



## Study Question

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**Patentability of computer implemented inventions**

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### I. Current law and practice

**1** Does your current law contain any statutory provisions which specifically apply only to CII?

No

Please Explain

French law does not contain any statutory provisions specifically applying only to CII

**2** Please briefly describe the general patentability requirements in the written statute based law of your jurisdiction which are specifically relevant for the examination of the patentability of CII.

In French law, there are no statutory provisions specifically relevant for the examination of the patentability of computer-implemented inventions.

**3** Under the case law or judicial or administrative practice in your jurisdiction, are there rules which specifically apply only to CII? If yes, please explain.

Jurisdiction: France  
Yes

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Please Explain

In France, administrative practice is defined by the Guidelines of the French National Institute of Industrial Property (INPI):

- Chapter VII Patentability, 1- Inventions, 6 Computer programs.

[https://www.inpi.fr/sites/default/files/directives\\_brevets\\_mars2017.pdf](https://www.inpi.fr/sites/default/files/directives_brevets_mars2017.pdf)

It must be noted that in France examiners do not conduct an in-depth examination of patent applications, but only a partial examination of the non-conformity of applications according to a list of grounds for refusal (Art. L 612-12 of the French Intellectual Property Code (IPC)) which, when the examiner believes that there is clear non-conformity, may lead to a full or partial refusal by the INPI. This examination does not consider novelty and inventive step conditions.

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Jurisdiction: European Patent Organization

Yes

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Please Explain

EPO administrative practice is defined by Guidelines for Examination:

- Part G-II, 3.6 of the Guidelines for Examination specifies how technical character can be assessed in respect of a CII.
- Part F-IV, 3.9 of the Guidelines for Examination specifies how to draft claims directed to CII.

**4** Please briefly describe the general patentability requirements under the case law or judicial or administrative practice of your jurisdiction which are specifically relevant for the examination of the patentability of CII.

The “condition of invention” which is required by the EPO and INPI Guidelines for Examination and by the case law of the EPO and the French courts is of particular relevance to the examination of the patentability of CII.

This requirement emerges from a reading *a contrario* of the non-exhaustive list of exclusions from patentability imposed by the law.

At both French and European level, an “invention” is understood as a technical solution to a technical problem.

In practice, the “condition of invention” requires a technical character of the claimed subject matter as a whole.

In addition, in the [INPI Guidelines](#), for claims entirely directed towards “computer programs”, an “additional technical effect” is required. See INPI guidelines Part VII- 1.6.

**5.a** Exclusion of non-patentable subject matter per se.  
Do the statutory provisions, case law or judicial or administrative practice (hereinafter collectively referred to as Law / Practice) in your jurisdiction exclude any particular subject matter relating to CII from patentability per se?  
*In this context, “per se” means that the non-patentable subject matter is identified without any implicit or explicit examination of the contribution to the state of the art the claimed CII makes.*

*If yes, please answer questions 5.b-5.e, if no, please go to question 6.a*

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Yes

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Please Explain

Article L.611-10 (2) French IP Code, which reiterates Article 52 EPC, establishes the following:

*Notably, the following shall not be regarded as inventions within the meaning of paragraph 1:*

a) *Mathematical methods*

[...]

- c) schemes, rules and methods for performing mental acts, in playing games or in doing business, as well as computer programs;
- d) presentations of information.

However, Article L.611-10 (3) French IP Code, which reiterates Article 52(3) EPC, establishes the following:

*Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a patent application or patent relates to such subject-matter or activities as such.*

**5.b Please describe the subject matter excluded from patentability per se and explain in detail how it is identified in practice**

Jurisdiction: France

French law thus provides, as does European patent law, for computer programs “as such” to be excluded from patentability, in other words, an exclusion from patentability of computer programs *per se*. It also provides for an exclusion per se of mathematical methods, methods for performing mental acts, methods for doing business and presentations of information.

The Offices (EPO, INPI) and the judges use the criterion of lack of technical character in order to identify subject matter which is excluded per se, and in particular subject matter relating to computer programs per se.

However, the methods for assessing technical character have varied over the years. It is possible essentially to distinguish between the following four approaches: the essential element approach (I), the technical contribution approach (II), the additional technical effect approach (III), the inventive contribution approach (IV).

I.  
**The essential element approach**

The Schlumberger decision given by Paris Court of Appeal in 1981 illustrates the essential element approach: subject matter can be considered to be technical if its essential element belongs to the field of technology. This is known by the German term “*Kerntheorie*” (core theory).

I.  
**The technical contribution approach**

A.  
**The technical contribution**

In a decision, given on 7 June 2013, Paris Regional Court drew upon the concept of technical contribution during the assessment of patentability. The following question was raised on the subject of the validity of the title: did the invention claimed concern a **presentation of information**, which was excluded from patentability under L. 611-10(2) IPC? The judges state, firstly, that “*the patentability of an invention must be assessed as a whole with regard to the invention claimed*”. They specify, secondly, that “*at this stage of the examination of validity, there is no need to examine the novelty or inventive step of the invention [...] on the other hand, the assessment of the patentability of the invention involves a determination of the technical contribution claimed by the patent*”. On this premise, the claimed invention is considered to be a presentation of information, the patent containing no indication revealing the existence of a technical contribution. Lastly, the judges issued a strongly worded reminder, in an *obiter dictum*, that a computer program cannot constitute a patentable technical feature..

A.  
**Technical considerations**

The criterion of technical considerations has rarely been used by the national courts. Two French decisions given by Paris Regional Court refer to said criterion. In the first decision, given on 20 July 2006, a patent was deemed valid, in particular as a result of the technical considerations that the invention involved. However, a second decision by the same court, on 7 June 2013, rejected the taking into account of technical considerations.

I.

## Additional technical effect approach

The criterion of the additional technical effect has been used on a number of occasions by the national courts. In France, the concept was used by Paris Court of Appeal in a decision given on 20 September 2005. An application was refused by the Director General of the INPI on the grounds that it related to **an intellectual method that originated from the field of economic activity**. The Court upheld this refusal, as the method consisted of the implementation of a non-technical method by known technical means. The invention did not produce any additional technical effect.

Furthermore, Paris Regional Court referred to the concept of an additional technical effect in the decision 'FREE' given on 18 June 2015. The title included: a program-product claim, a claim relating to the source code for said program, a third claim relating to the support therefor. The Court ruled that the three claims were invalid pursuant to Article 52(2)(c) EPC. It was considered that a **program-product constituted a computer program as such**, which was excluded from patentability, and that the realization of the other two claims would not bring about any additional technical effect, which also constituted an obstacle to the patentability of said claims.

I.

## Literal approach or inventive contribution approach (“any hardware approach”)

In France, only two decisions refer to a test relating to the literal interpretation method, namely two judgments of Paris Regional Court. In the case *Infomil v Atos*, the Court adopted a position in accordance with the case-law T 931/95 in a decision given on 20 November 2007. It was considered that the intellectual method performed by the device did not prevent the invention from being patentable in relation to said device. It was the lack of inventive step that led to the cancellation of the patent. The claiming of known technical means guarantees the technical character of an invention relating to an intellectual method. On the other hand, the inventive contribution must be technical. In this case, the patent was declared invalid because this contribution that lays in the issuing of commercial benefits was not an inventive contribution of technical character.

Paris Regional Court adopted a position similar to the case-law T 258/03 in a decision given on 19 March 2010. The defendant had filed a counter-claim for a declaration of invalidity in respect of the patent, maintaining that it related to **an intellectual method as such**. The court accepted this argument: “*As has been set forth, insofar as the description of the method claimed is restricted to stating the subject matter thereof without specifying the technical means to be implemented, only detailing the results and possibilities provided for the user without mentioning the technical features of the search engine itself, it should be held that this method does not constitute a patentable invention*”. On the contrary, an invention concerning an intellectual method implemented by technical means appears to be technical. This decision from 2010 was upheld on appeal on 16 December 2016. The Court of Appeal also does not refer to a criterion like technical contribution or additional technical effect in order to apparently settle for determining the contribution of the invention and whether or not it resides in the intellectual method. The decision given by the Court of Appeal in its decision of 26 February 2016 also appears to approximate the “*any hardware approach*”.

In practice, to summarise, the subject matter excluded per se is identified:

- In France, by the wording of the claim considered as a whole,
- At the EPO, by the wording of each claim feature, and potential link of the claim to a process claim.
- A claim belonging to a patentable claim category is not excluded from patentability because of its implementation via a computer program;
- A claim belonging to an excluded category (business, financial, mathematical method):
  - In France is not prevented from being excluded simply because its implementation is done via a computer program,
  - But at the EPO, is no more excluded when its implementation is done via a computer program. But the not technical claimed features are not considered when analysing the inventive step.

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Jurisdiction: European Patent Organization

French law thus provides, as does European patent law, for computer programs “*as such*” to be excluded from patentability, in other words, an exclusion from patentability of computer programs *per se*. It also provides for an exclusion per se of mathematical methods, methods for performing mental acts, methods for doing business and presentations of information.

The Offices (EPO, INPI) and the judges use the criterion of lack of technical character in order to identify subject matter which is excluded per se, and in particular subject matter relating to computer programs per se.

However, the methods for assessing technical character have varied over the years. It is possible essentially to distinguish between the following four approaches: the essential element approach (I), the technical contribution approach (II), the additional technical effect approach (III), the inventive contribution approach (IV).

I.

## The essential element approach

Not relevant in the European Patent Organization

I.

## The technical contribution approach

A.

### The technical contribution

The technical contribution approach was adopted by the EPO during the 1980s for the first time in decision T 208/84 (VICOM). The Examination Division had refused an application on the grounds that the claimed invention was a computer program as such. The Board set aside this decision by ruling that *“an invention which would be patentable in accordance with conventional patentability criteria should not be excluded from protection by the mere fact that for its implementation modern technical means in the form of a computer program are used. Decisive is what technical contribution the invention as defined in the claim when considered as a whole makes to the known art.”* The Board thus implicitly excluded the theory of the essential element.

A.

### Technical considerations

The lack of definition of the concept of technical contribution made the determination of that concept difficult. This is why the case-law developed a second method intended to facilitate the assessment thereof by focusing on the design stage of the invention. This approach was introduced by Technical Board of Appeal 3.5.1 in its decision T 769/92 (SOHEI) given in 1994. The Examination Division refused an application on the grounds that the features of the claimed application consisted of **a computer program and a presentation of information**, which are not patentable as such. The appeal filed against this refusal was based on the involvement of technical considerations at the time of design. It was maintained that the design of a solution implemented by a computer involves technical considerations. The Board of Appeal endorsed this argument. Thus, it was judged that technical considerations, which in this case were required at the design stage, involved the existence of a technical problem, which resulted in the existence of technical features.

In decision T 914/02, given in 2005, Board 3.4.1 ruled that technical considerations could be taken into account, but only providing that an additional technical effect is involved. The Examination Division refused an application, in particular on the ground that it related to a **non-patentable intellectual method**. The Board confirmed this refusal. It was ruled that the argument of technical considerations put forward by the appellant was not sufficient to prove the technical nature of an item. The technical considerations called for by the production of an item may serve to demonstrate the technical nature thereof, but they can only be taken into account if they concern an additional technical effect. This reasoning was approved by the Enlarged Board of Appeal in Case G 03/08.

I.

## Additional technical effect approach

Technical Board of Appeal 3.5.1 first allowed a product claim relating to a computer program in decision T 1173/97 given in 1998 (IBM I). The Examination Division had refused independent claims which concerned a computer program product. These claims related to **a computer program as such**. The examiners concluded that said claims were inadmissible in application of paragraphs (2) (c) and (3) of Article 52 EPC. This refusal was set aside. TBA 3.5.1 recalls that it is the lack of technical character that justifies the exclusions listed in the article of the EPC. The technical effect cannot consist of the electrical current produced by inserting the program into the machine. In the case in question, the technical character depends on the production of an additional technical effect: *“It is thus necessary to look elsewhere for technical character in the above sense: It could be found in the further effects deriving from the execution (by the hardware) of the instructions given by the computer program. Where said further effects have a technical character or where they cause the software to solve a technical problem, an invention which brings about such an effect may be considered an invention, which can, in principle, be the subject-matter of a patent”*.

I.

## Literal approach or inventive contribution approach (“any hardware approach”)

Decision T 931/95 (PBS) lays the foundation of this approach. Two claims were called into question. The first claim related to a method of controlling a computerized system, the second related to the apparatus for implementing this method. The Examination Division refused the application by considering that it concerned a **method for doing business** which was excluded from patentability under Article 52(1)(c) EPC. Board of Appeal 3.5.1 set aside this refusal. According to this Board, the patentability of an invention depends on the type of claim of which it forms the subject matter. **The claim relating to an intellectual method for doing business is strictly to be refused**. Such a method exists when the invention claimed serves an economic purpose and does not produce any technical effect. The simple performance of the method by a machine is not sufficient to render that method technical. Conversely, the claim relating to an apparatus is inherently technical. In the case in question, the invention relating to an apparatus used to control the computerized system was technical, but the controlling method originated from the field of economics: its contribution was not technical.

It emerges from decision T 931/95 that the type of claim on its own appears to be capable of determining the patentability of an invention. The use of conventional technical means, such as the computer implementation of a method, is sufficient to justify the technical character of an item. However, in a notice of 26 March 2002, the EPO reminded applicants that “*claims of European patent applications which relate to such methods or merely specify commonplace features relating to the technological implementation of such methods will not be searched if the [...] examiner cannot establish any technical problem which might potentially have required an inventive step for it to be overcome*”.

Decision T 258/03 (HITACHI) decisively expanded upon the approach outlined in Case T 931/95. The invention claimed in this case related to a method that the Examination Division refused as it deemed that said application related to a **method for doing business**. TBA 3.5.1 set aside this refusal. It was considered that the introduction of known technical means into the claim was sufficient to ensure the technical character of the invention.

Decision T 258/03 lies at the origin of the method of literal interpretation. This involves interpreting paragraphs (2) and (3) of Article 52 EPC in a literal manner. An element excluded by the article 52 (2) is no longer an element “as such” within the meaning of Article 52(3) EPC as soon as it is related to technical means, whether known or not. The presence of a single technical step in a method permits that method to be qualified as technical as a whole. This approach is a variation of the incorporation theory. According to that theory, the incorporation of a non technical element in a technical invention confers technical character on that element. This new concept of patentability is thus independent of the category of claim. An invention relating to an intellectual method is technical as soon as it is performed by technical means.

The EPO now uses an approach called “mixed inventions” consisting in not considering the claimed features excluded based on the “invention condition” for the analyse of inventive step.

**5.c** If there is any subject matter identified in a patent claim relating to CII that is excluded from patentability per se, is it possible to overcome a rejection of the patent claim by adding other subject matter to the claim?

*If yes, please answer questions 5.d-5.e, if no, please go to question 6.a*

Yes

Please Explain

By modifying the object of the invention or by adding not excluded claimed features.

**5.d** Does the “other subject matter” need to have a certain quality, e.g. does it need to be inventive?

Yes

Please Explain

The added subject matter must be technical in nature and, in combination with the initial subject matter deemed to be non-patentable per se, must permit the claim, analysed as a whole, to be deemed patentable.

**5.e** Can you describe the areas of human endeavour the “other subject matter” needs to relate to?

No

Please Explain

This other subject matter has not to relate to specific areas of human endeavour. It has only to be of a technical nature.

**6.a Requirement of a contribution in a field of technology.**

**Does the examination of the patentability of CII in your jurisdiction implicitly or explicitly involve an examination of the contribution the claimed CII makes to the state of the art (such examination may be part of a general “patentability” test or part of the novelty and inventive step/non-obviousness test)?**

*If yes, please answer questions 6.b-6.d, if no, please go to question 7*

Jurisdiction: France

No

Please Explain

During the French partial examination done by INPI examiners: the possible exclusion of the invention is determined exclusively by the text of the application (claims and description) as presented, without any analyse of the state of the art, and recognition of “patentability” is a prerequisite to the sending of a request for search report by INPI to EPO.

But the French jurisdictions may refer to the state of the art in the grounds of certain court decisions.

Jurisdiction: European Patent Organization

Yes

Please Explain

The contribution that the CII makes to the state of the art is examined but only at the stage of the examination of inventive step. The possible exclusion of the invention prior to the examination of novelty and inventive step is overcome as soon as the invention (the claims) includes technical features. The EPO shifts the question on to the examination of inventive step.

**6.b Does this test implicitly or explicitly involve excluding contributions from areas of human endeavour which are not deemed to be sources of patentable inventions? In other words, does patentability of CII implicitly or explicitly require a contribution from areas of human endeavour which are deemed to be sources of patentable inventions (e.g. engineering, natural sciences)? If yes, please explain.**

No

Please Explain

The patentability of a CII does not require that the contribution that the CII brings belong only to predetermined areas to be considered as the only sources of patentable inventions, even if, in Europe as well as in France, patentable inventions are defined “in all technological domains”.

However, regardless of the area to which it relates, a CII resulting from the performance of a purely mental/abstract act is not patentable as such.

**6.c Does this test also implicitly or explicitly require that the relevant contribution the CII makes to the state of the art qualifies as inventive/non-obvious? This additional test may be integrated into the general inventive step / non-obviousness examination, or may be a stand-alone test. If yes, please explain.**

Jurisdiction: France

No

Please Explain

Before the French patent Office, the test does not require that the technical contribution be considered by reference to the state of the art, nor that this contribution be qualified as inventive/non obvious.

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Jurisdiction: European Patent Organization

Yes

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Please Explain

Yes explicitly at the EPO: this test, as indicated in the answer to question 6a) is shifted to the analyse of inventive step as soon as technical features exist, and then requires the determination, first of all, of the inventive contribution of the invention to the state of the art, before examining whether this contribution is technical in nature.

The claim features that are not technical are the ones that are not involved in the solution of a technical problem. In practice, they are often integrated in the expression of the technical problem, or as a goal or a constraint that has to be fulfilled. See EPO Guidelines, C-VII-5.4.

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**6.d** Is there an implicit or explicit consensus in your jurisdiction as to the areas of human endeavour which are accepted as sources of patentable CII? If yes, are these areas of human endeavour defined, and if so how?

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Jurisdiction: France

No

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Please Explain

The patentability of a CII does not depend from a list of fields accepted as sources of patentable CII, but depends on the recognition of a technical contribution.

In France, all areas of human endeavour are accepted as sources of patentable CII as long as the concerned CII brings a technical contribution, and this is analysed case by case (and implicitly confirms that the invention belongs to a technological field).

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Jurisdiction: European Patent Organization

No

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Please Explain

EPO grants patents for CII in many technological fields in which computer programs bring technical contribution, for example in the following fields: medical devices, automotive sector, aerospace, industrial control, communication/media technology (such as automated natural language translation, voice recognition and video compression), and also computer/processor field itself (<https://www.epo.org/news-issues/issues/software.html>)

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**7** Does the Law / Practice in your jurisdiction contain any specific claim drafting or other formal requirements which are applicable to CII, i.e. which deviate from the Law / Practice applicable to inventions which are not CII? If yes, please explain.

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No

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Please Explain

However, for computer programs, the guidelines specify that the claims must define all the features ensuring the patentability of the process that the computer program has to implement when executed.

And in France as well as in Europe, it is specified in the guidelines that a claim for a “computer program” or a “computer program product” incorporating by reference the steps of a process recognised as patentable makes it possible to circumvent the exclusion of computer programs as such.



**8 Does the Law / Practice in your jurisdiction contain any specific requirements as to sufficiency of disclosure and/or enablement which are applicable to CII, i.e. which deviate from the Law / Practice applicable to inventions which are not CII? If yes, please explain.**

No

Please Explain

The same requirements than the ones defined for inventions that are not CII as to sufficiency of disclosure and/or enablement are applicable to CII. For example, if the invention relates to a new encryption method, all of the steps must be described but if the invention relates to the use of a known encryption method, the name of the algorithm used for the encryption may be sufficient.

But, if the requirements are the same, their compliance is critical for CII.

Actually, the disclosure is involved when assessing whether the means necessary to implement the CII are described in a sufficiently concrete and specific manner or whether, on the contrary, the description only defines these means in an abstract and generic manner. This approach can be seen in particular in the judgment of the Court of Paris of 16 December 2016 cancelling a French patent on the basis of Article L.615-10 IPC, and is also found in decisions of the Boards of Appeal of the EPO applying an assessment with regard to inventive step, such as decision T 0693/11 (Brokering Services) of 7 February 2017.

**9 Do courts and administrative bodies in your jurisdiction apply the Law / Practice for patentability of CII in your jurisdiction in a harmonized way? If not, please explain.**

No

Please Explain

In France, a number of decisions by the French courts contradict the guidelines issued by INPI providing that claims for “computer programs” or “computer program product” be accepted as patentable when its contribution is technical (additional technical effect brought by the program, an/or when the claim incorporates by reference a patentable process).

In addition decisions by French courts and those by the EPO may diverge. For example, the EPO accepted the admissibility of program-product type claim, whereas the same claim has been rejected in 2015 by Paris Regional Court for the French part of the same European patent.

## II. Policy considerations and proposals for improvements of your current Law/Practice

**10 Is the current Law/Practice in your jurisdiction regarding the patentability of CII considered by users of the patent system and practitioners to be understandable and workable? If not, please explain.**

Jurisdiction: France

No

Please Explain

In France, at the stage of disputes, the French judge has not explicitly adopted a position in favour of any particular approach for assessing the patentability of CII.

Moreover, refusals by the INPI during the partial examination of the conformity of applications, before any in-depth analysis of the invention, emphasizes the problems, in particular for inventions claimed in the form of computer programs. In particular the assessment of the technical character of the claimed subject matter is not carried out according to an understandable approach or in a consistent manner by the INPI and by the Paris Regional Court.

Jurisdiction: European Patent Organization

No

Please Explain

At the examination stage at the EPO, the positive law is relatively understandable and workable for practitioners because a single method, though imperfect, is now used ("any hardware approach").

However, the decisions of the EPO are still not sufficiently predictable.

**11** Does the current Law/Practice in your jurisdiction regarding patentability of CII provide appropriate outcomes, in particular from an economic perspective? If not, please explain.

No

Please Explain

The outcomes obtained are still insufficient from the perspective of legal certainty, which is vital from an economic standpoint.

In general, when the invention has a strong component of processing/calculation by computer program, applied to insufficiently "concrete" data, and has no or few specific means for the implementation thereof or for the application of the results of the processing/calculation, the analysis is uncertain and there is insufficient legal certainty.

The legal uncertainty is accentuated further by the variability of the assessment methods, as patents may be granted at the EPO then contested during a dispute in France on the basis of different assessment methods.

However, this legal uncertainty is detrimental to exploitation and to all economic activity in general. It causes problems both for the filing and for the freedom-to-operate study. At the initial planning stage, sometimes no filing is made because the applicant believes that it would not be capable of proving infringement (if a server hosting the computer is abroad, for example). It is also problematic at the dispute stage since infringement is sometimes difficult to qualify.

The presumption of validity of the patents is weaker in this area than in others. Faced with variable estimations of the prospects of grant and of successful outcome in litigation, businesses are hesitant to file applications. The available alternatives are technical means for the protection of software code, copyright, or secrecy.

**12** In your jurisdiction, is copyright protection of CII regarded as sufficient from an economic standpoint? Please state why in either case.

No

Please Explain

The question of knowing whether copyright protection is sufficient from an economic standpoint depends on the economic aims of the holder of the protection. The aims differ according to the categories of stakeholder; it is therefore difficult to give a general response to this question.

In Europe, and in France, copyright only protects part of the computer-implemented invention: the software. In other words, the copyright only relates to the *software* aspect of this invention.

The "software" protected by copyright includes the source code, object code and the preparatory design material, provided that it is "*of such a nature to enable the creation of a computer program at a later stage*".

In order for software to be protected by copyright, it must be "original".

The copyright protecting a computer program makes it possible to grant licences and to oppose illegal copies ("pirating") of the software.

In fact, the copyrighting of software proves to be useful and inexpensive and does not involve complex formalities; it is therefore regarded as practical, in particular for the distribution of software, by software publishers and other businesses specializing in software development. However, it is often insufficient for CII since it does not provide for protection of the functions of a software.

There is no intermediate protection, and thus exploitation, in between copyright and patent. If the functions of the software cannot be protected by a patent, only copyright is applicable and its effects are limited.

**13** Alternatively, is there an explicit or implicit consensus that patent protection of CII is required to ensure sufficient reward on investments made into the development of CII? If yes, please explain.

Yes

Please Explain

As for the answer to question 12, the response depends of the nature of the CII and the economic aims of the holder of the protection. The aims differ according to the categories of stakeholders; it is therefore difficult to give a general response to this question.

- The large majority of filings relating to CII relate to inventions in the field of industry (80% according to a recent study « *The economic impacts of computer implemented inventions at the European Patent Office* »- Fraunhofer - Juin 2015 ) and for these categories of CII the answer is clearly affirmative.

- In the case of the IT industry and the internet, the studies available do not provide a clear response, and the influence of the patentability of CII on the incentive to invest in these developments is not necessarily perceptible (See report 2016 of EU commission « *The trends and current practices in the area of patentability of computer implemented inventions within the EU and the US* » Authors Alain Strowel et Sinan Utku, pages 40 et 41).

However, there is an implicit consensus in relation to the fact that the protection of computer-implemented inventions by means of patents is useful for ensuring a return on investment in the development.

A patent makes it possible to “broadly” protect a novel and inventive solution by means of the functions and the means for implementing such an invention, independently of the source code and programming language. However, the economic value of computer-implemented inventions lies essentially in these functions.

The number of patent filings and disputes each year, in combination with the fact that CII are developed in virtually all sectors of human endeavour, prove what this potential economic value represents for the parties involved.

It is moreover noted that patents are sometimes indispensable tool in raising funds, especially for innovative start-ups in the field of new technologies.

14

**In your jurisdiction, is there an implicit or explicit consensus that availability of patent protection should be limited to contributions from certain areas of human endeavour, excluding contributions from all other areas of human endeavour, no matter how advanced these contributions?**

No

Please Explain

There is on the contrary a consensus to state that patent protection of CII should not be limited to the contributions from certain areas of human endeavour only.

But irrespective of the area, there is a consensus whereby patent protection of CII cannot relate to contributions of an “abstract” or “mental” nature, even if they are implemented by “concrete” means. *A contrario*, the patent protection of CII must be limited to contributions of a technical nature.

### III. Proposals for harmonisation

15

**Do you consider that harmonisation regarding patentability of CII is desirable?**  
***If yes, please respond to the following questions without regard to your Group's current Law/Practice.***  
***Even if no, please address the following questions to the extent your Group considers your Group's current Law/Practice could be improved.***

Yes

Please Explain

In particular, as a result of the fact that it is impossible to amend the description on the one hand and as a result of changes in Offices' practice on the other, it may be complicated for applicants to comply with all of the legal/administrative constraints of the large blocs (North America/Europe/Asia) at the time of the first filing, whilst the examination in the national/regional phase takes place several years after the first filing.

**6.a** **Exclusion of non-patentable subject matter per se.**  
**Should there be any exclusion from patentability per se of subject matter relating to CII?**  
***In this context, "per se" means that the non-patentable subject matter has to be identified without any implicit or explicit examination of the contribution to the state of the art the claimed CII makes.***

***If yes, please answer questions 16.b-16.e, if no, please go to question 17.a***

Yes

Please Explain

The French Group has a position which depends on what would be the legal context of such exclusions.

The answer is "No", if and only if:

- A condition of patentability, i.e. of a technical character, is positively defined by the legal texts, and
- A method for appreciating such condition is established on this basis by Offices through their guidelines, so that the interpretation of such condition guarantees a sufficient legal certainty.

Then, legal texts should no longer require an exhaustive or non-exhaustive list of exclusions from patentability of content directed to CII per se.

But the answer can be "Yes": In the absence of a definition of such a condition and with regard to the present discrepancies on the methods of assessment, a list of "per se" exclusions to patentability remains essential (but not sufficient) to exemplify what should be excluded.

In addition, discussions have led to the emergence of two opposing positions with regard to the exclusion of computer programs as such.

### **1st position:**

One div of the working group considers that there should be no exclusion from patentability of computer programs as such.

A number of factors justify this position.

The exclusion of computer programs as such may hamper the protection of inventions which are implemented by computer, in particular because the judges and the EPO are likely to take different stances. This exclusion may therefore be a source of legal uncertainty, in particular in the field of IT.

From a theoretical perspective, the exclusion is not justified. Indeed, in order to justify the exclusion of computer programs, it has been argued that they were not industrial, since programs as such are abstract and are being confused with simple mathematical methods. However, in reality programs are neither abstract in nature nor without application: in principle they have an application and may therefore be technical. If they are not technical, they will not be patentable in any case.

From a practical point of view:

- The INPI as well as the EPO both grant patents with claims drafted as "computer-program product", implementing patentable methods;
- the exclusion of computer programs as such is no longer raised by the INPI or the EPO. Inventions these days are rejected in view of the other exclusions of Art L 611-10 or Art. 52 (methods for performing mental acts, presentation of information, business methods)), or before the EPO for lack of inventive step;
- the exclusion of computer programs as such prevents the establishment of an efficient classification of computer-implemented inventions, which could be linked to the algorithms that they include.

From an economic perspective, the methods for distribution of a CII are increasingly taking place by means of the sale of software exclusively, that is to say independently of any hardware support (for example CD-ROM) or any hardware incorporating said software. Depriving applicants of a protection on computer programs prevents them from invoking direct counterfeiting and forces them to fall back on infringement by means of provision of..

In addition, these days the EPO tends not to consider the exclusion of computer programs as such in examinations and appeals and to shift this issue on to the analysis of inventive step. This leads to further legal uncertainty and shifts the problem on without solving it.

## **2nd position:**

Another div of the working group believes, conversely, that the exclusion of computer programs as such should be maintained.

This div of the working group believes that a CII characterized by a series of functions described in a functional algorithm in combination with an application should not be excluded. However, a “computer program” as such constitutes a series of instructions which should remain excluded from patentability for two reasons: the abstract nature of the computer program as such, and its protection under software copyright.

The arguments in favour of this position are as follows:

- Programs as such are already protected by copyright: the addition of patent protection for a computer program as such would create an accumulation of rights in relation to exactly the same subject matter, which would pose a problem in principle and could cause a conflict between the two protection schemes, thus leading to problems and confusion;
- The interest in removing the exclusion of computer programs as such from patentability is obvious, as the technical functions of a program forming part of a CII are (usually) already covered by the method or device/system claims relating to the CII as a whole. The provision of a program on its own does not fall directly within the scope of a claim relating to the CII as a whole, but it is also likely to be followed up as provision of an essential means;
- The major problem is not linked to the presence of this exclusion. It is linked to the assessment of the patentability of CII and to the uncertainty resulting from the absence of any definition with regard to the condition of invention and of a technical character, added to the uncertainty of the case-law, which is damaging to legal certainty. The proposed removal of the current exclusion could have the effect of drawing attention away to the detriment of this major issue;
- Lastly, the proposed removal of the current exclusion would be politically very risky and would probably arouse fierce opposition (see the rejection of the proposed directive by the European Parliament in July 2005 and the reaction of the software industry in India, which led the Indian government to withdraw its bill for the removal of the exclusion of programs at the start of 2016).

## **Conclusion:**

Finally, despite the divergence within the working group, there is a consensus in considering that:

- we must concentrate our efforts on achieving improved legal certainty in France and Europe and on achieving international harmonization (with or without exclusions per se of content related to CII);
- any abstract item (which is devoid of technical character) must be excluded from patentability, through a definition of a condition of invention and/or through exclusion per se;
- definitions appear to be necessary, in particular for:
  - computer program as such: a list of instructions that can be executed by a computer and is established in a programming language;
  - processing algorithm: a flow chart translating a method in the form of functional features of which the description can be performed, which is not a computer program as such.

**6.1 Please describe the subject matter that should be excluded from patentability per se and explain in detail how it should be identified in practice.**

Without examining the contribution that the CII makes to the prior art, exclusions from patentability of content pertaining to CIIs “per se” should be related to their non-technical nature because a contrario the technical character should constitute the positive criterion of patentability, and this should be a condition of patentability which is independent of any other condition (ie inventive step), examined without reference to the state of the art.

In practice, the identification of excluded subject matter "per se" should be made with regard to the description. It would be relevant to rely on the requirement for sufficient disclosure and the requirement for clarity of the claims when examining whether the invention is capable of being executed and reproduced, in particular with regard to the means of the invention as described, and whether the claims are clear enough to justify the exclusive rights sought by the applicant.

In this regard, it should be emphasized that the requirement for the content of the description is appreciated in relation to a person skilled in the art who relies on his general knowledge. These "general knowledge" of the person skilled in the art must be distinguished from the "state of the art" that can be opposed to novelty and inventive step. The general knowledge of the person skilled in the art is obviously very far from including all the documents which belong to the state of the art. If the term "technical contribution" is used, reference should be made to the general knowledge of those skilled in the art and not to "the state of the art" in the sense of what is opposable at the novelty and inventive step levels.

**6.d** If there is subject matter identified in a patent claim related to CII you consider should be excluded from patentability per se, should it possible to overcome a rejection of the patent claim by adding other subject matter to the claim?

*If yes, please answer questions 16.d-16.e, if no, please go to question 17.a*

Yes

**6.d** Should such "other subject matter" be required to have a certain quality, e.g. should it need to be inventive? Please state why in either case.

Yes

Please Explain

The exclusion from patentability of a patent claim relating to a CII on the basis of excluded subject matter can be overcome if the additional features supported by the description are combined with the initial subject matter and if the analysis of the claim as a whole makes it possible to overcome the exclusion. These additional features should be technical in nature.

**6.e** If yes to question 16.d above, please describe the areas of human endeavour to which such "other subject matter" should relate.

In our view, there is no need for a definition of areas of human activity to which this added content should relate, but it should be a technical content, as opposed to a purely intellectual / abstract content.

**7.a** Requirement of a contribution in a field of technology. Should the examination of subject matter eligibility of CII involve an examination of the contribution the claimed CII makes to the state of the art? If not, please explain.

*If yes, please answer questions 17.b-17.e, if no, please go to question 18*

No

Please Explain

The possible exclusion of an invention is linked to the very nature of that invention. This nature is inherent and independent of the prior art. The relationship between the invention and the prior art must be dealt with at the same time as novelty and inventive step.

**7.b** Should such examination be made under a test specific to CII, or should it be part of the usual novelty and inventive step/non-obviousness test? Please state why in either case.

**7.c** Under this test, should patentability of CII require a contribution from areas of human endeavour which are deemed to be sources of patentable inventions (e.g. engineering, natural sciences)? In other words, should contributions from areas of human endeavour which are not deemed to be sources of patentable inventions be disregarded? If not, please explain.

*If yes, please answer questions 17.d-17.e, if no, please go to question 18*

**7.c** Should this test also require that the relevant contribution the CII makes to the state of the art qualifies as inventive/non-obvious? This additional test may be integrated into the general inventive step / non-obviousness examination, or may be a stand-alone test. Please state why in either case.

**7.e** Should there be a non-exhaustive list of areas of human endeavour which are accepted as sources of patentable CII, taking into account the ultimate purpose of patent law (protecting unforeseen, non-obvious subject matter)? If yes, please provide such a list. If not, why?

**18** Should there be any specific claim drafting or other formal requirements which are applicable to CII, i.e. which deviate from the rules or practice applicable to inventions which are not CII? Please explain why in either case.

No

Please Explain

There is therefore no reason to use a particular wording. The conventional drafting rules and formal rules must simply be observed, in particular the requirements for sufficient disclosure and clear claims supported by the description, making it possible to assess the technical character of the invention (or the lack thereof).

**19** Should there be any specific requirements as to sufficiency of disclosure and/or enablement which are applicable to CII, i.e. which deviate from the rules or practice applicable to inventions which are not CII? Please explain why in either case.

No

Please Explain

Sufficiency of disclosure must be assessed in a conventional manner:

- if an invention relates to the use of a known function, the description must indicate at least one embodiment without having to describe the function in detail.
- if an invention relates to a new function, then it must be described in detail so that a person skilled in the art can reproduce it.

But, as stated in response to question 8, compliance with the description requirements is critical for CII's. In general, the description must make it possible to understand the technical problem and the solution provided.

For a CII, the characteristics that are realized wholly or partly by computer programs must be set out in such a way that they are understood so that their character, technical or not, can be appreciated.

Where an invention relates to a CII that implements a computer program, it should be verified that the program is sufficiently described in its structure and application (as appropriate, by an algorithm, functional decomposition, data, etc.).

**20** Please comment on any additional issues concerning patent protection of CII your Group considers relevant to this Study Question.

The indexing of patents should be improved, for example by means of classification of algorithms.

CII are often categorized into an insufficient number of classes, which are furthermore hardly, if at all, adapted to the fact that the means that they implement include computer programs.

It should be possible to organize the classification of computer-implemented inventions not only according to the targeted application but also according to the type and nature of the algorithms used.

**Please indicate which industry sector views are included in part "III. Proposals of harmonization" on this form:**

Please enter the name of your nominee for Study Committee representative for this Question (see Rule 12.8, Regulations of AIPPI). Study Committee leadership is chosen from amongst the nominated Study Committee representatives. Thus, persons not nominated as a Study Committee representative cannot be in the Study Committee leadership.

Clotilde TURLEQUE