

**UNICE COMMENTS ON THE EP AMENDMENTS FOR THE SECOND READING
REGARDING THE DIRECTIVE ON THE PATENTABILITY OF COMPUTER-IMPLEMENTED
INVENTIONS**

I. GENERAL REMARKS

UNICE has been closely following the institutional debate regarding the proposed directive on the patentability of computer-implemented inventions.

For UNICE, a legal framework ensuring appropriate patent protection in this area is key to enable European companies, including SMEs, which drive innovation, to be competitive in a high-tech global environment. It is of key importance that a directive on the patentability of computer-implemented inventions ensures protection in line with current European patent practice and neither extends nor restricts patentability. Patents guarantee a return on R&D investments and attract venture capital. Europe's innovation in new technologies is a pillar for growth in the European economy. This is key to improve Europe's competitiveness and therefore contribute to the Lisbon strategy.

In UNICE's view, it is also of high importance that the provisions of the directive reflect what has been prescribed in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs), namely that:

- all inventions in any field of technology have to be patentable if they are new, non-obvious and industrially applicable, and
- only limited exceptions to the exclusive rights conferred by a patent may be permitted, provided that such exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties.

Copyright and patents protect different types of property. Whereas copyright protects the authorship of a literary or artistic work, a patent protects the ideas behind technical solutions and inventions. A pure program code is protected by copyright and many people consider this type of protection to be the most appropriate. However, the protection offered by copyright is for several reasons not sufficient for complicated technical solutions that include program codes.

Some inventions can be copied quite easily without any knowledge of the program codes incorporated into them. It is therefore legal to copy the invention by writing entirely new code since, in this case, it is the unprotected inventive idea, not the copyright-protected code that is copied.

Another weakness of copyright protection is that it is possible to get round the copyright by making relatively small alterations to the program code. Such a change in the program code can produce an identical technical effect, which would make it possible to plagiarise the actual idea behind the invention without infringing the copyright-protected code.

Consequently, a company that invests time and money in complex development activities cannot protect itself against plagiarism solely with the aid of copyright. A patent that protects the technical idea itself would, on the other hand, have been useful in the above situations.

In this context, UNICE acknowledges the efforts of the members of the European Parliament to improve the proposed directive. However, UNICE is strongly concerned that some of the amendments proposed would substantially diverge from current European patent practice and would therefore adversely impact the competitiveness of European companies.

II. DETAILED COMMENTS

UNICE would like to make some detailed comments on some of the amendments that, in UNICE's view, would adversely impact the competitiveness of European industry, with the aim of trying to contribute constructively to a better understanding of complex technical issues. UNICE would also highlight some of the amendments that it regards as neutral in this respect.

1. AMENDMENTS WITH AN ADVERSE IMPACT ON EUROPE'S COMPETITIVENESS

UNICE would like to highlight in particular the following amendments that cannot be accepted by UNICE.

2.1 PROPOSED AMENDMENTS ON RECITALS

- **AMENDMENT 5 (RECITAL 6)**

The proposed amendment is based on a misinterpretation of Articles 10 and 13 of the TRIPs Agreement. Copyright and patents co-exist, and an object may be protected by both. This is also known from the field of industrial designs that may be protected by copyright and design rights at the same time. In the same manner, a patent may protect the technical invention that is (partly) implemented by software, while the same software as such can be the object of copyright protection.

That patent protection and copyright protection may co-exist is also clear from Directive 91/250/EEC that explicitly says in its Article 9 (Continued application of other legal provisions) that the provisions of this Directive shall be without prejudice to any other legal provisions such as those concerning patent rights, trademarks, unfair competition, trade secrets, protection of semi-conductor products or the law of contract.

- **AMENDMENT 185 (RECITAL 6)**

It is completely unclear why one of the most relevant parts of the TRIPs Agreement, which defines patentable subject matter, should be deleted from the recitals.

- **AMENDMENTS 6, 190, 191, 192 (RECITAL 7)**

These amendments ignore the clear fact that in the European Patent Convention (EPC), computer programs and other subjects listed in Article 52(2) are only excluded from patentability as such, (Article 52(3) EPC).

In addition, it is incorrect to suggest that computer-implemented inventions do not belong to a field of technology, since it is computer programs as such that do not belong to a field of technology.

- **AMENDMENTS 7, 193 (RECITAL 8)**

The proposed amendments should not be followed because they create an artificial distinction between technology and software. If software is used to solve a technical problem, the result is a technical innovation that must remain protectable by a patent. The same comment would apply to amendment 189 on recital 6.

- **AMENDMENTS 196-199 (RECITAL 9)**

UNICE cannot endorse the suggestion that a restriction of creative freedom, legal uncertainty, and anti-competitive effects are inevitable corollaries of the patent system. The patent system creates incentives to promote and boost R & D activities and innovation. Therefore, it can contribute to European competitiveness. Clear and unequivocal rules enhance legal certainty.

- **AMENDMENTS 201, 202, 203, 204 (RECITAL 10)**

The proposal states that software should only be protected through copyright, thereby making the underlying ideas and principles available for all.

Patents clearly do not allow exclusive rights on all ideas. It is only when the idea constitutes a technical solution that it may be patented. The EPC in article 52 paragraphs (2) and (3) excludes from patent protection discovering, scientific theories and mathematical methods, esthetical creations, plans, principles and methods for intellectual activities for games or commercial activities and software for computers, and presentations of information. In addition, a great number of technical solutions are already known and getting new patents means clearing a large hurdle.

Patents must, however, be available to protect investments in R&D that contain a new, non-obvious technical feature which is not duly protected by copyright. Without patents, a competitor could copy a technical solution (for example, the underlying methodology) simply by rewriting the code, thereby avoiding the protection given by copyright.

New solutions are often the result of considerable investment and their identification and dissemination, through new patents, increases the spread of technological knowledge.

- **AMENDMENT 11 (RECITAL 12)**

This amendment introduces a criterion of "a significant difference", which does not enhance legal certainty. The same comment applies to proposed amendment 216.

- **AMENDMENT 15 (RECITAL 16)**

A fully artificial distinction is made between an algorithm, software, and information/data processing methods on the one hand, and technical inventions on the other hand. If an algorithm, software or an information processing method is used to solve a technical problem, the result is a technical innovation that must remain protectable by a patent. The same comments apply to amendments 231, 232, 233, 234, 235 on recital 16.

- **AMENDMENT 16 (RECITAL 16A)**

This amendment makes an ill-conceived distinction between information processing in analog form and information processing in digital form. In the past, all information processing was analog. It is completely unclear why the same information processing, now done in a modern way in the digital domain, would suddenly no longer be patentable.

For many European companies in the high-tech industry this proposal would have highly negative consequences.

If inventions in the field of image, sound, speech and medical information processing are suddenly declared to be no longer patentable only because they are implemented by digital techniques, European innovative companies are deprived of protection for their innovations which can be freely copied by less innovative competitors. But also any companies, for e.g. large US companies, could take over the unprotected innovations of European SMEs. Any investment in such information processing innovations would no longer make sense. In order to protect any remaining innovations from being copied, European companies will do whatever they can to keep their innovations secret. The same comments apply to amendment 236 (Recital 16a new) as well as to amendments 18 and 242 on recital 18.

- **AMENDMENT 17 (RECITAL 17)**

Currently, the difference between a non-infringing apparatus and an infringing apparatus may consist of certain technical control software installed on the infringing apparatus. If patents can no longer be used to stop those who distribute such technical control software for turning a non-infringing apparatus into an infringing apparatus, a big loophole is created in the protection offered by patents. That's why patent protection should continue to exist for technical software implementing a technical invention. The same comments apply to amendments 117, 118, 119, 120, 121 on the first paragraph of article 5 as well as to amendments 128, 129, 130, 131, 132 on the second paragraph of Article 2.

- **AMENDMENTS 21, 255 (RECITAL 22)**

According to this proposal, patent protection is fully taken away by this abolition of patent protection for interoperability-related purposes and everybody may use the patented technology free of charge without any compensation to the inventor for his R&D efforts.

Article 30 TRIPs Agreement prescribes that only limited exceptions to patent protection are allowed that do not unreasonably conflict with normal exploitation possibilities. This proposal clearly does not provide a fair balance between the rightholder's legitimate interests and those of third parties and it is therefore not TRIPs-compliant.

Furthermore, Article 31 TRIPs provides another solution to address any abuse of a patent. If a voluntary licence cannot be obtained, Member States may grant an authorisation to nonetheless use the patent after an individual assessment of the situation. If it is decided to grant such an authorisation, the patentee must be paid adequate remuneration. In this manner, both access to necessary technology is ensured and the inventor is compensated for his R&D investments. Hence, Article 31 TRIPs strikes the right balance between public policy and individual interests.

2.2 PROPOSED AMENDMENTS ON DEFINITIONS (ARTICLE 2)

- **AMENDMENTS 67, 68, 70, 71, 74 (ARTICLE 2 POINT B A NEW)**

The proposed definition in amendment 67 is unclear. A clear, modern and straightforward definition would be: technology means industrially applied exact sciences (including industrially applied natural sciences and engineering sciences), and technical means pertaining to technology.

Regarding amendment 68, defining technology with a legal concept such as “controllable forces of nature”, that is no longer applied by the Courts in one Member State and remains totally unknown in the other Member States, does not provide legal certainty.

In proposed amendment 70, "experimentation" is an unusual and unnecessary part of this definition. Using “controllable forces of nature” again does not ensure legal certainty for reasons already stated. The same applies to amendment 71. The same comments apply to amendments 74 and 76 as well.

- **AMENDMENTS 27 (ARTICLE 2 POINT BB NEW), 28 (ARTICLE 2 POINT BC NEW), 49 (ARTICLE 2 POINT BA NEW), 60, 61 (ARTICLE 2 POINT B)**

Use of “controllable forces of nature” was a concept created by the German Supreme Court in the 1930s. In a 1999 decision, the German Supreme Court itself stated that this concept was not the ultimate test and that it was enough that the invention was based on technical considerations. It would not enhance legal certainty to render mandatory in this directive the use of a concept which is no longer applied by the Courts in one Member State and which is totally unknown in the other Member States.

As mentioned above, for many European companies in the high-tech industry this proposal would have highly negative consequences. The same comments as to amendment 16 apply.

- **AMENDMENT 75 (ARTICLE 2 POINT BB NEW)**

"Automated production of tangible goods" excludes many currently perfectly patentable inventions in the field of non-automated production. For example, large items like trains, aeroplanes and mobile phones are assembled manually and hence not manufactured in an automated way.

- **AMENDMENTS 77, 78, 79 (ARTICLE 2 POINT BB NEW), 83 (ARTICLE 2 POINT BC NEW)**

For many European companies in the high-tech industry this proposal would have highly negative consequences. The same comments as to amendment 16 apply. The same comments apply to amendments 122 and 123 (Article 5 par. 1a new), as well as amendment 135 (Article 5 par. 2 a new).

- **AMENDMENTS 81, 82 (ARTICLE 2 POINT BC NEW)**

A requirement for patentability is that the invention is susceptible of industrial application. The term ‘industrial’ has for a long time been given a wider meaning in patent law than in regular speech and includes basically all forms of commercial activities. Therefore, the proposed definition is not in line with the normal understanding of the notion "industry" in patent law. It must be understood that the EPC has three different language versions, and that in the German language version "industrially applicable" is equated with "gewerblich anwendbar".

This shows that linking industry to production of material goods deviates from normal patent law as applied in all fields of technology. This sectorial directive, only dealing with computer-implemented inventions, should not redefine a notion used throughout all fields of technology.

2.3 PROPOSED AMENDMENTS TO EXCLUSIONS FROM PATENTABILITY (ARTICLE 3)

- **AMENDMENT 29 (ARTICLE 3 PAR 1 NEW)**

As stated in the first part of this amendment, it should indeed not be relevant for patentability whether an invention uses modern digital technology or not, as it should only matter whether a new and non-obvious technical contribution has been made.

The second part can have highly negative consequences for the competitiveness of European industry, because on the basis of a completely artificial criterion certain inventions are excluded from patentability even if they solve a technical problem. As digital technology is replacing analog technology to an ever-increasing extent, this proposal would result in the field of what still can be patented gradually decreasing.

- **AMENDMENT 86 (ARTICLE 3):**

The same comments as to the amendments on Recital 16 apply.

- **AMENDMENTS 92, 93, 95 (ARTICLE 3 PAR1A NEW)**

The same comments as to amendment 15 apply.

2.4 PROPOSED AMENDMENTS ON CONDITIONS FOR PATENTABILITY (ARTICLE 4)

- **AMENDMENTS 31, 103 (ARTICLE 4 PAR1), 104 (ARTICLE 4 PAR 1A NEW), 105, 106 (ARTICLE 4 PAR 2):**

The criterion for patent-eligible inventions should be whether the invention is in a field of technology, i.e. whether it solves a technical problem. If an invention solves a technical problem, it should be possible to get a patent if the other usual patentability criteria are met (novelty, inventive step, industrial applicability, sufficient description). This should be the case irrespective of whether or not software is used in an implementation of the invention.

As set out above, currently the difference between a non-infringing apparatus and an infringing apparatus may consist of certain technical control software installed on the infringing apparatus. If people who distribute this technical control software for turning a non-infringing apparatus into an infringing apparatus can no longer be attacked via the patent, a big loophole is created in the protection offered by the patent. That is why patent protection should continue to exist for technical software implementing a technical invention.

Such technical software for turning a non-infringing apparatus into an infringing apparatus is not a "computer program as such", because a "computer program as such" is something that does not solve a technical problem, which is what the "as such" part is all about.

- **AMENDMENTS 99, 100 (ARTICLE 4 PAR 1)**

Patent law intends to protect technical inventions. Inventions do not suddenly stop being technical if they are implemented by means of software. This shows that only software as such should be excluded from patent law, to make clear that a technical invention that happens to use software in its implementation is still patentable. For example, it is often a designer's choice to implement a technical invention by means of dedicated hardware, by means of a programmable processor, or by means of a hybrid arrangement in which only a part is programmable. It is the same technical invention, which should remain patentable irrespective of its implementation as soon as the usual conditions for patentability have been met (novelty, inventive step, industrial applicability).

- **AMENDMENTS 111, 112, 113 (ARTICLE 4 PAR 2 A NEW)**

Improving efficiency is the most common technical problem in the sense that many inventions aim at doing things in a smarter way. Using fewer resources is one of the most rewarding forms of efficiency improvement. Proposing that patents should not be granted for an efficiency improvement, which results in the use of fewer resources, does not grasp the realities of current inventive practice.

- **AMENDMENT 32 (ARTICLE 4 PAR 2)**

As previously stated, a prohibition on information/data processing related inventions would just result in inventions in large fields of technology suddenly no longer being patentable with highly negative consequences for the EU's innovation and competitiveness. The same comments apply to amendment 110 on article 4 paragraph 2 a (new).

2.5 PROPOSED AMENDMENTS ON FORM OF CLAIMS (ARTICLE 5)

- **AMENDMENTS 124 (ARTICLE 5 PAR 1 B NEW), 144 (ARTICLE 5 B NEW)**

The proposed amendment only causes patent applications to be so expensive that SMEs that want to file patent applications will be placed before high financial thresholds.

This draft directive is about **technical** inventions that **may** use software as a component. A designer may decide to implement this invention fully by dedicated hardware or by a hybrid mix of dedicated hardware and a programmable device. If dedicated hardware is used, there is no software. If a hybrid mix is used, the software will only apply to some part of the invention. In both situations, a software listing simply does not make sense. Including software listings in patent descriptions may easily cause a straightforward patent description of 20 pages to swell into a fat document of 100 pages or more, while all what a technician needs is a clear and complete description of the invention that enables him to carry it out.

A legal argument against this proposal is that it is simply not possible under a UN convention, viz. the Patent Cooperation Treaty (PCT) that clearly forbids requirements relating to form and contents of an international patent application to deviate from the PCT requirements. The PCT requires a clear and complete description of the invention that enables a skilled person to carry it out. In view of the Patent Law Treaty (PLT), another UN convention in the field of patents, the same holds for non-PCT applications.

The part "without any restricting licensing terms" means that everybody is free to use this reference implementation without payment to the inventor. This means that a big loophole is created in the normal patent exploitation, as a patent can only be exploited in two ways:

- as a monopoly, which option is cancelled because anybody may use the reference implementation for free, or
- by granting licenses in return for a royalty, which option is also cancelled because anybody may use the reference implementation for free.

If nothing is left from patent protection as a result of this draft provision, it must be wondered why anyone should bother applying for a patent. Not being able to obtain patent protection implies that the invention is no longer published so that other people cannot build on the invention, and that R&D is no longer stimulated by means of granting a temporary monopoly, which is what the patent system is intended for.

- **AMENDMENTS 141, 143 (ARTICLE 5 A NEW)**

The same comments as to amendment 16 apply.

- **AMENDMENT 34 (ARTICLE 5 PAR 2)**

Patent claims relate to enforceability and restrictions on claims would cause immense legal uncertainty regarding already approved patents containing computer program claims. These already granted patents would become partly unenforceable which is tantamount to expropriation.

A patent protects the claimed technical solution as a whole and not certain parts of it. A computer program may be part of a patented solution but it is never the computer program in itself that constitutes the technical solution. In patent law, patent claims and what constitutes a patentable subject matter are two diverse things. This reassures that continued allowance of computer program claims is not the same as allowing patents for computer programs as such. Hence, Article 4a.1 stating that “a computer program as such cannot constitute a patentable invention” and Article 5.2 allowing “a claim to a computer program” in the Council’s proposal, do not contradict each other.

Sometimes is it necessary to have a claim that covers the computer program that is a part of the patented solution. This has to do with the possibility to enforce the right in an effective way and does not extend patent protection to “pure” computer programs. According to Article 5.1 and 5.2 of the Council’s proposal, computer program claims are *only* permitted if “that computer program, when loaded and executed in a computer, programmed computer network or other programmable apparatus, put into force” the product or process claimed in the patent application. Hence the patent application must contain product or process claims in order for a computer program claim to be allowed and this computer program claim must put into force the claimed product or process.

In practice, the aim of Article 5.2 is to make it possible for the patent holder to stop a person who commercially and without permission from the rightholder offers for sale computer programs which activate a patented product or a process when run on a computer.

2.6 PROPOSED AMENDMENTS ON USE OF PATENTED TECHNIQUES (ARTICLES 6/6A)

- **AMENDMENT 35, 145 (ARTICLE 6 PAR 1A NEW)**

The same comments as to recital 22 on interoperability apply.

The same comments apply to amendments 146, 149, 151, 152, as well as amendments 66, 69, 80, 84 providing a definition for interoperability in the framework of article 2.

- **AMENDMENTS 154, 155 (ARTICLE 6 A NEW)**

The second paragraph of proposed amendment 154 contradicts the first paragraph. If, as per the first paragraph, interoperability use is no longer an infringement, there is nothing left to licence under the second paragraph.

This infringement exception for interoperability in amendment 155 is too broad despite the fact that it incorporates the language of Article 30 TRIPs and thereby requires the courts to weigh the interests of the patentee in exploiting his patent and the interest of the third party in using the patented invention for interoperability purposes.

The above proposal is therefore not TRIPs-compliant. Furthermore, Article 31 TRIPs provides another solution to address any abuse of a patent. If a voluntary licence cannot be obtained, Member States may grant an authorisation to nonetheless use the patent after an individual assessment of the situation. If it is decided to grant such an authorisation, the patentee must be paid adequate remuneration. In this manner, both access to necessary technology is ensured and the inventor is compensated for his R&D investments. Hence, Article 31 TRIPs strikes the right balance between public policy and individual interests. The same comments apply to amendments 156, 157, 159 and 160.

2. AMENDMENTS THAT UNICE COULD ACCEPT

UNICE would like to highlight the following proposed amendments that it considers acceptable.

- **AMENDMENTS 162, 163, 164, 167, 168, 174, 249, 253**

These amendments relate to the mechanism to be established by the directive in articles 7 and 8, to monitor the impact of the directive on small- and medium-sized enterprises. In addition, an “SME Fund” to assist SMEs in benefiting from the computer-implemented inventions patent regime is proposed.

UNICE strongly believes that patents can be an asset of key importance for SMEs. Innovative SMEs can benefit from patent protection, since patents allow SMEs to secure their R&D investments, receive adequate return to their investments through the granting of licences and benefit from technology transfer.

UNICE could also accept the following amendments: 97, 108, 133, 169-172, 176-177, 180, 209-212.

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