

# Patentability of Computer Implemented Inventions

AIPPI Study Question 2017  
onsdagen den 15 mars 2017

Louise Jonshammar

# Arbetsgruppen

Christian Arkelius, Ström & Gulliksson  
Johanna Wright, Ericsson  
Per Karlsson, Patent- och registreringsverket

Mika Silfver, Brann

Rapportör: Louise Jonshammar, IAM Advokatbyrå

Computer Implemented Invention = invention which involves the use of a computer, computer network or other programmable apparatus, where one or more features are realised wholly or partly by means of a computer program

“CII” (**EPO**)

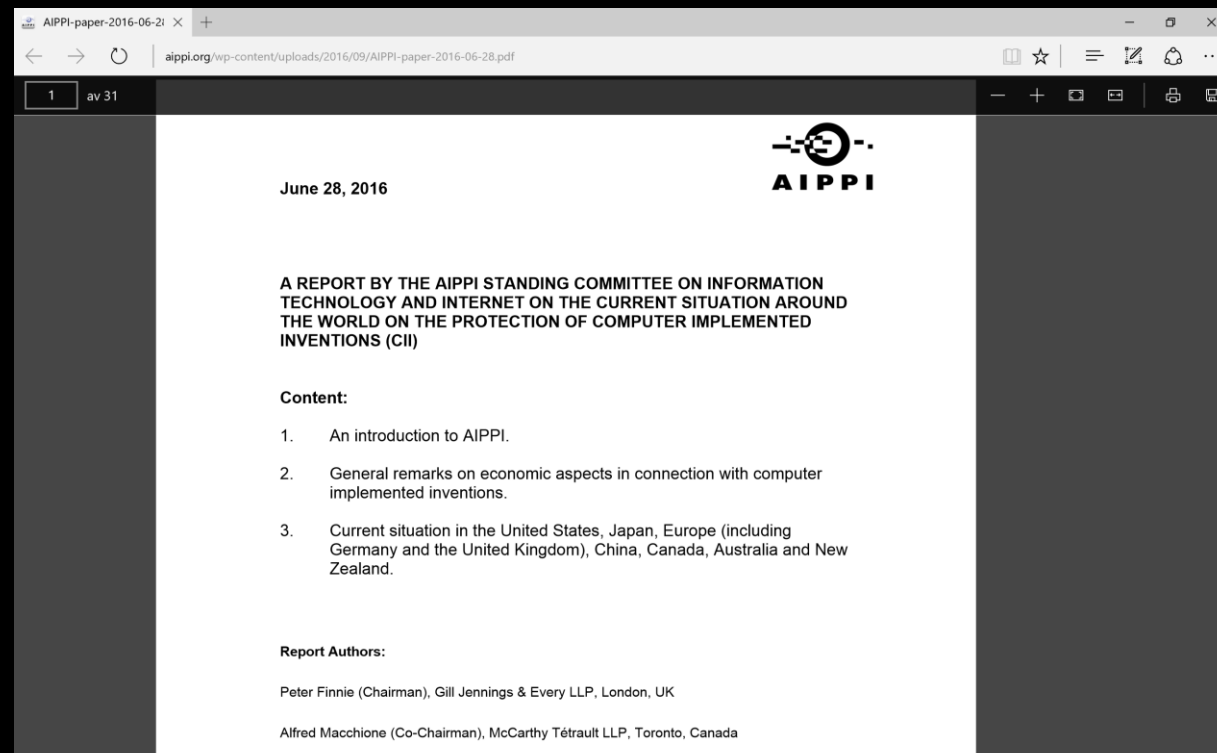
“software-related invention” (**JPO**)

“computer-related invention” (**KIPO**)

“invention relating to computer programs” (**SIPO**)

“software or computer-related technology” (**USPTO**)

# Report by the AIPPI Standing Committee on Information Technology and Internet on the current situation around the world on the protection of Computer Implemented Inventions (CII)



## Previous work of AIPPI

### Q57 (1975, confirmed 1988)

### Q133 (1997)

2. *Computer software should be considered patentable provided that the claimed subject matter meets the traditional patentability requirements of novelty, inventive step (non-obviousness) and utility or industrial applicability.*

3. *The technical character of computer software should be generally acknowledged and its industrial applicability should be construed in a broad manner so as to embrace the concept of enabling a useful practical result.*

### Q158 (2001, confirmed 2003)

1. *Inventions including methods used in all fields of industrial, commercial and financial activities, ..., should be entitled to patent protection provided that the invention as defined in the claims has a technical content.*

2. *If such an invention as a whole has a technical content, that should be sufficient for patentability even though the point of novelty and inventive step (non-obviousness) does not lie in the technical content.*

## Enlarged Board of Appeal of the EPO in G3/08

A modified inventive step test under Art. 56 EPC:

- Only features that contribute to the technical character of the invention are considered when assessing inventive step.
- Features which don't contribute, either independently or in combination with other features, to the technical character of the invention cannot support the presence of an inventive step.
- The technical solution does not necessarily need to result from a physical element, but may result from the performance of an algorithm.

Accordingly, a solution in a non-technical field (e.g. insurance mathematics) – no matter how innovative – would fail to serve as basis of an inventive step under Article 56 EPC. This practice clearly contradicts the position of AIPPI as stated in the Resolutions on Q133 and Q158.

## **US Supreme Court (2014)**

### ***Alice Corporation v. CLS Bank* 134 S. Ct. 2347**

Two-part analysis is applied to determine whether the claimed subject matter is eligible for patent protection under 35 USC 101.

1. Is the claim directed to a “law of nature, a natural phenomenon, or an abstract idea”, i.e. the judicial exceptions established by the US Supreme Court?
2. If yes, is the claimed subject matter patentable on the basis that the claim as a whole amounts to “significantly more” than the exception? “

An “abstract idea” (e.g. a computer-implemented method of hedging risks) will not pass the “two-part analysis” no matter how advanced the contribution is, unless it is accompanied by a further contribution outside the field of the judicial exceptions and this contribution qualifies as “significantly more”. “Significantly more” may refer to improvements to the functioning of a computer itself.

Beyond eligibility, for a claim to be patentable, it must also be novel and inventive “as a whole” and satisfy other requirements including written description and enablement.

The “two-part analysis” contradicts AIPPI's position as stated in the Resolutions on Q133 and Q158.

From the foundation of modern patent law until the 1960s there has been – at least in Europe and in the US – an implicit consensus that the availability of patent protection should be limited to achievement in certain areas of human endeavour. Consequently, achievements in all other areas of human endeavour are excluded, no matter how advanced they may be (but which may however be protected by other IP rights, such as copyright or designs). [...]

With the availability of computers, the intuitive approach of distinguishing between patentable and non-patentable inventions was bound to fail: every computer is a “machine” and consumes energy, so every computer program “looks” as if it is a new machine. [...]

AIPPI's position to allow patentability of CII irrespective of the area of human endeavour to which the respective software contributes may look workable and sound. However, this approach is increasingly unlikely to enjoy worldwide consensus. It may be that the only viable alternative to AIPPI's position is a contribution-based examination of the patentability of the CII in question, i.e. a test of whether the CII contributes to areas of human endeavour which is accepted as a source of patentable inventions. If so, it is highly desirable for AIPPI to provide 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).



## **National law**

### **- Swedish Patents Act/European Patent Convention**

The notion of invention excludes that which is exclusively

- computer programs
- discovery,
- scientific theory or
- mathematical method,
- aesthetic creation,
- scheme, rule or method for performing mental acts, for playing games or for doing business
- presentation of information

...considered non-technical and therefore excluded from patentability to the extent the patent application or patent relates to the specified subject-matter or activities as such.

**Patentability** of CII is examined under the same requirements as any other invention: patents are only granted for inventions which are new in relation to what was known before the filing date of the patent application (novelty) and which also differs essentially therefrom (inventive step).

When assessing inventive step, all features which contribute to the technical character of an invention are taken into account. This also includes non-technical features interacting with technical features to produce a technical effect.

Non-technical features (even though interacting with technical features) which do not contribute to the technical character of the invention cannot contribute to an inventive step. It is of no relevance whether or not a CII makes a **contribution in a certain field of technology**.

## Questions on Harmonization of the law

**Should there be any exclusion from patentability per se of subject matter relating to CII?** Patentability of CII should be assessed on the same requirements as other inventions. The notion of invention shall exclude non-technical ideas, per se.

**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?** No. Contribution approach means assessing whether an invention is present or not by comparing the subject-matter with prior art. It should not be put (back) in practice

## Questions on Harmonization of the law

**Should there be any specific claim drafting or other formal requirements which are applicable to CII?** No. Computer Implemented Inventions are not a technical field of its own, or limited to e.g. electro engineering. A mechanical invention implemented by using a computer should not be examined any differently than a mechanical invention which does not involve the use of a computer.

- Unity of invention
- Claim coverage in infringement situations

**Should there be any specific requirements as to sufficiency of disclosure and/or enablement which are applicable to CII?**

No. What matters is what the skilled person understands, not formal requirements on flowcharts etc.

## Any additional issues concerning patent protection of CII

...very reluctant to pointing out certain human endeavours as being patentable, thereby excluding other features which may be technical in certain contexts when assessing an invention as a whole. Fear that this would create a patent system which is inflexible and which, over a longer period of time, would hinder technology development if new and innovative technology fell outside such a list of patentable human endeavours.

Exclusions from the notion of invention as we know them, exclude only non-technical endeavours as such. What is not considered to have technical character shall be understood and implemented narrowly, so as to not hinder innovative progressions in technology. Also, the exclusions from the notion of invention does not differentiate between various technical fields.

Most method claims today are implemented using a computer, and looking only at Internet of Things we can already foresee that the areas of technology which are relevant for CII are almost unlimited.

## Any additional issues concerning patent protection of CII

... appreciates the efforts of AIPPI to reach a common denominator list of human endeavours to be acceptable for patentability, but recommends that the issue shall be focused on technical and non-technical features and on the technical effect of the invention.



Ia Modin

Advokat | Attorney-at-law  
+46-(0)727-33 15 30  
[ia.modin@iamlaw.se](mailto:ia.modin@iamlaw.se)



Fredrik Persson

Jur. kand. | Attorney-at-law  
+46-(0)709-61 87 44  
[fredrik.persson@iamlaw.se](mailto:fredrik.persson@iamlaw.se)



Louise Jonshammar

Jur. kand. | Attorney-at-law  
+46-(0)705-19 78 99  
[louise.jonshammar@iamlaw.se](mailto:louise.jonshammar@iamlaw.se)

**Tack!**

IAM Advokatbyrå  
Västra Trädgårdsgatan 15  
111 53 Stockholm  
Sweden

[www.iamlaw.se](http://www.iamlaw.se)