27 May 2004

Andrew Buckeridge

I am a resident of the Curtin electorate and a director of BGC (Australia) Pty Ltd.
Government policy can have serious implications for software development and use. The
two concerns I have relate to the Free Trade Agreement intellectual property provisions
and compulsory use of proprietary software (3rd party forcing).

Like many organisations in Australia BGC depends on the use of computers to do its
business. Perhaps unlike other organisations we like to be able to choose more secure
and reliable standards based systems rather than being forced to use the proprietary
Microsoft Windows system.

BGC has on a number of occasions attempted to move from the dominant proprietary system
only to have those attempts thwarted by obfuscation formats and corruption of computing
standards that were originally intended to ensure interoperability. (Technical
standards 10 and 11 define Internet communication protocols and the HTML format that
should be used for WWW.)

What concerns me now is that Microsoft who already has close to total domination will
be given even more protection against the remaining free software competition by
changes to Australian intellectual property laws.

Australia/US free trade agreement patent and copyright extension

The anti circumvention measures of the copyright act punishes those who provide a means
of viewing obfuscated content even though that means may be used to view content that
the user is entitled to view.

BGC is frequently sent PDFs which must be viewed with Xpdf (12) free software on a non
Microsoft environment. (The non free Adobe acrobat reader did not work on Linux and
now no longer works on Sun Solaris. As this is non free there is no way we could
repair the software. Also BGC may simply to choose free software because it can be
repaired and there is no place to hide back door code.)

Dmitry Skylarov was a victim of the US Digital Millennium Copyright Act. Would
developers of software to crack obfuscated formats in Australia or visiting Australia
also become victims of the Digital Agenda part of the Australian Copyright Act?

Another example is DVDs which have obfuscation as part of the technology agreement
which Australia should have nothing to do with if we want competition and freedom of
choice in software. Even though standards based Solaris and free Linux both have MPEG
players they can not play DVDs because this would require circumvention of the
obfuscation which is currently illegal. I paid for my DVDs, but I can't play them on
Solaris or Linux!

The anti circumvention measures don't sit well with copyright, but copyright should
prevent published work from being stolen. Though copyright prevents plagiarism it
allows for independent works that may be similar.

Software is like mathematics in that all discoveries depend on previous work and like
mathematics there would be serious implications if these were later patented.

One problem with patents is that they grant exclusive rights even if other similar work
has been independently discovered.

Software patents impose practical problems which free software does not have the resources to address. Software by its nature is complex and to review proposed code against existing patents would be an impossible burden to developers and would stifle free software development.

The problem with patents trumping independent discoveries is made worse when patent offices operate in a semi-commercial manner and it is not in their interest to look too hard for prior art during the examination process.

Due to the complexity of software it is necessary that work on software is documented on the Internet and not in 'learned journals' thus any examination for prior art would require powerful searching of the Internet.

ATO ECI 3rd party forcing

This not directly related directly to FTA, but demonstrates the degree of power that Microsoft already has and that it has used Sun's Java code without permission and has effectively got away with it. Australia should not give Microsoft any further protection by way software patents or ant-circumvention measures. The line between obfuscation and corruption of standards that can only be unravelled by reverse engineering is not clear.

In the ATO's correspondence with developers and users they said "the ATO will also be developing Apple and Unix compatible versions of the ATO ECI software application". This has not happened. (See 1.)

The Apple version can not work with recent machines as it depends on Microsoft MRJ and Internet Explorer which are no longer supported by Apple. Current Apple machines run MacOS 10 with Java (6) and the Safari HTML (11) browser.

This leaves BGC with Microsoft Windows as the only choice. This has caused problems for BGC in migrating from the proprietary Microsoft desktop to the standards based Sun desktop which is secure and interoperates with other standards based environments such as Apple's MacOS 10, IBM's AIX and also free software such as Linux and BSD.

Neither a Java (6) nor a POSIX/UNIX (7,8 and 9) version have been developed. Had a Java version been developed it could be ported to popular platforms including MS Windows, Apple and Linux. Had a POSIX version been developed it could have been built for practically all free software and UNIX systems for any hardware architecture and for current Apple and Microsoft.

Instead the ATO developed for MSJVM which though based on Java code was not Java (6) and the Java code was not used with permission of the owner. By corrupting the Java code Microsoft had locked MSJVM applications such as the ATO's ECI to their own system.

One government software initiative that was success in terms of openness was the EVACS system (2) which is freely available for review thus there is no where that back door code can be hidden. Such requirements should be mandatory where public funds or the democratic process is involved. The ATO should follow this lead and ensure that the ECI software is available and works.

References in ()

1. Open Electronic Government <http://www.muli.com.au/ato/atoindex.html>
2. Electronic Voting And Counting System <http://evacs.samba.org/> 3. The Free Trade Agreement Threatens to Lock Software Patents and 4. Anti-Circumvention Measures into Australian Law <http://www.linux.org.au/fta/> 5. Software Patents in Europe <http://swpat.ffii.org/>

Technical Standards in ()

6. Sun <http://java.sun.com/>
7. IEEE <http://standards.ieee.org/regauth/posix/>
8. UNIX <http://www.opengroup.org/>
9. Linux <http://www.linuxbase.org/>
10. Internet <http://www.ietf.org/>
11. WWW <http://www.w3.org/>

Software in ()

12. Xpdf <http://www.foolabs.com/xpdf/cracking.html>