrights and destroying the fundamental underpinnings of the broadcast television ecosystem". In other words, Dish is destroying an age-old advertising revenue model by rendering traffic irrelevant.

Television rating analysts such as Nielsen are aware that people ignore advertisements, even adjusting for the effect when reporting on traffic – and terming the factor "waste". Nielsen must try to estimate the percentage of households that are watching a given programme with a DVR. It must then project how many of those households are using the DVR's time-shift capability, rather than watching live; the time-shifting viewers are almost all skipping the advertisements. An advertiser that wants to buy airtime for a top-rated show does not want to pay for a spot for 30 million viewers if the waste factor is 43% - it wants to pay 43% less.

Delivering advertising content is both a concern across all media and a big opportunity for some new intellectual property. Undoing technology is akin to un-ringing a bell, and it is equally impossible to change the part of human nature that makes people ignore advertising that they don't care about. What is true for television is true for all media. There will always be a waste factor because people consuming content are like dogs at feeding time - indifferent to anything that is not tastier than the food in the bowl in front of them.

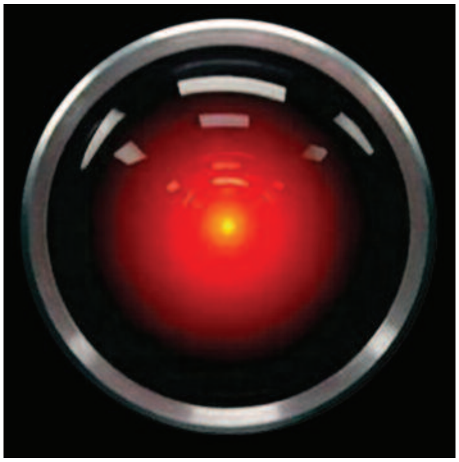
Waste is not just on Facebook

Before and after its initial public offering, Facebook was fiercely criticised over the waste factor. But how measurable is the effect of advertising in any medium? Print, radio or television advertising is not necessarily better than internet advertising. Arguably, the wrong advertisement to the wrong person at the wrong time will be ignored in any medium because everyone is adept at filtering out what they do not care about. However, ignoring turns into hunting as soon as we see or hear an advertisement for something that interests us – proof that people only hate advertising for things that they do not want. This is a weakness across all media, but also an opportunity to build the next big thing.

Technology: a double-edged sword

Technology did not create this problem of waste, but it has made it more obvious. However, it may also provide the best answer. The future of media, advertising, technology and services lies in finding the right solution – one that will make traffic valuable again.

Technology has finally reached the point where it can put an advertisement in front of the right people at the right time. The start of the solution is already scattered around us in different forms. The next big thing will be the company that can gather the pieces in the way that Google, Facebook,



Coming soon, we'll all have our very own HAL

YouTube, *American Idol*, the World Cup and the Super Bowl have gathered huge numbers of people to one place.

Facebook and many other web services are trying to build and sell what is being called "social advertising". This is supposed to be more relevant or contextual because it relates to brands that people have volunteered to say that they identify with or like. The phrase has echoes of old ad-speak terms, such as "targeted advertising" or "highly concentrated demographic". Social advertising amounts to trying to put advertisements in front of people who want your product. It is an old concept and the basis for enthusiast publications, such as *Cat Fancy*, *Knitting World* - or ESPN.

Xbox recently announced its social advertising play, which will roll out with interactive advertisements from Toyota, Unilever and Samsung Mobile. Xbox is calling them "NUads". They will apparently ask viewers to answer questions about the advertisements – which, of course, presumes that viewers will watch them. Despite their name, they are predicated on an old shotgun-blast approach that anticipates a significant percentage of waste. It seems likely that Xbox users will develop strategies to avoid the NUads, just as they have learned to ignore products that they don't want.

Good solutions for waste

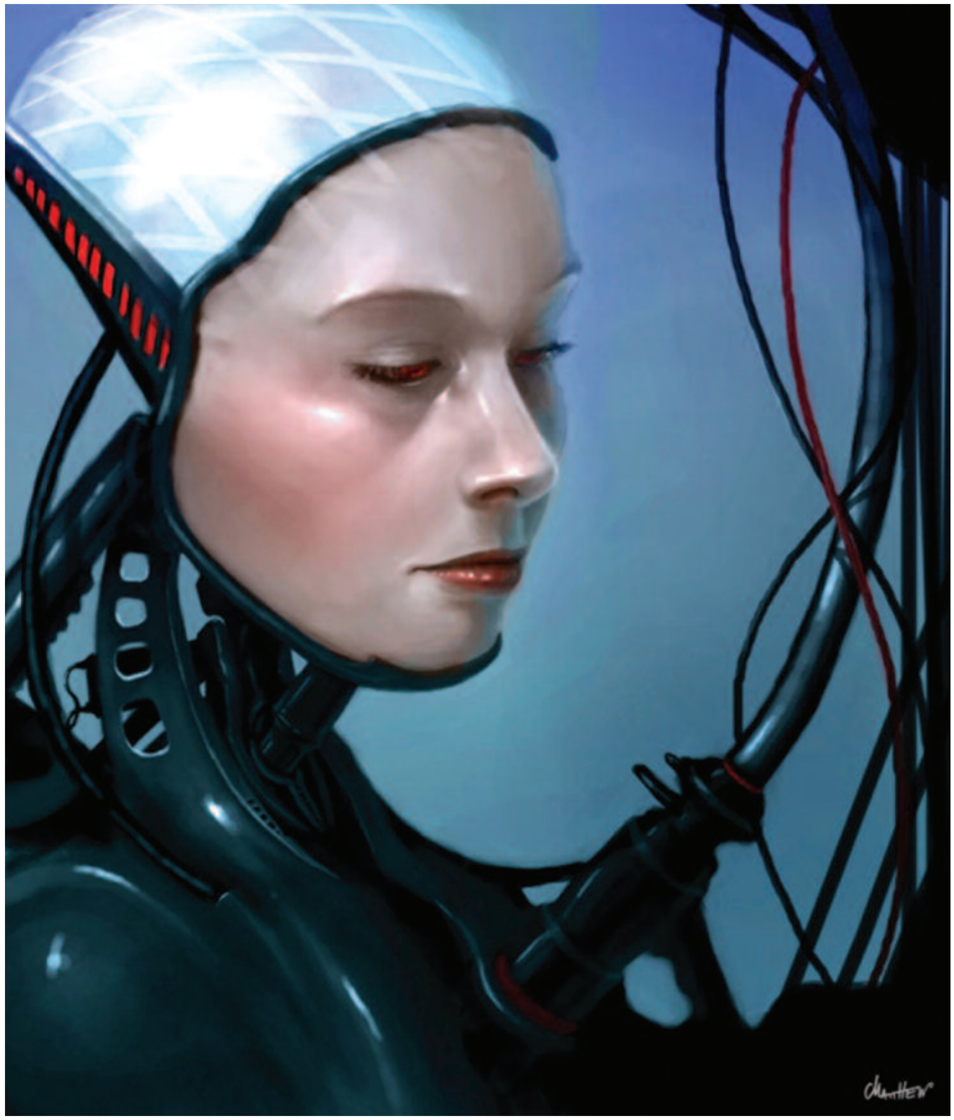
Product placement – one of the growing trends – is really what social advertising is pretending to be. It is one of the best affinity alignment tools available, but is no more measurable than a traditional advertisement. If people love *American Idol*, as they clearly do, Ford and Coca-Cola's product placement in the United States should have earned the two companies "coolness points" for being part of a hugely popular show. The cool-by-association factor is what social advertising companies are trying to pitch to advertisers. Otherwise, they are peddling the same thing as everyone else: a highly targeted demographic audience.

It was recently reported that Heineken has paid US$45 million to have James Bond drink its beer in the next Bond film, instead of the traditional martini - that figure is presumably too rich for a product placement battle between gin and vodka martinis. Arguably, Heineken will need to sell an additional US$45 million-worth of beer for this to be a smart buy, but there is no real way to qualify the return on investment other than a greater or equal leap in sales. Nonetheless, product placement is a sound idea, despite the fact that its value and ability to drive sales are no better or worse than traditional advertising.

Some estimates put the value of product placement at nearly US$30 billion a year. I have seen some technology recently that makes product placement in television completely seamless, contextual and trackable. Most importantly, it reflects something that television viewers would want to use because its components mesh with their modern, mobile lifestyle. This product placement technology works with all of the set-top box technology on the market, and brings the Internet and mobile to the television in a way that Microsoft's WebTV and Apple TV could never do. I saw it under a non-disclosure agreement, so I cannot reveal the name of the company or the technology. However, the technology represents the future of product placement in television. What's best is that it yields more effective advertisements, but also more revenue for broadcasters and the set-top box manufacturers. These manufacturers have traditionally been left out of the system, which is why some of them seem content to "destroy its underpinnings".

Better than product placement is a service that dramatically reduces waste by knowing what the viewer wants and when he or she wants it, and provides appropriately tailored advertisings. When that solution is created, traffic will regain its value.

Many companies are on the right path, including Google, Apple, Amazon, Groupon and – perhaps surprisingly – Vons grocery store, which is owned by the second-largest grocery chain in the United States. All of



Pretty robots – good for us and for those who will give them to us

these companies are providing a useful service that notes what users search for and what they buy, and presents them with more offers that are attractive to them. Google tracks what its users search for and endeavours to serve up relevant advertisements. We can still ignore the advertisements, unless they are for something that we want, but Google is becoming better at learning what its users search for and presenting them with appropriate advertising. Groupon has also become better at knowing where we live, where we shop and what we like by tracking what we buy. Amazon has a "You're one click away from personalised deals" feature, which promises that we can improve our AmazonLocal experience by telling it what we like and dislike. Vons has an iPhone app that keeps an individual cloud-based grocery list, displays weekly advertisements, offers coupons, locates stores and customises discounts for the products that the customer normally buys. The app is called (and trademarked) "Just for U" - and "just for me" is the key. Each of these service reduces waste and restores the value of traffic.

The next big thing is brewing in these types of services. However, it is still a nascent market. Each of the companies has only a piece of me or you. The problem with many apps or services is that they require our individual input - our UGC - which we may not want to give. Consumers are generally averse to sharing such personal information because, subconsciously, they know that they are helping a company to build a profile on them. However, services such as Google, Amazon and Groupon are doing this with what might be called "passive UGC". They track our searches and purchases, building profiles without us being conscious that we are contributing our information. We know that it amounts to the same thing, but are more accepting of passive UGC than of performing the task for them.

Pretty robots are the answer

Personalised and therefore truly relevant and timely offers are the future. However, no one wants to walk into Big Brother's office and be voluntarily chipped and tracked for life. That's where the pretty robots come into play.

"Pretty robots" are the future of personal assistants based on artificial intelligence, such as Apple's Siri, Vlingo and Cluzee. The pretty robots are coming, and they are in the market for me. That market is fragmented, but a handy app or service that tends to all my needs will be the one that I use most, simply because it will be the most useful to me.

These super-apps will introduce a new paradigm shift. The dominant companies, shows or websites discussed in this article have one big thing in common, whether they achieve it through broad or narrow appeal: they aggregate massive amounts of traffic to a single point. Over 900 million people have signed up for Facebook. Hundreds of millions watched the last World Cup final. The super-apps will aggregate massive traffic across all websites, programmes, applications and tasks. They will be your loyal personal assistants, following you wherever you go.

That is huge power. People will look for some sentient robot app, with the usefulness of HAL in *2001: A Space Odyssey*, to tend to their everyday needs. While the HAL-like personal assistants are not here yet, they are on the way. At present, they are in pieces, scattered across several companies and industries, but one day they will assemble into a pretty robot that is perfect for you.

In-car navigation devices already allow drivers to choose a male or female voice and select its accent and tone. In future, you will be able to choose your pretty robot's appearance and attitude. Your assistant will be as unique as you are – a reflection of your personal style and your situation in life. They will be virtual housekeepers or butlers, tending to our calendars, taking dictation and making sure that we don't forget our loved ones' birthdays. They will know not only what would make the perfect birthday gift, but also the best price and the best place to find it. The pretty robot will be perfectly efficient, calm and helpful, just

Action plan

All forms of the world's media, including apps and the Internet, are beholden to the same master. Their success is dictated by money - or, more accurately, by their ability to generate money through advertising or commerce. Print, radio, television and the Internet are primarily driven by a traditional advertising model and all struggle with the same problem: that of being able to deliver advertisements that pay the bills to the audiences that each content provider purports to deliver.

With this in mind, remember:

- **No such thing as free content.** Irrespective of the content or the way that it is delivered, people do not want their content to be interrupted by advertisements for products that they do not want. However, content providers need someone to pay for the content that people consume. This results in one of two models: subscription or free (ie, supported by advertisements). "Free" is the content price model of choice for most people, and so they endure the advertising or ignore it as best they can.
- **The age-old model.** As most content, whether broadcast in conventional media or online, is based on the old print circulation model, traffic or viewership dictates the price of advertising: higher traffic begets higher advertising revenue. As such, valuations for content and content providers are also based on traffic. This is clear from the cost of an advertisement during coverage of the World Cup or the Super Bowl, or on Google, YouTube or Facebook.
- **Technology destroying the age-old model.** The advertising model is being challenged - and may be destroyed - by the very technology that is making it possible to deliver content and advertising to more people. Technology, in some cases, is undermining the value of traffic by making it easier for people to avoid or ignore the advertising that pays for the content that they are consuming for free. But "free" is a misconception: the price that people have always paid for otherwise free content is having it diced with advertising.
- **Relevance and context to the rescue.** Content providers and advertisers are working on ways to combat advertising waste through relevant product placement and expanding business models. As technology changes how we aggregate traffic, psychographics on individual buying preferences and tastes will become one of the most important tools and intellectual assets for reaching people with advertisements that they want. Pretty robots may hold the key.

like HAL. She will be the best assistant you ever had. She will know you better than anyone in the world, and you will love your pretty robot.

This perfect robot will be an affordable app, probably sold with your mobile device, like Siri on the new iPhone. There will also be competitively priced alternatives from third parties. There may even be legislation to prevent device makers from excluding other assistant apps from their devices – as there is sure to be competition among the assistants. Ultimately, your pretty robot is likely to be highly subsidised, or even free. But in exchange, the robot will be tracking your passive UGC, like the harmless grocery store app or Google, so that you do not feel as if you are voluntarily submitting to Big Brother. One day, you may notice that your robot can read lips – although she may deny it when you ask her. On that day you will be reminded that technology is a double-edged sword: a robot that is perfect for you is equally perfect for the company that manufactures and maintains the robots, and for advertisers and profilers that pay for the data that they collect about you. Ultimately, we may end up asking whether our pretty robots are sent from heaven or HAL. ***iam***

Dan O Figueroa is director of legal & business affairs and corporate counsel at Sony Computer Entertainment America LLC
dan_figueroa@playstation.sony.com