

## **Introduction**

This paper explores the relationship between system administrators and the end user license agreements of commercial software. An overview of the software industry from the Australian and global perspective is provided, followed by an investigation into software piracy. The role of system administrators is defined, followed by an explanation of some of the alternate types of software licenses with regards to commercial software. Lastly, this paper presents the methodology that is used to gather the opinions of system administrators using an online questionnaire. A copy of the survey is also provided.

The aim of the study is to investigate the thoughts and opinions of system administrators who are representatives of one of the key groups of stakeholders in relation to end user license agreements and the implications that they have in the commercial arena.

### **The Software Industry in Australia**

The software industry can be seen as part of the larger Information and Communication Technology (ICT) sector of the Australian economy. The ICT sector is defined for the purposes of this study as that part of the economy that comprises Information Technology and Telecommunications (IT&T) specialist businesses. IT&T specialist businesses are defined by the Australian Bureau of Statistics (ABS) as “businesses which derive 50% or more of their total income from IT&T goods and services” (ABS 2002) with the exception of those businesses that can be classified into the following Australian and New Zealand Standard Industrial Classifications (ANZSIC):

- Class 2842, Telecommunication, broadcasting and transceiving equipment manufacturing;
- Class 4613, Computer wholesaling;
- Class 7120, Telecommunications services;
- Class 7831, Data processing services;
- Class 7832, Information storage and retrieval services;
- Class 7833, Computer maintenance services; and
- Class 7834, Computer consultancy services (ABS 2002).

This study has as its focus the licenses surrounding the provision of commercial software. Therefore it is important to determine the approximate size of the commercial software industry both in Australia and worldwide. To determine the approximate size of the software industry in Australia it is necessary to look at the income derived from the sale and licensing of packaged software. The Australian Bureau of Statistics in 2002 determined that in the year 2000 – 2001 IT&T specialist companies derived approximately \$AU3.3 billion from the sale and licensing of packaged software which is 15 percent of the total IT&T specialist business income (ABS 2002).

A study conducted by IDC found that for the year 2002 in the Asia/Pacific region Small to Medium Enterprises (SMEs) spent more than \$US28 billion on Information

Technology products and services, representing 45 percent of the total IT spending market (Chee & Teo 2003). Of the money spent by SMEs 12 percent was spent on packaged software and this year it is expected to grow by as much as 10 percent, with the total market growth expected to be above 9 percent and by 2005 to be between 13 and 14 percent (Chee & Teo 2003).

IDC also recently projected that in 2004 the Asia/Pacific region will experience 11 percent growth in the Information Technology sector and that the market should grow to approximately \$US88 billion, with the SME sector of the market expected to grow by 13 percent to \$US28 billion and will account for 40 percent of the total IT market by 2007 (Prabha 2004).

In April of 2002 the Microsoft Corporation released a white paper that named Australia as being only one of 11 countries worldwide to have experienced growth of the ICT industry share of the GDP by more than 40 percent between 1995 and 2001 and forecasted that growth would be more than 45 percent between 2001 and 2005 (cited in Grebe 2002). The report also stated that there had been an increase of 46 percent in the number of companies operating in the ICT sector in Australia since 1995 with almost 15,000 businesses identifying themselves as being part of the ICT sector (Grebe 2002).

All of this evidence suggests that the ICT sector in Australia is a vibrant and growing part of the economy with the production, sale and licensing of software forming an important part of the ICT sector not only now but also in the future. A major component of the income of the ICT industry surrounds software and their associated licenses. As licensing is the primary mechanism used to protect both the licensees and licensors rights and responsibilities they will come under increased scrutiny. It is one of the main propositions of this paper that software licenses are not read by a large proportion of the System Administrator community because they are too complex, lengthy and difficult to understand.

Enterprises that use software as a core component of their operations, that do not understand the implications of the licenses under which they are bound, could be increasing the risk of litigation. For example the issues surrounding such things as non-compliance with licenses in the form of a larger installation base than they have licenses, or including software code that may be obtained under one form of license and then licensed to their customers under another, incompatible licensing scheme.

These are just some of the issues that this paper will explore. However it should be noted that this is not just an issue that is limited to Australia or the Asia/Pacific region. The ICT industry is a worldwide industry that is experiencing similar amounts of growth to that of Australia. Therefore the licensing issues alluded to here are also applicable in the larger global ICT economy.

## The Global Perspective

The Organisation for Economic Cooperation and Development (OECD) (cited in Ruben, Johnson & Iventosch 2002) found that the market for pre-packaged software in the United States was expected to be worth approximately \$US2.3 billion by the year 2002, over twice the same figure in 1996. In 1998 the Business software Alliance in the United States stated that the global volume of software and services had reached \$US140.9 billion and was expected to increase by 17.8 percent annually to an estimated \$US228 billion by the end of 2001 (Ruben, Johnson & Iventosch 2002).

In the year 2002 the OECD found that the ICT-producing and ICT-using sectors of the economies of a wide range of OECD member countries accounted for the bulk of overall productivity growth (2002). More importantly it found that software “represents 10% of the total ICT market, but is growing fastest, at almost 16% a year since 1992” (OECD 2002).

With the increasing trend to use Open Source software, where an organisations income may not necessarily come from the sale or licensing of software, it is important to examine the software industry in terms of both packaged software and software related services. For example in the year 2001 the world packaged software markets were estimated at \$US196 billion however, it is also important to note that the trade in software and therefore the market size “...is significantly underestimated because it is usually based on the value of physical supports (CD-ROM, diskettes) rather than content” (OECD 2002).

A complementary way to determine the size of the software market is to examine the amount of investment that is made in the ICT industry sector. For example Colecchia and Schreyer state that in an examination of 9 OECD member countries the investment in the ICT sector during the year 2000 accounted for nearly one third of total non-residential investment, the United States led with 13.6 percent followed by Finland with 9.8 percent and then Australia with 9.7 percent (2002).

When examining the growth of investment in the software component of the ICT sector it can be seen that between 1980 and 1990 Australia experienced growth of 24.8 percent whereas in the same time period the United States experienced growth of only 14.6 percent, and between 1995 and 2002 the Australian growth was 14.1 percent and the United States experienced growth of 16.6 percent (Colecchia & Schreyer 2002).

According to the Worldwide IT Benchmark Report 2004 produced by the research firm Meta Group, on average organisations were spending 3.8 percent of their revenue on Information Technology during 2003 which is a slight improvement over the 2002 figure of 3.6 percent (2003). It is important to note that while IT spending remained relatively stable in 2002 compared to 2003 there was a substantial increase in security software with organisations spending on average 8.2 percent of their IT budget on security related products and services and the report goes on to state that “...security investment is now

considered strategic in certain industries where customer confidence rests on data and information security” and this is an increase of 5 percent over the year 2001 (2003).

Therefore it can be seen that while there are problems with accounting for the value of software in the ICT industry, due primarily to the different licenses in use creating different income streams and accounting for software by the value of its physical supports, an examination of investment and spending levels reaffirms the position that the software industry is an important component of the overall ICT industry.

One of the main problematic areas facing the commercial software industry is the issue of software piracy and the amount of possible revenue that is lost due to businesses and individuals using software that they have acquired without paying the appropriate license fees.

### **Software Piracy**

Software piracy is defined by the Software Publishers Association as “the unauthorised duplication of software” and was estimated to have cost the software industry \$US11.3 billion in 1996 (cited in Traphagan & Griffith 1998). In 2001 the Business Software Alliance (BSA) in the United States determined that software piracy cost the software industry \$US11 billion worldwide in 2001 (cited in Bigler 2003). The BSA is promoted as being “...the voice of the world's commercial software industry and its hardware partners before governments and in the international marketplace” (BSA, 2004).

In 2003 the research firm IDC in conjunction with the BSA found that Australia had a 27 percent piracy rate and that this had limited growth of the software sector to only \$AU12 billion a year (IDC, 2003a). They go on to state that with a 10 point reduction in software piracy the software industry could expand to nearly \$AU21 billion by 2006 and could also help to create 7,000 new jobs, boost revenue by \$AU3 billion and generate \$AU437 million in extra tax revenue (IDC, 2003a).

On a more global scale IDC and the BSA suggest that:

“Globally, four out of ten copies of software are pirated, with piracy rates of individual countries ranging from 25 percent to 94 percent. Reducing those rates 10 points could create 1.5 million new jobs, generate \$64 billion in additional tax revenues and foster \$400 billion on additional economic growth” (IDC 2003b).

Software piracy can have significant consequences, for example in the United States software piracy carries with it significant fines including “...civil penalties of up to \$150,000 for each program copy and criminal penalties of up to \$250,000 and possible imprisonment of up to five years” (Bigler 2003).

In Australia the Business Software Alliance of Australia, the Australian branch of the BSA, states that under Australian copyright law the criminal and civil penalties for illegally copying software is as follows:

- Criminal Penalties;
  - Fines of up to \$AU93,500 and, or, up to five years imprisonment for individuals; and
  - Fines of up to \$AU467,500 and, or, up to five years imprisonment for companies.
- Civil penalties;
  - Unlimited damages, the exact amount to be determined by the court; and
  - In many cases court costs (BSAA, 2004).

Doubt must be cast on the accuracy of statistics related to software piracy, for by its very nature pirating software is an illegal act and therefore one that is conducted in secret. This is not to suggest that software piracy does not occur, for to suggest that would be naïve, rather any statistics relating to software piracy must be viewed in the light that it is attempting to quantify something that is very difficult to quantify.

One way to examine the cost of software piracy is to investigate those people, or organisations, that are caught pirating software. For example recently the FBI in conjunction with law enforcement agencies in the United States and 11 other countries resulted in the seizure of 200 computers including 30 servers used as storage and distribution hubs for the pirated material with one server containing over 65,000 titles (Anderson 2004).

The pirated material included music, movies, computer games and software worth more than \$US50 million and identified over 100 people involved in the piracy with the searches being conducted in the United States, Belgium, Denmark, France, Germany, Hungary, Israel, the Netherlands, Singapore, Sweden, Great Britain and Northern Ireland (Anderson 2004). Reinforcing the proposition that software piracy is a global problem.

Regardless of the exact rate of piracy, and the associated cost, the software license is one of the main means employed by commercial software vendors to protect their intellectual property and to gather revenue. Therefore to examine software licenses it is important to survey those individuals who are in close contact with them on a regular basis. This paper has as its focus the thoughts and opinions of those whose occupation, or passion, it is to administer Information Technology systems and their related software. These people can be defined as System Administrators.

### **System Administrators Defined**

For the purposes of this study the definition of a System Administrator is given by the System Administrators Guild of Australia and it states that a System Administrator is “Anyone who manages a computer not solely for their own use” (2004). Using this

definition provides a large pool of possible survey respondents. For example in 2002 the ABS identified 84 percent of businesses using PC's, 72 percent as having Internet access and 24 percent as having a website (cited in Gregorio, McGeachie & De Montis 2003). It is highly likely that in all of these businesses there will be at least one person who can fit into the definition of a system administrator.

The ABS also found that 100 percent of large businesses, those having 100 or more employees, were using PC's and 99 percent provided Internet access and in the very small businesses sector, those with four or less employees, 79 percent used PC's and 65 percent had access to the Internet (cited in Gregorio, McGeachie & De Montis 2003).

Examining the size of the job market in the Information Technology sector can also assist in providing an estimate of the possible size of the pool of potential respondents. A recent study conducted by the Olivier Recruitment Group found that jobs in the IT sector were up 7.52 percent, seasonally adjusted, and with 7,940 Information Technology related jobs being advertised online with the three main categories of advertisements being those for networking, communications and security positions (cited in Foreshew 2004).

The Meta Group also has a positive outlook on the Information Technology sector by stating that in 2003 the turnover rates for Information Technology staff was decreasing in both the United States and worldwide (2003). The OECD also suggests that the employment market for Information Technology specialists is healthy by finding that:

“Given their role in the current transformation of advanced economies, ICTs [Information Communication Technologies] offer the promise of new business and employment opportunities along with higher productivity gains” (Colecchia & Schreyer 2002).

It stands to reason that there are also a large number of System Administrators in the home environment as well. For example in the second quarter of 2003 the ABS determined that 65 percent of households had a PC with 55 percent also having Internet Access (cited in Gregorio, McGeachie & De Montis 2003).

With all of these computers and other Information Technology devices in use by businesses and households, all of them running some type of software, and many being administered by System Administrators it is our position that System Administrators are in close contact with Software License agreements on a frequent basis and such exposure makes them a prime source of information on the perceived complexity and lack of ease in understanding many of the software license agreements that are in use by commercial software vendors.

### **What are Software License Agreements**

A license as it pertains to software is defined by the Uniform Computer Information Transactions Act in the United States as:

“a contract that authorizes access to, or use, distribution, performance, modification, or reproduction of, information or informational rights, but expressly limits access or uses authorized or expressly grants fewer than all rights in the information whether or not the transferee has titles to a licensed copy” (cited in Rowland & Campbell 2002).

Software licenses are also called End User License Agreements and therefore a simplified definition of a software license can be determined to be:

“...a legal contract between a software application author or publisher and the user of that application ... the user agrees to pay for the privilege of using the software, and promises the software author or publisher to comply with all restrictions stated in the [license]” (Tech Target 2004).

This paper focuses on the licenses that surround the use of commercial software, in this area there are two main types of licenses; the “shrink-wrap” license, the “click-wrap” license, and the third category of shareware and freeware licenses. No examination of licenses would be completed with examining those licenses used in the area of Open Source, therefore the General Public License (GPL) and the Lesser General Public License (LGPL) will also be considered.

### **Shrink-wrap and Click-wrap licenses**

Traditionally a software license would be negotiated between the vendor and user of the software and a formal signed contract would be entered into by both parties. However with the depth of penetration of computing and the myriad of different channels for supply of software a signed negotiated contract has become infeasible in many cases, for as Germanowski states:

“While preferable for strengthened legal protection, the formal signed software license had become incompatible with the distribution of personal computer software and the personal computer have continued to move to dominance in the industry, particularly with respect to the lion’s share of transactions done” (1998).

Out of these market conditions the shrink-wrap license was born, while the exact method of delivery differs between vendors for example; a sticker on the outside of the box, sticker on the media case, or a plastic bag containing the printed license, the same principle applies. When the user opens the box to retrieve the media that the software is on for installation they are presented with two choices. Those choices are to use the product and agree to be bound by the terms and conditions of the license, or return the software for a full refund should the user not wish to be bound by the terms and conditions of the license.

Germanowski identified four main areas that a shrinkwrap license covers and they are:

1. The license grant;
2. A prohibition against reverse engineering;
3. Disclaimers of implied warranties and limitations on remedies and damages; and
4. Required provisions for potential licensing to a government or required by a host government of the software producer (1998).

The license grant defines how the software may be used, for example it may specify that the software may only be used on one personal computer. Or it may specify that it can only be used on a server with a limited number of central processing units, or more commonly for server based software that it may only service a certain number of users simultaneously. These types of provisions have a direct correlation to the number of copies that are sold by the vendor and therefore an impact on their revenue stream.

The second area is a prohibition against reverse engineering and the making of backup copies. Vendors must be careful when drafting this section because different countries have different legal considerations in relation to this area. For example Germanowski identifies the issue that in Europe there is a legislative override of provisions restricting lawful decompiling, reverse engineering and making of backup copies, where as in the United States the law allows the inclusion of decompiling and reverse engineering restrictions but allows the creation of backup and archival copies (1998).

The third area of disclaimed warranties and limitations on negligence and damages is one that also proves to be contentious. For example Todd Bishop of the Seattle Post-Intelligencer states that in part the Microsoft license for Windows XP Professional operating systems states “In no event shall Microsoft ... be liable for any ... damages whatsoever ... even in the event of fault ... (including negligence)...” (cited in Babb 2003).

Such provisions prove contentious because it has been argued by some consumer advocate groups and computer users that software makers should be made more accountable for the defects in their software, for by doing so “would make companies such as Microsoft more accountable, resulting in programs with fewer defects” (Bishop cited in Babb 2003). The other side of the argument though is that “Opening software companies to liability would increase the prices charged to consumers and keep them from enjoying the benefits of software features that Microsoft, under threat of litigation, might deem to be too risky to release” (Bishop cited in Babb 2003). Germanowski goes further and states that:

“Unless there is a way of disclaiming such damages from loss of data, loss of use, or loss of profits, the risks involved may be prohibitive to developing and delivering the software, because every transaction is a ‘bet the company’ transaction on the part of the software producer” (1998).

The fourth and last major area is concerned with clauses necessary to deal with, or comply with legislation, of governments. For example in the United States it is necessary to state that the software was developed with private money and therefore the U.S. government must use it in accordance with the license agreement (Germanowski 1998).

One major issue concerning shrinkwrap licensing is that typically the conditions of the license are revealed to the licensee after the contract has been formed and as such a question arises as to whether they are legally enforceable. In this instance the purchaser must be made aware of the existence of the extra licensing conditions before concluding the transaction for purchase, this is typically achieved by a notice displayed on the box. For example Rowland and Campbell state that:

“...in this situation provided this [the notice] is clearly enough displayed there would be little doubt that this [the extra license provisions] will form part of the contract. It is not necessary that the actual terms and conditions be displayed on the outside of the box but merely that their existence is sufficiently brought to the attention of the contracting party. This will be a question of fact in each case” (2002).

The use of a click-wrap license can aid in reducing the concern raised by this issue. A click-wrap license is typically displayed to the user before the transaction is completed, and is typically used in online transactions. The resolution of this issue revolves around the fact that the terms and conditions are displayed before the contract is finalised and acceptance is signified typically by clicking the “I agree” button. The primary issue surrounding these licenses is pertinent to this paper, for as Rowland and Campbell state “Whether or not these are actually read is a different matter.” (2002).

Therefore it is possible for a System Administrator to be bound by a license agreement as it was incorporated into the online purchasing, or installation, process and by clicking on the “I Agree” button they have signified their acceptance of the terms and conditions. However as the license agreement can be typically very long and complicated the System Administrator has not read the agreement in its entirety and is therefore bound by an agreement that they have not sufficiently read nor understood.

Shrink-wrap and click-wrap licenses also apply to software that is distributed as shareware and freeware. For example Lucas defines shareware as “...software that comes with terms for people to redistribute copies, but requires anyone who continues to use a copy to pay a licensee fee” (2004). Typically this allows the user to try the software for a limited period of time before a license fee must be paid. Freeware in this instance means that the user of the software is still subject to the same licensing restrictions except that no license fee needs to be paid to the author of the software.

The overarching theme of these licenses is the protection of the software producers copyright of the software and in most instances restricts access only to the compiled software and does not provide access to the source code. For a System Administrator to

have access to the source code a piece of software would need to be distributed under one of the licensing models that make up the Open Source movement.

## **Open Source**

Licenses for commercial software, like those outlined in the previous section, typically only provide access to the compiled code, also known as object code, of a software product. However in open source licenses “the licensee/user gets both the object code and the source code, along with the right to modify and make improvements in that source code” (Kennedy 2004).

Open source software is typically also thought of as free software in that no licensing fees are charged for access to the software. As alluded to earlier in this paper this presents problems in determining the size of the software industry. It also presents problems to organisations wishing to derive income from their software by the traditional means of licensing fees. However one the most popular ways to derive income from open source software is by providing support for the software.

For example Hecker defines a business model for businesses wishing to make a profit from open source software called Support Sellers where “Revenue comes from media distribution, branding, training, consulting, custom development, and post sales support” (1999). The three main families open source licenses outlined here are the General Public License (GPL), the Library, or Lesser, General Public License (LGPL) and the BSD license.

The key characteristics of the GPL family of licenses as identified by Kennedy are as follows:

- They grant broad permission to use, modify and distribute software;
- They contain required copyright, disclaimer and license notices;
- They give no warranties for software, and liability for damages is drastically limited;
- Derivative works, with a few exceptions, must also be released under the GPL (modifications can not be made private); and
- Licensors may not charge for software but can charge for providing a copy or providing a warranty (2004).

A modification of the GPL is the LGPL and it provides an exemption from the strongly applied term of the GPL that derivative works must be released under the same terms and conditions of the GPL. For as Udell states “The LGPL was designed to exempt ‘nonfree’ programs that link against open source libraries from the GPL’s strong requirement to release source code” (2004).

For example the LGPL allows an organisation to create a commercial software product and use an open source product as part entire software solution without needing to release

their offering as open source. Up until recently it was possible to use the MySQL database platform in a commercial software package due to the use of the LGPL license for the MySQL libraries. However with the release of version four this is no longer possible. For as Zack Urlocker from MySQL AB, the company behind the MySQL project, states “If you’re open source, we’re free. If you’re closed source we have a commercial license” (cited in Udell 2004).

This raises another integral reason why it is imperative for System Administrators to read license agreements. For example now businesses that were once relying on the open source version of the MySQL database platform now must make the decision to either move to open source, move to another database platform or pay commercial licensing fees. Knowledge of the issues surrounding the change to the new licensing model, including the new commercial license, by System Administrators can assist an organisation in making these decisions.

The third and last type of license under consideration is the BSD style of licenses. Kennedy identifies the following salient points regarding BSD licenses.

- The licenses are very short and cover only a small number of substantive areas;
- The licenses contain the required copyright and license notices;
- There are no warranties for software and liability for damages is drastically limited; and
- There is no requirement that derivative works be released under the same license. Therefore modifications may be taken private and be released under commercial licenses (2004).

The BSD license allows derivative work to be released in commercial products; therefore it is possible to find BSD licensed software in such popular commercial operating systems as Microsoft Windows NT and Macintosh OSX. Even though this family of licenses are determined to be relatively simpler than the other open source families it is still important for the implications of a System Administrator using software released under these licenses.

The list of licenses presented here is not meant to be a definitive list of all of the Open Source licenses available for use by prospective authors and publishers of software. At the time of writing there were 54 licences that adhered to the definition of Open Source as provided by the Open Source Initiative (2004a). The Open Source Initiative (OSI) identifies 10 characteristics that an Open Source license must adhere to, and they are:

1. Free Redistribution;  
The software may be distributed freely without any royalty fees and can be distributed as part of an aggregate software product.
2. Source Code;  
The program must include source code, and must allow distribution in source code as well as compiled form.

3. Derived Works;  
The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.
4. Integrity of the Authors Source Code;  
The license may restrict source-code from being distributed in modified form *only* if the license allows the distribution of "patch files" with the source code for the purpose of modifying the program at build time.
5. No Discrimination Against Persons or Groups;  
The license must not discriminate against any person or group of persons.
6. No Discrimination Against Fields of Endeavour;  
The license must not restrict anyone from making use of the program in a specific field of endeavour.
7. Distribution of Licence;  
The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.
8. License Must Not Be Specific to a Product;  
The rights attached to the program must not depend on the program's being part of a particular software distribution.
9. License Must Not Restrict Other Software; and  
The license must not place restrictions on other software that is distributed along with the licensed software.
10. License Must Be Technology-Neutral.  
No provision of the license may be predicated on any individual technology or style of interface (Open Source Initiative, 2004b).

One initiative of the OSI is the introduction of the OSI Certification Mark. The primary advantage of the OSI certification mark and its associated program is that it assists prospective software authors and publishers in choosing an appropriate Open Source license. It also assists users in determining if a particular piece of software is in fact open source. For example as the OSI states:

“The Open Source Definition spells out the essential qualities of open source software. Unfortunately, the term "open source" itself is subject to misuse ... Since the community needs a reliable way of knowing whether a piece of software really is open source, OSI is registering a certification mark”  
(2004c)

With the increased interest in Open Source the provision of a way to reliably determine if a software license is indeed an Open Source license is going to become increasingly important. The certification mark therefore may make it easier for system administrators and other stakeholders in making decisions regarding software licenses.

It is the proposition of this paper that for various reasons Systems Administrators do not regularly read license agreements, whether they are those for commercial software or open source software and that this creates a variety of issues for organisations and users who use the software. The focus of this paper is to determine if System Administrators do not regularly read licenses agreements, the reasons behind their decision not to read the license and from this examination determine avenues of further investigation to ascertain ways to rectify this situation.

### **Methodology**

The population of potential survey respondents for this research are system administrators who are a member of the System Administrators Guild of Australia (SAGE-AU). The respondents will be contacted via a post to the SAGE-AU e-mail mailing list and will be directed to an online questionnaire housed at the University of Southern Queensland. The online survey facilitates the collection of data that will be analysed to determine the aggregate of the thoughts and opinions of the respondents in relation to software license agreements.

As the number of survey respondents is indeterminate until completion of the questionnaire, the data will be analysed using a *post-hoc* analysis technique that will indicate that the sample size is sufficient for a confidence level of 95% and a precision level of  $p < 0.05$ . These levels of confidence and precision will indicate that the results are statistically reliable enough to be generalised.

The online questionnaire will be available for access by the membership of SAGE-AU using the following URL, <http://www.usq.edu.au/library/apps/eula-survey> and will only be available during the period 14 June 2004 – 28 June 2004.

### **Conclusion**

The aim of this study is to investigate the thoughts and opinions of system administrators in relation to end user license agreements and the implications that they have in the commercial arena. A review of the available literature indicates that system administrators are an important group of stakeholders that have not, up to this point, been sufficiently explored. Very little published, peer-reviewed information exists in relation to their knowledge and behaviour concerning software licenses, and as such highlights the importance of this study.

Another area that is highlighted as needing further investigation is into the area of unlicensed copying of software, more colloquially known as software piracy. Much of the

information presented regarding this issue was obtained from sources that some readers may concede as being biased. For example the statistics are quantifying an activity that is inherently illegal and therefore one that is conducted in secret. This was unavoidable due to the lack of peer-reviewed research that is conducted into this area.

It is also important to note that many of the statistics regarding the size of the software industry may also be cast in doubt; due to such activities as using the value of the physical distribution media that the software is distributed on, to determine the value of the software being sold.

Due to various technical and logistical issues the results of the study are not available at the time of submission of this paper. The full results, and their discussion, will be presented at the SAGE-AU conference to be held in Brisbane in August 2004.

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