

2010 - The start of the 'second digital decade'

DIGITAL GROWTH

One way to look at the decade from 2000-2009 is as the digital decade. In this decade the world has gone from having about 300 million to 1.6 billion Internet users. The number of mobile phone subscriptions has gone from about 750 million to 4.5 billion. The decade started out being called the digital decade by none other than Bill Gates, and the results have lived up to this billing!

COMPUTING POWER

According to Moore's law, the number of transistors on an integrated circuit is doubled every two years. Meaning that computing power doubles every 2 years! Since the 1960's every decade has seen this law fulfilled, and the last decade was no exception with Computing power doubling every 18 months, and at the same time costs for hardware falling.

With ever cheaper computing power available the capabilities of software, information storage, and communications has leaped continually forward at a staggering pace.

The first digital decade

The 'Noughties' was accurately predicted to be the first Digital Decade by Bill Gates. We saw leaps in communications and Internet technologies and the advent of a society continuously connected in a digital world. We now feel lost without our mobile phones, GPS navigation, access to emails and the Internet. We saw the growth of digital medias such as social networking sites, video calling, video / music / photo sharing, and e-commerce; only the most techie 'geeks' could even imagine the full impact of most of these at the start of the last decade, but now they are a standard part of our society.

2010 sees the start of the decade being dubbed the 'Second Digital Decade'. So, what could we see changing in this decade, and how might this affect us all in our personal and professional lives?

Technology we saw arrive

The start of the 'Noughties' began with the collapse of the Dot.COM boom. Internet businesses were then mysterious and run by 20 something's, and the Internet was only somewhere where other very technical 20 something's even knew how to access!

By the end of the Noughties the Internet has however become a standard part of the lives of billions of people across the World. We have seen the promised rise of e-commerce companies and a web presence for every business. But further than this the Internet now connects people's lives in ways that don't follow traditional business models and were not all fully predicted.

Throughout the decade computing power has, in line with 'Moore's Law', doubled every 18 months to 2 years (and has done so without fail since the 1960's). This has allowed ultra powerful Computing devices (such as mobile phones) and PC's/laptops to be available for a fraction of the cost compared to only 2 years ago – but with more computing power than ever before.

Mobile phones, are now becoming full blown computers performing functions that were the subject of science fiction only decades before. They are no longer restricted to just



making phone calls but connect users to information and communications across the Internet. At the same time, Internet speeds have grown from 'Dial-up' modem speed to ultra-fast Broadband, but for costs lower than it was for dial-up.

Some of the new technologies we've seen arrive to utilise this faster access to the internet on more powerful and cheaper hardware include:

- Digital audio players
- Online video players
- New versions of operating systems such as Windows, Linux, Android, and Apple.
- Blogs, wikis, social networks
- Internet telephony and VoIP
- File sharing
- GPS navigation and positioning
- Instant text messaging
- Smart phones
- Videophones

This technology has undoubtedly had dramatic effects on our lives in a short space of time. And, the way we access the Internet has begun to change from desktop's to mobile technology giving us continuous access to the Internet.

CLOUD COMPUTING

The Internet Cloud has now become the standard technology of today's world. The old technology where systems and data were stored and managed as islands of information in offices by specialist IT staff are over. Instead, modern technology and systems use is about using the Internet to access shared information and services stored in 'The Cloud' from wherever people need access to integrated information.

THE FUTURE?

It's notoriously difficult to predict where technology will evolve. However, what is clear is that the Internet Cloud is the technology we'll all use in every walk of our lives, and mobile Internet access will outstrip desktop access within 5 years. Computing power doubles every 18 months, and Internet availability and speed will continue to increase. The Software technology we use will inevitably expand to fill the ever increasing capabilities of our technology infrastructure, and in ways we might find difficult to imagine at present.

Where to now in the 2nd Digital Decade?



The 1st Digital Decade has changed the way we all live and work. Even the 'technophobic' now use email, access the Internet, have a mobile phone and utilise GPS navigation. Many of us now live in a fully digital world and utilise Social networking sites, music/video downloads, VoIP telephones, and on-line file sharing.

However, one of the biggest shifts that has taken place is the growth of mobile internet access. Internet access has now begun to shift from just desktop access to the Internet to full mobile access. The introduction of Smartphones (particularly the Apple iPhone and Google's Android operating system) have catapulted us forward into a new era of Internet use.

The step-change that this has brought now sees not only WAP and Email service access when mobile. We now have full connectivity to all Internet based services from our touch-screen mobile computers, and the ability for users to download software 'widgets' giving access to nearly any type of service or function you can think of (and many you wouldn't even have thought possible). We can now access and share information on the move in on an unthought-of scale and can now connect to the Internet continuously through fast mobile 3G and Wi-Fi access points.

In the next decade, this explosion in Internet use and mobile access will only continue to expand on a faster and faster scale. Driven by evermore powerful computing power and the expansion of always available and faster Internet access

demanded by consumers the Internet has now become the technology standard for society. Within 5 years it is predicted that mobile internet access will outstrip desktop access and the norm will become using our handheld computers (presently called mobile phones) for personal and work data management, sharing, and access.

With the expanding Internet infrastructure and more powerful computing devices, some of the technology that is perhaps set to take advantage of this includes:

- 3D Video, television & broadcasting
- Hosted VoIP services
- Speech Control and speech to text / text to speech
- Information exchange and sharing thousands times faster
- Micro-processors costing less and less
- Mobile phone GPS tracking/positioning
- Facial recognition software
- Controlling software through thought

The above are ALL available technologies right now (yes even the ability to connect brain waves to control devices!). Although it is notoriously difficult to predict what technology will and won't succeed it is clear that the continuing leaps in our use of the Internet across our work and personal lives is set to bound forward at an increasing pace.

Perhaps, by the end of this decade we'll all be using 'Head-up' displays instead of mobile screens and we'll also be controlling access to services by thought and voice with no keyboards? Imagine walking down the street and when meeting someone you'll be able to access information about them just by looking at their face to identify them! It's even predicted that the convergence of computing power and understanding of the human brain will lead to us utilising implanted processors to enhance our brains with artificial computing power, making us the computer!

It sounds science fiction perhaps, but after a decade that has already seen science fiction become fact, who's to say this isn't where we will be? One thing is certain however, the pace of technology change we have seen in the last decade is only a fraction of what we will see in this decade to come. The Internet is now the medium for the human race to become increasingly connected to integrated and faster information. This is only set to continue in directions we're probably yet to fully appreciate.