

BSA/CEC Advocative Preface

<http://swpat.ffii.org/papers/eubsa-swpat0202/pref/index.en.html>

Workgroup

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The European Commission's software patentability proposal of 2002-02-20 is based on a draft from the Business Software Alliance (BSA). Especially the advocative preface of this proposal contains arguments and materials that were supplied by the BSA. The argumentation tries to create a vague impression that "business software" or "packaged software" is related to patents, jobs, and wealth, and that purely copyright-based software is related to an "open-source movement" that wants everything in the world to be available for free. The argumentation is full of popular errors and lies, which are easily discovered by comparing it to our debugged version, listed on the right side of the table.

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1 “EXPLANATORY MEMORANDUM”

BSA/CEC: Objective of the Community initiative

BSA/CEC: Software development has shown steady growth in recent years. It has had a major impact on the whole of European industry and provides a substantial contribution to the GDP and to employment. In 1998, the value of the packaged software market in Europe was 139 B Euros. A recent study by Datamonitor concluded that the number of packaged software workers in Western European countries will grow by between 24% and 71% from 1999 to 2003, with an average of 47%. A further conclusion is that each packaged software job creates 2-4 jobs in the downstream economy and 1 job in the upstream economy.

EPC/FFII:

Software development has grown in importance in recent years. It has had a major impact on the whole of European industry and provides a substantial contribution to the GDP and to employment. In 1998, the value of the “packaged software” (i.e. proprietary software) market in Europe was said to be 39 bn eur. An unpublished study by a company called Datamonitor predicts that the number of proprietary software workers in Western European countries will grow by between 24% and 71% from 1999 to 2003, with an average of 47%. This study also claims that each proprietary software job creates 2-4 jobs in the downstream economy and 1 job in the upstream economy. It remains unclear what the study says about other forms of software, such as shareware, free software and individual software, whose growth rate and stimulating effects during recent years and during the coming years does not seem to have been less significant than that of proprietary software. The Datamonitor study apparently does not deal with these questions, nor with the effects of patents vs of copyright on either proprietary software or any other kind of software business.

BSA/CEC: Its future potential for growth and, thus, its impact on the economy are even stronger because of the accelerating importance of electronic commerce in the Internet-based Information Society. Given the maturity that today’s software industry has achieved, many improvements of software are increasingly difficult and expensive to achieve while, at the same time, they can easily be copied.

EPC/FFII:

The future potential of software for growth and, thus, its impact on the economy is even stronger because of the accelerating importance of electronic commerce in the Internet-based Information Society. Given the modularity of software creations, punctual innovations and improvements of software, as targeted by patents, are easy to achieve and inexpensive while, at the same time, they are relatively difficult to imitate.

BSA/CEC: Patents play an important role in ensuring the protection of technical inventions in general. The basic principle underlying the patent system has proven its efficiency with respect to all kinds of inventions for which patent protection has thus far been afforded in the Member States of the European Community. Patents act as an incentive to invest the necessary time and capital and it stimulates employment. Society at large also reaps benefits from the disclosure of the invention which brings about technological progress upon which other inventors can build.

EPC/FFII:

Patents have traditionally been applied as a regulation instrument for the stimulation of investment in the field of technical invention. The basic principles underlying the patent system continue to be highly controversial among economists¹, and the question whether the patent system as it stands in the member states of the European Community today is beneficial or detrimental to the economy, needs to be asked and studied without prejudice. In theory, patents should act as an incentive to invest the necessary time and capital and thereby to stimulate employment in research and development activities. Society at large should also reap benefits from the disclosure of the invention which should bring about technological progress upon which other inventors can build. Fritz Machlup² as well as most respected economists have found that this supposed positive effect of the patent system is likely to be outweighed by negative effects. They have therefore advised great caution in formulating policies concerning the scope and conditions of patentability. One of the results of such caution has been the exclusion of software and, in general, purely mental achievements from patentability in the European Patent Convention of 1973³.

BSA/CEC: The current legal situation regarding patent protection in the field of 3computer-implemented inventions is ambiguous, and thus lacks legal certainty. In fact, computer programs “as such” are excluded from patentability by Member States’ patent laws and the 4European Patent Convention (EPC) but thousands of patents for computer-implemented inventions have been granted by the European Patent Office (EPO) and by national patent offices. The EPO alone accounts for more than 20,000 of them. Many of these patents are in the core areas of information technology, i.e. digital data processing, data recognition, representation and storage. Others are being granted in other technical areas such as automotive and mechanical engineering, e.g. for program-controlled processors.

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The current legal situation regarding patent protection in the field of software is ambiguous, and thus lacks legal certainty. In fact, “programs for computers” are excluded from patentability by Member States’ patent laws and the European Patent Convention (EPC), but thousands of patents for programming solutions, including business methods, have been granted by the European Patent Office (EPO) and by national patent offices. The EPO alone accounts for more than 20,000 of them. Many of these patents are in the core areas of data processing, such as data recognition, representation and storage. Others are being granted for the application of data processing to technical areas such as automotive and mechanical engineering, e.g. for program-controlled processors.

¹<http://swpat.ffii.org/archive/mirror/impact/index.en.html>

²<http://swpat.ffii.org/papers/machlup58/index.en.html>

³<http://swpat.ffii.org/analysis/epc52/index.en.html>

BSA/CEC: While the statutory provisions setting out the conditions for granting such patents are similar, their application in the case law and the administrative practices of Member States is divergent. There are differences, in particular, between the case law of the Boards of Appeal of the European Patent Office and the courts of Member States. Thus, a computer-implemented invention may be protected in one Member State but not in another one, which has direct and negative effects on the proper functioning of the internal market⁵.

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While the statutory provisions setting out the conditions for granting such patents are similar, their application in the case law and the administrative practices of Member States is divergent. There are differences, in particular, between the case law of the Boards of Appeal of the European Patent Office the courts of Member States. Thus, a programming solution may be patented in one Member State but not in another one. This is likely to have direct and negative effects on the proper functioning of the internal market.

BSA/CEC: This Directive addresses this situation by harmonising national patent laws with respect to the patentability of computer-implemented inventions and by making the conditions of patentability more transparent.

EPC/FFII:

This Directive should address this situation by clarifying the limits of patentability with respect to computer programs so as to give lawcourts and patent offices in all of Europe unambiguous guidance. Unfortunately the CEC/BSA proposal does not achieve its aim. The CEC press release and the directive contradict each other on what should be patentable, and key terms are undefined. The only thing that is certain is that judges will find little support in the CEC proposal for rejecting any software patent applications for lack of technical character. This should help to reassure the owners of the 30000 software patents which the EPO has so far granted against the letter and spirit of the written law.

2 The background to the initiative: Commission's consultations

BSA/CEC: Following consultation centred on the 1997 Green Paper on the Community Patent and the Patent System in Europe⁶, the patentability of computer-implemented inventions was one of the priority issues identified in early 1999 on which the European Commission should rapidly take action⁷. It was envisaged that a Directive harmonising Member States' law on the issue would remove the ambiguity and lack of legal certainty surrounding the issue. Furthermore, it was stated that in parallel with this action at the Community level, the contracting states to the EPC would need to take steps to modify Article 52(2)(c) of the Convention, in particular to abolish computer programs from the list of non-patentable inventions.

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Following a consultation among 40-50 patent lawyers¹ centred on the 1997 Green Paper on the Community Patent and the Patent System in Europe, the patentability of software was one of the priority issues identified in early 1999 on which the European Commission should rapidly take action. It was envisaged that a Directive harmonising Member States' law on the issue would remove the ambiguity and lack of legal certainty surrounding the issue. Furthermore, it was stated that in parallel with this action at the Community level, the contracting states to the EPC would need to take steps to modify Article 52(2)(c) of the Convention, in particular to delete the "programs for computers" from the list of non-patentable inventions.

BSA/CEC: After 1999, public debate on the issue developed and became more intense. Some sections of European industry repeatedly asked for swift action to remove the current ambiguity and legal uncertainty surrounding the patentability of computer-implemented inventions, while on the other hand, developers and users of open source software and a substantial number of small and medium-sized enterprises backing them have increasingly raised concerns about software patents.

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After 1999, public debate on the issue developed and became more intense. Some patent law experts speaking in the name of European industry associations repeatedly asked for swift action to "remove the current ambiguity and legal uncertainty surrounding the patentability of computer-implemented inventions", while on the other hand, developers and users of free/opensource software and shareware and a substantial number of software companies (mostly small and medium-sized, creators of free and proprietary software as well as service providers) have increasingly raised concerns about software patents.

¹<http://swpat.ffii.org/papers/cr-bmueller00/index.de.html>

BSA/CEC: On 19 October 2000 the European Commission launched a final round of consultations in which the public at large and Member States were invited to comment on the basis of a paper which was made available on the Internet⁸.

EPC/FFII:

On 19 October 2000 the member states therefore decided to abstain from deleting the “programs for computers” exclusion from Article 52 EPC and instead entrusted the European Commission to launch a new round of consultations. The Commission responded by publishing a consultation paper on the Internet and inviting the public at large and Member States to send comments.

BSA/CEC: The consultation adopted a two-pronged approach. In the first place, the basic question was posed as to whether there was any need at all for action at the Community level on harmonisation, and in the case this question were to be answered in the affirmative, what the appropriate level would be in general terms. Following this, there was set out in some detail the current state of the case law as established within the EPO, with the suggestion of a number of very specific elements which might figure in any harmonisation exercise based more or less on this status quo.

EPC/FFII:

The first of these two questions was not asked during the public consultation period but only thereafter in confidential meetings with civil servants from the national patent administrations. The second question set made it clear that this consultation was indeed only a “final round” of an already predetermined course and, as the previous patent lawyer consultations, was only a virtual debate in which patent lawyers were to hold learned debate on grammatical questions rather than on the content of the regulation to be decided.

BSA/CEC: The consultation produced around 1450 responses, which have been analysed by a contractor whose report has been published⁹.

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The consultation produced around 1450 responses, which have been analysed by a contractor whose report has been published. Authors also had the possibility to request the Industrial Property Unit to have their paper published in PDF form on the EC website. The requests were so numerous that the Commission did not find itself capable of fulfilling them. Indeed only selected responses were published by the CEC, and a contractor, selected among trusted comrades of the UK patent lobby², wrote a summary report³ catering to the taste of the CEC patent lawyers and keeping silent about many important patent-critical submissions.

BSA/CEC: One conclusion which can be drawn unquestionably from the responses is that there is a clear demand for action. The present situation in which there is lack of clarity as to the limits of what is patentable is seen as an important negative influence on the industry. However as to

²<http://swpat.ffii.org/players/uk/index.en.html>

³<http://swpat.ffii.org/papers/eukonsult00/softanalyse/index.en.html>

precisely what action should be taken, opinions were sharply divided between those who wish to see strict limits on software-related patents (or a complete ban) and those who support harmonisation at the level of more or less the status quo as defined by the current practice and jurisprudence of the EPO.

EPC/FFII:

One conclusion which can be drawn unquestionably from the responses is that there is a clear demand for action. The present situation in which there is lack of clarity as to the limits of what is patentable is seen as an important negative influence on the industry. However as to precisely what action should be taken, opinions were sharply divided between those who wish to see as return to a strict exclusion of software patents (as laid out in the EPO's guidelines of 1978⁴ and the caselaw of that time) and those who support a regulation based on the current practice and jurisprudence of the EPO.

BSA/CEC: The individual responses were dominated by supporters of open source software, whose views ranged from wanting no patents for software at all to the "official" position of the Eurolinux Alliance which is to oppose patents for software running on general-purpose computers. On the other hand, submissions broadly in support of the approach of the consultation paper tended to come from regional or sectoral organisations representing large numbers of companies of all sizes, such as UNICE, the Union of Industrial and Employer's Confederations of Europe, EICTA, the European Information and Communications Technology Industry Association, and the European IT Services Association. There were also individual large organizations, other industry associations and IP professionals. Thus although the responses in this category were numerically much fewer than those supporting the open source approach, there seems little doubt that the balance of economic weight taking into account total jobs and investment involved is in favour of harmonisation along the lines suggested in the paper.

EPC/FFII:

The individual responses were dominated by software professionals whose views were more or less close to the official position of the Eurolinux Alliance⁵, which is to exclude software in general from patentability but to allow the patenting of technical inventions (teachings of physical causality) regardless of whether they are implemented with help of a computer or not. On the other hand, submissions broadly in support of the approach of the consultation paper⁶ tended to come from regional or sectoral organisations which count large numbers of companies of all sizes among their members, such as UNICE⁷, EICTA⁸ and EISA⁹. There were also individual large organisations, other industry associations and IP professionals. Thus although the responses in this category were numerically much fewer than those opposing software patents, their economic weight taking into account total jobs and investment involved seemed to speak in favour of regulation along the lines suggested in the paper. However it must be noted that

1. The European Commission's consultation paper advocated the viewpoint of the EPO using the jargon of the EPO and contained questions which could reasonably be answered only by people from the lobby of the EPO, i.e. corporate patent lawyers

⁴<http://swpat.ffii.org/papers/epo-gl78/index.en.html>

⁵<http://swpat.ffii.org/papers/eukonsult00/eurolinux/index.en.html>

⁶http://europa.eu.int/comm/internal_market/en/indprop/comp/softpaten.htm

⁷<http://swpat.ffii.org/papers/eukonsult00/unice/index.en.html>

⁸<http://swpat.ffii.org/papers/eukonsult00/eicta/index.en.html>

⁹<http://swpat.ffii.org/papers/eukonsult00/eisa/index.en.html>

2. The responses of the cited big organisations were in fact written by patent lawyers and contained, apart from pledges of allegiance to the patent faith, almost no information or analysis of the interests of the software players whom they claimed to represent
3. Most of these responses were not publicised by the concerned associations, and most did not result from any debate within the association
4. Software companies are largely unfamiliar with the patent system and, like other companies, not preoccupied with questions of public policy
5. Even sectoral organisations and associations may not be primarily designed for the purpose of forming opinions on matters of public interest
6. By far not all sectoral bodies expressed themselves in favor of software patents, e.g. CLEDIPA¹⁰, SYNTEC¹¹, PROSA.dk¹², ISOC¹³ etc were quite critical of the Commission's approach, and more organisations have formed critical opinions since then.

It would be inappropriate to simply weigh the submissions either by their number or by their "economic weight". The issue has proven to be more controversial than assumed in the "consultation paper". The interests of the economic actors must be fairly assessed before any conclusion or compromise can be attempted.

BSA/CEC: The Commission's Directorate-General for Enterprise also commissioned a study, specifically in relation to small and medium sized enterprises (SMEs). This study aimed to investigate how SMEs involved in the development of software manage their IP. A central objective was to produce for them a brochure that will enhance the awareness of various methods of IP protection, as well as to inform them of these forms of protection. The research was largely desk-based but was supplemented with a survey questionnaire of European software SMEs that were selected from a number of sources. Of the questionnaires distributed, 12 SMEs responded. A limited number of large European software companies were also surveyed, as was a group of public research organizations.

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The Commission's Directorate-General for Enterprise also commissioned a study¹⁴, specifically in relation to small and medium sized enterprises (SMEs). This study aimed to investigate how SMEs involved in the development of software manage their IP. A central objective was to produce for them a brochure that will enhance the awareness of various methods of IP protection, as well as to inform them of these forms of protection and, by doing this in the name of the European Commission, to lend further legitimacy to the current practise of the European Patent Office, whose Brussels liaison office also happened to be directly in charge of conducting this study. The research was largely desk-based but was supplemented with a survey questionnaire of European software SMEs that were selected from a number of sources. Of the questionnaires distributed, 12 SMEs responded. A limited number of large European software companies were also surveyed, as was a group of public research organizations.

¹⁰<http://swpat.ffii.org/papers/eukonsult00/cledipa/index.en.html>

¹¹<http://swpat.ffii.org/papers/eukonsult00/syntec/index.en.html>

¹²<http://www.prosa.dk>

¹³<http://swpat.ffii.org/papers/eukonsult00/walle/index.fr.html>

¹⁴<http://swpat.ffii.org/papers/tangadpa00/index.en.html>

BSA/CEC: Among the SMEs who responded there was generally quite a low level of awareness of patents as a means of protection for their products. Patents were seen as complex, expensive and difficult to enforce for small entities and therefore less valuable than copyright or informal means of protection. Neither was there much awareness of the possibilities to use patents as a source of technical information. These results highlight the need to increase awareness among SMEs and present a particular challenge to practitioners and those responsible for administering the various systems.

EPC/FFII:

The SMEs who responded generally did not think highly of patents as a means of protection for their products. Patents were seen as complex, expensive and difficult to enforce for small entities and therefore less valuable than copyright or informal means of protection. Also the possibility to use patents as a source of technical information were judged as rather uninteresting. These results highlight an ever-growing discrepancy between the century-old ideology of the patent movement and the modern practise of the SMEs whom this movement is pretending to benefit. It has shown that the patent system should better try to close this gap between ideology and practise in its core area of technical invention before trying to hastily expand to other areas. Otherwise there might be a risk that more and more people become aware of the gap and then put the whole system in question. Time seems to be running out.

BSA/CEC: The Commission has assessed the question as to how extensive harmonisation of the national patent laws regarding computer-implemented inventions should be in the light of the likely impact of the proposal on innovation and competition, both within Europe and internationally, and on European businesses, including electronic commerce. Moreover, it has considered the impact on small and medium-sized enterprises and on the creation and dissemination of free/open source software. For this purpose, in particular, the findings of a study on the economic impact of the patentability of computer programs as well as of other pertinent economic studies have been taken into account. In determining the conditions for patentability, the Commission has paid special attention to the practice of its main trading partners, in particular of the United States and Japan. In this context, consideration has been given to the granting of patents for computer-implemented business methods in the United States, and more specifically to those of these patents which have applications in electronic commerce. Business method patents have become the subject of considerable debate in industrialised countries.

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The Commission has assessed the question as to how extensive harmonisation of the national patent laws regarding programming solutions should be in the light of the likely impact of the proposal on innovation and competition, both within Europe and internationally, and on European businesses, including electronic commerce. Moreover, it has considered the impact on small and medium-sized enterprises and on the creation and dissemination of free/opensource software. For this purpose, in particular, a study on the economic impact of the patentability of computer programs¹⁵ was created by reliable patent lawyers friends of the influential group at the European Commission¹⁶. This paper is not an economic study. Rather it is a reformulation of the CEC patent lobby's wishes under the guise of a study, written by trusted british patent family members who have organised themselves as

¹⁵<http://swpat.ffii.org/papers/indprop-ipi00/index.en.html>

¹⁶<http://swpat.ffii.org/players/uk/index.en.html>

a private think tank called “Intellectual Property Institute”. In determining the conditions for patentability, the UK patent lobby at IPI and CEC has, in lack of economic arguments, tried to rely on the authority of their patent brethren from the United States and Japan, who are not suffering from the explicit restrictions on patentability which the EPC provides in Europe. In this context, consideration has been given to the granting of patents for business methods in the United States, and more specifically to those of these patents which have applications in electronic commerce. Business method patents have become the subject of considerable debate in the patent community worldwide.

3 “International competition: The legal situation in the U.S. and Japan”

BSA/CEC: To create a level playing field regarding the conditions for protecting computer-implemented inventions between Europe and the U.S., it could have been considered desirable to widen the scope of protection and bring European patent law in this field more in line with the U.S. law. One could have conceived, in particular, to allow for the patentability of computer-implemented business methods.

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To create a level playing field regarding the conditions of patentability between Europe and the U.S., it could have been considered desirable bring European patent law in this field more in line with the U.S. law. One could have conceived, in particular, to allow for the patentability of programming solutions, including business methods.

BSA/CEC: The difference between the U.S. and Europe and between the U.S. and Japan is that in Europe there has to be a technical contribution provided by the invention. In Japan there is a doctrine which has traditionally been interpreted in a similar way: the invention has to be a highly advanced creation of technical ideas by which a law of nature is utilised. In the U.S., the invention must simply be within the technological arts and no technological contribution is needed. The mere fact that the invention uses a computer or software makes it become part of the technological arts if it also provides a “useful, concrete and tangible result”. That the U.S. does not require the invention to provide a technical contribution means that the restrictions on patenting of business methods (apart from the requirements of novelty and inventive step) are negligible.

EPC/FFII:

One apparent difference between the US and Europe is that in Europe, at least in theory, an invention implies a “technical contribution”. The Japanese Patent Law contains an explicit definition of *invention*, which has traditionally been interpreted in a similar way: an invention is understood to be a “highly advanced creation of technical ideas by which a law of nature is utilised”. In the US¹ and the UK², there is no invention concept. According to recent US caselaw, the patentable idea must simply be “within the technological arts”. The mere fact that an idea uses a computer or software makes it become part of the technological arts if it also provides a “useful, concrete and tangible result”. That the US does not require the invention to provide a technical contribution means that the restrictions on the patenting of programming solutions and business methods (apart from the requirements of novelty and inventive step) are negligible. However the same is true for the European Patent Office and for the Japanese practise. In both Europe and Japan, the

¹<http://swpat.ffii.org/players/us/index.en.html>

²<http://swpat.ffii.org/players/uk/index.en.html>

laws and patent doctrines have basically been reduced to meaninglessness by the practise of patent courts and patent offices seeking to align themselves with the practise of the United States. This is also reflected in recent joint declarations of the leading patent organisations of the whole world in forums such as Association Internationale Pour la Protection de la Propriété Industrielle (AIPPI)³ and the Trilateral Commission⁴.

BSA/CEC: The impact of the patentability of software-related inventions on innovation, competition and on businesses

BSA/CEC: The study referred to above (see note 11) relies on the United States as a test case. It finds that “the patentability of computer program related inventions has helped the growth of computer program related industries in the States, in particular the growth of SMEs and independent software developers into sizeable indeed major companies”. In Europe, too, there is increasing, even though still relatively low, use by independent software developers of patents in raising finance or in licensing. The main source of protection that has allowed the software industry to grow has been the law of copyright.

EPC/FFII:

The IPI study referred to above (see note 11) relies on the United States as a test case. Without doing any economic research or analysis, it states that “the patentability of computer program related inventions has helped the growth of computer program related industries in the States, in particular the growth of SMEs and independent software developers into sizeable indeed major companies”. In Europe there is “increasing, even though still relatively low, use by independent software developers of patents in raising finance or in licensing”. Although this is not confirmed by the findings from an economic survey commissioned by the German government, it would hardly be surprising, given that patents are powerful weapons whose presence changes the rules of the market, to which companies have to adapt if they want to grow. Nevertheless, the IPI paper admits that the main source of protection that has allowed the software industry to grow has been the law of copyright.

BSA/CEC: However, the study also clearly identifies concerns about the patentability of computer-implemented inventions in the U.S. They relate, first, to the grant of allegedly “clearly invalid patents” (in particular for e-commerce), that is patents which are granted for inventions that are either not new or where inventive step is on the face of it lacking. Second, patents for computer-implemented inventions might strengthen big players’ market positions. And, third, patents for incremental innovation which is typical of the software industry entail the economic costs of figuring out the patent holders and negotiating the necessary licences. Yet, the study acknowledges that it has not been shown that these reservations would outweigh the positive effects of the patentability of computer-implemented inventions in the U.S. To outline how Europe might be better placed than the U.S. to avoid adverse effects, the study stresses “our strength in having opposition procedures in addition to the facility ... of being able to submit observations on the patentability of inventions to the EPO without the expense of opposition procedures”. These are important legal means to ensure patent quality which are not available in the U.S.

³<http://swpat.ffii.org/players/aippi/index.en.html>

⁴<http://swpat.ffii.org/players/useujp/index.en.html>

EPC/FFII:

The IPI paper also sees itself forced to admit that there are concerns about the patentability of software, but it immediately tries to assert that this problem does not point to any design flaw of the software patent system but, first, to the grant of allegedly “clearly invalid patents” (in particular for e-commerce), that is patents which could have been avoided without any need for a reform of the system. Secondly, the IPI paper points out that software patents might strengthen big players’ market positions. And, third, patents for incremental innovation which is typical of the software industry entail the economic costs of figuring out the patent holders and negotiating the necessary licences. The IPI paper does not show any positive effects of software patents in the U.S., but suggests that such effects might exist and that they might outweigh the evident negative effects. To outline how Europe might be better placed than the U.S. to avoid adverse effects, the study stresses “our strength in having opposition procedures in addition to the facility ... of being able to submit observations on the patentability of inventions to the EPO without the expense of opposition procedures”. These, according to IPI, are important legal means to ensure patent quality which are not available in the U.S. This could mean that at the EPO only 80% of the software patents are invalid (90% at the USPTO according to estimations from Greg Aharonian), and only 2% are not outright ridiculous to the person skilled in the art (1% at the USPTO). The IPI paper forgets to mention that, (1) EPO examination quality⁵ concerning software was never superior to the USPTO and has dramatically deteriorated in the last few years (2) unlike the EPO, the USPTO offers a *reexamination* procedure which makes it easier to eliminate invalid patents when they turn up (3) even “valid patents” may still be of highly questionable merit.

BSA/CEC: Moreover, the study points out that in Europe we must ensure the application of proper examination standards, in particular of the inventive step, to prevent invalid patents¹⁵. It should be added that the quality of the examination done in particular by the EPO is widely respected. Finally, the study finds “no evidence that European independent software developers have been unduly affected by the patent positions of large companies or indeed of other software developers”.

EPC/FFII:

Moreover, the IPI paper points out that in Europe we must ensure the application of proper examination standards, in particular of the “inventive step” criterion, to prevent the granting of patents that are deemed invalid even by the standards of patent offices. It should be added that the quality of the examination done in particular by the EPO is widely laughed at. Finally, the study finds “no evidence that European independent software developers have been unduly affected by the patent positions of large companies or indeed of other software developers”. This is no wonder, since the validity of EPO’s patents in infringement law suits has not been tested and is highly questionable, given the explicit exclusion of software from patentability in European patent law.

BSA/CEC: The study identifies as one possible option for the scope of harmonisation to “stay with the status quo (as defined by the case law of the EPO), subject to removal of the exclusion of

⁵<http://swpat.ffii.org/players/epo/index.en.html>

“computer programs” “as such””. This would, the authors consider, “have no consequence save for the important one that SMEs and independent software developers will be less likely to consider computer program related inventions unpatentable.”¹⁷ On the other hand, “any move to strengthen IP protection in the software industry cannot claim to rest on solid economic evidence”¹⁸.

EPC/FFII:

The IPI paper identifies as one possible option for the scope of harmonisation to “stay with the status quo (as defined by the case law of the EPO), subject to removal of the exclusion of “computer programs” “as such””, in other words *legalise the EPO’s practise by removing the “programs for computers” from Art 52(2) EPC*. This would, the authors claim, “have no consequence save for the important one that SMEs and independent software developers will be less likely to consider computer program related inventions unpatentable.” On the other hand the authors admit that “any move to strengthen IP protection in the software industry cannot claim to rest on solid economic evidence.” This could also mean that any move to codify the EPO’s “status quo” cannot claim to rest on solid economic evidence. However the IPI study does not investigate the alternative of returning to the letter and spirit of the currently valid EPC regulation.. Note also that European Commission’s translation of this last IPI statement into French and German distorts the sense, so as to make the slightly critical nature of this comment disappear completely. These translations are even more biased toward the patent lobby than the english original.

4 “The current legal situation regarding art. 52(1) and (2) of the epc.”

BSA/CEC: The fundamental requirement of “technical character”

BSA: The Boards of Appeal of the EPO have held that it is fundamental to all inventions that they have a technical character. Similarly, Article 27(1) of the TRIPS Agreement confirms that patents shall be available for inventions in all fields of technology. Accordingly, the EPO Boards of Appeal and courts of the Member States have held that computer-implemented inventions must be considered as patentable when they have a technical character, i.e. when they belong to a field of technology. Computer-implemented inventions which meet this condition are not considered to relate to programs for computers “as such”.

Conversely, the exclusion has been interpreted by the Boards of Appeal of the EPO as relating to those computer-implemented inventions which have no technical character. In the recent Controlling pension benefits system case, the Board decided that all programs when run in a computer are by definition technical (because a computer is a machine), and so are able pass this basic hurdle of being an “invention”. However, in Computer program product I & II the Board held that because of the potential of a program on a carrier to produce a technical effect when run on a computer, it should be allowable to claim a program as itself or as a record on a carrier (i.e. as a program product or as a signal).

CEC: According to the general requirements cf. article 52(1)-(3) of the EPC, which are reproduced in essence in Member States’ patent laws, all patentable inventions must be new, involve an inventive step and be capable of industrial application cf. Article 52(1).

Under Art. 52(2) of the EPC, *programs for computers* are defined as not being *inventions* and are thus excluded from patentability. The Boards of Appeal of the EPO have held that it is fundamental to all inventions that they have a technical character. Similarly, Article 27(1) of the TRIPS Agreement confirms that patents shall be available for inventions in all fields of technology. Accordingly, the EPO Boards of Appeal and **some** courts of the Member States have held that “computer-implemented inventions” can be considered as patentable when they have a technical character, i.e. when they belong to a field of technology. Computer-implemented inventions which meet this condition are not considered to fall under the exclusion in Article 52(2) as they are considered not to relate to “programs for computers “as such””. In fact, the exclusion has been interpreted by the Boards of Appeal of the EPO as relating to those “computer-implemented inventions” which “have no technical character”.

With regard to what computer-implemented inventions can be said to have “technical character” the conclusion to be drawn from the recent 20Controlling pension benefits system case is that all programs when run in a computer are by definition technical (because a computer is a machine), and so are able pass this basic hurdle of being an “invention”.

EPC/FFII:

According to the general requirements cf. article 52(1)-(3) of the EPC, which are reproduced in essence in Member States’ patent laws, all patentable inventions must be new, involve an inventive step and be capable of industrial application cf. Article 52(1).

Under Art. 52(2) of the EPC, *programs for computers* are defined as not being *inventions* and are thus excluded from patentability. The Boards of Appeal of the EPO have held that it is fundamental to all inventions that they have a technical character. Similarly, Article 27(1) of the TRIPS Agreement confirms that patents shall be available for inventions in all fields of technology. Accordingly, the EPO Boards of Appeal and some courts of the Member States have held that “computer-implemented inventions” can be considered as patentable when they have a technical character, i.e. when they belong to a field of technology. Computer-implemented inventions which meet this condition are not considered to fall under the exclusion in Article 52(2) as they are considered not to relate to “programs for computers “as such””. In fact, the exclusion has been interpreted by the Boards of Appeal of the EPO as relating to those “computer-implemented inventions” which “have no technical character”.

With regard to what “computer-implemented inventions” can be said to have “technical character” the conclusion to be drawn from the recent *Controlling pension benefits system* case is that all programs when run in a computer are by definition technical (because a computer is a machine), and so are able pass this basic hurdle of being an “invention”. This again means that, according to the EPO and its followers in the member states, all computer programs are patentable.

BSA/CEC: Similar considerations have been applied by the EPO Boards of Appeal to the other **non-inventions** listed in Art. 52(2), for instance to “methods for doing business”, “presentation of information”, or “aesthetic creations”. This means that these non-inventions have equally been held to be patentable when they “have a technical character”.¹

EPC/FFII:

Similar considerations have been applied by the EPO Boards of Appeal to the other **non-inventions** listed in Art. 52(2), for instance to “methods for doing business”, “presentation of information”, or “aesthetic creations”. This means that these non-inventions have equally been held to be patentable when they “have a technical character”.

BSA:

CEC: With regard to the representation of the (non-)invention in the patent claims, the Board held, in Computer program product I & II that if a program on a carrier has the potential to produce a technical effect when loaded and run on a computer, such a program claimed by itself should not be excluded from patentability. This has been interpreted as meaning that it should be allowable to claim such a program by itself or as a record on a carrier or in the form of a signal (e.g. stored as a file on a disk or transmitted across the internet).

EPC/FFII:

With regard to the representation of the (non-)invention in the patent claims, the Board held, in “IBM computer program product I & II” that if a program on a carrier has the potential to produce a technical effect when loaded and

¹Note that BSA/CEC is careful to make all the exclusion provisions in art 52 EPC look obscure and meaningless by avoiding any rewording that might put them in a reality context and by adding the appositive “as such” in a non-grammatical way. This way, the EPO will be able to point to an official EU document and say “Look, Article 52 means nothing, we can do what we want”. So far they had to point to their own caselaw when they wanted to argue like that.

run on a computer, such a program claimed by itself should not be excluded from patentability. This has been interpreted as meaning that it should be allowable to claim such a program by itself or as a record on a carrier or in the form of a signal (e.g. stored as a file on a disk or transmitted across the internet).

5 “The role of algorithms”

BSA/CEC: The term “algorithm” may be understood in its broadest sense to mean any detailed sequence of actions intended to perform a specific task. In this context, it can clearly encompass both technical and non-technical processes.

EPC/FFII:

The term “algorithm” may be understood in its broadest sense to mean any detailed sequence of actions intended to perform a specific task. This includes descriptions of the processes performed in implementing a technical inventions.

BSA/CEC: The mere existence of an algorithm does not constitute a workable criterion for distinguishing patentable from non-patentable subject matter. An algorithm may underlie either a computer-implemented invention or an invention relating to a conventional (mechanical, electrical etc.) machine or the process carried out by that machine. The sole difference is that a computer program is executed by instructions directed to the computer and a conventional machine is operated by its (mechanical, electrical etc.) components.

EPC/FFII:

A mere algorithm is not a technical invention. A technical invention is only present when forces of nature are part of the (allegedly novel) problem solution. A technical invention may be *described* by an algorithm, but the invention (= technical contribution) does not consist in the algorithm but in the new knowledge gained by experimenting with forces of nature. Making an algorithm run on standard computer hardware does not require any new knowledge about forces of nature.

BSA/CEC: An abstract algorithm can be defined in terms of pure logic in the absence of any physical reference points. It is possible that such an algorithm may be put to practical use in many different functions in apparently unrelated domains, and may be capable of achieving different effects. Thus, an algorithm which is considered as a theoretical entity in isolation from the context of a physical environment, and in respect of which it is accordingly not possible to infer its effects, will be inherently non-technical and thus not susceptible of being regarded as a patentable invention.

EPC/FFII:

All algorithms are as abstract and mathematical as any algorithm can be. Moreover, all algorithms can refer to “physical entry points”, i.e. models that can apply to the real world. In particular, the universal computer provides entry points which are both highly abstract and physical at the same time. The value of algorithms lies in their abstractness. The intellectual achievement of algorithm design is higher, when the algorithm is defined in more abstract terms. Patenting algorithms at a low level of abstraction, as

advocated by CEC/BSA means (1) patenting trivial ideas (2) claiming something other than what was really disclosed (3) claiming unlimited classes of undisclosed algorithms, i.e. claiming problems rather than solutions. The CEC/BSA are thereby in fact promoting the very horror patents¹ for which the EPO has been most harshly criticised in recent years. Such a practise cannot be desirable. Algorithms at all levels of abstraction must remain unpatentable.

BSA/CEC: It is a consequence of the above that an abstract algorithm as such cannot be monopolised. The normal rules for patentability mean that a patent claim to an invention which is founded on a particular algorithm would not extend to other applications of that algorithm.

EPC/FFII:

It is a consequence of current EPO practise that an abstract algorithm as such can be monopolised. It only needs to be claimed with “physical reference points” – the addition algorithm applied to apples would belong to the technical field of “computer-implemented botanics” or even that of computing itself. Computing terminology is an equivalent of the most abstract algorithms and at the same time the only practically relevant way of describing such abstract algorithms today.

¹<http://swpat.ffii.org/patents/index.en.html>

6 “Patent and copyright protection are complementary”

BSA/CEC: A patent protects an invention as delimited by the patent claims which determine the extent of the protection conferred²². Thus, the holder of a patent for a computer-implemented invention has the right to prevent third parties from using any software which implements his invention (as defined by the patent claims). This principle holds even though various ways might be found to achieve this using programs whose source or object code is different from each other and which might be protected in parallel by independent copyrights which would not mutually infringe each other²³.

EPC/FFII:

A patent is a monopoly on an invention as delimited by the patent claims which determine the extent of the protection conferred. Thus, the holder of a patent for programming idea would have the right to prevent third parties from using any software which implements his idea. This principle holds even though various ways might be found to achieve this using programs whose solution to the problem is different from each other and which might be protected in parallel by independent copyrights which would not mutually infringe each other.

BSA/CEC: On the other hand, for the purposes of Directive 91/250/EEC on the legal protection of computer programs, copyright protection is accorded to the particular expression in any form of a computer program, while ideas and principles which underlie any element of a computer program, including those which underlie its interfaces, are not protected. A computer program will be accorded copyright protection where the form of expression is original in the sense of being the author’s own intellectual creation. In practice, this means that copyright would subsist in the expression in any form of the source code or the object code but would not subsist in the underlying ideas and principles of the source code or object code of a program. Copyright prohibits a substantial copy of the source code or object code but does not prevent the many possible alternate ways to express the same ideas and principles in different source or object code. It also does not protect against development of an identical or substantially identical program without the knowledge of an existing copyright.

BSA/CEC: Accordingly, legal protection may exist in a complementary manner in respect of the same program both by patent and by copyright law. The protection may be cumulative in the sense that an act involving exploitation of a particular program may infringe both the copyright in the code and a patent whose claims cover the underlying ideas and principles.

EPC/FFII:

Accordingly, concurrent property rights to the same program may exist, founded both by patents and by copyright law. The property may be cumulative in the sense that an act involving exploitation of a particular program

may infringe both on the copyright in the individual creation and on a series of patents of various owners whose claims cover the underlying ideas and principles.

BSA/CEC: Directive 91/250/EEC includes specific provisions (Articles 5 and 6) to the effect that copyright in a computer program is not infringed by the doing of acts under certain circumstances which would otherwise constitute infringement. These exceptions include acts done for the purposes of studying the ideas and principles underlying a program and the reproduction or translation of code if necessary for the achievement of the interoperability of an independently-created computer program. It is also specified that the making of a back-up copy by a lawful user cannot be prevented.

BSA: Such provisions are justified and necessary in the context of copyright law because copyright confers the absolute right to prevent the making of copies of a protected work. All the acts mentioned involve making copies and would therefore infringe in the absence of any exception. On the other hand, Member States' patent laws, while not fully harmonised, do not in general extend to acts done privately and for non-commercial purposes, or to acts carried out for experimental purposes related to the subject-matter of the invention. Nor is it likely that the making of a back-up copy in the context of the authorised exploitation of a patent covering a programmed computer or the execution of a program could be construed as an infringement. Thus, because of the differences between the subject-matter of protection under patent and copyright law, and the nature of the permitted exceptions, the exercise of a patent covering a computer-implemented invention should not interfere with the freedoms granted under copyright law to software developers by the provisions of the Directive 91/250/EEC. Moreover, as regards developing interoperable programs, the requirement for each patent to include an enabling disclosure should facilitate the task of a person seeking to adapt a program to another, pre-existing one incorporating patented features (the requirement of disclosure has no analogue under copyright law).

Finally, it should be said that in the event that patent rights are exercised in abusive way, compulsory licenses may be available as a remedy, as well as possible recourse to competition law. Recital 18 makes specific reference, inter alia, to the provisions on decompilation and interoperability in Directive 91/250/EEC.

CEC: Such provisions are justified and necessary in the context of copyright law because copyright confers the absolute right to prevent the making of copies of a protected work. All the acts mentioned involve making copies and would therefore infringe in the absence of any exception. On the other hand, Member States' patent laws, while not fully harmonised, do not in general extend to acts done privately and for non-commercial purposes, or to acts carried out for experimental purposes related to the subject-matter of the invention. Nor is it likely that the making of a back-up copy in the context of the authorised exploitation of a patent covering a programmed computer or the execution of a program could be construed as an infringement. Thus, because of the differences between the subject-matter of protection under patent and copyright law, and the nature of the permitted exceptions, the exercise of a patent covering a computer-implemented invention should not interfere with the freedoms granted under copyright law to software developers by the provisions of the Directive 91/250/EEC. Moreover, as regards developing interoperable programs, the requirement for each patent to include an enabling disclosure should facilitate the task of a person seeking to adapt a program to another, pre-existing one incorporating patented features (the requirement of disclosure has no analogue under copyright law). Finally, it should be said that in the event that patent rights are exercised in abusive way, compulsory licenses may be available as a remedy, as well as possible recourse to competition law. Recital 18 and Article 6 make specific reference, inter alia, to the provisions on decompilation and interoperability in Directive 91/250/EEC.

EPC/FFII:

Such provisions are justified and necessary in the context of copyright law because copyright confers the absolute right to prevent the making of copies of a protected work. All the acts mentioned involve making copies and would therefore infringe in the absence of any exception. On the other hand, Member States' patent laws, while not fully harmonised, do not in general extend to acts done privately and for non-commercial purposes, or to acts carried out for experimental purposes related to the subject-matter of the invention. Nor is it likely that the making of a back-up copy in the context of the authorised exploitation of a patent covering a programmed computer or the execution of a program could be construed as an infringement. Thus, because of the differences between the subject-matter of protection under patent and copyright law, and the nature of the permitted exceptions, the exercise of a patent covering a software innovation should not interfere with the freedoms granted under copyright law to software developers by the provisions of the Directive 91/250/EEC. As regards developing interoperable programs, the requirement for each patent to include an enabling disclosure could even facilitate the task of a person seeking to adapt a program to another, pre-existing one incorporating patented features (the requirement of disclosure has no analogue under copyright law). However, by using or distributing the thus written interoperable program, the program's author would infringe on the patent. Finally, it should be said that in the event that patent rights are exercised in certain abusive ways, compulsory licenses and competition law may be available as a remedy to those who can afford long drawn-out litigation. In general, when a standard or an interface is covered by patents, the patent owner would be free to exclude competitors from using his standard or to prevent free software that would interoperate with this standard. Recital 18 and Article 6 of the CEC proposal make specific reference, *inter alia*, to the provisions on decompilation and interoperability in Directive 91/250/EEC, but fail to do anything to prevent patents from being used to block interoperability and reinforce anticompetitive effects, which are, even without patents, already a core component in the "packaged software" business world whose interests this draft claims to be serving.

7 “The necessity of a Community action harmonising national laws and its legal basis”

BSA: There are divergences of national case law and administrative practices which can have an impact on the question of whether individual inventions are patentable. The most significant are outlined below. In this context, it should be understood that the majority of litigation so far in this field has been conducted in the courts of only two Member States: Germany and the U.K.

CEC: European Patents are granted by the European Patent Office, thus a uniform set of rules in a centralised procedure is provided for according to which, once granted European patents become subject to the national patent laws of each country for which they enter into force. Furthermore, the basic national laws on patentability are in principle uniform as between themselves and the provisions of the European Patent Convention, but their detailed interpretation — with regard to the effect of a European Patent as well as a national patent - is the preserve of the courts. While the national courts may accord persuasive authority to decisions of the EPO’s appellate bodies (and to decisions of other Member States’ courts), they are not bound to follow them, and in the event of direct conflict, they may have no choice but to respect binding precedents in accordance with their own legal traditions. This can lead, and has in practice led, to divergences in interpretation of the European Patent Convention and consequently in the scope of protection accorded to certain classes of invention.

The majority of national level jurisprudence so far in the field of computer-implemented inventions has been developed in the courts of only two Member States: Germany and the U.K. Interestingly, even these have decided differently on important questions touching on the requirements for obtaining a patent (definition of patentable matter). This suggests strongly that the courts of other Member States, in the absence of any harmonising measures, could well come to widely diverging positions if and when confronted with cases to decide in this field. Thus, patentees and the public at large who may be users of patentable matter currently lack certainty as to whether in the event of litigation patents which have been granted in this field will be upheld.

Moreover, the existence of such uncertainty and divergences in legal protection can have a real and negative effect on investment decisions and free movement of goods within the internal market. The most obvious example of this can arise where a product is held to be patentable in the jurisdiction of one Member States and not in another. The competitive environment for innovative products in this situation will be radically different depending upon whether or not they are protected, while unlicensed copies will be prevented from passing across the Community’s internal frontiers from Member States where protection has been denied to those where it exists. Companies considering the location of development facilities or the entry into new markets are also likely to be influenced in their decisions by the degree of certainty in the extent to which the local courts would give protection to computer-implemented inventions.

It should also be recalled that patents can be obtained by a purely national route without the involvement of the European Patent Office. The above arguments concerning divergences between national laws apply equally in such situations, but there is the additional factor that the applications will be fully processed and granted exclusively according to national laws. Thus even the unifying factor of the EPO as a single granting authority will be absent, with the consequence that members of the same patent “family” in different countries (i.e. patents all relating to the same invention and stemming from a single original application) could be granted from the very outset with very different scopes of protection.

EPC/FFII:

To summarise: The laws are the same in all countries, but the question of whether the illegal EPO caselaw should be followed or not has created confusion. Normally, a need for “harmonisation” may arise when the countries have different laws. In this case the laws are already unified and “harmonisation” serves only to end embarrassing discussions.

BSA/CEC: (a) Differences between U.K. and EPO case law

BSA: Significant differences exist between the case law of the U.K. courts and that of the EPO Board of Appeal as regards computer-implemented inventions in the field of other classes of excluded matter. Under U.K. jurisprudence (in contrast to EPO case law), a computer program related invention that amounts to no more than, for example, a method for doing business or a mental act, is unpatentable even if a technical contribution can be found. This is illustrated by Merrill Lynch, for business methods, and by Raytheon Co’s Application, for mental acts.

CEC: As to the specific differences which exist between the case law of the U.K. courts and that of the EPO Board of Appeal, these concern the manner in which the law is interpreted in relation to excluded matter in general. Under U.K. jurisprudence (in contrast to that of the EPO), a computer program related invention that amounts to, for example, a method for doing business or a mental act, is considered unpatentable even if a technical contribution (in terms defined in this Directive) can be found. This is illustrated by Merrill Lynch, for business methods, and by Raytheon Co’s Application, for mental acts.

EPC/FFII:

In other words: this directive proposal forces British courts to accept business method patents as they have been granted by the EPO in recent years.

BSA/CEC: (b) Business methods: Differences between U.K., German and EPO case law

BSA: Further differences exist between the case law of U.K. courts and the German Federal Patent Court as regards the patentability of methods for doing business. In particular, German jurisprudence does not appear to exclude the possibility that business methods can be patentable even if the only contribution that the invention makes is non-technical. This is in contradiction to the U.K. approach of Merrill Lynch referred to above. Relevant cases include the Automatic Sales Control¹ case and Speech Analysis Apparatus. The EPO Board of Appeals, on the other hand, has clearly stated that an essentially economic improvement cannot contribute to inventive step.

CEC: On the other hand, it had been thought that German jurisprudence did not exclude the possibility that business methods having a technical aspect could be patentable even if the only contribution that the invention makes is non-technical. Such an interpretation would open the door to significant extension of patentability into this field. Relevant cases include the Automatic Sales Control² case and Speech Analysis Apparatus. While the Bundesgerichtshof recently clarified the position by affirming that the correct approach is the one adopted by the EPO Board of Appeals and this Directive, namely that an inventive technical contribution is an essential prerequisite for inventive step, this example clearly illustrates the potential for judicial interpretation to develop the law in such a manner as to result in major changes to the scope of patentability at the national level.

¹<http://swpat.ffii.org/papers/bpatg-autabs99/index.en.html>

²<http://swpat.ffii.org/papers/bpatg-autabs99/index.en.html>

EPC/FFII:

The recent *Automatic Sales Control*³ (BPatG/21 1999) and *Speech Analysis Apparatus*⁴ (BGH/10 2000) cases have been criticised⁵ for the chaotic situation which they create in legal theory. The *Speech Analysis* reasoning is systematically coherent in that, unlike the EPO/CEC/BSA doctrine it maintains the concept of “invention”, but it seems to overtly assert that business methods are inventions, which again is politically undesirable at the moment even for the staunchest patent believers in Europe.

The CEC/BSA forgets to note that in Germany there is also the 17th senate of the Federal Patent Court which has consistently refused to follow the experimental doctrines of the senates responsible for the above-mentioned decisions, and that recent decisions from the other courts show a tendency to swing back toward the course which the BGH followed until the early 1990s. Thus there is not a question of disunity between national jurisdictions but rather one of conflict within all jurisdictions. The first step is to resolve this conflict.

BSA/CEC: (c) Differences regarding the allowable claims

BSA: In addition to differences in the assessment of the patentability criteria, the administrative practices of the U.K. Patent Office and the EPO on one hand and those of other patent offices on the other differ with respect to the possible claims. While the U.K. allows the program product claims in the form approved in the two EPO Board of Appeal Computer program product I⁶ and II⁷, there is no suggestion that other Member States, as of yet, appear prepared to admit such claims.

CEC: In addition to differences in the assessment of the patentability criteria, there is uncertainty with respect to the form of possible claims allowable. While the U.K. moved quickly to announce that its patent office would be allowing program product claims in the form approved in the two EPO Board of Appeal decisions Computer program product I and II, and this approach was recently also endorsed by the German court⁸, other Member States have not yet clearly followed suit.

EPC/FFII:

The CEC version hastily adds a reference to the newest BGH/10 decision⁹ and spreads optimism about member state courts' willingness to follow the EPO. However the BGH/10 decision is not a clear endorsement of program claims but rather call for consistency whose consequences are still unclear. The immediate result was the rejection of the patent in question as not pertaining to a technical invention. However under the proposed CEC/BSA directive such a rejection would not have been possible.

³<http://swpat.ffii.org/papers/bpatg-autabs99/index.en.html>

⁴<http://swpat.ffii.org/papers/bgh-sprach00/index.en.html>

⁵<http://swpat.ffii.org/papers/grur-nack00/index.de.html>

⁶<http://swpat.ffii.org/papers/epo-t971173/index.en.html>

⁷<http://swpat.ffii.org/papers/epo-t970935/index.en.html>

⁸<http://swpat.ffii.org/papers/bgh-suche01/index.de.html>

⁹<http://swpat.ffii.org/papers/bgh-suche01/index.de.html>

8 “The approach adopted”

BSA/CEC: In the light of the Commission’s findings on the impact of patents for computer-implemented inventions on innovation and competition and European businesses, the Commission believes that harmonisation should rely on the basic principles which have become established in the present case law and administrative practices. The proposal should thus not result in any sudden change in the legal position and in particular avoid any extension of patentability to computer programs “as such”. An important safeguard is provided in Article 5 which mandates the Commission to report to the European Parliament and Council within three years of the coming into force of the Directive on the impact of computer-implemented inventions on innovation. In the light of the experience gained following the implementation of the Directive and the reports of the special panel, the Commission could consider proposing changes to the Directive.

EPC/FFII:

In reality what this directive does is declaring programs as such to be patentable inventions. Once granted on the basis of this directive, they can no longer be revoked. The “safeguard” in Article 5 only ensures that the CEC patent establishment will have further resources available for engaging in patent movement propaganda activities, as it has been doing in this case and in the case of recent reporting on the effects of genetic patenting on university research experience reporting.

BSA: While the patent system has to be adapted where appropriate to meet the need for protection of inventions in new fields of technology, such developments should be based on the general principles of European patent law as they have evolved historically. These are expressed, in particular, in the rule that an invention, to be patentable, must make a technical contribution to the state of the art. Based on this assumption, the case law and the administrative practices have, in recent years, developed patentability requirements for computer-implemented inventions.

CEC: While the patent system has to be adapted where appropriate to meet the need for protection of inventions in new fields of technology, such developments should be based on the general principles of European patent law as they have evolved historically. These are expressed, in particular, in the rule that an invention, to be patentable, must make a technical contribution to the state of the art.

EPC/FFII:

While the invention concept of the patent system may have to be adapted to new types of technical inventions (such as e.g. the inclusion of biological causality into the realm of controllable forces of nature), such developments should be based on the general principles of European patent law. In particular any such development must

- 1. serve the public interest**
- 2. be carefully balanced against general freedom interests and specific freedoms such as freedom of speech**
- 3. respect neighboring legal systems such as copyright and refrain from uncontrolled and unintegrated intrusion into their domain**

4. stick to principle that an invention must involve the finding and use of a new physical causality and that forces of nature are at the core of the problem solution

BSA/CEC: Having reached this stage, the Commission believes it is right that Europe should, for the time being at least, refrain from extending the patent protection available for computer-implemented inventions, for example by dispensing with the technical contribution requirement. Such a course of action would lead to the patenting of computer-implemented business methods. The U.S. experience in this field is still only recent and the impact of business method patents on the economy in general and on electronic commerce in particular cannot yet be fully assessed. Moreover, on this subject there is considerable debate in the U.S. where it has been argued that such patents may stifle e-commerce. An additional consideration is that a harmonisation in this sense would essentially create a set of rules for computer-implemented inventions separate from the more general principles of European patent law which have always required a technical contribution.

EPC/FFII:

This directive explicitly authorises the patenting of computer-implemented business methods. The language here is deceptive. Ordinary terms are used but with a meaning that is determined by certain doctrine debates, in which the term “computer-implemented business method” refers to “the obvious computerisation of an already known business method”. Patent applications of the latter type can be rejected anywhere, also in the US.

BSA/CEC: By codifying the requirement for a technical contribution in accordance with the current judicial interpretation of the EPC, the Directive should ensure that patents for “pure” business methods or more generally social processes will not be granted because they do not meet the strict criteria, including the need for technical contribution.

EPC/FFII:

By codifying the “requirement for a technical contribution” (i.e. by removing the anti-requirement that there needs to be an invention (technical contribution) which must be novel) in accordance with the current judicial interpretation of the EPC, the CEC/BSA proposal would ensure that patents for business methods or more generally social processes will be granted, because they easily meet the tautological criteria such as the requirement that the idea should contain an invention (technical contribution) which is not new (i.e. only “part of the inventive step”) and whose technical character may reside in features known from prior art, and – as if the above was not already enough to make business methods patentable – classified as “technical” only on the basis of a concept according to which all computer-implemented ideas “belong to a field of technology”.

BSA/CEC: The above should ensure that patents for computer-related inventions in Europe have a positive impact on innovation and European businesses, and do not unfairly stifle competition.

EPC/FFII:

The above should ensure that patents in Europe have a positive impact on innovative patenting practises and patent law businesses in Europe and do not in the least stifle the competition between patent offices in granting ever more patents according to ever lower quality standards. The EPO is now free to legally do whatever it wants. All economic studies¹ on the subject more or less clearly suggest that patents in general have a questionable or negative impact on innovation and that in particular software and business method patents, as authorised by this directive proposal, stifle innovation and create inextricable competition problems. But who cares? This directive proposal was made by patent lawyers for patent lawyers.

BSA/CEC: Patents for computer-implemented inventions are of importance for all enterprises in the software field, including SMEs. SMEs however often have little or no experience with the patent system. Therefore, they have frequently preferred to rely solely on copyright, which provides protection for the expression of computer programs as literary works. In order for SMEs to be able to make full use of the different possibilities offered by the patent system, they must have easy access to information about the means of obtaining patent protection, the benefits which this protection can provide, and the conditions for obtaining patents for their own inventions, for licensing them and for securing patent licenses from other patent holders. Member States have a role in evaluating whether the specific situation of patents in the field of computer-implemented inventions requires specific educational initiatives to be undertaken, in particular by their patent offices.

EPC/FFII:

So the CEC does admit that it is proposing to change the “status quo” in Europe.

BSA/CEC: The proposed Community action meets the subsidiarity criteria since its objectives cannot be achieved at national level. In fact, the case law and administrative practices of the Member States regarding computer-implemented inventions have been divergent for many years and there is no indication that these practices would converge without legislative action being taken. In the light of the cross-border impact of these practices, the objectives can, therefore, only be achieved by Community action.

EPC/FFII:

The proposed Community action can in a way be claimed to meet the subsidiarity criteria since its objectives are not easy to achieve at the national level. In fact, the case law and administrative practices of the various lawcourts in the member states regarding computer-implemented inventions have diverged and reconverged many times and there is no indication that these practices would or would not reconverge without legislative action being taken. However, given the apparent divergence between the law and the practise of the European Patent Office, national lawcourts are facing a dilemma. It would be possible for individual member states to put order into this confusion by giving some legislative hint for national courts to return to the law, such as removing the (materially redundant, only explanatory “as such” clause from their national patent law, as has been proposed by the german patent examiner Günter Schölch in his consultation submission

¹<http://swpat.ffii.org/archive/mirror/impact/index.en.html>

(which was ignored in the CEC consultation report²). Moreover, the national governments could force the European Patent Office to comply, both by invalidating its illegal patents and by a vote on the board of the European Patent Organisation. As long as the European Patent Organisation is kept separate from the European Community, an community directive on a single issue such as software interferes with a domain for which a solution at the national (intergovernmental) level already exists.)

BSA/CEC: The means of the Community action are also proportional to its objectives. The Directive is strictly confined to setting forth the basic rules regarding the patentability of computer-implemented inventions. To the largest extent possible, general patent law, as it relates both to procedure and to substance and as it has been interpreted by the national courts, will continue to apply and complement the Directive, provided that it is not contradictory to it.

BSA/CEC: Harmonisation and greater transparency should provide an incentive for European companies, and in particular for SMEs, to use such patents in order to fully exploit their computer-implemented inventions.

EPC/FFII:

The removal of limitations on patentability should provide an incentive for European companies, in particular for patent-oriented large corporations, to further step up their efforts at systematically patenting their software ideas. Evidently, and contrarily to what Bolkestein said to the press when he introduced the directive proposal, this may well lead to a further explosion of the number (and deterioration of the quality of patents granted).

²<http://swpat.ffii.org/papers/eukonsult00/softanalyse/index.en.html>

9 “The legal basis for harmonisation”

BSA: As the legal basis for harmonisation, the Commission proposes to rely on Article 95 of the CEC Treaty. This was done in the case of other directives aligning national laws on intellectual property. This choice of legal basis has been upheld by the Court of Justice on a number of occasions.

CEC: As the measure has as its object the achievement of the internal market by approximation of the provisions laid down by law, regulation or administrative action in Member States related to the patentability of computer-implemented inventions, the Commission proposes to rely on Article 95 of the CEC Treaty as legal basis for the harmonisation. This legal base has been relied upon in the case of other directives aligning national laws on intellectual property and, most importantly, in the recent Directive 98/44/CEC concerning the harmonisation of the patentability of biotechnological inventions. This choice of legal basis has been recognised under the circumstances which are present with regard to patentability by the Court of Justice on a number of occasions and especially with regard to the mentioned Directive 98/44/CEC in a recent ruling of the Court of Justice where the legal basis was examined thoroughly.

10 “Explanation of the Directive article by article”

10.1 Article 1

BSA/CEC: This article provides that a “computer-implemented invention” is understood to mean any invention implemented on a computer or similar apparatus which is realised by a computer program. It is a consequence of this definition that the “novelty” of any invention within the scope of the Directive does not necessarily need to reside in a technical feature. The employment of the expression “prima facie” to qualify “novel features” means that it is not necessary to establish actual novelty (for example through the carrying out of a search) in order to determine whether an alleged invention falls within the scope of this definition. As set out in recital 11 and Article 3, the presence of a “technical contribution” is to be assessed not in connection with novelty but under inventive step. Experience has shown that this approach is the more straightforward to apply in practice.

EPC/FFII:

Summary: no independent assessment of whether a patentable invention is present, declaration that computer programs as such are technical and patentable, codification of the EPO’s questionable examining formalisms, regulation of basic concepts at a level of unclear and unstable formalisms and politically motivated euphemisms.

10.2 Article 2

BSA:

CEC: This article defines certain terms used in the Directive. A “computer-implemented invention” is stated to mean any invention implemented on a computer or similar apparatus which is realised by a computer program. It is a consequence of this definition that the “novelty” of any invention within the scope of the Directive does not necessarily need to reside in a technical feature. The employment of the expression “prima facie” to qualify “novel features” means that it is not necessary to establish actual novelty (for example through the carrying out of a search) in order to determine whether an alleged invention falls within the scope of this definition. As set out in recital 11 and Article 4, the presence of a “technical contribution” is to be assessed not in connection with novelty but under inventive step. Experience has shown that this approach is the more straightforward to apply in practice.

“Technical contribution” is defined to mean a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art.

EPC/FFII:

This means that any programming idea which has not been literally documented anywhere and which would require the programmer to do a bit of ordinary thinking can be patented.

Read “experience has shown” to mean “theory cannot convincingly explain, but we can trust the EPO. Let’s give up our role as the independent legislative power and just follow the EPO. They already have administration and

jurisdiction in one hand, and since the mysteries of patent law are higher than what ordinary human reason can explain, let's just say "So be it, Amen", so as to make sure we have all three powers of constitutional democracy firmly in one experienced hand!"

10.3 Article 3

BSA: Article 2, in the context of Recital 6, reflects Article 27(1) of the TRIPS Agreement, according to which 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 susceptible of industrial application. A computer-implemented invention is defined as belonging to a field of technology.

It is clarified by Recital 13 that an abstract algorithm does not fall within a field of technology.

CEC: Article 3, in the context of Recital 6, reflects Article 27(1) of the TRIPS Agreement, according to which 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 susceptible of industrial application. A computer-implemented invention is defined as belonging to a field of technology. However, an algorithm which is defined without reference to a physical environment does not meet the definition of "computer-implemented invention" and does not fall within a field of technology.

EPC/FFII:

This means that an algorithm needs only to be formulated in the language of the Turing machine (the standard logical device called computer) in order to be patentable. In other words, any algorithm is patentable.

10.4 Article 4

BSA: Article 3

CEC: Article 4

BSA: Article 3 paragraph 1 provides that it is a requirement for the presence of inventive step that a computer-implemented invention must make a non-obvious technical contribution to the state of the art. This is to be regarded as a qualification of, and not a substitute for, the definition of inventive step as it appears in Article 56 of the EPC, which provides that an invention shall be regarded as having an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. This is effectively already a general requirement for all patentable inventions, although naturally, in the course of assessing the inventive step of inventions in fields where there is rarely any question of excluded matter (for example mechanical subject-matter), there is normally no need to consider whether a contribution to the state of the art is technical or not.

Thus, a computer-implemented invention in which the contribution to the prior art does not have a technical character will be considered to lack inventive step even if the (non-technical) contribution to the prior art is not obvious. When assessing inventive step, the questions as to what is to be included in the state of the art and the knowledge of the skilled person must be determined according to the criteria applied when assessing inventive step in general (see for example Article 56 EPC, second sentence).

Article 3 paragraph 2 provides that in determining the technical contribution, the invention must be assessed as a whole. This is consistent with the decisions of the EPO Technical Boards of Appeal in *Controlling Pension Benefits* and *Koch & Sterzel* according to which there must be no assessment of a "weighting" between technical and non-technical features in an attempt to determine which aspect makes the more important contribution to the invention's success.

It follows from the above that an invention, aspects of which lie in a field of subject-matter excluded under Article 52(2) (for example a method for doing business), may still be patentable if a non-obvious technical contribution is present. However, if there is no technical contribution, e.g. if the contribution to the state of the art lies wholly in non-technical aspects, as would be the case if the contribution to the state of the art comprised purely a method of doing business, there will be no patentable subject-matter. A further logical consequence of this approach is that although a valid claim may comprise both technical and non-technical features, it is not possible to monopolise the purely non-technical features in isolation from the technical features.

The term “technical contribution” has been used in the case law of the EPO Boards of Appeals for many years. Consistent with the jurisprudence of the EPO, a technical contribution may result from

- the problem underlying, and solved by, the claimed invention
- the means, that is the technical features, constituting the solution of the underlying problem
- the effects achieved in the solution of the underlying problem
- the need for technical considerations to arrive at the computer implemented invention as claimed.

The technical contribution may constitute an alternative solution for an already solved technical problem or for achieving a technical effect that is already known.

CEC: Article 4 paragraph 1 obliges Member States to protect computer-implemented inventions as any other invention, subject to the basic requirements of novelty, inventive step and industrial applicability as laid down in Article 52(1) of the European Patent Convention.

Paragraph 2 provides that it is a requirement for the presence of inventive step that a computer-implemented invention must make a technical contribution, that is, a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art (Article 2). This is to be regarded as a qualification of, and not a substitute for, the definition of inventive step as it appears in Article 56 of the EPC, which provides that an invention shall be regarded as having an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. This is effectively already a general requirement for all patentable inventions, although naturally, in the course of assessing the inventive step of inventions in fields where there is rarely any question of excluded matter (for example mechanical subject-matter), there is normally no need to consider whether a contribution to the state of the art is technical or not.

Thus, a computer-implemented invention in which the contribution to the prior art does not have a technical character will be considered to lack inventive step even if the (non-technical) contribution to the prior art is not obvious. When assessing inventive step, the questions as to what is to be included in the state of the art and the knowledge of the skilled person must be determined according to the criteria applied when assessing inventive step in general (see for example Article 56 EPC, second sentence).

Article 4 paragraph 3 provides that in determining the technical contribution, the invention must be assessed as a whole. This is consistent with the decisions of the EPO Technical Boards of Appeal in *Controlling Pension Benefits* and *Koch & Sterzel* according to which there must be no assessment of a “weighting” between technical and non-technical features in an attempt to determine which aspect makes the more important contribution to the invention’s success.

It follows from the above that an invention, aspects of which lie in a field of subject-matter excluded under Article 52(2) (for example a method for doing business), may still be patentable if a non-obvious technical contribution is present. However, if there is no technical contribution, e.g. if the contribution to the state of the art lies wholly in non-technical aspects, as would be the case if the contribution to the state of the art comprised purely a method of doing business, there will be no patentable subject-matter. A further logical consequence of this approach is that although a valid claim may comprise both technical and non-technical features, it is not possible to monopolise the purely non-technical features in isolation from the technical features.

The term “technical contribution” has been used in the case law of the EPO Boards of Appeals for many years. Consistent with the jurisprudence of the EPO, a technical contribution may result from

- the problem underlying, and solved by, the claimed invention;
- the means, that is the technical features, constituting the solution of the underlying problem;
- the effects achieved in the solution of the underlying problem;
- the need for technical considerations to arrive at the computer implemented invention as claimed.

EPC/FFII:

Article 4 paragraph 1 obliges Member States to consider computer programs as patentable inventions, subject to the basic requirements of novelty, inventive step and industrial applicability as laid down in Article 52(1) of the European Patent Convention.

Paragraph 2 provides that it is a requirement for the presence of inventive step that a computer program must make a technical contribution, that is, a contribution to the state of the art in a “technical field” (such as computing) which is not obvious to a person skilled in the art (Article 2). This is to be regarded as a qualification of, and not a substitute for, the definition of “inventive step” as it appears in Article 56 of the EPC, which provides that an invention shall be regarded as having an inventive step if, having regard to the state of the art, it is not obvious to a person skilled in the art. This is already an implicit general requirement for all patentable inventions. Indeed, if this requirement was not redundant, it would violate Art 27 TRIPS. But it does have a function in this directive it subordinates the question of technical contribution (i.e. invention) to the question of non-obviousness. This means that the invention no longer needs to be new and destined for application in the serial production of material goods.

“Thus, a software innovation in which the contribution to the prior art does not have a technical character will be considered to be obvious even if the contribution to the prior art is not obvious. When assessing non-obviousness (inventive step”, the questions as to what is to be included in the state of the art and the knowledge of the skilled person must be determined according to the criteria applied when assessing non-obviousness in general (see for example Article 56 EPC, second sentence).

Article 4 paragraph 3 provides that in determining the technical contribution (i.e. invention), the claimed object must be assessed as a whole. (s:This means that even a non-technical contribution (non-invention) may be considered to be a technical contribution (invention)), if it belongs to a whole object which contains known technical elements (computer, mouse etc). This is consistent with the decisions of the EPO Technical Boards of Appeal in *Controlling Pension Benefits and Koch & Sterzel* according to which there must be no assessment of a “weighting” between technical and non-technical features in an attempt to determine which aspect makes the more important contribution to the invention’s success.

It follows from the above that an invention, aspects of which lie in a field of subject-matter excluded under Article 52(2) (for example a method for doing business), may still be patentable if a non-obvious technical contribution is present. However, if there is no technical contribution, e.g. if the contribution to the state of the art lies wholly in non-technical aspects, as would be the case if the contribution to the state of the art comprised purely a method of doing business, there will be no patentable subject-matter. A further logical consequence of this approach is that although a valid claim may comprise both technical and non-technical features, it is possible to monopolise the purely non-technical features by claiming them in the language of computing, which is the standard form of business logic today.

The term “technical contribution” has been used in the case law of the EPO Boards of Appeals for many years. Consistent with the jurisprudence of the EPO, a technical contribution may result from

- the problem underlying, and solved by, the claimed invention;
- the means, that is the technical features, constituting the solution of the underlying problem;
- the effects achieved in the solution of the underlying problem;
- the need for technical considerations to arrive at the computer implemented invention as claimed.

10.5 Article 5

BSA: Article 4

CEC: Article 5

BSA: In accordance with Article 27(1) of the TRIPS Agreement, patents have to be available for any inventions, whether they be products or processes. Article 4 provides that a computer-implemented invention may be claimed either as a programmed computer or similar apparatus (i.e. a product) or as a process carried out by such an apparatus.

It should be noted that the proposal has not followed the practice of the EPO in permitting claims to computer program products either on their own or on a carrier, as this could be seen as allowing patents for computer programs “as such”.

CEC: In accordance with Article 27(1) of the TRIPS Agreement, patents have to be available for any inventions, whether they be products or processes. Article 4 provides that a computer-implemented invention may be claimed either as a programmed computer or similar apparatus (i.e. a product) or as a process carried out by such an apparatus.

It should be noted that the proposal has not followed the practice of the EPO in permitting claims to computer program products either on their own or on a carrier, as this could be seen as allowing patents for computer programs “as such”.

EPC/FFII:

Here BSA/CEC apparently tries to codify a convenient misinterpretation of the “as such” clause Art 52(3) EPC. It is of course clear that a claim of the form

computer program, characterised by that it executes the method according to claim 1

violates Art 52. From this it does however not follow that a method or apparatus claim to the same object would not violate art 52 EPC. Indeed the EPO Guidelines of 1978¹ were very clear on this point:

If the contribution to the known art resides solely in a computer program then the subject matter is not patentable in whatever manner it may be presented in the claims. For example, a claim to a computer characterised by having the particular program stored in its memory or to a process for operating a computer under control of the program would be as objectionable as a claim to the program *per se* or the program when recorded on magnetic tape.

Art 52 says that, while a technical invention may make use of a program, a programming solution as such is not an invention. When there is no invention, there is nothing to claim, regardless of whether the claim is directed to the non-invention as such or to an apparatus whose only novel feature consists in the non-invention.

¹<http://swpat.ffii.org/papers/epo-gl78/index.en.html>

10.6 Article 6

BSA:

CEC: Article 6

BSA:

CEC: Article 6 expressly preserves the application of the provisions on decompilation and interoperability in Directive 91/250/EEC.

EPC/FFII:

This is apparently a later insertion requested by GD Information Society, but it does nothing to ensure that interoperable software may be published or used.

10.7 Article 7

BSA: Article 5

CEC: Article 7

BSA: Article 5 requires the Commission to monitor the impact of computer-implemented inventions on innovation and competition, both within Europe and internationally, and on European businesses, including electronic commerce. A report will be prepared and sent to the Parliament and the Council on the operation of the Directive within three years from the date by which Member States have to transpose it into national laws. This framework provides an important safeguard which should ensure that any negative effects of the Directive are detected and reported.

CEC: Article 7 requires the Commission to monitor the impact of computer-implemented inventions on innovation and competition, both within Europe and internationally, and on European businesses, including electronic commerce.

EPC/FFII:

This article authorises the CEC patent establishment to use more public money for their patent propaganda activities, but apparently the cost is zero, as stated later in the financial statement.

10.8 Article 8

BSA:

CEC: Article 8

BSA/CEC: This article requires the Commission to report to the Parliament and the Council on the operation of the Directive within three years from the date by which Member States have to transpose it into national laws. This framework provides an important safeguard which should ensure that any negative effects of the Directive are detected and reported.

EPC/FFII:

The article according to the BSA/CEC proposal required the Commission to report to the Parliament and the Council on the operation of the Directive within three years from the date by which Member States have to transpose it into national laws. This framework was designed to ensure that the well-known negative effects of the proposed patentability ruling are not reported by any independent monitoring organ and that the patent lawyers in the European Commission have extra tax money for propaganda purposes at their disposal.

10.9 Articles 9, 10 and 11

BSA: Articles 6, 7 and 8

CEC: Articles 9, 10 and 11

BSA/CEC: These are standard articles governing the coming into force of the Directive and its transposition by the Member States.

In order to implement this Directive, Member States will need to introduce new provisions in their patent laws which, in particular, make it clear that the patentability criteria for computer-implemented inventions are as set out in Articles 1 to 4 of the Directive. The Directive does not require action in respect of any of the other exceptions from patentability in the provisions of Member States' patent laws corresponding to Art. 52(2) of the EPC.

Beyond what is provided for in this Directive, the procedural and substantive legal rules of national patent laws and binding international agreements remain the essential basis for the legal protection of computer-implemented inventions.