I. Current law and practice

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

No

Please Explain

There are no specific requirements applying to CII only.

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.

Alike Article 52(1) EPC, Article XI.3 of the Belgian Code of Economic Law (hereafter ‘CEL’) provides that a patent shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

Article XI.4,§1 CEL (cf. Article 52(2) EPC) however provides: “shall not be regarded as inventions within the meaning of Article XI.3 CEL: 1) discoveries, scientific theories and mathematical methods; 2) aesthetic creations; 3) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; 4) presentation of information. “ Paragraph 2 of the same Article clarifies that “the provisions of paragraph 1 do not exclude the patentability of the subject-matter or activities referred to therein only to the extent to which the patent application or the patent relates to such subject-matter or activities as such.”

This exclusion from patentability of e.g. computer programs as such is based on the essentially intellectual and conceptual nature of the (abstract) mathematical formulas underlying computer programs, rather than an actual intent to exclude computer programs from patentability (M. JANSSENS, “Bescherming van computerprogramma’s: oude wijn in nieuwe vaten?”, DAOR 2011, no. 98, 216).
Once the computer program becomes part of an industrial process, it goes beyond the scope of the patentability exclusion mentioned in Article XI.3 CEL for computer programs as such, and enters the field of computer-implemented inventions. A concrete patentability assessment is based on the technical character of such inventions, before examining the general validity requirements, in particular its novelty and inventive step (cf. infra).

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.

No

Please Explain

The Belgian group however notes that the limited available Belgian case law is more or less in line with the practice and case law of the European Patent Office (hereafter ‘EPO’) with regard to computer-implemented inventions, as summarized in Part G, chapter II, 3.6 of the Guidelines for Examination. Briefly summarized, a patent may be granted if the subject-matter of the invention has a technical character or achieves a further technical effect that goes beyond the normal physical effect of the execution of a program, e.g. electrical currents. Only if the subject-matter complies with this first test for technicality, then the novelty, inventive step and susceptibility for industrial application will be assessed. If the claimed subject-matter does not have a technical character, it will be rejected under Article 52(2) and (3) of the EPC.

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.

* In the Belgian Aerocrine vs Medi Soft case (Court of Commerce Liège, 28 June 2012), concerning a device for measuring nitric oxide in exhaled air, the Court ruled that the invoked patents by Aerocrine (4 in total) cover a “mixed” invention, combining a technical feature (e.g. the measuring device) and a non-technical feature (the scientific discovery that the presence of NO in air exhaled by patients can be used as a marker for inflammation). According to the Court, such inventions are patentable as they do not cover a scientific discovery or theory as such. The patent claims include technical features implementing the scientific discovery.

In that regard, the Court also confirmed that the requirement of a further technical effect for inventions inherently embodying a technical effect (like software), equally applies for other categories excluded as such from patentability (in casu discoveries). In the same regard, the Court ruled that this further technical effect – which of course cannot be identical to the inherent effect – should be assessed on the basis of the concrete application of the invention, considering all additional and technical advantages or all effects linked with the specific features of the application.

Consequently, the novelty and inventive step requirements were assessed by the Court. 2 patents were declared valid, the other 2 were invalidated.

* In the DZINE vs DJ Matic case (Court of Appeal Ghent, 7 September 2005), the validity of a combined set for digital audio distribution was assessed comprising (i) a carrier provided for storing digital audio files and (ii) a player comprising reading means provided for reading the digital audio files stored in the carrier, and (iii) said set further comprising a digital audio supply source and an access card.

The Court was of the opinion that the invention essentially was a combination of hardware and software (thus to be considered as a CII). The Court did not discuss a possible exclusion from patentability (like e.g. computer programs), and immediately proceeded with the assessment of novelty and inventive step.

Although the Court considered the invention to be susceptible to patentability, it ruled however that the invention was invalid as the new combination of known items would have been obvious for a person skilled in the art.

* The Belgian group identified other case law relevant for CII, although most of these judgments did not consider the validity of CII as such.

One ruling is however noteworthy. In United Video Properties vs Telenet (Court of Commerce Antwerp, 3 April 2012), the competent judge adjourned the validity assessment of an invention related to on-demand media delivery systems that have user-related memory for providing system enhancements, awaiting the outcome of opposition proceedings pending before the Opposition Division of the EPO.

This demonstrates that Belgian courts – if needed – will strive to be in line with the case law of the EPO.
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

Yes

Please Explain

see below

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

As mentioned under point I.2, Article XI.4,§1 CEL (cf. Article 52(2) EPC) provides that

1) discoveries, scientific theories and mathematical methods;
2) aesthetic creations;
3) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers; and,
4) presentation of information,

shall not be regarded as inventions within the meaning of Article XI.3 CEL.

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

The exclusion from patentability only applies to the extent to which the patent application or the patent relates to such subject-matter or activities as such (cf. point I.2).

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

No

Please Explain

No. Once the invention is found eligible for patentability (i.e. having a technical character or achieving a further technical affect, cf. above), the inventiveness of an invention will be considered as a whole.

In that regard, the Belgian group notes that the further technical effect – which could lend technical character to the invention – may be known in the prior art.
Can you describe the areas of human endeavour the “other subject matter” needs to relate to?

No

Please Explain

There is no restriction of the areas of human endeavour to which the “other subject matter” should relate.

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

Yes

Please Explain

As a preliminary remark, the Belgian group notes that the answer to this question depends on the type of proceedings in which the “examination” is executed (patent prosecution and/or litigation).

Prosecution – In Belgium, there is a Belgian national route for the registration of a patent. If the application complies with the administrative requirements, the patent will be granted automatically. The Belgian Office for Intellectual Property (OPRI) does not examine the content of the patent application and does not review the conditions of patentability of the invention. The European Patent Office – on behalf of the OPRI – searches for prior art of the invention but the result of this research does not have an impact on the issuance of the patent. This research report is accompanied by a written opinion on the invention's patentability for the applicant’s informational purposes. In Belgium, the validity will only be assessed by the Belgian courts in case of litigation (cf. infra).

Litigation – The contribution to the state of the art of the claimed CII is not considered when assessing the technical character of the invention. This is also the case when one has to rely on the further technical effect of the invention to obtain such technical character, as this specific further technical effect may be known in the prior art (cf. above). It is thus not considered as a “contribution”.

This contribution is however explicitly considered when assessing the novelty and inventive step requirement. If the contribution is not novel, the patent will be annulled. In the framework of the inventive step analysis, the assessment of the contribution is part of the “problem-solution-approach” (or PSA). The objective technical problem (the second step of the PSA) is determined on the basis of the technical difference between the closest prior art (determined in the first step of the PSA) and the invention, as well as the technical effect thereof. This technical difference (and its technical effect) defines the contribution of the invention over the closest prior art.

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

As said, there is a list of exclusions (business methods as such, software as such, etc., see supra), but there is no consensus as to a list of areas of human endeavour that from the outset would be excluded from patentability.

The only requirement is the technical character of the invention or a further technical effect that lends a technical character to the invention. This requirement is justified by the underlying objective of patent law, in particular to reward the inventor for his contribution to technological progress (G. KOLLE, “Patentability of Software-Related Inventions in Europe”, IIC, 1991, 661). After the diplomatic conference of November 2000, the requirement of a technical character of the invention
AIPPI 2017 - Study Question - Patentability of computer implemented inventions

was addressed in the revised EPC 2000 by referring to “all fields of technology” (see also Article XI.3 CEL).

The Belgian group furthermore notes that this contribution may comprise a combination of technical and non-technical features (see e.g. the Aerocrine vs Medisoft case discussed under point I.4). The use of non-technical means therefore does not necessarily undermine the technical character of the invention considered as a whole.

3c 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.

Yes

Please Explain

See also our answer to point I.6.a.

The relevant contribution the CII makes to the state of the art is assessed as part of the general inventive step / non-obviousness test.

3d 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?

No

Please Explain

See also our answer to point I.6.b. There is also no consensus as to a list of areas of human endeavour which are accepted as sources of patentable CII. Article XI.3 CEL (Article 52(1) EPC) only provides that it should concern “a field of technology”. If the invention has a technical character and a technical contribution, the invention will be examined on its validity.

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.

No

Please Explain

We however note that the EPO is currently working on updated Guidelines for examination which will contain more exemplary claim wording.

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

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.

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

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.

Yes

Please Explain

Unfortunately, there is no straightforward answer to this question.

When considering patent-eligibility of CII (or the technical character thereof), the EPO’s Guidelines for Examination – as well as the case law of the Boards of Appeal – seem extensive and detailed. As case law is very limited in Belgium, users of the patent system and practitioners will certainly turn to these guidelines and case law of the EPO to assess the patentability of its CII. The Belgian group considers that these guidelines are sufficiently clear for most day-to-day cases. However, the assessment still remains a difficult exercise in borderline cases. Therefore, the Belgian group recognizes that these areas of uncertainty should be reduced as much as possible, in order to provide legal certainty to potential users of the patent system and practitioners.

When considering the general patentability requirements (sufficiency of disclosure, added matter, novelty and inventive step) in the context of CII, the major obstacle is identifying the prior art. Developments in the IT sector often comes with the development of a new “language” which makes searches for prior art in particular difficult. Although the general patentability criteria are thus clear, in practice this assessment remains very difficult. It is thus not surprising that lack of clarity is a common issue during the prosecution phase. Once the patent is granted, most difficulties are seen when assessing the sufficiency of disclosure and/or the inventive step of the invention. The sufficiency of disclosure is evidently linked with the lack of clarity. The assessment of the inventiveness of CII in particular lies in the technical contribution of such type of inventions.

This is however a factual case-by-case analysis for which the existing regulation and/or case law is merely a guidance in order to attain the correct outcome. On European level, considerable effort has been made to increase legal certainty on this topic. In that regard, the Belgian group notes that telecom and CII are joined at EPO level, which should improve harmonization of both domains.

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.

Yes

Please Explain

In a study of 2015 (R. FRIETSCH et al., “The economic impacts of computer-implemented inventions at the European Patent Office”, June 2015, Fraunhofer, ISBN 978-3-945185-02-5), the authors pointed a trend that more CII patent applications have been filed over the years.

The motivation is in first instance defensive (freedom to operate) (in particular for SME), but for larger companies assessment becomes important. This study pointed out that CII are throughout all industrial activities thanks to widespread use of computer.

The Belgian situation is in line with this study: current law and legal practice in Belgium (and Europe) does not need major modifications.

As the criteria become more effective and clear, they allow protecting CII such that Belgian industry and academia do seek patent protection for CII.
In your jurisdiction, is copyright protection of CII regarded as sufficient from an economic standpoint? Please state why in either case.

No

Please Explain

Copyright protection of CII is not regarded as sufficient, although it is considered to be complementary to patent protection.

The subject of copyright and patent protection is totally different. Copyright does not protect the (technical) concept of an invention involving the use of a computer, computer network or other programmable apparatus, where one or more features are realized wholly or partly by means of a computer program. It only protects a particular expression form, like e.g. the source code of software. Once the software is used as a tool (like any other technical tool) for use in an application, it no longer provides adequate protection – if needed – against competitors. In other words, copyright cannot compensate for a possible lack of patent protection.

Patent protection for CII should always be an option, although a well-consideration should be made on a case-by-case basis. Patent protection of CII thus is – and needs to remain – part of the toolbox for users of the patent system and practitioners.

In that regard, the Belgian group also stresses the importance and commercial value of undisclosed know-how and business information (trade secrets).

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.

No

Please Explain

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

III. Proposals for harmonisation

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

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

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

The software-code as such should be excluded from patentability.

The Belgian group also considers that the existing “as such” exemptions from patentability – mentioned in Article XI.4,§1 CEL – should be maintained, considering their essentially intellectual and conceptual nature.

66. 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

67. 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.

No

Please Explain

The Belgian group agrees on the existing case law of the EPO that the invention as a whole should be assessed for obviousness. This assessment should not be limited to the “other subject matter”.

68. If yes to question 16.d above, please describe the areas of human endeavour to which such “other subject matter” should relate.

N/A

72. 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 Belgian group considers that subject matter eligibility should only relate to the technical character of the invention, or the further technical effect that could lend technical character to the invention. This further technical effect should not necessarily involve a contribution to the state of the art as the word “contribution” implies a novelty/obviousness assessment. This is however no longer an examination of subject matter eligibility.
7. 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.

8. 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.

9. 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.

10. 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?

11. 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

   The Belgian group does not see why separate and/or deviating rules or practice (e.g. related to claim drafting) should be created for CII.

12. 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

   Again, the Belgian group is not convinced that additional and specific rules for CII are needed to solve the existing issues with CII patentability. The Belgian group prefers a further clarification of the existing rules and case law, in order to reduce the areas of uncertainty.

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

   The Belgian group considers that a harmonization of patent law is not the most adequate response to solve the issues currently existing for (the patentability of) CII.
In particular, the Belgian group is of the opinion that – given the lack of clarity in used terminology in “IT”-related fields like CII and the resulting issues (see also point II.10 above) – the initiative for a more harmonized approach should first and foremost come from the users of the system themselves, by applying a more clear and universal terminology.

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.

André CLERIX