

# UPCOMING IN INTERACTIVE

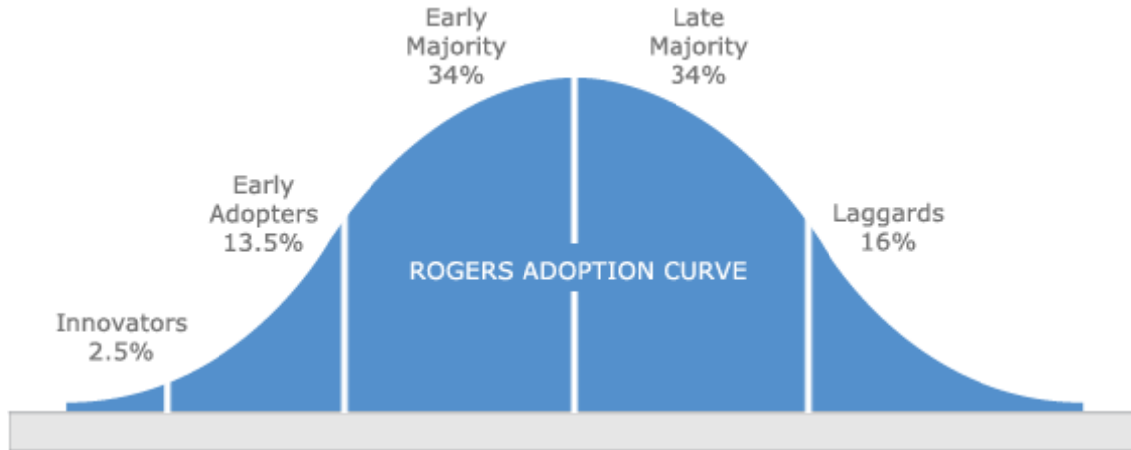
7 Trends and Technologies Shaping the Future of Interactive

**bloor media**

DESIGN, MARKETING & TECHNOLOGY

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The Rogers curve highlights the 5 main stages of technology adoption among the population:

1. Innovators
2. Early Adopters
3. Early Majority
4. Late Majority
5. Laggards



In *Upcoming in Interactive*, we've highlighted 7 products and trends currently within the early adopter cycle that we expect to test the marketplace within the next 1-4 years. We've rated them according to the confidence interval that such technologies will be strong trends in the future. These are issues that we believe CTOs and companies should plan for within their strategic initiatives.



## Disruptive Technology Today: Explosive Growth for Twitter

The "Twitter Race of 2008 to 1 million subscribers" between CNN and Ashton Kutcher, or Twitter's role as a news and commentary source during the Iranian election (<http://www.nytimes.com/2009/06/15/business/media/15cable.html> | <http://www.cbc.ca/world/story/2009/06/15/iran-twitter-election-protest.html>) highlights but one example of the transformative and disruptive nature of interactive media unthinkable only several years ago for mainstream audiences.



Twitter Race of 2008, between @CNNBRK (CNN) against @AplusK (Ashton Kutcher) for the first to 1 million Twitter subscribers



The Twitter story on Time Magazine



Oprah speaks with Twitter Co-Founder Evan Williams

## 1.

## Microsoft Silverlight



A coming generation of Rich Internet Applications will be arriving with Microsoft Silverlight.

Silverlight is a front-end technology similar to Adobe Flash, which installs on your browser and provides multimedia and animation-rich content on the .Net development platform.

What we like about Silverlight is its integration into the .Net 3.0 framework which promises to make applications not only visually appealing, but also quick to develop and data-rich as well.

Adobe has hit the market earlier, with Adobe FLEX, which is a robust platform built on Flash presentation

technologies and Flex backend technologies. Flex 4.0 is set to arrive in beta June 2009 and we do see competition brewing between these two competing platforms.

Ultimately, expect Silverlight to gain significant market share in RIA, due to the informational advantage that the Silverlight/.Net platform enjoys as well as the access to a ready-made and mature developer community.

With so many offerings, some of Microsoft's technologies are good (ie. Office Suite) and some are bad (ie. Internet Explorer). We expect Silverlight and .Net 3.0 to join the good variety.

It has been designed with a high integration approach in mind and makes developing rich internet applications an easier and more streamlined process than before.

## 2.



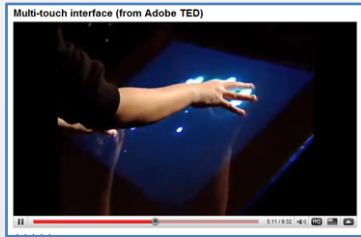
## Google Android: Open Source Power

Google's Android operating system is a Linux-based platform designed for mobile phones. While Apple has protected large parts of the iPhone by making it proprietary, Google has decided to make Android a completely open source offering and has included native Google applications such as Google Search and Google Maps into the core applications of the phone.

We see the open source aspect as being a significant factor in influencing the platform's acceptance and viability. Expect a self-reinforcing virtuous loop among developers, freely available code and users of Android applications within the mobile space.

Android supports modern phone inputs such as, accelerometers and the other nifty interactions which have made the iPhone popular. Those wacky steering driving games are available if you switch to an Android-powered device. Already live and available, Android is positioned to be very popular.

## 3.



## Multi-Touch Computing

Touch Screens have been around a long time in the form of tablet computers, bank machines and other kiosks. For human factors reasons, what engineers called 'gorilla arm' (the discomfort in holding a user's arm for extended periods horizontally) the touch screen was not a successful addition to the computing environment. There was simply a low value-add for the technology and there it languished for many years.

For more software than hardware reasons we see a large paradigm shift towards multi-touch computing. Most importantly, game-changing paradigms have been introduced by 'innovators', and the wave unleashed by technologies such as those created by

Such examples include

[Dell's XT2 Tablet PC](#)

[HP TouchSmart PCs](#)

[ASUS Eee Top](#)

[Jefferson Han's Perceptive Pixel Technology](#)

[Perceptive Pixel](#) as well as Apple's iPhones, are flowing downstream into more traditional and conservative interaction libraries. To illustrate the trend, many of the world's first multitouch consumer tablet and desktop pcs were introduced late 2008 with iPhone/iPod touch-style user experiences built in. The interactions to date have been fairly unsophisticated, but the larger trend is that multi-point touch and tracking are entering the marketplace in new and unforeseen ways.

Products like the [compact disc player](#) (consumer model debut price \$900 usd), or the [mobile phone](#) (debut \$3,995 usd ) debuted as high-end technologies, and their expansion became most ubiquitous as the technology went downstream. Multi-touch interaction is headed this direction.

## 4.



## 3D Web Specifications and HTML 5

Both of these specifications will be poised to change interactive in the next few years. Used currently by the early adopter community, these two technologies will present opportunities for developers to create smarter and more immersive

events. Here is a demo of some of HTML 5's features. <http://htmlfive.appspot.com/> (Warning. Your browser may not support all the functionality).

In 3D, both Google and Mozilla have announced plans to enable and standardize a 3D language for web browsers. Google has released their specification as a pilot project called O3D and it is offered as a plugin for your browser. Although this technology was tried in the early 90s (VRML), the time is ripe for computing standards to be able to support 3D. Here is a demo video of O3D's current incarnation. <http://code.google.com/apis/o3d/>.

# 5.



TREND

## The New Paperless Papers

The demand for news content and music remain undiminished as ever as the newspaper industry changes their distribution model to survive. The age of the daily newspaper is coming to an end. The expected gap being left by traditional print newspapers, is largely being taken up by interactive. Market leaders such as CNN are already filling this void electronically (see @CNNBRK on twitter above for an example). E-readers such as Amazon’s Kindle are entering the market to fill some of the void, however we expect the vast majority of news readers to be using traditional screen or mobile. Expect

content-wrapping (see no. 6) to drive most free content and premium-access login areas to support premium content.

Such examples include

Metro News Mobile Edition has been optimized for blackberry, windows and iphone devices since March 2009.

# 6.



TREND

## Expect more educated, more permission-based, video and content-wrapping advertisements

More sensible advertising will (ironically) be more disruptive by being less disruptive.

Expect static banners (display ads) with their low conversion rates to be driven to the fringes of interactive advertising. Obtrusive for both users and advertiser with typically low ROI, we see the content being replaced by more dynamic and intelligent ad-serving mechanisms. Geo-ad serving is already a commonplace event and AJAX makes ad changing possible without the page being refreshed, increasing impressions.

Other drivers will be permission-based marketing, through content specific algorithms, intelligent targeting, social media ‘coupons’ and buy-in aspects. For other channels, expect content wrapping (placing advertisements ahead and behind delivered feature content) to be the norm. We anticipate content wrapping to be even more ubiquitous, as the push to profitability forces content providers to convert views to revenue.

# 7.

## Further Afield – Things to Come

Live Mesh, Google Wave and Wolfram Alpha promise to change interactive in ways unseen by the current paradigm

We've looked for other ways "coming soon". We're less certain of these technologies, but as these technologies will be in some workable form arriving in 2009 (or already here). We believe strongly that they will have impact several years down the line. Here they are.

1. **Live Mesh** (and our prediction of operating systems which span multiple devices) seeks to align your transportable data away from a 'device' and simply onto the cloud.  
<https://www.mesh.com/>
2. **Google Wave**, is the google initiative to redesign email, 'if email were to be created now'. It features realtime threads, closer to a forum than traditional 'send mail'.  
<http://wave.google.com/>
3. **Wolfram Alpha**, by the inventor of the software Mathematica, Stephen Wolfram takes a swing at improving search. His new search engine named Alpha, promises not just to deliver results, but rather it promises to be an answer engine, creating results to your questions (even if no one else has answered them before). <http://www.wolframalpha.com/>
4. **Head Mounted Displays**, HMDs are already here in some form, but we see them playing an important role in expanding interactive in the future. What happens to these technologies is anyone's guess. Head mounted displays are a form of computer screens attached to glasses/goggles or helmets. The military is using them and we see some fringe applications with HMDs, usually involving gaming or VR environments, however they are not fully mainstream. Perhaps when a mainstream gaming platform offers them, their ubiquity will be assured. We're excited about HMDs, because sufficiently developed, they will replace the computer screen, with a pair of glasses, allowing smaller devices with a larger viewable area. That is a convergence waiting to happen.  
[http://en.wikipedia.org/wiki/Head-mounted\\_display](http://en.wikipedia.org/wiki/Head-mounted_display)
5. **AdHoc Networks** offer the promise of small devices talking to one another, whether tiny sensors from your fridge and your toaster, or else the electricity gauge from your house to the electricity utility, the convergence of technologies and protocols such as Zigbee, Bluetooth are starting to make this happen.  
[http://en.wikipedia.org/wiki/Mobile\\_ad-hoc\\_network](http://en.wikipedia.org/wiki/Mobile_ad-hoc_network)

## All Roads Meet Ahead: Convergence in the Immersive Hyper-Reality.

### The view from an Earth Browser

We anticipated the current the smartphone convergence in 2002, we thought we should make one small prediction for the future beyond the 1-5 year timeline. Several key technologies are lining themselves up to create the immersive hyper-reality a true living reality before the end of the next decade. Those technologies are:

**Multi-Touch interaction / Ad-hoc Networks / HMDs / Mashups / Geo-Apps / GPS / Cloud Computing / 3D APIs**

Picture yourself riding in a train, you plug HMD glasses into your 'phone' and begin reading the newspaper. You use the multitouch pad on your 'phone' to turn the pages or switch applications to a presentation. A new message comes in through Google Wave and you correspond in real-time to the thread. You switch devices from your 'phone' to a work terminal, without losing your work or your contacts.

You can change computers like you can change sneakers, because, all of your specific devices and data are coordinated on the computing cloud under one operating system, protected by public-key encryption and backed up daily (all of which is transparent to you).

Losing your computer, never means losing your data as all your essential information lives on the cloud. Just like web-based email and bank account information today, smart downloading allows you to access your complete 'desktop' online.

Before you leave work to go to the gym, you use an *Earth Browser*. There are many different competing brands. The *Earth Browser* is an immersive hyperreality environment, which combines all geospecific data into a single browser: a miniature earth. From street traffic, weather, daylight, flights, mail shipments, your friends who have turned on their geolocation, and other feeds all overlay on your earth. The feeds are all navigable in a 3d and near real-time.

To track where a cab is, you locate your city, click on the miniature model of a taxi in the earth client, which places a call to the dispatch. You paste the address to the Taxi ticket online which maps the route from your house to the gym. Payment is verified when you show your ID to the taxi.

Such a convergence and such a view are not too far in the distant future. Environments like 2<sup>nd</sup> life, MS VirtuaEarth, Google Earth and Google Ridefinder (which tracks realtime vehicle locations) are already here in 3D.

To complete the picture, better communication bandwidth and better portable display technology like HMD technology are necessary, but the convergence is certainly taking place for such an immersive Hyper-reality to exist.

Just as we had successfully predicted the phone/mp3/camera/pda convergence, in 2002, we predict that all future geo-specific data will be overlaid on the Earth browser.

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