

## **Future Technology for law firms**

This article takes a brief look at what might happen to technology in the next few years, and in particular what law firms may like to keep an eye on. Having said that, what it is not going to do is make predictions about what will happen; far too many scenarios are possible to have any certainty in the regard. Instead, let us gaze into the crystal ball and follow the best rule of all clairvoyants: see what we know now, make some educated guesses and state the obvious in a mystical sounding way...

### **Computers will get faster, smaller and have more storage**

With due credit to Gordon Moore, this still seems to hold true and is likely to continue to do so. How much difference this will make at the desktop is a debateable point, with much of this additional power being used up for prettier interfaces and running anti virus and security software. Word 2.0 on a 386 was pretty much the same speed as Word 2007 on the latest hardware. The main result of the power is likely to be computers that are easier to use, and have a more intuitive interface. Hopefully, it will also lead to a greater reliability.

On the mobile side, increased power, coupled with increased battery life may lead to some significant changes. We have already seen how the Blackberry has in many ways surpassed the laptop for a mobile device for lawyers. A future generation of device is quite likely to provide another layer of capability and may have a similar effect. Even in the short term, we can be certain that formally or informally the iPhone will be well tested by partners once it is available in the UK. Certainly mobile devices will store more information. Perhaps the lawyer of the future will just have a mobile device containing all documents for all his current matters, and simply hook up to a larger screen at home or in the office for working (a portable desktop if you like).

### **Screens will get larger/cheaper/better**

There are numerous different screen technologies such organic light-emitting diodes (OLEDs) as waiting in the wings ready to provide much larger and clearer screens, including some like paper that can be rolled up. Again, the effect of this is likely to be different for mobile and desktop devices.

On the desktop, we may see the use of larger or multiple screens. This has not taken off yet despite a pair of 19" LCD displays being perfectly viable even now, but as firms experiment this could take off. The significance will be if screens become available that lawyers are happy to use across the board for reviewing documents, and finally start to reduce the paper mountain. Such a situation is likely to go hand in hand with full scale electronic filing systems, with any remaining paper generated by a matter scanned in. With in office filing reduced, and

the ability to work from anywhere without carrying a small filing cabinet of documents, significant changes may occur to all the professional services.

On the mobile side there are several areas where screen changes could make a huge difference. Overall, lower power consumption and lighter weight will improve all devices. On handhelds, screen resolutions are currently around half VGA (480 x 320 pixels), while desktops are at about 1024 x 768 and higher. It is hard to see how these devices can get a much larger screen with any technology as the form factor of the device limits it. An ability to fold would easily double the size possible, so perhaps we could get useful 800x600 screens on a handheld device. As mentioned above however, an ability to use (wirelessly?) any available desktop screen would enhance the capabilities dramatically.

Laptops should continue to keep close to desktop screens if power requirements and weight continue to fall. Other than that, it is hard to see which direction the commercial world will move in: fixed desktop and mobile handheld more limited mobile and laptop.

### **New interfaces will appear**

While suppliers have played with and tried many new interfaces for users to interact with computers over the years, this is now turning into a key battleground in many areas for both developing new products and selling existing systems. Many of these now are focussing on improvements to touch screen and keyboard less interaction, with products such as the multi touch interface on the iPhone and larger demonstration systems like Microsoft Surface – a coffee table made from a large touch screen. Both firms and other are certainly researching how similar interfaces can enhance or replace existing keyboard and mouse interfaces.

A different approach is for a lot more items to move towards being an appliance with very little in the way of an interface, often just a single button for the main function. Almost any printer/scanner/external hard drive has a 'one touch' button triggering some relevant process.

### **Bandwidth will increase and get cheaper\***

Overall, bandwidth (by which we all mean the speed of internet access) is becoming higher and cheaper, and should continue to do so. However, in the small print (hence the asterisk), signs are already appearing that services may become tiered, with different prices for different levels of service. To an extent, this has always been true, but we are already seeing ISPs up in arms over the bandwidth requirements of the BBC iPlayer, and questions are being raised about the requirements of internet based Voice over IP (VoIP).

Overall, there is a strong likelihood that bandwidth will be able to purchased in up to three forms in the future: general purpose, which will be cheap but come with no guarantees; Streaming, which will allow for high bandwidth downloads with a degree of guaranteed service to allow downloading of near real time video content (but taking into account that such

services can use buffering to smooth out performance); and voice grade, which will support Quality of Service and very low latencies in each direction to provide high quality voice calls.

The last of these will be of most interest to business, as the availability guaranteed voice grade IP circuits will make widespread use of VoIP the norm. BT's 21<sup>st</sup> Century Network, a project to move all the UK's telephone network onto IP, will help drive this providing regulation of the services encourages BT to develop them while still allowing competitors access.

### **Communication methods will become blurred**

The youth of today already know this, as they sit and email their friends, take part in online chat rooms, instant message someone else and add in a voice or video call over the internet to yet another. But in less than 10 years, these same people will be working in your firm, and wondering why communications are so old fashioned. The final move of voice to an IP, and then computer based platform will finish of the integration that allows all of these to work from the same screen in front of you, and also allow you to switch seamlessly between them. Initially, this will happen within firms, often to improve communications in those spread across multiple offices, but as public networks support easy to connect to standards this will happen between organisations.

Just to emphasis the point, video calls will become common, despite the overall failure of video conferencing to make much of an impact. Rather than large formal VC rooms, video calling will be desktop to desktop, and start by just adding video to what people perceive as a phone call. As the video quality increases, so this will be seen as more of a video call, and then people will start to accept people in meetings over video links much more readily than they do now. As with so much else, part of this change will be the comfort created by the fact that it is no longer expensive high technology, but easy to use appliances or systems that do not need a separate technician.

### **Microsoft won't get a monopoly**

Quite apart from any commercial reality, the US anti trust system and the EU simply won't allow it. However, at present there is every sign that their overall share of hearts, minds and desktops is decreasing, with Apple, Linux and other platforms gaining ground. It is very hard to have any clear view as to which way the market will go, although I think it will be very unlikely that the Windows desktop will disappear any time in the short or even medium term.

Depending on their strategy, we could see a rapid rise in the use of Apple products as success in the consumer market moves into the business world. This is already apparent in very small businesses and in sectors with independent end user purchasing such as barristers, where a Mac is no longer an unusual sight. Another interesting Apple move is the certification of the upcoming version of OSX as a Unix platform, in some ways putting it a bracket with HP-UX, IBM's AIX and Sun's Solaris operating systems. Whether this is significant or not is hard to say, but linking the system in consumers mind with systems that

have a reputation for security and reliability, while retaining the Apple ease of use image may allow for some significant changes to business purchasing. An odd result may even be a large acceptance of top end Unix platforms like Solaris (available on standard Intel systems) in moderately sized business such as law firms.

What seems very likely is that compatibility and similarity between platforms and products will increase, to the extent that mixed platforms become less of an issue. A widespread move towards browser based applications even for widespread back office and line of business applications such as practice management systems simplifies this even further, and firms that are installing such systems are giving themselves greater flexibility for the future.

### **Legal applications will be more standardised**

The traditional fully sector specific software package is probably on its way out in favour of customised versions of off the shelf packages. The underlying reason is that of volume; as more businesses and sectors sign up to a general package, the more R&D money the vendor has to improve it and support new features that allow it to be used by yet more industries. At the heart of this commercially is Microsoft's drive into business applications. The SharePoint framework is widely regarded as an ideal starting point for law firms' internal information management and sharing, possibly even including document management in the future. Their CRM package is regarded as at the least a viable competitor and probably future versions will be highly successful.

For the current vendors, this does not mean they will be out of business tomorrow. The market should change slowly enough for them to evolve. New players will appear selling for example PMS, CRM or other systems based on MS Dynamics products. Some existing players will be left behind, but the majority will absorb the standard systems as an underlying framework into their existing systems.

### **The law firm of tomorrow**

So what will the law firm of tomorrow look like? We have only touched on some likely directions above, but the most likely outcome is that the law firm of tomorrow will look very much like the law firm of today, just as today's firm looks remarkably similar to that of 100 years ago. Unless major changes occur to the practice of law itself, this will always be the case. Technology is a supporting mechanism, and while all the supporting systems in a firm may change utterly in the next few years, keeping IT directors and consultants busy, the underlying work done by partners, associates and whatever new positions are created will continue.

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