

## *Autodesk Inc v Dyason*

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Issues of interpretation and compatibility with respect to the development of technology and intellectual property law have been the subject of increasing contention in recent years. The extent of protection offered by copyright law to computer programs under the *Copyright Amendment Act 1984 (Cth)* was the subject of the eagerly awaited decision of the High Court in *Autodesk Inc v Dyason*.<sup>1</sup>

### *Facts*

To prevent unauthorised use of a software package known as AutoCAD, Autodesk,<sup>2</sup> the owner of the copyright in the software developed a hardware device, the AutoCAD lock. This piece of machinery was essential to the use of the software as the program could not be run unless the lock was connected to the computer running AutoCAD. Only one lock was sold with each package, and extra locks could only be obtained by purchasing the entire package.

One of the respondents, Kelly, by the use of an oscilloscope to detect electrical impulses from the AutoCAD lock, but without any inspection of the internal workings of the lock itself, constructed an alternative device. Called the Auto Key lock, this device could be used as a substitute for the AutoCAD lock, and was marketed as such, for a fraction of the price, by Kelly and the Dyasons.

Although the function and purpose of the two devices was exactly the same, both the judge at first instance<sup>3</sup> and the Full Bench of the Federal Court on appeal<sup>4</sup> considered the technology used in their implementation to be completely different. The bulk of the debate following the decisions was based on this difference in form.

### *The decision*

Autodesk's action was founded on s31 of the *Copyright Act 1963 (Cth)* which makes it an infringement of copyright for anyone other than the copyright owners to reproduce an original<sup>5</sup> literary work in a material form. This Act was amended in 1984, in the aftermath of the *Computer Edge* decision<sup>6</sup> to include computer programs in the s10 definition of "literary work". The High Court's decision in favour of Autodesk was based on the respondent's reproduction of a "substantial part"<sup>7</sup> of a computer program which was part of the AutoCAD package.

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1 (1991-1992) 173 CLR 330.

2 A Californian company and its Australian subsidiary.

3 *Autodesk Inc v Dyason* (1989) 15 IPR 1.

4 *Dyason v Autodesk Inc* [1990] AIPC para 90-697, (1990) 24 FCR 147.

5 *Copyright Act 1963 (Cth)*, s32.

6 *Computer Edge Pty Ltd v Apple Computer Inc* (1986) 161 CLR 171. This decision held that computer programs in object code, in this case stored as electrical impulses on a silicon chip, were not literary works, as they were not expressed in writing.

7 Above n5, s14(1)(a).

Further amendment of the definition of material form was aimed at bringing reproduction of computer programs in object code within the infringement provisions. The new definition included: "any form (whether visible or not) of storage from which the work or adaptation, or a substantial part . . . can be reproduced."<sup>8</sup>

"Reproduction" is not defined in the *Copyright Act*. The *Computer Edge* decision, however, established two requirements. The alleged reproduction must be derived from the original work and there must be "a sufficient degree of objective similarity between the two works".<sup>9</sup> The first requirement can be satisfied not only by direct copying from the original work, but also by copying something which is itself a reproduction of that work. This intermediate copy may be in another dimension, such as a copy of a dress produced from copyright drawings.<sup>10</sup> Indeed, the intervening causal link need not necessarily be a copy of the work.<sup>11</sup> Even a reproduction from a verbal description is enough.<sup>12</sup>

The indirect copying doctrine is important to the *Autodesk* decision because of the way in which the Auto Key lock was constructed. Kelly had not dismantled the AutoCAD lock or seen the code which controlled the device and its interface with the package. He had constructed his alternative device solely on the basis of the electrical impulses emanating from the lock.

It has long been an essential feature of copyright law that no copyright can subsist in an idea, but only in particular modes of expression.<sup>13</sup> This "traditional dichotomy . . . between an idea and the expression of an idea"<sup>14</sup> was challenged by the trial judge's finding of a "sufficient degree of objective similarity" on which to base a breach of copyright solely in the function of each of the locks.<sup>15</sup> This decision may have been greeted with acclaim by Autodesk and other software manufacturers struggling with the difficulty of protecting easily copyable programs from unauthorised use, but, was condemned by both the Full Federal Court and the High Court for its cavalier treatment of the established principles of copyright law.

Dawson J acknowledged the difficulty of distinguishing ideas from expressions with respect to utilitarian works such as computer programs but was prepared to hold in this case "that the idea of a utilitarian work is its purpose or function and . . . the method of arriving at that purpose or function is the expression of the idea".<sup>16</sup> He extended this by stating that "when the

8 Id, s10(1).

9 Above n6 at 186.

10 *Burke & Margot Burke Ltd v Spicers Dress Designs* [1936] Ch 400.

11 McKeough, J and Stewart, A, *Intellectual Property in Australia* (1991) at 153-54.

12 *House of Spring Gardens v Point Blank* [1985] FSR 327.

13 See, eg, *Donoghue v Allied Newspapers Ltd* [1938] Ch 106 at 109-10; *Mono Pumps (New Zealand) Ltd v Karinya Industries Ltd* (1984) 3 IPR 505 at 508; *Lincoln Industries Ltd v Wham-O Manufacturing Co.* (1984) 3 IPR 115 at 121-22; *Plix Products Ltd v Frank M Winstone Ltd* (1984) 3 IPR 390 at 419.

14 *Autodesk Inc v Dyason*, above n1 at 10.

15 Northrop J considered that both locks constituted computer programs, a conclusion doubted by both the Full Federal Court and the High Court.

16 Above n13 at 11, approving *Whelan Associates v Jaslow Dental Laboratory*, 797 F2d 1222 (1986) at 1236, citing *Baker v Selden*, 101 US 99 (1879).

expression of an idea is inseparable from its function, it forms part of the idea and is not entitled to the protection of copyright".<sup>17</sup>

The High Court was prepared to find sufficient similarity, not in the function of the two locks, but in a 127-bit look-up table which appeared in binary form in the EPROM (erasable programmable read only memory) of the Auto Key lock and in decimal form in the source code of WIDGET C. Dawson J saw this look-up table as a "substantial, indeed essential"<sup>18</sup> part of the WIDGET C program, indirectly copied by the respondent by analysis of the electrical impulses emanating from the AutoCAD lock and "not something which [Kelly] arrived at by means of his own calculations".<sup>19</sup>

Some commentators had expressed doubt as to whether the 1984 amendments would allow copyright to subsist in computer programs other than those in a written form.<sup>20</sup> Mason CJ, Brennan and Deane JJ were at pains to scotch such "a narrow literal construction"<sup>21</sup> which would deny protection to those programs stored in a "non-senate form such as electrical impulses on a disk, ROM or EPROM".<sup>22</sup> To impose a requirement that programs must have at some time been expressed in a written form would in their view "frustrate the obvious legislative intent"<sup>23</sup> to confer protection on all computer programs whatever their form.

### *Originality*

Dawson J's classification of the look-up table as "a table or compilation"<sup>24</sup> and therefore a literary work in its own right<sup>25</sup> raises unresolved questions.

Supported by the majority, he stated that there was "no doubt"<sup>26</sup> about the originality of the look-up table, basing this conclusion on remarks in *Victoria Park Racing and Recreation Grounds Co Ltd v Taylor*<sup>27</sup> regarding originality of authorship. Dawson J makes no mention of a respectable body of cases which impose an extra element of a degree of effort in order to satisfy the requirement of originality of a work. The extent of the degree is uncertain but it is clear that at least some, if not a substantial amount, of "skill, judgment or labour"<sup>28</sup> must be employed. The look-up table was merely a random selection of 127 0s and 1s. It is open to debate whether or not the degree of

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17 Id at 18, approving *Lotus Development Corporation v Paperback Software International* (1990) 18 IPR 1 at 25.

18 Id at 12.

19 Id at 13.

20 See, eg, Greenleaf, G, "Software Copyright: FAST and loose amendments" (1988) 62 *ALJ* 457, Stern, S, "Computer Software Protection After the 1984 Copyright Statutory Amendments" (1986) 60 *ALJ* 333, and Hughes, G, "Australian computer law and the English experience" (1988) 16 *ABLR* 208.

21 Above n13 at 1.

22 *Ibid.*

23 *Ibid.*

24 Id at 13.

25 Above n5, s10(1).

26 Above n13 at 13.

27 (1937) 58 *CLR* 479.

28 Above n3 at 183.

effort employed in this compilation could hardly be considered as "more than negligible",<sup>29</sup> the least stringent test used by the previous decisions.

Considering that this 127-bit table would translate into merely 16 alphabetic characters, questions of substantiality must also be raised. The *Exxon*<sup>30</sup> case refused copyright protection to the word "EXXON" because it was not sufficiently substantial in itself to convey meaning, and therefore could not be classified as a literary work.

However, Dawson J's judgment expressly stated that he placed no reliance on the look-up table as a literary work in itself. He dismissed as irrelevant the classification of the table as a literary work, and, by implication, its originality. This ignores previous decisions holding that there will be no infringement of copyright if the "substantial part" of the literary work which is reproduced is not in itself original.<sup>31</sup>

As a result, this decision could have an important influence in determining the basis of a literary work with respect to computer technology. Originality standards for computer tables and compilations may be set much lower than previously thought, and indeed, the originality requirement as a whole may be affected. Originality of authorship may be interpreted as the minimum standard, and the possibility exists that there will be no standard of originality set for reproduction of a substantial part.

### *Copyright protection for functional items*

Much of the debate generated by the Autodesk decisions has centred around the difference in form between the Auto Key and the AutoCAD lock. The High Court decision has unexpected implications for cases where an alternative device was produced to perform the same function. If this alternative device was not in the form of an EPROM, but instead was instead a hardwired piece of machinery similar to the AutoCAD lock itself, it would be of significant importance whether or not the device would be held to constitute a reproduction of a substantial part of a computer program.

If the wiring of this device would be considered to be a copy of the look-up table in WIDGET C, then copyright protection is effectively conferred on the AutoCAD device. This produces an anomaly in the law covering mass-produced three-dimensional objects. The Attorney-General's Department considered that copyright protection was inappropriate for such industrial products. The length of protection, the life of the author of the work plus fifty years,<sup>32</sup> has been "generally acknowledged to be an excessive period and may be detrimental to technological development and competition between firms [and] to the interests of consumers in general".<sup>33</sup> In an effort to

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29 *Ladbroke (Football) Ltd v William Hill (Football) Ltd* [1964] 1 WLR 273 at 287, *Apple Computer Inc v Computer Edge Pty Ltd* (1984) 53 ALR 225 at 234 per Fox J, and at 257 per Lockhart J.

30 *Exxon Corporation v Exxon Insurance Consultants International Ltd* [1981] 2 All ER 495.

31 *Klissers Bakers v Harvest Bakeries* (1985) 5 IPR 533, *Dixon Investments Pty Ltd v Hall* [1990] AIPC para 90-714.

32 Above n5, s33.

33 Attorney-General's Department, Discussion Paper, *Copyright Protection for Artistic*

reduce these effects, as well as eliminate overlaps between copyright and design protection, the *Copyright Amendment Act 1989* (Cth) was passed amending ss74-77 of the *Copyright Act*, removing copyright protection for artistic works applied industrially.<sup>34</sup> These provisions effectively remove protection for functional mass-produced items based on copyright artistic works such as technical drawings and plans.

However, a computer program is not an artistic work but a literary work under the Act. Therefore, mass-produced three-dimensional functional items which are reverse engineered in a similar way to the proposed Auto Key substitute will be outside the provisions and the policy of the 1989 amendments. This lack of distinction between hardware and software leads to a clear anomaly in the law.

If, in the alternative, the very fact of hardwiring led the court to conclude that such machinery was not a reproduction of the look-up table, the conclusion could creep into the bounds of absurdity. The Auto Key was different in form from the AutoCAD lock but was considered to be a breach of copyright. However, if on this analysis the respondents had produced a device exactly the same as the AutoCAD lock, copyright protection would not have been available. The incongruity of such a situation is obvious.

These extrapolations highlight the uncertainty of application of traditional copyright law to computer technology, and the elusiveness of definitions of "works" which one can neither see, hear or feel in any traditional sense.

#### *Computer technology: is copyright the answer?*

Despite the justifications for the particular decision in *Autodesk*, it is clear that serious problems of integration of computer technology and copyright law remain. This is due in part to the historical basis of copyright law which was developed to protect works whose intrinsic value lay in their form or expression such as novels, plays, paintings or musical pieces. Inevitable distortion is produced by placing utilitarian works, whose intrinsic value is based on their function, in the same category.

The very dynamism of the computer industry defies a simple solution. Patent law, because of its protection of ideas, has a considerable capacity to stifle innovation and competitiveness due to a lengthy and expensive registration process which sits uneasily with the rapid obsolescence of computer technology.

Whilst producing a degree of flexibility, the use of contracts and the law of "trade secrets" as an alternative is hampered by its unenforceability against innocent third parties and in mass-marketing situations.<sup>35</sup>

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Works Industrially Applied (March 1987) at 11.

34 A similar effect was produced in England by the decision in *British Leyland Motor Corp Ltd v Armstrong Patents Co Ltd* [1986] 2 WLR 400 which enunciated the so-called "spare parts exception".

35 Copyright Law Review Committee, Issues Paper, *Computer Software Protection* (April 1990) at 7.

Specifically tailored *sui generis* schemes have often been touted as the solution<sup>36</sup> to provide "adequate and effective protection"<sup>37</sup> whilst supporting the twin aims of innovation and competition. Copyright-style protection (outside the definition of literary work) for a program written in Pascal; design-type protection for electronic circuits and user interfaces and patent protection for computer machinery and parts are examples of a flexible scheme which takes into account the divergent nature of information technology.

However, Australia's computer industry is heavily dependent on foreign industries. Copyright protection for computer software at least, is overwhelmingly supported by the major trading countries,<sup>38</sup> with various legislation and instruments such as the Draft European Commission Directive supporting the continuing use of such protection in opposition to the alternatives. To stay competitive in the industry and ensure continuing access to foreign technology any move against the world trend must be viewed with caution.

It cannot be denied that the High Court in *Autodesk* has shown a balanced approach. A highly technical problem has been dealt with using strict traditional principles of copyright law and has emerged with a commercially viable solution. Whether or not this success can continue is a question only future cases can answer. Compatibility between a rapidly diversifying and multiplying technology and a legal system which by its nature is slow to adapt to change will always be in a precarious position.

KAYLEEN MANWARING<sup>39</sup>

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36 *Id* at 7-8.

37 *Id* at 4.

38 *Id* at 41.

39 I would like to express my appreciation for the valuable help provided by Professor Alan Tyree and David Cavenor.