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I, object!

A landmark case in relation to software copyright

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A recent landmark decision of the Federal Court of Australia will have implications for the IT industry. CA, Inc. v ISI Pty Limited[1] *is the most significant case to consider the extent of copyright protection in computer software programs in Australia since the High Court judgment in Data Access Corporation v Powerflex Services Pty Ltd.*[2] *The case involved complex issues concerning copyright protection for computer programs including whether copyright can subsist in a macro, but will also likely have implications for the protection of code 'objects' employed in software. Bennett J found in favour of CA, Inc (**CA**) in relation to both copyright infringement and breach of confidence.*

Background

CA (the applicant), is an international IT software management company that produces software to manage large databases on mainframe computers. CA owns a relational management database system called Datacom. Datacom is typically used by organisations with very large processing requirements, including the US Customs Service and Macquarie Bank Limited. The database is installed on licensees' mainframe computers.

A 'special attaching program' called a 'User Requirement Table' (**URT**) was required to attach to a licensee's application program to enable the application to interact with the Datacom database. It is used by a licensee application when that application program accesses or alters information that the licensee has stored in a Datacom database. For Datacom, the URT is generated by running macros included in the Datacom software.

A macro is a command that, when executed, causes a sequence of other functions to be executed, so that the overall effect of performing a more complex function is

In this issue

From the editors...

This issue of the Computers and Law Journal includes analysis of recent case law developments in the field of software licensing and copyright, the potential for liability in respect of the accuracy of information provided by a customer in technology outsourcing arrangements, and a book review considering the future of legal services.

Tim Golder, Jesse Gleeson and Brandon Van Slyke's article reviews the reasoning of Bennett J in the recent landmark decision of *CA, Inc. v ISI Pty Limited* in the Federal Court of Australia. Her Honour, having found that copyright can subsist in a macro, found that ISI infringed CA, Inc.'s copyright and also that ISI breached their confidence. Her Honour's finding that a macro is a 'computer program' for the purpose of *Copyright Act* will have implications on the protection of code 'objects' employed in other forms of software, which may be considered computer programs in their own right.

In her article, Grainne Marsden suggests that software developers should reconsider their software licensing arrangements to protect themselves from the implications of the European Union's Court of Justice decision in *UsedSoft GmbH v Oracle International Corp.* The Court found that the sale of used or existing software licenses does not infringe copyright if the license is perpetual, the license is sold as a whole and the first acquirer disables their own copy of the software upon resale. Marsden considers that the decision may only apply to software licenses that are perpetual, and that other licensing arrangements may not be affected by the decision.

Anne Petterd considers the recent Victorian Supreme Court of Appeal decision in *Ipex v Melbourne Water*, in which the position at trial was upheld. As with the trial decision, the judgment reminds us that the accuracy of information provided by a customer is a possible basis for liability for misrepresentation, or misleading and deceptive conduct, and also that tenderers relying on customer information must ensure that they either conduct their own due diligence to verify such information, or alternatively ensure that reliance on such representations are included in the contract (either within the scope, or through the inclusion of appropriate warranties).

The second part of Dr Pamela Gray's and Xenogene Gray's book review of Peter Hinssen's book, The New Normal, continues their analysis of the implications of a changing social and technological landscape for the legal profession and the future of legal services.

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achieved.[3] Datacom licensees were provided with five macros (**CA URT Macros**) that enabled their applications to interact with Datacom.

The names of the CA URT Macros and their parameters were created specifically for Datacom and were provided to licensees in source code so that their programmers could write programs to interact with Datacom. Without the CA URT Macros, a licensee would have to create the URTs required by its application program from scratch.

In the early to mid 1980s, IBM released a competing database product (**DB2**). DB2 uses an alternative method to store and retrieve data and was not compatible with Datacom. If an organisation wished to convert its database and the applications it uses with one product (e.g. Datacom) to a form compatible for use with an alternative brand (e.g. DB2), all data managed by the first product would need to be translated into a format compatible with the second product. In addition, all of the organisations applications would have to be rewritten. This process is time-consuming, costly and gives rise to the risk of error.

To avoid that process, the respondent, ISI, made an alternative software program called '2BDB2' designed to facilitate users of CA's Datacom database system to switch to IBM's DB2 system by enabling an organisation to migrate the data from Datacom to DB2 without modifying their applications that need to interact with the database.

In order to convert the Datacom information, DB2 needed to use new URTs to replace the CA URT Macros (**ISI Replacement Macros**). The ISI Replacement Macros prompted the generation of a new set of URTs, but only following completion of the data migration process. The copyright issues arose out of the interim period (the data migration process) where only URTs produced using the CA URT Macros could be used. The purpose of the ISI Replacement Macros was to generate new URTs to replace the original CA URT Macros once conversion from Datacom to DB2 had completed.

ISI produced four sets of ISI Replacement Macros over the years: 1999, 2004, 2009 and 2011.

The Copyright Claim

Section 10 of the *Copyright Act 1968* (Cth) (**the Act**) t defines a 'literary work' as including 'a computer program or compilation of computer programs.' A 'computer program' is defined as 'a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result.'

CA claimed that each release of Datacom and each of the CA URT Macros is a copyright work and that each version of the ISI Replacement Macros reproduced a substantial part of these works.

Bennett J found that Datacom itself was clearly a computer program. However, for evidentiary reasons, she did not consider whether ISI had reproduced a substantial part of Datacom. In any event, it is the analysis and determination with respect to copyright in the CA URT Macros that is of particular interest.

Copyright in CA URT Macros

CA contended that each of the CA URT Macros is a 'computer program' as defined by section 10 of the Act in that it is 'indirectly' used to bring about 'a certain result'; the creation of a URT for an application linked to Datacom.

ISI maintained that the CA URT Macros do not constitute 'a block of source code' but are simply 'a piece of data' and therefore are not a 'set of instructions' as required in the definition of computer program under the Act. ISI argued that copyright in a computer program is to be 'found in the entirety of a computer program and not in part of it, otherwise "every snippet of code that was ever written" could potentially be a computer program because each takes a necessary and inexorable part in some particular function'. Counsel for ISI likened the CA URT Macros to a recipe on the basis that they 'will be read and things will be done based on their content.' ISI further argued that the macros were not a 'set of instructions' because they require other mechanisms to achieve a result.

CA claimed that to constitute a 'set' all that is required is that 'the statements or instructions in issue relate to one another.' CA argued that there is no requirement that their operation is independent of other statements or instructions.

In considering the issue, Bennett J applied the case of *Dais Studio Pty Ltd v Bullet Creative Pty Ltd*[4]. She agreed with CA's interpretation of the word 'set' as indicating that the instructions are 'related to one another rather than being a mere collection.' Her Honour was not persuaded by ISI's argument that because the macros required participation with other components they were disqualified from being a 'computer program.' She found that the participation of other components 'simply means that the result attributable to the CA URT Macros is brought about "indirectly" in this case.' According to Bennett J, the function of the word 'indirectly' in the definition of 'computer program' meant the macros would fall within the definition even where interaction with other programs or components is required.

Ultimately, despite CA's acknowledgement that the relevant macros formed part of its Datacom application, each of the CA URT Macros was held to be a 'computer program' in its own right and therefore a 'literary work'.

Industry perceptions of what constitutes a computer program were not considered persuasive. While Bennett J accepted that the macros in question were not a 'computer program' as the term is understood in the industry, she found that this is irrelevant to the construction of 'computer program' as defined in the Act.

Significantly, Bennett J did not comment specifically on ISI's argument that, if the macros at issue are considered to be a 'computer program,' 'every snippet of code that was ever written' could potentially be a computer program. By implication, what constitutes the minimum unit of code for protection has been left open. There would be far-reaching ramifications for the IT industry if every snippet of code is potentially a computer program. For instance particular 'objects' in object-oriented programming may be considered computer programs in their own right. This suggests that it may not be necessary to compare the alleged copied code with the whole of a software package in assessing substantial part. Rather, divisible portions may be considered computer programs in their own right. This will make it significantly easier to establish that a 'substantial part' has been copied.

Infringement

Reproduction of a 'substantial part' of CA URT Macros

CA argued that determining whether a substantial part has been copied involves an examination that places emphasis on 'functional' aspects rather than focussing exclusively on the form (or textual aspects) of the CA URT Macros and the ISI Replacement Macros. CA acknowledged that the CA URT Macros and the ISI Replacement Macros are not textually identical, but maintained that they operate identically.

CA claimed that the appropriate inquiry involves consideration of functionality of the computer statements comprising the copyright work and determining how those statements function to produce a 'certain result'. That certain result, according to CA, was the creation of a URT for a Datacom licensee's application program. CA argued that the CA URT Macros and the ISI Replacement Macros achieved this result 'by exactly the same means.'

ISI, on the other hand, focussed on 'form' and emphasised the differences between the CA URT Macros and the ISI Replacement Macros. ISI pointed out that the ISI Replacement Macros did not reproduce several elements found in the CA URT Macros.

Bennett J favoured the functional approach advocated by CA, but concluded that there must also be sufficient similarity in form. Her Honour stated that it was not in dispute that there are differences between the two sets of Macros. She noted that there were partial differences in function and form with each set of macros, but emphasised that the question was whether the ISI Replacement Macros contain a 'substantial part' of the CA URT Macros.

1999 ISI Replacement Macros

On the basis of the expert evidence, Bennett J found that the 1999 ISI Replacement Macros reproduced a substantial part of the CA URT Macros. Her Honour described the 1999 ISI Replacement Macros and the CA URT Macros as 'virtually identical.' The macros were found to be functionally similar as they acted to create URTs, utilised CA's first and second-level macros, and contained parameters that are the same (including parameters not utilised by the 2BDB2 or for the purposes of DB2). Her Honour also pointed to textual similarities including the fact that the macros had identical names.

The 2004 and 2009 ISI Replacement Macros

CA recognised that there were changes from the 1999 ISI Replacement Macros to the 2004 ISI Replacement Macros and 2009 ISI Replacement Macros, but submitted that these changes were 'trivial' in that they did not relate to the core functionality of the macros. ISI again pointed to the respective differences, including original additions that had been made and a significant number of lines in the 1999 ISI Replacement Macros that had no counterpart in the 2004 or 2009 ISI Replacement Macros.

However, Bennett J found that there was objective similarity in form and function in the reproduction of the 2004 and 2009 ISI Replacement Macros. She held that the 'reproduction performed an identical function and the textual similarity that enabled that function to occur was evident'. Importantly, although ISI made changes to the 2004 and 2009 ISI Replacement Macros, those additions did not preclude a finding that a substantial part of the CA URT Macros was reproduced. It was held that the 2004 and 2009 ISI Replacement Macros infringed CA's copyright.

The 2011 Macros

Her Honour concluded that the 2011 ISI Replacement Macros were not objectively similar to the CA URT Macros and that they were the result of ISI's original work. This is a significant finding. Although the 2011 version was created with the author's knowledge of the 2004 and 2009 ISI Replacement Macros, there was no casual connection as no evidence was put forward to suggest that the author wrote or was part of the creation of or was consulted in the creation of the 1999 ISI Replacement Macros.

Bennett J found that the 2011 ISI Replacement Macros were effectively rewritten. As such, despite a finding that there was a connection between the CA URT Macros and the 2011 ISI Replacement Macros, the casual connection was broken by the 're-write' of the 2011 ISI Replacement Macros.

Although the function of 2011 ISI Replacement Macros was held to be the same as the 2004 and 2009 ISI Replacement Macros, this was not enough to amount to copyright infringement or the taking of a substantial part. According to Bennett J, there must also be sufficient similarity of what may be described as 'expression, form or parameters' (e.g naming, word-ordering, spacing, capitalisation, punctuation and lexicon).

The Interoperability Defence

Broadly, ISI's software aimed to permit interoperability between its client's software and backend databases. Accordingly, ISI sought to rely on the defence to infringement available under section 47D of the Act. Bennett J adopted a rigid approach to the scope of the interoperability defence, describing the defence as a 'very limited exception.'

Section 47D protects reproductions made by the owner or licensee of copyright in a computer program or someone acting on their behalf. Bennett J found that the defence does not contemplate a defence where 'an independent third party reproduces a computer program and then for commercial purposes provides that reproduction to a licensee of the computer program.'

Bennett J concluded that ISI was not acting 'on behalf' of such licensees when it made the ISI Replacement Macros as they were not made in response to specific requests from customers before the reproduction was made.

Confidentiality

In the course of providing services to CA's licensees prior to developing DBDB2, ISI was provided with confidential information of CA, including source code and user manuals. The Court accepted that source code could be confidential and was, on the facts of this case.

The agreements between CA and licensees provided that the contract terms were confidential and that Datacom could only be used for the benefit of licensees. Additionally, the relevant user materials had confidentiality notices.

While ISI was not party to any confidentiality agreement with CA, CA argued that ISI was subject to an equitable obligation of confidence. The Court found that CA only disclosed the relevant information to licensees under express contractual or implied obligations of confidence and that a reasonable person standing in the shoes of those working on ISI's behalf 'should have appreciated that the CA information was inherently confidential to CA.' In this regard, the Court was satisfied that the CA confidential information was imparted to ISI in circumstances importing an equitable obligation of confidence.

On the evidence, the Court also accepted that CA's confidential source code was used in ISI's products and documentation and that this constituted an unauthorised use of CA's confidential information.

How does it affect you?

Bennett J found that macros will satisfy the definition of 'computer program' under the Act, which suggests that 'objects' within broader software packages may be

considered computer software in their own right. This will make it significantly easier to establish that a 'substantial part' has been copied.

Bennett J's judgement raises interesting questions concerning the distinction between 'form' and 'function' when considering copyright in computer programs. The Court had significant regard to functional similarity, but also required sufficient similarity of 'expression, form or parameters'.

However, despite the existence of functional similarity, where an author has effectively 're-written' the textual elements of the alleged infringing program this may be enough to break the chain of causation and does not warrant copyright infringement. This validates 'clean room' coding techniques that seek to replicate the functionality of software without infringing copyright.

The authorship and originality of the macros and the Datacom database were not in dispute. This was largely because the authorship and programming history of CA's Datacom database were well documented, and as such, no major issues of authorship or originality arose. To avoid problematic authorship and originality issues, a detailed programming history should be documented and maintained. This aligns with good technical code management practices.

Parties seeking to rely on the interoperability defence under section 47D of the Act will need show that they were acting in response to 'specific requests' from customers. This suggests that the interoperability defence under section 47D will only apply to bespoke software work for particular customers (or by firms on their own behalf) and not any broader right to create software packages to facilitate interoperability.

An action for breach of confidence may provide an alternative or supplementary basis to bring a claim against an alleged infringer. In this case, ISI was held not only to have infringed copyright, but was also found in breach of an equitable obligation of confidence.

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[1] [2012] FCA 35.

[2] (1999) 45 IPR 353.

[3] *Data Access Corporation v Powerflex Services Pty Ltd* (1999) 202 CLR 1 at [99].

[4] (2007) 165 FCR 92.