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Enlarged Board of Appeal European Patent Office Erhardtstr. 27 80469 Munich Germany

> 30 April 2009 By fax and post

Dear Sirs

Referral No: Case G 3/08

On behalf of the ITechLaw (International Technology Law Association) IP Law Committee I am filing the attached submission to the Enlarged Board of Appeal of the EPO. This submission is being filed by email and by fax.

Yours faithfully

Susan Barty, Partner

Board of Directors, ITechLaw CMS Cameron McKenna LLP

BOARD OF DIRECTORS

# Case G3/08: Referral under Art. 112(1)(b) EPC by the President of the EPO (Patentability of programs for computers) to the Enlarged Board of Appeal, pending under Ref. N° G 3/08 submission by the Intellectual Property Law Committee of ITechLaw.

# Background on ITechLaw (the International Technology Law Association)

ITechLaw has been serving the technology law community since 1971. ITechLaw is one of the longest standing Technology Law associations in the world. With global operations and participation, ITechLaw offers leading-edge education and opportunities for technology law professionals and law students.

ITechLaw offers membership to law professionals and law students anywhere in the world. Its membership offers a very broad spectrum of expertise across numerous legal disciplines touching on technology, and covers many jurisdictions. Just under 50% of its members are based in Europe. It is run by staff and the dedicated volunteers that make up its officials, and operates as a not-for-profit association.

ITechLaw's Intellectual Property Committee wishes to make this submission relating to the patentability of programs for computers. Due to the makeup of ITechLaw, its members act for numerous companies and individuals with a real interest in the patentability of programs for computers. Some members favour making it easier to patent programs for computers and others would rather it be made more difficult. This submission therefore attempts to provide a balanced view and one which focuses on problems which are common to all members, such as certainty and clarity in the legislation.

# The software industry in Europe

Worldwide enterprise software revenues are set to reach \$222.6bn in 2009, according to the latest research from the analyst firm Gartner<sup>1</sup>. The European market is thought to account for 36% of this global figure (i.e. over \$80bn). Software is a valuable and an important industry in the world today.

The software industry in Europe is incredibly wide in scope, its omnipresence apparent in its most tangible form, the computer, which is playing an increasingly important role in the life of European citizens. In 2008, 16 million households (65 per cent) had internet access in Great Britain alone. This is an increase of just over 7 per cent in the last year and 46 per cent since 2002. What is more, our relationship with this software is also becoming more and more sophisticated, with fifty-six per cent of all UK households having a broadband connection in 2008, up from 51 per cent in 2007<sup>2</sup>. Similar figures are repeated throughout Europe<sup>3</sup>, with as many as 86% of households in the Netherlands having home access to the internet<sup>4</sup>.

However, the software industry is far more ubiquitous than it might at first appear. It touches almost every aspect of daily life in ways that are not necessarily as instantly recognisable as those related to computers or internet software. This is in part because the software industry has many facets: it would be nearly impossible to draw a neat dividing line between software and many modern electronic and mechanical inventions. There are, for example, many digital processing innovations that lie at the heart of everyday technology such as digital television, digital cameras and digital radio. Software-intensive systems and services are driving forces behind innovation in many of Europe's most competitive

As cited in CRN News at: http://www.channelweb.co.uk/crn/news/2239509/software-market-stays-flat-2009

<sup>&</sup>lt;sup>2</sup> See National Statistics Online at: http://www.statistics.gov.uk/cci/nugget.asp?id=8

<sup>&</sup>lt;sup>3</sup> See Eurofound website:

<sup>&</sup>lt;sup>4</sup> See E Health Europe website: http://www.ehealtheurope.net/news/4381/eu\_internet\_access\_reaches\_60\_per\_cent

industries ranging from automotive, aerospace and communications to healthcare and consumer electronics.

Software, in all its forms, is a leading industry and a vital engine for growth in Europe<sup>5</sup>. Therefore this referral is of interest to a wide section of industry and there is a wide range of stakeholders.

#### Investment in R&D

In spite of the current economic downturn, software companies continue to invest in research and development ("R&D"). The sums invested are high: IBM, Microsoft and Hewlett-Packard collectively spend \$17 billion annually on R&D<sup>6</sup> alone. A number of initiatives have recently emerged at the European level. Most notable of these are the "ITEA 2 EUREKA Cluster for software-intensive systems and services" and "ARTEMISIA", the Association for R&D actors in Advanced Research & Technology for Embedded Intelligence and Systems, which bring together leading industrial groups, SMEs and academic research institutes and represent them towards the European Commission and interested Member States. The key focus is to forge cross-border public-private partnerships that promote research and innovation in the software industry in Europe as part of EUREKA<sup>8</sup>, a pan-European network for market-oriented, industrial R&D.

The investment is not limited to non-European entities. SAP reported that its R&D spend for the financial year 2008 was €1,631 million which represented 14% of its total revenue.9

Beyond this, a number of key international players in the industry have recently established or expanded R&D units in Europe. Most recently, Intel announced its first major investment into academic research in France in March 2009, marking the start of a five-year collaboration with government agencies and academia in a new lab initiative dedicated to high-performance computing.

Similarly, last autumn, Microsoft announced plans to set up a new Search Technology Centre in Europe, with branches in Paris, London and Munich. Europe already has the largest concentration of R&D staff for Microsoft outside of the United States, with more than 40 other R&D centres, including labs in Cambridge, Dublin, Copenhagen and Oslo, and a \$500m European data centre currently being built in Dublin<sup>10</sup>. Unveiling the Search Technology Centre plans, Microsoft CEO, Steve Ballmer, described Europe as an "important centre" for future innovation with a "critical role" <sup>11</sup> to play in realising his vision for the company's future. The new centre forms part of Microsoft's long-term strategy to invest in local development of search technology in Europe, adding to its current R&D investment in Europe of over \$600 million per annum. It follows a number of high-profile acquisitions in Europe, including the purchase of Norwegian enterprise search firm Fast Search & Transfer, which made Norway one of Microsoft's principal centres for enterprise search R&D.

On the one hand, it may appear that the availability or otherwise of patents for computer programs in Europe has not discouraged R&D investment in Europe by large US software corporations and therefore, so far as encouraging inward investment to Europe for such corporations, changes to the software patent regime are unnecessary. On the other hand, the evident dominance of US software corporations may be said to illustrate the benefits of having patent protection for software available in one's home territory and is counter-indicative to arguments that software patents inhibit the software industry. As a general rule, where there are large industry players there are also multiple smaller businesses serving those larger

<sup>&</sup>lt;sup>5</sup> See Hulig News: http://www.huliq.com/11/72468/cooperation-synergy-marks-out-road-ahead-european-software-research

<sup>&</sup>lt;sup>6</sup> As cited in ComputerWorld.com:

http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9108098

<sup>&</sup>lt;sup>7</sup> See: https://www.artemisia-association.org/

<sup>8</sup> See: http://www.eureka.be/home.do

http://www.sap.com/about/investor/inbrief/index.epx

<sup>10</sup> See Datacenter dynamics:

http://www.datacenterdynamics.com/ME2/dirmod.asp?sid=&nm=&type=news&mod=News&mid=9A02E3B96F2A415ABC72CB5F516B4C10&tier=3&nid=579195DC459142E6814CC38FD275A66B

<sup>&</sup>lt;sup>11</sup> See Microsoft Press Release at: http://www.microsoft.com/presspass/exec/steve/2008/10-02stcemea.mspx

businesses and coalescing around them. The software industry is no different and strong large corporations are indicative of multiple smaller businesses within the same industry.

#### Patents – a reward for or a threat to innovation?

The debate over the patentability of software has polarised the software industry. Some sectors (primarily consisting of the large global organisations) argue in favour of software patents and have built up large patent portfolios in countries where computer software is patentable. For example, in 2008 the US Patent Office<sup>12</sup> lists the top ten recipients of granted patents during 2008 as IBM with 4169, Samsung with 3502, Canon with 2107, Microsoft with 2026, Intel with 1772, Toshiba with 1575, Fujitsu with 1475, Matsushita Electric with 1469, Sony with 1461 and Hewlett-Packard with 1422. These statistics are not solely for software or electronic based companies yet these companies lead the patenting tables. It should be noted that these patents are not limited to software patents however it is indicative of the strong interest in patents by these industry participants. It should be noted that some of the software patents granted to a number of large companies have been partially dedicated to the open source community.<sup>13</sup>

# Proponents of software patents argue:

- patents promote development and innovation the monopoly granted protects the investment in research and development which in turn spur more investment and the creation of new software companies, and the growth of existing companies and jobs;
- the value of a software company will be increased if it has patent protection for its inventions (whether a small or large company and at any stage of the company's development or for M&A transactions). The ability to raise funding will often depend on whether particular developments are protected by patents;
- smaller software companies can compete with larger players on innovation rather than commoditisation if their inventions can be protected by patents;
- publication of patent specifications greatly accelerates the sharing of knowledge and the advance of science. Without patent protection, discoveries will often remain shrouded in trade secrecy to preserve the ability to appropriate their value;
- the reward for novel and inventive software should be no less for software than for other areas of technology;
- copyright does not protect the functionality of the software, only the expression of the code thus enabling a competitor independently to develop software implementing the same invention;
- the arbitrary exclusion of software from patent subject-matter risks eroding patent protection for inventions that combine mechanical and electronic elements. Conversely, the arbitrary exclusion of software will lead, as it has in many countries, to unnecessarily complex patent drafting to result in protection for a software-implemented invention while disguising its inherent nature; and
- patents for software patents are granted in other jurisdictions such as the US, Japan and Australia Europe should not sit apart from these countries, and inhibit the greatly beneficial harmonisation of intellectual property laws.

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<sup>12</sup> http://www.uspto.gov/web/offices/ac/ido/oeip/taf/topo\_08.htm

<sup>&</sup>lt;sup>13</sup> "An open secret" The Economist, 20 October 2005 reporting on IBM's pledge of 500 of its patents to the open source community

On the other hand the free software and open source movement, and others, often argue against the grant of software patent monopolies:

- software is developed at such a rapid pace that new software including patches has often been developed before any patent is granted;
- software also differs from many other sectors in that there is a large proportion of incremental
  development and certain code will be used as a building block for many and varied applications
  such that to obtain licences for the basic code underlying new software would be prohibitive
  (from both a time and money perspective);
- patents stifle innovation as there is no sharing of ideas or development until the patent (or patent application) is published. Disclosure of an invention before filing a patent application for it will destroy novelty in the invention;
- patents create barriers to entry the cost of acquiring the necessary licences to existing patents restrict research and development particularly where multiple licences are required (where patent thickets allegedly exist);
- threats of patent infringement will force SMEs out of business if they cannot afford to defend the litigation or to pay the licence fees demanded;
- copyright provides sufficient protection software code will generally be protected as a literary work under copyright law;
- patents are to the detriment of SMEs as they are expensive to obtain and enforce<sup>14</sup> and given that software will have application throughout the world, a worldwide freedom to operate search can be prohibitively expensive;
- the difficulties with the examination process it is argued that the patent examiners must be skilled in software;
- difficulties with prior art searches it is argued that prior art searches are ineffective for software patents as so much prior art is unpublished; and
- patents will be granted for trivial inventions.

# The international setting

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) provides (inter alia) "patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application... patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced." The stated exceptions to patentability do not include software or computer technology. Under TRIPS, there is no exclusion of software patents from the general requirement to make patents available.

# Need for clarity

This referral was due to there being diverging decisions from the Boards of Appeal. The uncertainty extends beyond just the EPO to the national courts dealing with European patents (for example, see the

<sup>15</sup> Article 27 (1) TRIPS

<sup>&</sup>lt;sup>14</sup> note however that a SME has successfully enforced a patent against Microsoft http://technology.timesonline.co.uk/tol/news/tech\_and\_web/article6064066.ece

UK Court of Appeal in *Aerotel/Macrossan*<sup>16</sup>). Irrespective of on which side of the debate one stands, there is a definite need for the issue of software patentability to be clarified and provide certainty for all stakeholders. At present, prospective patentees lack certainty as to whether their invention will be patentable and if granted, will the patent withstand any validity challenge. Conversely, other parties (whether large entities or SMEs or prospective patentees themselves) face the risk of infringement and uncertainty of whether they can mount a validity challenge to the patent. Of course, the uncertainty affects others such as potential investors who may be discouraged from investing if there is a lack of clarity as to what can or cannot be protected.

# Question 1:

Can a computer program only be excluded as a computer program as such if it is explicitly claimed as a computer program?

What are the effects of answering "yes" or "no" to this question?

A "yes" answer is attractive from the perspective of providing a clear test for allowability. However, such a simple test could be easily satisfied merely by choosing claim language that avoids defining the subject-matter for which protection is sought in terms of a computer program. It may be considered undesirable for claim drafting technique, style or language to be determinative of whether or not a claim is allowable.

A "no" answer merely provides for other tests to be applied for determining whether a claim is directed to excluded subject-matter in addition to whether and not it is explicitly claimed as a computer program.

Whilst it may be undesirable for mere choice of claim language to determine whether or not a claim relates to excluded subject-matter, the choice of claim language defines the thing or activity that the claim protects. What a claim protects is very important when it comes to a consideration of infringement since it is on the basis of language of the claim that a thing or activity is an infringement. The national laws of the contracting states to the EPC typically provide for three types of infringement which may be generally characterised as:

- (a) dealing or offering to deal in a patented article;
- (b) using or offering to use a patented process;
- (c) dealing or offering to deal in a product directly obtained from a patented process;

within the territory of the contracting state in which the patent is in force.<sup>17</sup>

These are known as direct infringements. A claim drafted in language explicitly defining a computer program would be infringed by a person doing an act as defined in sub-paragraph (a) above. For example, selling, distributing or otherwise dealing in the computer program whether by way of encoding the computer program on a disk, tape or other storage media, or by electronic distribution for example over the internet. A proprietor of a patent including such a "program claim" will be able to take action against the person responsible for dealing in the computer program however the computer program is embodied. In such a scenario, action need only be taken against the person responsible for dealing in the computer program in order to enforce a proprietor's rights.

This should be contrasted with a claim which protects a computer program only when it is being used, (i.e. being run on a data processing apparatus), for example a claim to a method of operating data processing apparatus. Such a method claim would only be directly infringed by the ultimate users of the

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<sup>&</sup>lt;sup>16</sup> [2006] EWCA 1371

<sup>&</sup>lt;sup>17</sup> For example, UK Patents Act 1977, section 60 (1)

computer program. This has a number of unfortunate consequences. First, the proprietor of a patent including such a method claim would have to take action against each individual end-user in order to enforce their patent. This would be highly disruptive and expensive for the end-users, possibly involving a great number of defendants, and also possibly intimidating for the end-users particularly if they are very small organisations or individuals. Secondly, from the patent proprietor's perspective, taking action against a large number of defendants is likely to be complex and costly. Whilst thirdly, such litigation is likely to be unwieldy and take-up a disproportionate amount of court time thereby putting an unnecessary burden on the judicial process.

Additionally, it may be an infringement to supply or offer to supply in a contracting state in which the patent is in force any of the means, relating to an essential element of the invention, for putting the invention into effect when a person knows, or it is obvious to a reasonable person in the circumstances, that those means are suitable for putting, and are intended to put, the invention into effect in the contracting state<sup>18</sup>. This is sometimes termed "contributory infringement", and includes a "double jurisdiction" criterion in that both the supply or offer to supply and the use of the essential element have to take place in contracting state for which the patent is in force. This has particularly important consequences when considering infringement of their invention which is implemented using software for example.

For a computer implemented invention protected by a patent including a method claim, the supply or offer to supply of the computer program may reasonably be considered to constitute the supply or offer of means essential for putting the method into effect, and by the very nature of computer programs it will be evident that the computer program is suitable for putting a method into effect. However, the method claim would only be infringed if both the offer and the eventual use of the computer program took place in the contracting state for which the patent was in force. Therefore, a distributor of a computer program operating in a first contracting state for which the patent was in force but supplying the computer program to a second contracting state (whether or not the patent was also in force in the second contracting state) would not be committing an infringing act. Therefore, no action could be taken against the distributor if all they were doing was supplying computer programs to the second contracting state. However, if the claim was in the form of an explicit claim to a computer program then the distributor operating in the first contracting state and would be committing a directly infringing act, and action could be taken against the distributor.

Therefore, it can be seen that a claim explicitly worded as a computer program has a practical effect in terms of enforcement. Therefore, providing the computer program satisfies any other tests for excluded subject-matter that might be adopted, claims expressly for computer programs may be a desirable format to allow since they may be enforced against a person responsible for their distribution, rather than a multitude of end-users, resulting in what may be considered more proportionate and appropriate legal proceedings, than would otherwise be the case.

Claims explicitly worded as a computer program have been found allowable by the EPO Technical Board of Appeal in T-1173/97 *IBM* in a decision issued in 1998 which concluded that "it does not make any difference whether a computer program is claimed by itself or as a record on a carrier" (Reasons: section 13). More recently, the English High Court<sup>19</sup> has also found claims explicitly worded as computer programs to be allowable and not necessarily excluded by Article 52(2) of the European Patent Convention when considering the allowability of such claims under the corresponding provisions of UK legislation<sup>20</sup>. In that case it was found that where a method performed by running a suitably programmed computer or to a computer programmed to carry out the method were allowable, then, provided the claim was drawn to reflect the features of the invention that would ensure patentability of the method that the program was intended to carry out when it was run, a claim to the program itself should also be allowable.

<sup>20</sup> UK Patents Act 1977, section 1(2)(c)

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<sup>&</sup>lt;sup>18</sup> For example, UK Patents Act 1977, section 60 (2)

<sup>&</sup>lt;sup>19</sup> In re Astron Clinica Ltd and others [2008] EWHC 85 (Pat); [2008] WLR (D) 12

In summary, if a computer program could be excluded as a computer program as such if explicitly claimed as a computer program then an application may be excluded merely on the basis of the claim drafting rather than on a substantive assessment of what the application is directed to. Additionally, the unavailability of claims worded as computer programs may lead to disproportionate and inappropriate legal proceedings when enforcing patents for inventions involving computer programs in their implementation.

#### Question 2:

(a) Can a claim in the area of computer programs avoid exclusion under Art 52 (2)(c) and (3) merely by explicitly mentioning the use of a computer or a computer-readable data storage medium?

For the reasons already expressed above, reliance on a particular form of language in a claim may not be desirable. In the present case, if an explicit reference to the use of a computer or computer-readable data storage medium could be used to avoid the computer software exclusion then excluded subject-matter, for example non-technical, subject-matter could be disguised under a technical cover as a Trojan horse and overcome any initial patentability question. It seems that something of substance should be used to test for excluded subject-matter, and not merely the language used in the claim. For example, under the EPO's "any hardware" approach<sup>21</sup>, examiners first investigate whether there is an invention and then consider whether that invention makes a technical contribution to the state of the art. There is no initial threshold of patentability as there is in countries such as the UK. Under EPO practice, only if the inventive part of the computer program comprises non-excluded subject-matter, for example a technical innovation, will the inventive step be found. Therefore the language of the claims would not alter the ultimate analysis.

Having a separate stage for testing for excluded subject-matter may be unnecessary, and indeed undesirable, since it will tend to separate the test for excluded subject-matter from the other conditions for patentability such as novelty, inventive step and sufficiency which look at the substance of what is claimed. In order for a test for excluded subject-matter to be based on the substance of a claim not its form, a detailed consideration of what a claim relates to is necessary. Such detailed considerations are also made when considering novelty, inventive step and to a certain extent sufficiency, and it appears inefficient to separate the test for excluded subject-matter from the tests for the other aspects of patentability when they require similar considerations and investigation.

Indeed, having a separate test for excluded subject-matter may result in a full consideration of the substance of a claim not being examined, or even capable of examination, if the test for excluded subject-matter is conducted prior to any novelty or inventive step analysis. For example, if the test for excluded subject-matter is applied before a search was conducted then it seems impossible for the subject-matter of the claim to be considered in its proper context of the prior art since no prior art would have been cited. Similarly, if the excluded subject-matter test is applied before the novelty or inventive step examination it will be conducted in the absence of a thorough review of the claim in the context of the prior art. It is therefore possible that a claim may be discarded for covering excluded subject-matter when a proper review would have demonstrated that it was not directed to excluded subject-matter.

Therefore, there may be merit in combining the test for excluded subject-matter with the test for novelty and inventive step, and not having it as a separate earlier test, in terms of efficient examination of claims and ensuring that a claim is not prematurely discarded.

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<sup>&</sup>lt;sup>21</sup> Hitachi (2004) T258/03

In any event, clarity of the law is not necessarily best served by tests which turn on the drafting style rather than the substance.

If Ouestion 2(a) is answered in the negative, is a further technical effect necessary to avoid *(b)* exclusion, said effect going beyond those effects inherent in the use of a computer or data storage medium to respectively execute or a store a computer program?

If a further technical effect was not necessary, the mere fact that a computer is used to run the program may result in there being a finding of patentability and the situation would be as if Question 2(a) had been answered in the affirmative. It therefore seems reasonable that if one assumes reciting a computer or a computer-readable data storage medium provides a minimum of "technical effect", a further technical effect is necessary if Question 2(a) is answered in the negative.

The term "technical effect" has been used by the EPO to test for excluded subject-matter, and other such tests have also incorporated the term "technical". However, the application of the tests has occasionally proved difficult since the term "technical" is not defined in the EPC, and the basis for its use (originally Rule 29 EPC, now Rule 43 EPC 2000) is expressed in the three official languages of the EPC where the equivalent terms in each language did not necessarily mean the same thing. For example, the term "technical" in English may be used to describe things which are merely complex such as tax laws, financial instruments and other commercial or business artefacts, and not matters relating to engineering. Conversely, the equivalent term in German is "teknische" which is generally used to describe things in the applied sciences, engineering and technology.

A better term, which appears to have a more consistent meaning amongst the official languages of the EPC, may be "technological effect" and which is consistent with the language used in Article 52(1) EPC 2000. Since data processing apparatus such as a computer, microprocessor and the like may be considered technological entities then the further effect could be within such technological entities. For example, an invention which makes a computer itself work better may be considered to have a "technological effect" consistent with inventions for which the EPO have granted patents, and which the English High Court in the case of Symbian<sup>22</sup> have found patentable.

A computer-related invention may not possess any physical elements other than the processing apparatus in which a computer program implementing that invention runs. Its components may have no physical implementation other than when running on the processing apparatus and its result is often intangible to the extent that no physical article is produced. However, as illustrated by Symbian, the question whether the computer program relates to the architecture of the computer system and produces a better computer as a result, i.e. a better technological entity, may be more appropriate than looking for a "technical" effect.

# Question 3:

- Must a claimed feature cause a technical effect on a physical entity in the real world in order to (a) contribute to the technical character of the claim?
- If question 3(a) is answered in the positive, is it sufficient that the physical entity be an *(b)* unspecified computer?
- If question 3(a) is answered in the negative, can features contribute to the technical character (c) of the claim if the only effects to which they contribute are independent of any particular hardware that may be used?

<sup>&</sup>lt;sup>22</sup> [2008] EWCA Civ 1066

It may be superficially attractive if the threshold question for software patents requires a "real technical" effect on a physical entity in the real world since there would be a clear test. For example, it would avoiding examining whether a computer program relates to the architecture of the computer system and produces a better computer apart from tangible effects in the real world. But such a bright line test may shut out protection for new developments for the benefit of science, the economy and society.

But, the term "physical entity" introduces a new problem namely what is a "physical entity"? Is a microprocessor, data processing apparatus or a computer for example a physical entity? There is no doubt that a microprocessor chip is a tangible physical entity. When executing the instructions of a computer program, the internal configuration of the microprocessor chip changes in accordance with the instruction as it is being executed. The microprocessor, the tangible physical entity, has its physical configuration changed in real time in accordance with the computer instructions being executed. Depending upon the physical configuration internal to the microprocessor a particular function or functions will be performed. The execution of the computer program causes real physical changes to the internal configuration of the microprocessor. Indeed, the microprocessor may be considered to be a highly flexible real-time configurable machine.

In light of the foregoing, it seems that the answer to this question depends upon whether the claimed feature of producing a better computer can be classified as a producing a better physical entity.

# Question 4:

(a) Does the activity of programming a computer necessarily involve technical considerations?

Writing software does not necessarily involve technical considerations, but it could. For example, a programmer writing code in a low-level language may well take into consideration the nature of the different elements of a processor, for example which data register to use, what accumulators should be used, where is the most efficient place in memory to store an item of data or instruction. Nevertheless in light of the technical-contribution-approach (or maybe "technological-contribution-approach") it does not matter whether technical considerations whilst writing software are necessary. The test is what is the effect of that software when executed.

If the activity of programming a computer necessarily involved technical considerations the exclusion of software as such from patentability would have no effect. Any software would be patentable.

(b) If question 4(a) is answered in the positive, do all features resulting from programming thus contribute to the technical character of a claim?

If the test for patentable subject-matter is whether or not it has technical character, and technical considerations are necessarily involved in the activity of programming a computer it seems inevitable that all features resulting from programming contribute to technical character of a claim.

(c) If question 4(a) is answered in the negative, can features resulting from programming contribute to the technical character of a claim only when they contribute to a further technical effect when the program is executed?

This question answers itself. Necessarily the technical effect will only result if the program is used. Otherwise there would not be a technical effect within the computer or outside on another physical entity.

For the avoidance of doubt: it is not necessary that the claimed software itself is an executable program such as a file with an ".exe"-extension. For example, in the UK case of *Symbian* the claimed invention, which was held to be patentable, lay in a Dynamic Link Library (".dll"-file). Dynamic link libraries are already known as a means of storing functions common to a number of different applications, so that they were only required to be stored once. The particular function is selected and linked to the application program when it is loaded and run. The library itself cannot be executed without another executable application.

If non-executable files, for example like a dynamic link library, were excluded from patentability, the question of patentability would be determined by whether the inventor has stored the same function in the library or in the executable file. That could not be appropriate as it would be an uninformed distinction.

#### Conclusion

In light of the make up of ITechLaw, its Intellectual Property Committee does not take a particular view on the question of whether software should be patentable or not. However, given the enormous value of software to the European economy and to the community in general, there is a need for all stakeholders to have a clear test to determine whether the scope of patent protection available for inventions involving a computer program in their implementation.

# Intellectual Law Committee of ITechLaw 30 April 2009

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