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30/09/2010

[Home](#) > [Innovation](#) > [Innovation features](#) > The rise of applications

0

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The rise of applications

Thanks to the rise of the Smart Phone and tablet PC, we are seeing some key changes in how people are accessing information and how they are communicating.

The use of mobile phone and tablet applications for the majority of day-to-day tasks is a new phenomenon. Reading the news, sending mail, reading and updating social networking sites like Twitter and Facebook, and downloading or streaming music and videos are things that in the past we would have done through web pages. Today, it is via applications on our mobile devices.

What is driving this change? Yes, these tasks are faster and easier via the new applications, but that is only part of the story. Sitting next to me on the train recently was a young man showing his school friends (girls) how he is able to scan the bar code on a book and then access all the details on the internet via his mobile phone. While this is not new (in fact one of my colleagues showed me this feature many months ago), it's transition to school-age children marks it not only as "cool," but also as mainstream and no longer limited to the early adopter market segment.

Imagine someone just a year or two ago wanting to update their Facebook status in the morning. They would get out of bed, pop open their laptop or turn on their PC, and log into Facebook via the Facebook website. If they wanted to update their Twitter as well, they could do that on the Twitter website. Today, all they need to do would be grab their Smartphone or iPad, open an application, and type their status (which can be sent to multiple websites at once). None of this even requires getting out of bed!

Applications are the new gateway to the internet. Through various "smart" devices, it is becoming easier to circumvent going to websites and instead having content accessed and filtered for you from the web. Social norms are also changing, leaving the iPad on the bedside table is seen as fashionable if not a commonly accepted modern living behaviour.

The impact of the cloud

We have been hearing about cloud computing for some time now, but the advent of these mobile applications coupled with cloud architecture is moving computing power and data storage away from mobile phones and tablets and into the cloud where it can be managed easily and efficiently for the mobile user.

A recent ABI research study; "[Mobile Cloud Computing](#)" forecast that the dominant force in mobile apps is likely to be cloud computing. The research also predicts that the number of mobile cloud computing users globally will rise from a base of around 40 million in 2008, to more than one billion in 2014.

The BBC also recently reported that a [new study](#) completed for Getjar, the world's second biggest app store, predicted the market will grow to \$17.5bn (£12bn) in the next two years.

Behind these sits the application store model and it's almost Darwinian approach: the strong survive in a social competition.

As an application enters the market, satisfied users recommend it, and dissatisfied users discourage others from downloading it. These recommendations (or lack thereof) drive adoption. Applications with widespread dissatisfaction are soon deleted and eventually cease to exist.

Why is what essentially amounts to word-of-mouth advertising so important in the application market? With social networking sites playing an ever-increasing role in people's lives, many applications facilitate social interaction of some sort. For instance, the application FourSquare lets users "check in" at their current location. Without a broad user base, these applications are all but useless, so recommendations from satisfied users play a huge role in making these applications popular.

These predicted growth patterns have major implications for our networks and services in the future. We only have to look back a few months to the Business Week article about AT&T and their iPhone customers to see how misunderstanding the market and it's rapid adoption of new applications can be catastrophic. (Feb 2010 - Business week - [AT&T's iPhone Mess](#): The iPhone has swamped AT&T's data network and sparked a consumer rebellion. What can Ma Bell do?).

A turning point in the use of applications

We are encountering a 'switching point', a point in time where new technologies come together with human needs, which have either been unrecognised or under-served previously.

A recent [Gartner study of mobile application downloads and revenue](#), predicted a sudden increase in the growth rate from 2010, with a year on year increase at least three times the pre-2010 growth. They also forecast that worldwide downloads in mobile application stores will pass 21 billion by 2013.

Sharing content worldwide

This rise in the use of applications has also driven 'uploading.' Last week, one of our US researchers, who had just come back from an assignment in Asia, explained that the ability to share short videos and photographs from anywhere in the world with her friends and colleagues was key to her ability to feel like she was successfully relating her experiences.



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However, equally important was the ability to store this content in the cloud, allowing her to "back up her life"(she had once lost many key photographs when a device crashed and now stores all her most important images on-line).

She explained that these 'bits' (the digital files making up her pictures and videos) now had great sentimental value, equivalent to her to a physical photo album, something the owners of Facebook had misunderstood in 2009 during the short-lived release of their photo ownership policy. (Feb 2009 – "Facebook Changes Terms Of Services; Owns Your Photos Forever").

There is a constant interaction between technology and people. We adopt and adapt new tools as they enhance our lives or our interaction with others. As explained to me by preeminent cognitive scientist Rebecca Saxe, what sets us apart as human beings is our ability to collaborate in complex problem solving, and if new technologies enhance this in either our working or personal lives and do it well, we will adopt them at the maximum possible rate.

Predicting how this will happen and designing our networks and services such that they can grow profitably in concert with our hunger for these new tools is the challenge of the future.

By Jeff Patmore, head of strategic university research, BT and Tanya Goldhaber, 'Graduate Researcher at Cambridge University'

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