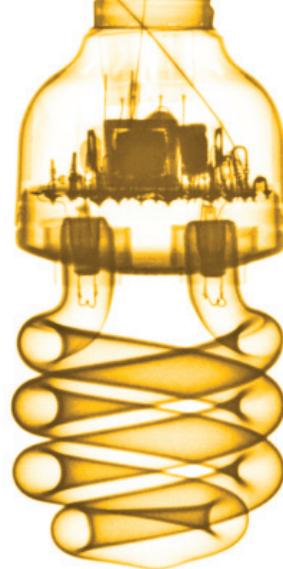
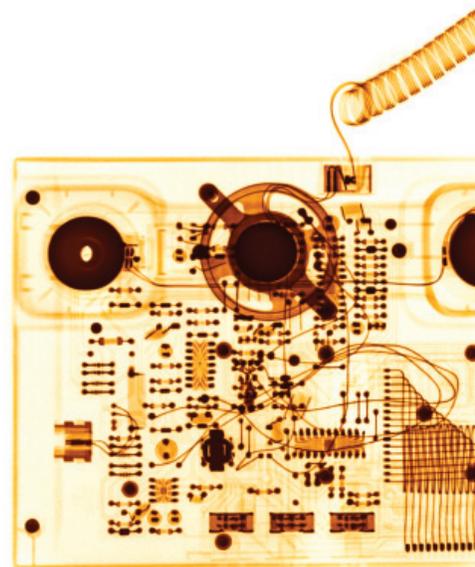


Deloitte.



2011 Canadian TMT Predictions



The paradox of choice:
Be careful what you
wish for – you just
might get it

In 2011, Canadian consumers and enterprises will continue to move away from a predictable but narrow world of standardized computing devices and are voting with their wallets in favour of diversity of choice. Between PCs, netbooks, tablets and smartphones, buyers must choose among a wide array of functionalities, platforms, operating systems, sizes, features and price points. Like kids in a candy store, consumers and enterprises will be both excited and overwhelmed by the sheer variety of options available to them.

This new computing world offers Canadians many things the “one size fits all” PC-dominated world did not: computing choices that tend to be more affordable, connected, mobile, pervasive, reliable, useful and fun, and that can be used in many different environments by both adults and children. On the other hand, across a more varied device environment, enterprises and consumers will need to seek optimum solutions for buying, replacing, managing and supporting these new tools.

Canadians will use these various devices while shopping, while working, for social networking and for media consumption. Ad markets will shift, and the networks that connect all these computers will be as diverse as the devices themselves: we will use more Wi-Fi and more high-speed networks of all types.

Top 10 Canadian TMT Predictions for 2011

Shifting from a world of standards to a computing free-for-all

1 Smartphones and tablets: More than half of all computers aren't computers anymore

In 2011, more than half of computing devices sold globally will not be PCs. While PC sales are likely to reach almost 400 million units, Deloitte's estimate for combined sales of smartphones, tablets and non-PC netbooks is well over that amount. Unlike the 2009 netbook phenomenon, when buyers chose machines that were less powerful versions of traditional PCs (but still PCs), the 2011 computing market will be dominated by devices that use different processing chips and operating systems than those used for PCs over the past 30 years. This shift has prompted some analysts to proclaim that "the era of the PC is over." Deloitte disagrees: traditional PCs will still be the workhorse computing platform for most of the globe in 2011 given that non-PC computers are expected to represent only about 25 percent of all computing devices at the end of 2011. However, 2011 marks the tipping point as we move from a world of mostly standardized PC-like devices to a far more heterogeneous environment. In this new era, price, performance, form factor and other variables will be diverse. Choosing a device will take longer, and will need to be done more carefully. And as employees are increasingly being allowed to pick their own devices, the cost for IT departments to manage a mixed network of both PCs and non-PCs is likely to be much higher.

2 Tablets in the enterprise: More than just a toy

In 2011, more than 25% of all tablet computers will be bought by enterprises. Although some commentators view tablets as underpowered media-consumption toys suitable only for consumers, more than 10 million of the devices will likely be purchased by enterprises in 2011. Consumer demand for tablets is forecast to remain strong; however, enterprise demand is likely to grow even faster, albeit from a lower base. Four factors are driving enterprise tablet adoption. First, many consumers initially buy tablet computers as personal media devices, but quickly discover they are useful for work. Second, certain industry sectors seem poised to use tablets in large numbers (e.g., retail, manufacturing and healthcare), due to the device's ease of use, long battery life, lack of moving parts, minimal need for training and rapid application-development environment. Third, enterprise software providers are quickly responding to Fortune 500 customer requests for tablet-specific software. Fourth, the tablet is driving adoption in the boardroom because it can be placed flat on a conference table and accessed unobtrusively. These growth drivers are likely to foster significant tablet diversity, and although certain form factors and operating systems dominated the market initially, the different requirements of various enterprises mean that "one size" (form factor, operating system, price, features, etc.) will probably not fit all. For an enterprise, a key challenge will be deciding whether to support multiple types of tablets or standardize on a single type.

3 Operating system diversity: No standard emerges on the smartphone or tablet

By the end of 2011, no operating system (OS) on smartphones and tablets will have a dominant market share. Some will have more than a 5% share, but no single player will become the de facto standard. In these markets, the top five OS companies based on market share each enjoy annual revenues in the tens of billions, have billions in cash and are gaining ground with consumers. None appears ready or willing to abandon the market. Mobile network providers also seem unlikely to allow a dominant OS: whenever any operating system or device maker, in any geography or segment, approaches 50% market share, the carriers seem to push one device or OS over another. Device manufacturers also seem to believe that a diverse OS ecosystem is in their best interest. Application developers might need to get comfortable in a world where they must pick and choose their platforms as no app can address the entire market. Media companies also face a similar challenge, and publishers will probably need to prioritize some audiences over others, or exclude some entirely. Finally, IT departments are likely to face significantly higher costs to support this new, more diverse technology environment. With all of these major players fighting to prevent an industry-wide standard OS from emerging, it seems that only a nearly irresistible force could make it happen.

Social networking ads grow, but remain below 1% of global advertising revenues

4 Social network advertising: How big can it get?

Social networks are likely to surpass the milestone of one billion unique members in 2011 and deliver over two trillion advertisements. Yet in the short term, the advertising revenues directly attributable to social networks may remain relatively modest compared with other media. With per-member annual advertising revenue of about \$4, total 2011 advertising revenues will be about \$5 billion. Despite social media's large and growing audience, its advertising revenues still represent less than 1% of worldwide advertising spending because advertising rates (based on the cost per thousand impressions, or CPM) are likely to remain low compared with other forms of online

advertising and traditional media. Nevertheless, thanks to a low cost base, social networks might still achieve impressive gross margins despite their relatively low revenues per user, particularly compared with traditional media companies. Social networks' near-term prospects depend on three metrics: subscriber growth, time spent on the network and CPMs. However, social networks have already signed up over half the Internet audience and already are one of the largest components of online hours, and the recent trends for CPMs have been downwards – not upwards. Therefore, it is difficult to find factors that would cause social network ad revenues to accelerate from their already rapid pace, although that could change, if new business models or better use of targeting allow for better CPMs or if the mobile audience grows faster than expected.

The future of TV is TV: PVRs, Internet TV and other media do not threaten, replace or even compete with traditional TV – they complement it

5 Television's "super media" status strengthens

In 2011, television will solidify its status as the current super media, defying some commentators' prophecies of imminent obsolescence. Viewers around the world will watch 140 billion more hours of television than last year, worldwide TV advertising will increase by \$10 billion, the global TV audience will grow by 40 million to 3.7 billion viewers, and TV shows will be the most common conversation topic around the world and the subject of more than a billion tweets. In short, television will likely continue to command a growing share of the world's attention and wallets and will retain its leadership among all media in terms of total revenues – which include advertising sales, subscriptions, pay-per-view and license fees. Television is also likely to retain its status as the media that most powerfully influences content creation in other media sectors. It should remain a key driver of the book trade and is likely to drive tens of millions of magazine sales. All the while, television technology continues to improve. The steady migration to high definition (HD) should provide significant opportunities for up-selling to premium television subscribers. The growing penetration of large flat-panel televisions and the rise in HD broadcast material should increase the visual impact of programming and advertising.

6 PVRs proliferate! The 30-second spot doesn't die!

By the end of 2011, more than 50% of television owners in the U.S. and UK are expected to own a personal/digital video recorder (PVR/DVR) and have the technological ability to skip ads. However, given most PVR owners will continue to watch the majority of their television live (known as "appointment to watch" television), TV advertising will be almost entirely unaffected in these markets. Viewers are also likely to attach increasing value to "first broadcast programming" as the volume of social commentary steadily grows and as they become even more locked into the schedule and less able to skip advertising. When viewers do watch pre-recorded programming, it will typically be non-mainstream content scheduled outside of peak hours by individuals who watch a few hours of content per week, rather than those who watch the typical average of 25 to 35 hours per week. However, studies show that even ads viewed at 12 times their normal speed are still retained by viewers, and by including more distinctive imagery, advertisers can further enhance the impact of fast-forwarded ads. According to BBM Canada, the Canadian PVR penetration rate is only 20%, with the average weekly hours of playback viewing at 0.91 (3.1% of viewing) and the average weekly hours of live viewing at 28.2 (96.9% of viewing).

7 Push beats pull in the battle for the television viewer

Despite the sale of tens of millions of television sets that offer built-in search capability for television programming, the vast majority of viewing will be delivered on a traditional "pushed" basis (i.e., the schedules will be determined by channel planners). The "pulling" of television content by viewers beyond the selection of a television channel is likely to remain an exceptional behaviour. Searching will be available to varying degrees of sophistication, ranging from simple search apps selectable from an on-screen menu, to powerful functionality that enables searching across a wide variety of broadcast, streamed and stored content. Yet adoption of program searching is likely to remain modest, largely due to a lack of need. Price is also likely to be a major obstacle in 2011: television sets and set-top boxes that incorporate the most advanced search capabilities will typically add at

least \$50 (or 10%) to retail prices. Customers pondering the selection of their next television set may well choose a larger screen rather than paying a premium for enhanced search capabilities. For most people, television continues to be a passive experience. Although viewers value the option to choose, often they do not exercise it. Interaction has generally been limited to choosing channels on a remote control or selecting from a PVR menu of pre-recorded content. Search functionality may be like picture-in-picture capability: it looks great on the showroom floor and TV makers love advertising it – but most consumers don't use it most of the time.

Retailers roll out Wi-Fi to encourage in-store comparisons

8 What's "in-store" for Wi-Fi: Online comparison shopping on aisle three

In 2011, 25% of North American big box and anchor tenant retailers will begin offering free in-store Wi-Fi access to shoppers. In 2012, this number will rise in North America and start to spread around the world. Until now, cellular data was the only connectivity available inside most large stores, given Wi-Fi access is not yet an accepted retailing practice (even though it has become pervasive in coffee shops and in the common areas of malls) as retailers feared that consumer online comparison shopping would hurt sales. However, when shoppers do in-store online comparison shopping, the likelihood of purchasing appears to go up, not down: when an online search reveals that competitor's prices are similar, many shoppers proceed with the purchase at the store they are in, rather than drive around to save a few dollars. Although some sales will be lost, they will be more than offset by connected consumers being less likely to leave without purchasing, and even spending more. In-store Wi-Fi use will also allow in-store employees to avoid responding to routine questions and spend their time on more valuable activities such as increasing service and sales. In-store Wi-Fi could also enable a variety of advanced push applications, such as localization (to allow for precise targeting) and up-sell offers. Another benefit is the collection of customer data: depending on Wi-Fi user agreements and local privacy laws, various levels of in-store customer information could be collected, retained and analyzed.

The proliferation of new computing devices doesn't mean that we need new networks

9 Getting to 4G cheaply: Will many carriers opt for 3.5G instead?

In 2011, the deployment of next-generation Long Term Evolution (LTE) wireless networks will fall short of industry expectations due to the continuing viability of the latest third-generation (3G) wireless technologies, such as High Speed Packet Access (HSPA+), and the handsets that work with them. Many commentators expected widespread rollouts to have happened by now; however, fewer than 30 LTE carriers in six countries will offer commercial service by the end of 2011. While a few of the world's largest carriers will likely deploy LTE, most networks will stick with transition technologies for the next year. There are two main reasons why adoption of fourth-generation (4G) technology (of which LTE is likely to be the most commonly deployed) might be slower than expected. First, not all mobile providers have made full use of their existing 3G spectrum. Second, LTE as it exists today does not offer the quantum leap in speeds and features over 3G that previous generational upgrades did. However, mobile providers with severe network congestion and weak ownership of spectrum have little choice at this point: only LTE's bandwidth efficiency can solve their problems. By contrast, networks with ample spectrum can probably defer LTE for years. The difficult choice will be for providers that fall between the two extremes: although they might think they can defer LTE investment for three to four years, a sudden surge in wireless data devices or usage patterns could create an immediate need for LTE's spectral efficiency and other features.

10 Wi-Fi complements cellular broadband for "data on the move"

The volume of data uploaded or downloaded from portable devices via public Wi-Fi networks will grow at a faster rate (25% to 50%) than the volume carried over cellular broadband networks in 2011. The bulk of this growth will be video data, as Wi-Fi is likely to become the default network for video applications. Wi-Fi's increasing share of the mobile device data load will likely have a ripple effect in moderating the growth rate of cellular broadband traffic, potentially helping improve margins for mobile providers' data services. Trends that could contribute to increased Wi-Fi use include the proliferation of Wi-Fi hotspots, increased penetration of Wi-Fi chips in portable data devices, easier log-in procedures to access hotspots, partnerships between hotspot providers and mobile providers, growing awareness of Wi-Fi capabilities in existing devices, superior battery life in some contexts and a steady shift toward tiered mobile data pricing. Cellular broadband will increasingly revolve around specific uses and the users that can take full advantage of the technology's unique strengths (wide-area coverage, mobility and integrated security) and justify the cost premium. As a result, mobile providers should view Wi-Fi and cellular broadband as complementary and build out blended networks, or partner with Wi-Fi providers as appropriate. They should not view the new, more specialized role for cellular broadband as a failure or a defeat: both cellular and W-Fi will be winners.

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