

Submission by F. P. Old regarding Chapter 8

Business Methods & Software

Chapter 8 of the draft report has clearly been written by someone without any practical knowledge of patents or experience of inventors. It is clear that there is an enormous pent-up demand for patent protection.

If one goes to IP Australia's search facility AUSPAT and using the general enquiry facility types in "app", then one gets a long list of patent applications which include APP, App or app in their title. Commencing about 2010 there are clearly many persons who have sought to achieve patent protection for an idea implemented by means of an APP, or application software.

What is apparent in scrolling through this list is that none of the standard patent applications are granted, and none of the innovation patents are certified. Moreover, many of the titles are very long and overly informative. The latter is a characteristic of a self-represented applicant. Applicants professionally represented by a registered patent attorney are essentially missing from the list since they will have received advice to the effect that APPs are not patentable.

APPs are only the tip of a snowballing iceberg of ideas which are not currently patentable in Australia. Several decades ago it became cheaper to implement an electrical engineering idea in software rather than in some form of hardware such as logic gates or ASICs (application-specific integrated circuits). Such electrical engineering ideas often have as their central tenet the concept of "why not do this instead of doing that?" Since doing "this" can be done in several hardware ways or by software, the electrical engineering idea is actually divorced from the technology used to implement the idea. These technical developments have had the perverse effect that whether an electrical engineering idea is patentable, or not, depends upon the technology used to

implement the idea. As a consequence, the TRIPS ideal of patent protection for all technologies is not being met.

For example, consider whether the following two developments in lift (or in American parlance elevator) technology are a manner of manufacture. Firstly, all questions of novelty and inventive step are put to one side because the question (posed by Section 18(1)(a)) is whether the claim which defines the invention is a manner of manufacture, rather than being a manner of new manufacture.

As is well known in lift technology, each floor serviced by the lift has an up call button and a down call button, except for the top and bottom floors which respectively only have a down call button and an up call button. In addition, each lift car is provided with a button for each floor. This enables a person entering the lift to designate the floor to which they want to be taken. The usual procedure and results in lift operation are well known. In particular, once the lift has reached its final destination and its last occupant has departed the lift car, the lift car stays where it is until the next call is received. This saves electricity.

The first invention arises from the observation that first thing in the morning most people are arriving at an office building and want to get to their office. So the first invention is that during the two hours in the morning between 8 AM and 10 AM, when the last occupant departs from the lift car, the lift car is (only during this time) directed to the ground floor in readiness for the likely next call. The result is that more people find the lift car waiting for them at the ground floor and that the speed with which people are conveyed to the office is increased because the otherwise “dead time” required for the lift to descend to the ground floor has occurred before the lift is actually called. Of course, during this period someone on level 3 may wish to go to level 5 and they may have a short wait while the lift comes up from the ground floor, but the overall service is improved. So we have a technical change in the operation of the lift and an improved result.

The second invention first arose in high-rise buildings in New York, where the number of people needing to use the lifts exceeded the conventional capacity of the lifts to move them. In order to overcome this problem, someone came up the bright idea of pre-sorting the lift passengers before they got into their lift car. This was done by requiring would-be passengers to press a button in the foyer indicating their intended floor, as a consequence of which the particular lift to which they should go, normally designated by letter of the alphabet, was indicated by an illuminated letter. As a result, lift car A, for example, was filled with passengers who wished to go to floors 1-5, whereas lift car B was filled with passengers who wished to go to floors 6-10, etc. This greatly speeded up the conveyance of passengers to their desired floors. Again there is a technical change in the operation of the lift and an improved result.

However, a first problem arises in that each of these two inventions can be implemented in a number of different ways. Conceivably, the most primitive of these ways would be a very large relay circuit which implemented the required logic. Alternatively, the required logic could well be implemented by logic gates such as AND, OR, NAND and NOR gates wired together to generate the necessary electrical impulses to drive the lift motors. Finally, by far the cheapest way to implement the required logic is to re-program the computer which controls the operation of the lifts to generate the necessary electrical impulses.

The patent attorney drafting the description is obliged to disclose the “best method” known to the applicant. Accordingly, the patent attorney is obliged to disclose the programming of the computer which controls the operation of the lifts.

The patent attorney will also give consideration as to how the invention should be claimed. Ideally the claim should cover both the programmed computer and the logic gates. Normally this can be achieved by use of terminology such as “first logic means to determine a destination floor” (in its simplest form this is a call button and the electric circuitry with which the button is connected), and so on. However, as will be seen, the form of the claims seems to be irrelevant.

Even if the patent attorney has also disclosed the use of logic gates, the Australian Examiner on reading the disclosure of the best method known to the applicant, throws the book at the application and objects that the claims don't define "patentable subject matter". Notwithstanding the requirements of Sections 18 and 40(2)(b) (that "the invention, so far as claimed in any claim" and "a claim or claims defining the invention") and the consequent corollary as arose in *EMI v Lissen* (1936) 54 RPC 5 that what is not defined in the claims is disclaimed, the Australian Examiner will use the Patent Office word processor to raise an objection along the following lines. "Applying *RPL Central Pty Ltd* [2015] FCAFC 177 and reading the present application as a whole, it must be concluded that the substance of the present invention relates broadly to a scheme to program a computer". And similarly, "The scheme to program a computer is merely implemented by a standard system using standard call buttons to communicate with a standard computer controller". And so on.

This represents an enormous change in past practice. Following on from the decisions in *IBM v Commissioner of Patents* (22 IPR 417) and *CCOM Pty Ltd v Jiejing Pty Ltd* (28 IPR 481) there followed a period of nearly three decades from the mid-1990s to the early 2010s where such lift technology would not have produced any patentable subject matter objection. This period is now nostalgically looked back upon by "electrical" patent attorney practitioners as the years of "wine and roses".

This recent change in the nature of objections taken by Patent Examiners and the recent Full Federal Court decisions in *Research Affiliates LLC v Commissioner of Patents* (109 IPR 364) and *Commissioner of Patents v RPL Central Pty Ltd* (115 IPR 461) mean that upwards of one third of all patent applications relating to electrical subject matter now routinely receive an objection that the subject matter of the "specification as a whole" - irrespective of the words in the claims - is not a manner of manufacture. The barrage of such objections sends the message to the world "Don't bother filing for such technologies in Australia".

If the present situation is maintained, it will not be long before many potential patent applications in Australia are not actually filed because the result predicted by the professional advisers acting for the applicant, is that the application will be unsuccessful. The resulting reduction in filing fees, sealing fees and annuities will soon become apparent in the budget of IP Australia.

The Federal government's recent Innovation initiative draws attention to the economic importance of fintech, software development, APPS, and the like, whilst conveniently neglecting to mention that all these innovative new technologies are presently unable to be patented in Australia.

However, these innovative new technologies are important. An important sector in the Australian economy is the financial services sector. The Australian Financial Review newspaper publishes a Technology supplement of a Tuesday and predominantly the companies referred to are engaged in "fintech, software development, APPS, and the like". This will come as no surprise to many who are aware of the decline of traditional manufacturing in Australia. This is best demonstrated by considering that the factory floor employees of traditional manufacturing belong to a trade union, and then considering the steeply declining membership of Australian trade unions over the last several decades. Given that the total Australian workforce is expanding, and that many public sector employees belong to a trade union, it is clear from the contraction of trade union membership numbers that traditional manufacturing has undergone an enormous decline.

What has expanded has been "fintech, software development, APPS, and the like". The question for Australia is whether the activities of this sector should be excluded from the benefits of patent protection. There are two lobes to this question. The first has to do with the intrinsic benefits of patent protection, and the second has to do with the size of the US market.

Economists would have people believe that unfettered competition is a wonderful ideal. However, venture capitalists would clearly prefer to invest in

companies which have their products protected by patents rather than invest in companies which were susceptible to “free rider” competitors. The amazing technological development in advanced economies since the Second World War has all taken place with patent laws in place. Whilst it might be debatable as to whether even more technological development may have taken place without patent laws, what is undeniable is that the patent laws have not prevented the technological development happening. So based on this evidence, the author would suggest that it is the case that there are intrinsic benefits of patent protection.

As to the size of the US market, clearly the value of any particular patent depends upon the size of the market it protects. Thus an Australian patent protecting a market of 20 or so million people is clearly much less valuable than the corresponding US patent which protects a market of more than 10 times that number of people.

A pernicious problem with the current demeanour of the Australian Patent Office is that the message being received by Australian innovators is that advances in the “fintech, software development, APPS, and the like” sector “are not patentable full stop”. The message is received without the fine detail, as to which jurisdiction is being talked about, being captured in the message. Many innovations which are not currently patentable in Australia are still patentable in the USA, notwithstanding recent US decisions such as that in *Alice Corp. v. CLS Bank International*, 573 U.S. ___, 134 S. Ct. 2347 (2014). The consequence is that many Australian start-up companies which could achieve patent protection in the USA, do not do so because of ignorance. As a result, the value of such companies is substantially reduced. This is hardly a good policy outcome for Australia.

In the year 2000, Professor Sir Gustav Nossal AC, the former director of the Walter & Eliza Hall Institute gave an interview which was published in Volume 43 of the Intellectual Property Forum, the Journal of the Intellectual Property Society of Australia and New Zealand Inc. The following is a brief extract from that interview by one of Australia’s most eminent scientists. It is difficult to

think of a more pithy and succinct testimonial for the benefits of patent protection.

Q: Let's focus for a moment on the process of converting a scientific theory into a commercial product. When in 1965 you became Director of the Hall Institute was there any recognition of the benefits of commercialising those discoveries? Was intellectual property valued as a major asset that needed to be exploited?

A: You are now talking about one of the minor tragedies of Australian science. The answer to your question is an unequivocal "no". The word "intellectual property" did not exist in our lexicon. The word "patent" was never enunciated. The word "profit" was a very dirty thing with which you did not sully your hands. Our job was to publish or perish, to amaze the world with our brilliance in the vague hope that someone, somewhere, at some time, might turn those discoveries into something useful.

Now, particularly over the last 20 years, one has learnt how abysmally wrong those orienting stances were. For example, if you make a discovery that has the potential of producing a cancer cure or a new treatment for asthma, or a blood pressure reducing pill in the longer term, and if you do not patent that discovery and protect the intellectual property, one thing is certain - you will delay the entry of that discovery into practice and you will delay whatever benefit humankind can derive from that discovery.

The reason is pretty simple. The boffin's pipedream and basic research are cheap; what is devastatingly expensive is the applied research, the clinical trials, and the regulatory processes which companies must undertake to turn a bright idea into a usable product. We're not talking millions of dollars here, we're talking hundreds of millions of dollars. Therefore the very worst thing that you can do for humanity, and for your country and your institute, is not to protect the intellectual property.

Q: You have no problem with, as it were, the monopolistic aspect of patent protection. You think that that is justified as far as encouraging endeavour and investment in the field?

A: Two comments. The first is: "The capitalists won, the communists lost." *(laughs)*.

The second is: "Let's not forget what a patent is." A patent is a publication. It is a method whereby you, the discoverer, tell the world what it is you have discovered rather than keeping it secret. You tell the world what you have discovered such that others can climb on your back and perfect or alter the discovery, then perhaps get a patentable entity in their own right. In return for not keeping it an industrial secret, which you could have done until someone

broke the secret one way or another, you have a period of say 20 years of sole exploitation of the commercial aspect of that discovery. It seems to me a very fair trade off.

The author's only quibble with the views expressed in that interview is that failure to patent by Australia's scientific community was not a "minor" tragedy, but a major one.

It is high time that Australia sought to provide protection for what it is that Australians now do, as opposed to what it is that Australians used to do. If this is to be achieved, the Patents Act 1990 should be amended, without delay, to bring it into the 21st Century. That other jurisdictions, particularly Europe, may be suffering from similar handicaps is no reason for delaying amendment of the Australian Patents Act. Australia led Europe in general, and Britain in particular, with the NRDC decision in the 1960s. There is no reason why we shouldn't do it again. After all, it's a great time to be an Australian!

The following amendments are proposed:

1. That an invention shall not be excluded from being a manner of manufacture merely because it is implemented by, or in, a general-purpose computer ,
2. That APPs should be patentable, and
3. That methods of presentation of information should also be patentable.

In order to achieve these ends the following amendments to Section 18 "Patentable inventions" should be made and the following Schedule 1 Dictionary definition should be inserted.

18. Patentable inventions

Patentable inventions for the purposes of a standard patent

(1) Subject to subsections (2) and (5), an invention is a patentable invention for the purposes of a standard patent if the invention, so far as claimed in any claim:

(a) is a manner of manufacture within the meaning of section 6 of the Statute of Monopolies or is an APP; and

(b) when compared with the prior art base as it existed before the priority date of that claim:

(i) is novel; and

(ii) involves an inventive step; and

(c) is useful; and

(d) was not secretly used in the patent area before the priority date of that claim by, or on behalf of, or with the authority of, the patentee or nominated person or the patentee's or nominated person's predecessor in title to the invention.

Patentable inventions for the purposes of an innovation patent

(1A) Subject to subsections (2), (3) and (5), an invention is a patentable invention for the purposes of an innovation patent if the invention, so far as claimed in any claim:

(a) is a manner of manufacture within the meaning of section 6 of the Statute of Monopolies or is an APP; and

(b) when compared with the prior art base as it existed before the priority date of that claim:

(i) is novel; and

(ii) involves an innovative step; and

(c) is useful; and

(d) was not secretly used in the patent area before the priority date of that claim by, or on behalf of, or with the authority of, the patentee or nominated person or the patentee's or nominated person's predecessor in title to the invention.

(2) Human beings, and the biological processes for their generation, are not patentable inventions.

Certain inventions not patentable inventions for the purposes of an innovation patent

(3) For the purposes of an innovation patent, plants and animals, and the biological processes for the generation of plants and animals, are not patentable inventions.

(4) Subsection (3) does not apply if the invention is a microbiological process or a product of such a process.

(5) For the purposes of both a standard patent and an innovation patent, an invention shall:

(a) also include a method of, and/or apparatus for, presentation of information, and

(b) not be excluded from being an invention merely because the invention is implemented by, or in, a general-purpose computer.

(6) For the purposes of both a standard patent and an innovation patent in respect of an APP, novelty, an inventive step, and an innovation step are present if the APP achieves a new technical or commercial result.

Schedule 1 –Dictionary

insert the following definition

APP means an item of software downloadable over the Internet to a mobile computing device