

NetBooks

ICT spending in UK schools is unsustainable but it could be cut by 90% with the help of Open Source software and the latest innovations in personal computing dubbed NetBooks. ARM wars?

The latest salvo in the new chip war gives some indication of what is to come and just how soon it will happen. Nvidia's release this week of their ARM-based Tegra CPU uses an astonishingly meagre 1 watt of power and rivals Intel's new 2 watt Atom chip.

Both chips are technical wonders (low enough in power to make photovoltaic devices a reality) and both signal a clear break away from Microsoft's dominating influence in Desktop-PC-CPU specification.

New devices based on these chips will use Open Source applications and sport Linux operating systems. No one, surely, expects otherwise? Windows XP continuing to 2010 is hardly a solution to Microsoft's empty OS larder for this new market sector.

So called NetBooks are being designed and launched by all major manufacturers. The new chips make last year's 6 watt Asus EeePc seem rather greedy.

The coming of the NetBook will make the PC obsolete in schools except where specialist applications such as CAD are needed. Education is the target market

The impact will be felt in education first. RM has lead the way in the UK with the amazingly successful Linux based EeePC. Other suppliers will follow.

As for the OLPC (One Laptop per Child Project) these new low cost, low power computers will be aimed at children and education where resistance to adoption is low and interest in innovation is high. What is the ideal NetBook for schools?

- Think the Asus's EeePC to get a feel for the size; make the screen fill one side of the clam shell and think along the lines of Amazon's Kindle e-book for readability.
- Make the keyboard-side the same thickness as the screen side. Now fit a wireless interface, embed an OS and a few useful applications including a browser and a decent terminal server client. If you turn it on its side hinge vertical) it's a e-book. When horizontal it's a notebook PC.
- Let the screen flip (a la Apple), and give it 7 hours battery life.
- The NetBook is not only a PC-notebook but a thin-client and a universal text book.
- The Netbook will access content wirelessly from the School's File Server, Intranet and Publishers electronic textbooks.

Maybe this machine will turn up this year, maybe next year, but turn up it will and soon: the new chips have made this a certainty. ICT procurement

That ICT in schools will change radically is obvious but less obvious is the effect it will have on the procurement of ICT in schools.

Very recently schools have undergone a sea change in their attitude to ICT. E-learning credits have gone, ring-fenced ICT budgets have gone. They are now in stasis, unsure of which way to go, discouraged from entering the latest upgrade cycle by official Government advice and facing cuts in their budgets.

The love affair with network rooms full of expensive power hungry PCs running the latest bloated software is over. Shrinking budgets and steeply rising energy costs have seen to that.

Furthermore the pedagogical claims of proprietary 'interactive learning software' are dying away and anything that is remotely useful is on the Web.

With the emergence of Free Open Source Software and genuine low cost personal computing devices, schools can quite simply do the following:

- Stop paying for software and software licences.
- Stop buying any computer equipment that draws more than 30 watts when operational and extend the life cycle of existing computers.
- Stop the printers and the photocopiers.

It is not really necessary to elaborate on the above. Previous posts have done so at length.

Possibly, paper addicts may wince at point 3 but in terms of cost these devices are the biggest single equipment/electricity/consumables technology in a school.

It doesn't take a fortune teller to predict that the above developments may mean many traditional ICT vendors will simply not exist in five years' time. Emerging business-models

In a previous post I described 'the great VLE scam'. VLE or learning Platforms have been slow to get a grip of teachers' enthusiasm. In most cases they are forced upon schools. The sticking point has always been content. The problem is solved by deals such as those made by the content publishing house Pearson.

Quite simply the VLE will be delivery device for a publisher's e-text book market. Expect many other VLE-publisher exclusives in the near future.

Schools have to pay for text books even e-textbooks. A new gravy train is departing on the back of an ever diverse curriculum.

Schools and LA's will have specific requirements for applications in education. The Open University provides a good example. The OU decided to use the VLE Moodle for part of its distance learning provision. Moodle, like all VLEs, did not do exactly what the OU needed. However because it's Open Source software the OU simply paid for it to be changed to meet their needs - an impossible notion for a major proprietary product.

It follows that the future vendors will be knowledge-based companies able to develop and customise products as required by the users. This means Open Source software. No user adapts proprietary software to their needs, you adapt to what it can do. Summary

In five years' time it is likely that:

- There will be no proprietary software or hardware market in education capable of sustaining even a medium sized company.
- Schools will have slashed their ICT expenditure.
- Publishing houses will reclaim their pre-eminence in content provision through quickly updatable e-textbooks delivered through VLEs.
- Specialist suppliers will adapt and develop Open Source software for a new emerging market.

How things change so quickly.