I. Current law and practice

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

No

Please Explain

There is no United States (U.S.) statute, i.e., no federal law enacted by the U.S. Congress, that specifically applies only to patentability of 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.

Patentability[1] of CII depends on the same statutory provisions as patentability of any other invention. [2] In particular, div 101 of 35 U.S.C. states as follows:

"Inventions patentable. Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

Section 100(b) of 35 U.S.C. is also pertinent, as it defines a "process":

"The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material."

CII can involve processes, machines, manufactures, and compositions of matter. CII is typically claimed as a process, a machine (e.g., a system), or a manufacture (e.g., a computer readable program product or storage medium).

Also relevant to the examination of CII are 35 U.S.C. §§ 102, 103, and 112. Section 102 requires novelty. Section 103 requires non-obviousness (inventive step). Section 112 requires (1) a full and complete written description (2) sufficient to enable one of ordinary skill in
the art and (3) one or more claims "particularly pointing out and distinctly claiming" the invention.

[1] The U.S. Group finds the questionnaire’s reference to "patentability" to be ambiguous and, at times, inconsistent with the meaning of that term under U.S. law. In Paragraph 2(b) of the questionnaire introduction, "patentability of CII" is said to refer to "whether CII may properly be the subject of a patent claim," but that proposed definition lacks clarity. To the extent that it suggests an inquiry into patent eligibility, Paragraph 17 of the "Discussion" states that "beyond eligibility, for a claim to be patentable, it must also be novel under 35 USC 102 and inventive 'as a whole' under 35 USC 103 and satisfy other requirements including written description and enablement under 35 USC 112."

Accordingly, for purposes of this report, patentability is interpreted as encompassing all of the requirements of patent law, including 35 U.S.C. §§ 101, 102, 103, and 112. When the discussion is specific to eligibility, i.e., under 35 U.S.C. § 101 and related case law and administrative interpretations, the term patent eligibility is used herein.

[2] For purposes of this report, we describe only the statutory provisions related to examination of utility patents. There are separate statutes governing examination of patent applications for plants and designs.

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

In the United States, there are no laws or rules that apply only to CII. However, the U.S. Patent and Trademark Office (USPTO) does have some administrative guidelines that provide a framework for ensuring compliance with certain statutory provisions when evaluating CII.

In fact, the USPTO Manual of Patent Examination Procedure (MPEP) 2161.01 begins by noting that:

"The statutory requirements for computer-implemented inventions are the same as for all inventions, such as the subject matter eligibility and utility requirements under 35 U.S.C. 101 (see MPEP §§ 2106 and 2107, respectively), the novelty requirement of 35 U.S.C. 102, the nonobviousness requirement of 35 U.S.C. 103, the definiteness requirement of 35 U.S.C. 112(b) or pre-AIA 35 U.S.C. 112, second paragraph, and the three separate and distinct requirements of 35 U.S.C. 112(a) or pre-AIA 35 U.S.C. 112, first paragraph. In addition, claims with computer-implemented functional claim limitations may invoke 35 U.S.C. 112(f) or pre-AIA 35 U.S.C. 112, sixth paragraph. See MPEP § 2181, subdiv II.B. and § 2181, subdiv IV, for information regarding means- (or step-) plus-function limitations."

The div goes on to provide examiners with information about how to determine whether a functional claim limitation for a computer-implemented invention includes an adequate written description, and a description of the best mode, as well as whether the functional claim limitation is fully enabled.

In addition, the USPTO has provided regular updates to its examination guidance on subject matter eligibility, including updates that specifically updates the issues of abstract ideas and business methods. This guidance can be found at the following link: https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility. Notably, the guidance includes memoranda addressing recent case law and examples of claims that may be considered patent eligible and ineligible.

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.

Section 101 provides that an inventor of "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent thereof, subject to the conditions and requirements of this title." 35 U.S.C. § 101. However, the courts have developed certain exceptions to patent eligibility under Section 101, holding that "[l]aws of nature, natural phenomena, and abstract ideas" are ineligible for patenting. See Alice Corp. Pty., Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347, 2354 (2014) (quoting Assoc. for Molecular Pathology v. Myriad Genetics, 133 S. Ct. 2107, 2116 (2013)). In general, the patentability of CII has been evaluated under the abstract idea exception to eligibility.

In the Mayo and Alice decisions the U.S. Supreme Court articulated a two-step test to establish what constitutes a patent-ineligible subject-matter. Under Alice, the first step of determining whether the abstract idea exception applies is to determine whether the claims are directed to an abstract idea. Id. at 2355. If so, the second step is to determine whether the claims' elements, considered both individually and as an ordered combination, transform the nature of the claim into a patent-eligible application. Id. This second step determines whether the claims contain an "inventive concept" sufficient to 'transform' the claimed abstract idea into a patent-eligible application. Id. at 2357 (quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 72-73 (2012)). A claim includes an "inventive concept" if it "include[s] additional features' to ensure 'that the [claim] is more than a drafting effort designed to monopolize the [abstract idea] itself.'" Id. (quoting Mayo
While the U.S. Court of Appeals for the Federal Circuit (the U.S. appellate court that has nationwide jurisdiction over patent cases) has held that not all improvements in computer-related technology are inherently abstract, see Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016), courts in the United States, as well as the USPTO, have wrestled with the Supreme Court’s framework regarding the application of these judicial exceptions, including the application of the abstract idea exception, to CII.

For example, the Federal Circuit has found some CII claims patent ineligible while finding others to be patent eligible. Examples of Federal Circuit decisions since Alice in which claims were held to be patent ineligible include Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709 (Fed. Cir. 2014) (payment of royalties by sponsor over telecom network); Versata Dev. Group, Inc. v. SAP Am., Inc., 793 F.3d 1306 (Fed. Cir. 2015) (pricing products in multi-level product and organizational groups); and Electric Power Group, LLC v. Alstom S.A., 830 F.3d 1350 (Fed. Cir. 2016) (real-time performance monitoring of an electric power grid). Examples of Federal Circuit decisions since Alice in which claims were found to be patent eligible include DDR Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245 (Fed. Cir. 2014) (expanding commercial opportunities for internet websites); Enfish (improved information and storage system using a self-referential table); BASCOM Global Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341 (Fed. Cir. 2016) (filtering Internet content); and McRO, Inc. v. Bandai Namco Games Am. Inc., No. 2015–1080 (Fed. Cir. Sept. 13, 2016) (automatically animating lip synchronization and facial expression of animated characters).

As noted in response to Question 3, the USPTO regularly updates patent subject matter eligibility guidance: https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility. This guidance includes memoranda addressing recent case law and examples of what may be considered patent eligible and ineligible.

Lower courts and the USPTO have struggled to implement the Supreme Court’s test in a predictable and consistent manner, and there are material disparities in how the applicable standards are implemented in practice.

**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

No

Please Explain

There are no statutory provisions, case law or judicial or administrative practice that exclude any particular subject matter relating to CII from patentability per se. However, one legislative provision in the Leahy-Smith America Invents Act that impacts the scope of prior art and references CII is Sec. 14 of the Leahy-Smith Act, which addresses the treatment of tax methods.

While not limited to CII, Sec. 14 of the Leahy-Smith Act provides a carve-out for claimed inventions that are drawn to tax avoidance strategies by treating all such tax avoidance strategies as prior art.

**§14. Tax Strategies Deemed Within The Prior Art.** [1]

(a) IN GENERAL.—For purposes of evaluating an invention under div 102 or 103 of title 35, United States Code, any strategy for reducing, avoiding, or deferring tax liability, whether known or unknown at the time of the invention or application for patent, shall be deemed insufficient to differentiate a claimed invention from the prior art.

(b) DEFINITION.—For purposes of this div, the term “tax liability” refers to any liability for a tax under any Federal, State, or local law, or the law of any foreign jurisdiction, including any statute, rule, regulation, or ordinance that levies, imposes, or assesses such tax liability.

(c) EXCLUSIONS.—This div does not apply to that part of an invention that—

(1) is a method, apparatus, technology, computer program product, or system, that is used solely for preparing a tax or information return or other tax filing, including one that records, transmits, transfers, or organizes data related to such filing; or

(2) is a method, apparatus, technology, computer program product, or system used solely for financial management, to the extent that it is severable from any tax strategy or does not limit the use of any tax strategy by any taxpayer or tax advisor.

(d) RULE OF CONSTRUCTION.—Nothing in this div shall be construed to imply that other business methods are patentable or that other business method patents are valid.

(e) EFFECTIVE DATE; APPLICABILITY.—This div shall take effect on the date of the enactment of this Act and shall apply to any patent application that is pending on, or filed on or after, that date, and to any patent that is issued on or after that date.

For a more detailed explanation of how this legislative provision is implemented, see MPEP 2124.01 and USPTO, Section 14 - Tax Strategies Deemed To Be Within The Prior Art Introductory Examples
Please describe the subject matter excluded from patentability per se and explain in detail how it is identified in practice.

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

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

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

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

Under current Supreme Court precedent, a claim that is directed to an abstract idea, whether it includes CII or otherwise, is not patent eligible unless the claim “contains an ‘inventive concept’ sufficient to ‘transform’ the claimed abstract idea into a patent-eligible application.” *Alice Corp. Pty., Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2347, 2357 (2014) (quoting Mayo, 566 U.S. at 72-73). That is, a judicial or administrative tribunal must first analyse a claim to determine whether it is directed to an abstract idea, and then must determine if the claim recites “an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (quoting Mayo, 566 U.S. at 73). Subject matter that may be enough to qualify as “inventive concept” includes:

- Improvements to another technology or technical field;
- Improvements to the functioning of the computer itself;
- Applying the abstract idea with, or by use of, a particular machine;
- Effecting a transformation or reduction of a particular article to a different state or thing; and
- Specific element(s) other than what is well-understood, routine and conventional in the field, or unconventional steps that confine the claim to a particular useful application.


The U.S. Group notes that, to the extent there is overlap in the analysis of eligibility and non-obviousness, it is addressed in the response to Question 6(c).
3c. 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

No, in theory, but sometimes yes, in practice. The first four bullet point items noted above in the response to Question 6(a) relate to areas that are deemed by the USPTO to be conventional sources of patentable inventions. The fifth bullet point is not limited to such conventional sources. Yet, when asked to explain what falls within the scope of the fifth bullet point “specific element(s) other than what is well-understood, routine and conventional in the field, or unconventional steps that confine the claim to a particular useful application,” patent examiners typically refer back to the first four bullet points.

The courts are also struggling to determine the bounds of patent eligibility; some courts have focused on whether the claimed subject matter relating to CII provides a technological solution to a technological problem. See, e.g., Amdocs (Israel) Ltd. v. Openet Telecom, Inc., 841 F. 3d 1288 (Fed. Cir. 2016) (majority opinion by Plager, J., joined by Newman, J., and dissenting opinion by Reyna, J.).

Under existing case law, reciting elements of conventional technical character in a claim relating to CII is alone insufficient to confer patent-eligibility. The following subject matter has been found not to be an “inventive concept” when recited in a claim found to be directed to an abstract idea:

- Mere instructions to implement an abstract idea on a computer;
- Appending well-understood, routine and conventional activities previously known to the industry, specified at a high level of generality, to the judicial exception, e.g., a claim to an abstract idea requiring no more than a generic computer to perform generic computer functions that are well-understood, routine and conventional activities previously known to the industry;
- Adding insignificant extra-solution activity (activity that is not central to the purpose of the claim) to the abstract idea exception, e.g., mere outputting of data; and
- Generally linking the use of the abstract idea to a particular technological environment or field of use, e.g., the Internet.


The USPTO regularly updates a table of case law relevant to CII that lists other examples of cases in which CII alone was found insufficient to confer patent-eligibility. See Chart of subject matter eligibility court decisions (last updated March 24, 2017) at: https://www.uspto.gov/patent/laws-and-regulations/examination-policy/subject-matter-eligibility

3d. 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.

No

Please Explain

The existing case law does not expressly import the novelty or non-obviousness requirements of §§ 102, 103, and 112. In practice, however, a non-obviousness analysis may implicitly come into play when determining whether a claim is directed to an abstract idea (step 1) or recites an “inventive concept” (Alice step 2). See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1335-36 (Fed. Cir. 2016) (claims directed to “a specific improvement to the way computer operate” not directed to an abstract idea); BASCOM Global Internet Servs. v. AT&T Mobility LLC, 827 F.3d 1341, 1350-51 (Fed. Cir. 2016) (“inventive concept … found in the non-conventional and non-generic arrangement of known, conventional pieces”).

On the other hand, under U.S. law, a non-obviousness substantial contribution to the state of the art may not be sufficient to make a claim directed to a law of nature, natural phenomena, or abstract idea patentable. Though unrelated to CII, in Ariosa Diagnostics, Inc. v. Sequenom, Inc., 788 F.3d 1371 (Fed. Cir. 2015), the Federal Circuit agreed that Sequenom’s invention “reflects a significant human contribution…and utilized man-made tools of biotechnology in a way that revolutionized prenatal care.” Id. at 1379. However, in finding the claims ineligible, the court said, “We agree but note that the Supreme Court instructs that ‘[g]roundbreaking, innovative, or even brilliant discovery does not by itself satisfy the § 101 inquiry.’” Association for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2017, 2117.
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

Note, however, the law is still developing on which areas of human endeavour are accepted as sources of patentable CII.

As explained in the response to Question 6(a), courts have found at least the following subject matter to be patent-eligible:

- Improvements to another technology or technical field;
- Improvements to the functioning of the computer itself;
- Applying the abstract idea with, or by use of, a particular machine;
- Effecting a transformation or reduction of a particular article to a different state or thing; and
- Recitation of specific element(s) other than what is well-understood, routine and conventional in the field, or unconventional steps that confine the claim to a particular useful application.


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

The formal claim requirements for CII are the same as for other inventions that are not CII. In practice, however, CII patent applications may be the subject of additional scrutiny as to whether they obey the formal requirements. This scrutiny is based on statutory and case law, as discussed below in the response to Question 9. Administrative requirements are codified as formal requirements in the Manual of Patent Examination Procedure (MPEP) by the USPTO. Administrative requirements, and statutory and case law, are clarified by informal memoranda and examiner training materials provided by the USPTO.

While the MPEP does not present specific requirements for CII patent claims, MPEP § 2161.01 provides specialized guidelines for examining CII patent applications. Memoranda and training materials are readily available online and include specialized information relating to examination of CII patent applications with regard to formal claim requirements.

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

As discussed in the response to Question 7, the disclosure and enablement requirements for CII are the same as for other inventions that are not CII. In practice, however, CII patent applications may be the subject of additional scrutiny as to whether they obey the disclosure and enablement requirements. Administrative requirements of the USPTO are located in the Manual of Patent Examination Procedure (MPEP),
clarified by informal memoranda and training materials of the USPTO patent examining corps available online, which include specialized information relating to examination of CII patent applications with regard to disclosure and enablement requirements.

While the MPEP does not present specific requirements for CII disclosure and enablement, MPEP § 2161.01 provides specialized guidelines for determining if a CII patent application includes an adequate written description, if it satisfies the requirement for best mode, and if it enables any extent functional claim limitations. For example, MPEP § 2161.01 recites:

"When examining computer-implemented functional claims, examiners should determine whether the specification discloses the computer and the algorithm (e.g., the necessary steps and/or flowcharts) that perform the claimed function in sufficient detail such that one of ordinary skill in the art can reasonably conclude that the inventor invented the claimed subject matter. Specifically, if one skilled in the art would know how to program the disclosed computer to perform the necessary steps described in the specification to achieve the claimed function and the inventor was in possession of that knowledge, the written description requirement would be satisfied."

MPEP § 2161.01 directs examiners to MPEP § 2164.06(c), which recites that, with respect to CII, "an examining guideline to generally follow is to challenge the sufficiency of such disclosures which fail to include either the programmed steps, algorithms or procedures that the computer performs to accomplish the claimed function." MPEP § 2164.06(c) further recites that "no specific universally applicable rule exists for recognizing an insufficiently disclosed application involving computer programs" and provides certain examples of potential CII enablement issues from U.S. case law.

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

As explained in the response to Question 4, the recent U.S. Supreme Court Alice decision interpreting 35 U.S.C. § 101 sets forth a specific two-step test that is meant to clarify the analysis for determining of whether a claim (CII or non-CII) includes patent eligible subject matter. However, the Alice two-step test can be ambiguous and malleable when applied. As a result, the decisions of United States Court of Appeals for the Federal Circuit, which have applied the test, are not necessarily consistent. The USPTO has issued several successive guidelines intended to reflect new case law. Unfortunately, there is often a lag between the recent case law and the updated administrative standards, such that the updated guidelines are applied by the examiners in uneven fashion. Thus, even though the test is the same for both the courts and the USPTO, the results of the Alice test as applied in the courts and the USPTO are inconsistent.

Section 101 defines patent eligible subject matter as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof," subject to conditions of patentability under §§ 102, 103 and 112. The courts have created exceptions to §101: laws of nature, natural phenomena, and abstract ideas. See Alice Corp. Pty., Ltd. v. CLS Bank Int‘l, 134 S. Ct. 2347, 2354 (2014) (quoting Assoc. for Molecular Pathology v. Myriad Genetics, 133 S. Ct. 2107, 2116 (2013)). The claims directed to CII often are deemed to be "abstract ideas" not eligible for patent protection.

The test provided by the Supreme Court in Alice first determines whether the claim at issue is "directed to" a judicial exception under Section 101, such as an abstract idea. Alice, 134 S. Ct. at 2355. If the claim is directed to such an exception, the second step considers whether the claims "contain[] an 'inventive concept' sufficient to 'transform' the claimed abstract idea into a patent-eligible application." Id. at 2357 (quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc., 566 U.S. 66, 72-73 (2012)).

Several cases from the Federal Circuit have since applied and further interpreted the Alice test. For example:

In Enfish, LLC v. Microsoft Corp., 822 F.3d 1327 (Fed. Cir. 2016), the Federal Circuit held that because the claims were directed to specific improvements in the way computers operate, the claims included patent eligible subject matter and were not directed to an abstract idea. 822 F.3d at 1335-36. Even though the claims were directed to methods performed solely on a computer without reference to physical components, the Federal Circuit held that the claims were not abstract because they improved computer function. Id. at 1336.

In Bascom Global Internet Services v. AT&T Mobility, 827 F.3d 1341 (Fed. Cir. 2016), the Federal Circuit held that although claims for a method and system for filtering Internet content were directed to an abstract idea, the inventive concept described in the claims transformed the abstract idea into a patent eligible invention. 827 F.3d at 1349. The claims became patent eligible material because they recited a "specific, discrete implementation of the abstract idea." Id. at 1349.

In McRO, Inc. v. Bandai Namco Games America Inc., 837 F.3d 1299 (Fed. Cir. 2016), the Federal Circuit held that claims directed to means or methods for producing a result or effect using rules with specific, common characteristics are not abstract ideas. 837 F.3d at 1313-14. The Federal Circuit distinguished the claims of McRO from previous CII claims that were held to be patent ineligible, explaining that the McRO claims did not claim the result and thus did not preempt all methods of producing a similar result. Id. at 1314-16.
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.

No

Please Explain

In a recent letter to the Director of the USPTO, the American Intellectual Property Law Association (“AIPLA”), whose approximately 14,000 members represent a wide and diverse spectrum of practitioners and users of the U.S. patent system, stated that patent-eligibility jurisprudence and its application by the USPTO and the courts have become the issues of greatest concern among AIPLA’s members.” Comments of the AIPLA on Notice of Roundtables and Request for Comments of the AIPLA on Notice of Roundtables and Request for Comments Related to Patent Subject Matter Eligibility (Jan. 18, 2017) at p. 2, available at http://www.aipla.org/advocacy/executive/Documents/AIPLA%20101%20Comments%201-18-17.pdf. The AIPLA letter describes the U.S. Supreme Court’s Alice decision, which is frequently used to determine patentability of CII, as a missed opportunity to provide much needed guidance. Id. (“[T]he Supreme Court’s decision in Alice and the cases that have followed have continued to create problems and confusion.”)

The AIPLA letter provides the following summary of the uncertainty, confusion, and inconsistency engendered by the current state of Law/Practice in the United States with respect to patent-eligibility of inventions, including CII:

“Overall, our experience is that Patent Office examination decisions on patent[ability] . . . have been inconsistent and confusing. At the same time, there has been a sharp uptick in litigating eligibility issues both before the courts and the Patent Trial and Appeal Board. The result is uncertainty and inefficiency for patent applicants and litigants, which is not healthy for our patent system and puts the incentives to innovate at risk.”

Id. at p. 1.

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

As explained in the response to Question 9, the current state of Law/Practice regarding patentability of CII has created uncertainty, confusion, and inconsistency. This may be harmful to investment and innovation. U.S. Senator Chris Coons recently noted that “the sheer amount of uncertainty that the courts’ §101 jurisprudence is creating” is worrisome and “[d]ead[s] to very real harm to [United States’] prospects for future economic growth.” The Supreme Court’s Section 101 Jurisprudence: Dangers for the Innovation Economy (Dec. 7, 2016), available at http://innovationalliance.net/from-the-alliance/inventing-america-ip-watchdog-div-101-conference-speakers-call-strong-patent-protections-innovative-industries/. Former Chief Judge of U.S. Court of Appeals for the Federal Circuit, Paul Michel, opined that legal developments in the U.S. over the last half decade, which include significant changes to patentability, have “greatly added to the uncertainty that’s killing investment, killing invention.” Id. Echoing Judge Michel’s concerns, Ami Patel Shah, who is a Managing Director of a 70+ billion USD investment fund Fortress Investment Group, stated that uncertainty associated with patentability of inventions has led to the fund “not [being] able to provide [companies with] financing, nor was anyone else in the venture community giving them venture financing because then it became known that their product was unprotected, that anyone could copy it. So companies were put in bankruptcy or they had a fireside sale.” Id.

At least some members of the industry are concerned with the current state of Law/Practice for patentability of CII. In a recent letter to the Director of the U.S. Patent and Trademark Office, several U.S. companies innovating in the electromechanical and electronic fields stated that the abstract idea exception to patentability is “unworkable, unnecessary, and should be legislatively abolished.” Response to Request for Comments Related to Exploring the Legal Contours of Patent Subject Matter Eligibility (Jan. 18, 2017) at pp. 3-13, https://www.uspto.gov/sites/default/files/documents/RT2%20Comments%20InterDigital%20Inc.pdf. The companies’ letter calls the abstract idea exception “a blunt weapon where extreme precision in necessary.” Id. at p. 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
In the United States, copyright protection of CII is generally not regarded as economically sufficient. While copyright protection of CII may be valuable to protect against intentional copying, the scope of protection under copyright law is more limited than the scope of protection under patent law. For example, copyright protection of CII will not protect the functional aspects of the code. While many businesses use copyrights as part of a protection strategy for CII, patents generally provide much broader protection.

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

There is an implicit consensus that patent protection of CII is needed to ensure sufficient reward on investments. This implicit consensus is found in the long history of U.S. Patent law being seen as the “fuel that is added to the fire of our genius,” as President Lincoln so aptly said 150 years ago, and in the “one-size-fits-all” nature of the U.S. patent system that does not differentiate patent protection according to the underlying technology. The scope of patent protection, where available, provides potentially broad protection over the application of an idea implemented via CII. In addition, the competitive landscape often warrants and demands patent protection in order to attract investors in the first instance.

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

As explained in the responses to Questions 4, 6, and 9, there is inconsistency and a lack of consensus on availability of patent protection as it applies to CII.

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

Harmonization is desirable both as to patent eligibility and the other requirements for patentability.

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

No

Please Explain
This view is consistent with TRIPs Article 27, which states “patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application.” (Note - Article 27 provides for some non-CII exclusions).

Patents provide a short-term exclusivity period in exchange for the publication of how to make and use an invention, thus promoting the progress of technological innovation.

If one were to explicitly define what is per se patent ineligible relating to CII (or any such technological field), one risks excluding otherwise patentable inventions from participating in the patent system, thus having an adverse impact on the promotion of the progress of innovation. The U.S. Supreme Court acknowledged this balance of interests, stating that “too broad an interpretation of this exclusionary principle could eviscerate patent law.” Mayo Collaborative Services v. Prometheus Laboratories, 566 U.S. 66, 71 (2012).

With regard to Question 16.b (Please describe the subject matter that should be excluded from patentability per se and explain in detail how it should be identified in practice), as indicated in the response to Question 16(a), no subject matter related to CII should be excluded per se; indeed, no subject matter should be excluded per se.

With regard to Question 16.c (If there is subject matter identified in a patent claim related to CII you consider should be excluded from patentability per se, should it be possible to overcome a rejection of the patent claim by adding other subject matter to the claim?): Yes. As indicated in the response to Question 16(a), no subject matter related to CII should be excluded from patentability per se. In practice, if there is a rejection of a patent claim, it should be possible to overcome the rejection by adding other subject matter to the claim.

With regard to Question 16.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), as indicated in the response to Question 16(a), no subject matter related to CII should be excluded from patentability per se.

With regard to Question 16.e (If yes to question 16.d above, please describe the areas of human endeavor to which such “other subject matter” should relate), as indicated in the response to Question 16(a), no subject matter related to CII should be excluded from patentability per se. Moreover, the patent eligibility of a claim as a whole directed to “other subject matter” should not be dependent on the area of human endeavor to which the claim applies. “[A]nthing under the sun that is made by [a human] should be eligible for patent protection. See Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) (internal quotation marks and citation omitted).
7. 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 U.S. Group does not agree that the novelty and/or non-obviousness of the claimed CII is relevant to a subject matter eligibility analysis. We do not support any resolution inconsistent with Resolutions on Q133 and Q158.

The U.S. Group agrees with the dissent in Parker v. Flook, 437 U.S. 584, 600 (1978) (Stewart, J., dissenting), that the majority [1] struck a “damaging blow at basic principles of patent law by importing into [the subject matter eligibility] inquiry . . . the criteria of novelty and inventiveness.” Comments of the AIPLA on Notice of Roundtables and Request for Comments of the AIPLA on Notice of Roundtables and Request for Comments Related to Patent Subject Matter Eligibility (Jan. 18, 2017) at pp. 8-9, available at http://www.aipla.org/advocacy/executive/Documents/AIPLA%20101%20Comments%201-18-17.pdf, at p. 1. The majority in Parker v. Flook used the “point of novelty” approach to eligibility, holding that a claim to a computer implemented invention is ineligible if the point of novelty is a mathematical algorithm. 437 U.S. at 595 n.18 (”Very simply, our holding today is that a claim for an improved method of calculation, even when tied to a specific end use, is unpatentable subject matter under § 101.”).

As a result, the U.S. Supreme Court’s law on subject matter eligibility conflates the standards of novelty and inventiveness into the subject matter eligibility analysis. Id. at p. 7. In addition, the U.S. Supreme Court’s recent interpretations of subject matter eligibility, including Alice, have had a profoundly adverse impact on the development of subject matter eligibility law. Id. at pp. 7, 9 (“This over-expansive view of the filter effect of § 101 was continued in Alice.”). The Supreme Court’s overreaching test has directly resulted in decisions that adversely affect the competitiveness of United States businesses by providing, for example, less patent protection for certain classes of invention than the protection available in Europe and China. Id. at p. 7.

With regard to Question 17.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?), as indicated above, the U.S. Group believes that examination of the contribution to the art of the claimed CII (and non-CII) should not be undertaken to determine patent eligibility. If undertaken as part of the patentability determination, however, it should be considered in the context of the invention of the whole, i.e., all the claimed elements, as part of the traditional novelty and inventive step/non-obviousness analysis, as expressed in Resolutions on Q133 and Q158.

With regard to Question 17.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?), as indicated above: No. The U.S. Group believes that examination of the contribution to the art of the claimed CII should not be undertaken to determine patent eligibility. If undertaken as part of the patentability determination, however, contributions from all areas of endeavour, both CII and non-CII elements, should be considered in their combination as recited in the claim as a whole, consistent with the Resolutions on Q133 and Q158. There is no reasonably objective basis to determine arbitrarily what areas of human endeavour are or are not deemed to be sources of patentable inventions, and therefore no claim limitations should be disregarded.

With regard to Question 17.d (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), as indicated above: No. The U.S. Group believes that examination of the contribution to the art of the claimed CII should not be undertaken to determine patent eligibility. If undertaken as part of the patentability determination, however, contributions from all areas of endeavour, both CII and non-CII, should be considered in their combination as a whole as recited in the claim as part of the traditional novelty and inventive step/non-observability analysis, as expressed in Resolutions on Q133 and Q158. In other words, the elements of the claims that qualify as inventive/non-obvious need not lie in the claimed CII.

With regard to Question 17.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?), as indicated above: No. The U.S. Group believes that examination of the contribution to the art of the claimed CII should not be undertaken to determine patent eligibility. If undertaken as part of the patentability determination, however, there should not be a non-exhaustive list of human endeavors, which are accepted as sources of patentable CII. By creating such a list, it has a risk of being interpreted as excluding areas of endeavor that are not on the list. The Resolution on Q158 expressly states that inventions could be patent eligible in all fields of activities. There is no reasonably objective basis to determine arbitrarily what areas of human endeavor
are or are not deemed sources of patentable inventions that should go on such list.

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.

7. 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. 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. 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

Requirements for patentability (novelty, inventive step/non-obviousness, and adequacy of disclosure) are sufficient for determining the patentability of all inventions, regardless of whether those inventions are computer-implemented inventions. There is nothing inherently different about computer-implemented inventions requiring a different form of claim drafting or other formality.

18. 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

As noted previously, there is no inherent difference between computer-implemented inventions and other inventions to justify different requirements for the former. The disclosure and enablement requirements should be the same for all inventions. These two requirements are sufficient to ensure that a computer-implemented invention was in the possession of the inventor and that the patent enables a person of ordinary skill in the art how to make and use the claimed invention.

20. Please comment on any additional issues concerning patent protection of CII your Group considers relevant to this Study Question.
Proposed resolution: “New and useful computer-implemented inventions (CII) should be eligible for patent protection and should be examined using the same criteria as applied to other inventions, i.e., inventorship, novelty, inventive step/non-obviousness (considering the claimed invention as a whole), and adequacy of disclosure.”

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.

Bea Koempel-Thomas