

# Reducing Computer Technology Costs in Australian State Education

## Abstract:

This whitepaper discusses two methods by which Australia's state Departments of Education can save (collectively) approximately \$100 million per year in reduced computer technology costs. The two methods are: better negotiation with proprietary software vendors; and the adoption of open source software in lieu of existing proprietary software solutions.

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## Background:

A recent report<sup>1</sup> published by the UK government, shows how adopting Linux and other open source<sup>2</sup> solutions could save education tens of millions of pounds every year.

The UK government's ICT agency, British Educational Communications and Technology Association, suggested that schools could slash their total computer costs by up-to 50% if they "stopped buying, operating and supporting products from the world's largest software company".

But what does this mean in the Australian context? Will we see Australia's state departments of education suddenly jump at the chance to save hundreds of millions in computer system costs? Not likely. Why? Intimidation and trepidation. In simple terms, fear and lack of vision.

Here's how it works. Most primary & secondary schools (government ones at least) don't care about saving costs by using cheaper alternatives to the status quo. You see, they effectively pay nothing for their proprietary software - the schools' owners, the respective Departments of Education do. And the mandarins therein don't like anything that rocks the boat and are thus greatly threatened by open source software. You see, nothing rocks any ICT boat like open source does.

Which is why you find that in almost all circumstances, the Departments of Education in each state are also the most pro-Microsoft. I've been trying for over two years to make headway with some of them. They tell me that they are scared of doing anything which will upset Microsoft.

Yes - you read that right.

The representatives of our elected government are scared of displeasing a vendor! It's hard to believe this line of reasoning applying to any other realm of government procurement. Or any other realm of business transaction - that doesn't involve

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1 <http://www.tes.co.uk/2094985>

2 <http://www.opensource.org/>

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organised crime.

Further, if these Departments of Education suddenly stopped paying for proprietary software and switched to open source, the schools know they would see none of the purported savings. So, why would the schools bother with piloting open source software programmes for trial deployment? Where's the incentive?

Additionally, the school teachers also know that they would suddenly need to learn a whole swag of new software, with minimal time and support. Teachers' time and stress levels are at a premium already. Without support from above, this makes migration away from "the world's largest software company" a hard and thankless task.

The upshot of all this is that every report commending the advantages of open source for the education sector falls on deaf, disinterested and frightened ears.

What this means is that unless there is action from the absolute top, there will never be any action. Period.

It's for this reason that this document has been created and disseminated to you, as a way to provide a view 'from the trenches' as it were. Thankfully there are viable means to reduce the costs of computer technology.

## Proposed Solution #1: Go with Open Source Solutions

The best long-term solution to reducing the costs of computer technology in schools, as alluded to by the British government report, is to migrate to Linux and open source software.

The Australian Government has recently released A Guide to Open Source Software Procurement<sup>3</sup> which may assist in this exercise.

All the core software technologies used by schools are now available in open source versions. These, for the most part, provide the functions necessary for most schools' computer usage, certainly enough to warrant serious consideration and pilot projects.

## Proposed Solution #2: Increase Negotiative Leverage

If in the short term it is considered difficult to make a quick move to open source, then the vendors of the proprietary software should be asked to nullify the licence costs of their software to the schools and further, to assist in the extremely high maintenance and support costs of such software.

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3 [http://www.sourceit.gov.au/\\_data/assets/pdf\\_file/42065/A\\_Guide\\_to\\_Open\\_Source\\_Software.pdf](http://www.sourceit.gov.au/_data/assets/pdf_file/42065/A_Guide_to_Open_Source_Software.pdf)

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The Departments of Education are in an excellent position to leverage the fact that vendors like Microsoft abhor students learning on alternatives like Linux and OpenOffice.org<sup>4</sup>

The Departments can use this in negotiations with the vendor. It should be possible to impress upon the vendor that having the Department switch to Linux would be a disaster for the vendor. The message from the Departments of Education to vendors like Microsoft should thus be very clear:

“Microsoft, it costs the Department of Education a large sum of money to maintain and support your complex and insecure software. If you don't help us defray these costs soon, by reducing the licence fees to zero and covering \$20 million per year for the ongoing pain of supporting your products, we will move to alternatives such as Linux and OpenOffice.org even faster than planned.”

Microsoft may balk at saying 'yes' to the first few Departments that try this, but even though they will fear the *Domino Effect*<sup>5</sup> that saying 'yes' will generate in the region and internationally, may eventually concede.

This is because the potential loss for Microsoft of having millions of Australian schoolchildren enter the workforce fully versed in Linux and open source software, is immense.

Education departments must use this negotiation leverage to the full extent possible.

## Examples of Open Source Solutions in Education

To provide a contrast of computer technology costs using proprietary software solutions, we present a deployment by the state of NSW of 135,000 computers running proprietary (Microsoft) software, costing AU\$544.4 million, and contrast a deployment by the state of Extremadura in Spain of 100,000 computers running open source (Linux) software, which cost, by comparison, only AU\$111 million.

### The Microsoft Solution:

The NSW Department of Education and Training deployed 135,000 computers in NSW schools as part of the *Computers in Schools* programme. This will deliver a ratio of one computer to 6 students in NSW state schools. The total cost of this is

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4 <http://www.openoffice.org/>

5 [http://en.wikipedia.org/wiki/Domino\\_effect](http://en.wikipedia.org/wiki/Domino_effect)

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AU\$544.4 million.<sup>6</sup>

## **Bottom Line Result for the Microsoft Solution:**

One computer per 6 students at the cost of **AU\$4,030** per computer.

## **The Linux and Open Source Solution:**

Extremadura is a region in the South-West of Spain. The region has been making efforts to catch up on information and communication technology, and has deployed a strategic project based on the principles of connectivity and technological literacy for every citizen. An adapted version of GNU/Linux, called GNU/Linex, was developed for installation in all schools at a ratio of one computer per two students, and for spreading around at no costs to SMEs and the public administration.<sup>7</sup>

Extremadura deployed 100,000<sup>8</sup> Linux computers for 183,000 pupils and 16,000 teachers.<sup>9</sup> The total budget for the project was 67 million euros,<sup>10</sup> or AU\$110 million.

## **Bottom Line Result for the Linux and Open Source Solution:**

One computer per 2 students at a cost of **AU\$1,100** per computer.

## **Conclusion**

The Linux and open source solution deployed in Spain was thus 73% cheaper than the Microsoft Windows-based solution deployed in NSW, and helped Spain achieve a ratio of computers-to-students three-fold higher than what the Microsoft solution was able to.

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<sup>6</sup>[https://www.det.nsw.edu.au/newsroom/yr2004/jun/edu\\_budget.htm](https://www.det.nsw.edu.au/newsroom/yr2004/jun/edu_budget.htm)

<sup>7</sup>[http://europa.eu.int/information\\_society/activities/opensource/cases/index\\_en.htm](http://europa.eu.int/information_society/activities/opensource/cases/index_en.htm)

<sup>8</sup><http://www.linux-mag.com/content/view/1537/2184/>

<sup>9</sup><http://www.oss.gov.za/modules.php?op=modload&name=News&file=article&sid=108>

<sup>10</sup><http://www.aboutseniors.com.au/Computers-Seniors-Opinion12.html>

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## About the Author:

Con Zymaris is the CEO of Cybersource Pty. Ltd. a long-standing open source professional services company. He was also, for several years, the editor of the Australian UNIX and Open Systems User Group Journal, the open source columnist for both Internet World magazine and Australian Developer magazine. He has written over 150 published articles over the past 12 years on ICT topics.

Con is also the convener of Open Source Victoria, a government-funded industry cluster and is the co-founder and director of the national industry body, Open Source Industry Australia. Con has been using and programming computers since 1979, and using the Internet since 1989 and is an enthusiastic advocate for open-source software libre, using Linux since 1993. While computers were always a passion which morphed into a career, at the University of Melbourne he actually studied Physics.