The Patentability of Computer Software in New Zealand

by John Terry

Introduction

The same difficulties that have been experienced in dealing with computer technologies under copyright law have been experienced when dealing with them under patent law. The essence of the problem is that a standard computer can be programmed to function in the same way as any novel electrical device. Thus, if a device is patentable, how can one deny that a computer when programmed to operate in the same manner is not also patentable, albeit a combination of known hardware and novel software? However, if every computer when programmed with novel software is a novel patentable device, then patent protection may be extended to 'non-technical' inventions, such as business software. This does not sit well with the traditional understanding that patents are granted for novel technical advances.

Statutory Framework

The New Zealand *Patents Act* 1953 is in almost identical form to the 1949 UK Act. The UK Act was however amended in 1977 to specifically exclude computer software *per se*. There has been no substantive amendment of the New Zealand *Patents Act* since 1953, although all intellectual property law is presently under review. Section 2 of the New Zealand *Patents Act* 1953 defines an invention as 'any manner of new manufacture the subject of Letters Patent and grant of privilege within section 6 of the Statute of Monopolies and any new method or process

of testing applicable to the improvement or control of manufacture; and includes an alleged invention'. Although the words 'manner of new manufacture' give an indication that some technical advance is required, the definition takes us little further. We must turn to case law to establish what is patentable. As there is no case law in New Zealand regarding the patentability of computer software we must look to foreign law, especially to pre-1977 UK law, which is highly persuasive in New Zealand.

A Brief History of Pre-1977 UK Law

Mere ideas of a non-technical nature have been excluded from patentability. Examples are 'mere schemes and plans', 'methods of doing business' and 'mere intellectual information'. The cases reflect the traditional understanding that patents should be granted for technical advances and not ideas relating to commerce or the arts.

The patentability of computer software under the 1949 UK Act was developed by a line of four leading cases. In *Slee* and *Harris's* applications[1] the invention related to a method of enhancing the processing speed of a computer. The method involved transferring data from slow memory to a processing unit, performing processing between the processing unit and fast memory, and storing the result in the slow memory. The method allowed processing time to be minimised using the expensive fast memory while

utilising inexpensive slow memory to store the results. The original claims were in the form of 'a method of operating a computer'. These were held to be unpatentable as they consisted merely of a method of operating a known machine. Furthermore, the product of the method was merely intellectual information, which was barred from patentability. A claim to the apparatus when modified by the novel software was however allowed on the basis that a standard computer when programmed became a novel device. The invention in this case related to a technical improvement allowing faster processing at a lower price and sits comfortably with the type of subject matter for which patents had previously been granted.

In *Gever's application*[2] the invention related to a method of generating phonetic equivalents of a trade mark for the purpose of trade mark searching. In this case there was no technical improvement in the operation of the device, as above. The computer merely ran the novel program as it would run any other software. Claims directed to a 'data processing apparatus' operating in accordance with the novel software were however held patentable on the basis that the computer when programmed was a novel device. Thus the seemingly innocent approach taken in *Slee* and *Harris's* application resulted in a computerised operation being patentable whereas the operation would not have been patentable if conducted manually.

In *Burroughs Corporation (Perkin's) application*[3] the Patents Appeals Tri-

bunal again upheld the patentability of a computer when programmed to operate in a new way on the basis that it was a novel device. In an *obiter* statement Graham, J. also considered computer programs embodied in some physical media to be patentable.

The high water mark was reached in the case of *IBM Corporation's application*[4]. This application related to a computer program for determining the market price of a commodity based on sets of buy and sell orders. There was clearly no technical improvement. The invention was merely a computerised method of doing business. It was accepted by the Court that once the idea had been conceived, any competent computer programer would have been able to write a program to implement it. The application was, however, accepted on the basis that the computer when programmed was a novel device. The British parliament had however legislated before the issuance of this decision to exclude computer programs *per se* from patentability in the 1977 Act.

International Trends

The current world-wide trend appears to be towards liberalising the patentability of computer software. In the United States, Merrill Lynch patented its cash management systems and successfully sued others for infringement of its patent.[5] US practice with regard to the patentability of algorithms has also relaxed. Under present practice a novel algorithm may be patented provided it does not wholly pre-empt the use of the algorithm. The limitation may consist of commercially useless embodiments.[6]

In the recent Australian case of International *Business Machines Corporation v Commissioner of Patents*[7]

the invention related to an algorithm for producing smooth interpolating curves. The Patent Office refused the application following US precedent on the basis that it related to a pure algorithm and the claims wholly pre-empted its use. Burchett J. considered IBM's claim to be clearly limited to computer graphics applications and rejected the Patent Office view that all uses of the algorithm were pre-empted. His Honour further went on to reiterate the test laid down by the full High Court of

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Australia in *NRDC v Commissioner of Patents*[8] where patentability is determined on the basis of whether the invention has a useful commercial application. This second ground may be particularly persuasive in New Zealand as the *NRDC case* has been followed in New Zealand and approved by the Court of Appeal[9].

Current New Zealand Practice

New Zealand practice has been inconsistent, depending to a large degree upon the attitude of the particular examiner concerned. For example ICL obtained a patent in 1988 for a menu system. Broadly

speaking the claims protect a menu system which displays a listing of programs having screen data available upon actuation of a review key and, upon actuation of a key associated with a selected program, screen data for the selected program is displayed. The breadth of the claims is surprising and reinforces why patent searches need to be conducted in respect of software.

Examiners generally feel uncomfortable with the state of the law in the UK following *IBM's application*. They continually raise objections to the patentability of computer software based on old decisions in different fields. They also cite *Merrill Lynch Inc's application*[10] as authority for the proposition that computer software is unpatentable where the operation carried out by the software would also have been unpatenable if not carried out on a computer. It is surprising that New Zealand examiners rely upon this case as it was decided under the 1977 UK Act, which specifically excludes computer software *per se*. Further, Falconer J made it clear that the decision was based upon the changed statutory basis of the 1977 Act.

It is also surprising that the Patents Court Decision is cited when this was critised in the *Genentech case*[11] and in the subsequent Court of Appeal case[12]. In the Court of Appeal *IBM Corporation's application* was specifically distinguished on the basis that it was decided under the 1949 Act rather than the 1977 Act. Accordingly, it is difficult to see how *Merrill Lynch's application* can be preferred over *IBM Corporation's application* when the New Zealand Act is on all fours with the 1949 UK Act.

The Court of Appeal in *Merrill Lynch's application* adopted the approach taken by the European Patent Office: that computer software

is patenable where some 'technical' advance on the prior art is present. In *Vicom System Inc's application*[13] the Technical Board of the European Patents Office allowed an application in respect of a computer program for image processing. The program was run on a conventional computer with the novelty residing solely in the operation of the software. There was however held to be a 'technical advance' in that increased processing speed resulted.

A case relating to the patentability of computer software was taken to a hearing before the New Zealand Commissioner of Patents in 1986. No decision has yet issued. Until this decision issues many examiners appear to be taking a very cautious approach, even where the subject matter relates to the technical operation of a computer.

Conclusion

Taking the most restrictive approach of *Merrill Lynch's application* computer software should be patentable in New Zealand where some 'technical' advance is present. *IBM Corporation's application* however remains the most persuasive precedent in New Zealand under the present statutory framework. *IBM's Corporation application* is however only highly persuasive and the New Zealand Patent Office and Courts may not wish to follow it for policy reasons. The presently uncertain law in this field will hopefully be clarified soon by the long awaited decision of the Commissioner of Patents. Hopefully he will be influenced by the liberal approach recently taken by the Australian Federal Court in *IBM Corporation v Commissioner of Patents.* ✍

John Terry is a patent attorney and barrister and solicitor with the firm Baldwin, Son & Carey New Zealand and specialises in the areas of patent and computer law.

Footnotes

1 [1966] RPC 194

2 [1970] RPC 91

3 [1974] RPC 147

4 [1980] FSR 564

5 U S patent Nos. 4346442 & 4376978

6 see *In re Iwahashi*, 12 USPQ 2d 1909 where the only limitation was that a ROM look-up table be used. It was considered almost inevitable that a ROM look up table would be used in any practical implementation.

7 unreported decision of the Federal Court of Australia, 13 December 1991; Burchett, J

8 (1959) 102 CLR 252 [see comments of David Webber in this issue-Eds]

9 followed in *Swift & Co. v Commissioner of Patents* [1960] NZLR 775 and approved by Somers J in *Wellcome Foundation Ltd v Commissioner of Patents* [1983] NZLR 385.

10 [1988] RPC 1

11 [1989] RPC 147

12 *Merrill Lynch's application* [1989] RPC 561

13 (Decision T208/84), (1987) Official Journal EPO 14

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