# Patents on computer-implemented inventions and pure software patents: what's in a name?

This text tries to explain **why allowing patents on "computer-implemented inventions" (as defined in the proposed directive) is no different from allowing "pure software patents"**, and as such why opponents of the directive on the patentability of computer-implemented inventions always talk about a directive on software patents.

## What do you understand under "computer-implemented invention"?

- The **most straightforward meaning of "computer-implemented invention"**, would be **a solution that is actually implemented by a computer** (after all, that's what the term literally says). **Computers only implement logical/mathematical solutions**. That is why they are called computers: they compute, they do simple math very quickly. So with only a computer you can only implement logic, math and rules of organisation. **These are not inventions according to Art 52 EPC. So the straightforward meaning is contradictory.**
- **What is hopefully meant with the term** (but which is **contrary to the definition in art 2a**), **is gadgets which implement an invention, and which also happen to have a computer inside**.
- I'll use mobile phones and washing machines as examples on this page.

## How do patents normally work, for things that are not computer-implemented inventions?

- **Mobile phones and washing machines were invented a long time ago**, so you can't invent them again. Since patents are only granted for inventions, you **cannot patent a mobile phone nor a washing machine**.
- You can however create a mobile phone with a new, better antennae, or a washing machine with a better motor. So **although the mobile phone and the washing machine are not new themselves, they can *contain* inventions, and these inventions can be patentable**.
- You can then get a patent on "a mobile phone with a new type antennae that is created such and such", or on "a washing machine with a new motor that is constructed like this". Since you actually invented a new type antennae and motor however, you could just as well get a patent on "a new type antennae that..." or on a "new type motor that..."! (except when the only advantage of your invention is in conjuction with that specific application)
- **Conclusion**: **when you invent something, you can patent this invention. You can say in your patent claim that the invention is used in one or other device, but that merely makes your claim more specific; it does not influence whether or not your invention is patentable**.

## So what about computer-implemented inventions?

- **Example 1**: suppose we create a **program for a mobile phone which dramatically improves its reception, or a revolutionary washing program for a washing machine that gets all stains out**.
    - The **above innovations do not lie in the fact that you use a computer program**, but in your research in how to send and received the signals that are in the airwaves (i.e., how to modulate and demodulate them, ...), or what exactly your washing machine should do to get those stains out (i.e., which motions to make, what temperature the water should have, ...).
    - These innovations **may** be patentable inventions, but that will be decided like for any other innovation by traditional patent law and case law. **The fact that there's also a computer (program) involved, is irrelevant.**
- **Example 2**: compare the above with a **program that guesses names of contacts in your phonebook** as you type them on the mobile phone, **or with a more configurable setup for the washing machine** (so that you can tell it exactly how much water you want, and the temperature for each washing step).
    - These second examples contain innovative software, but **computer programs as such cannot be patentable according to Art 52 of the EPC.**
    - The washing machine and the mobile phone are also not inventions, since they are not new (nor do they contain an invention). **This means no invention is present, and no patent must be granted**.
- The antennae signal processing or washing process of the **first example could be inventions, and since computers participate in their implementation, you might even talk of computer-implemented inventions if that expression were defined as by the European Parliament in its first reading of September 2003.** In the **second examples** (washing machine management application and phonebook user interface) there is **no invention, there is only an *innovation in software***.
- **Conclusion**: if you **insist on calling all examples computer-implemented inventions**, you force yourself to consider the software in the second examples as the invention (as it's the only new thing), so **you are granting pure software patents**. This is the **risk of using contradictory terminology, without even giving an explicit definition that solves the contradiction** (with some violence to semantics).

## Synthesis: how patents are supposed to work.

- **Patents are for inventions**.
- **Mobile phones and washing machines are already invented**, so you can't invent them again. They **can all contain inventions** though, and the invention may deserve a patent.
- The **patent may claim a mobile phone with a new antennae** (invention = antennae, not mobile phone), or claim a washing machine with a better motor (invention = motor, not washing machine).
- **The objects that are claimed are different from the invention**. The invention must be in the claimed object in order for the applicant to be allowed to claim this object, but the invention is not the whole claimed object.
- **The invention is what you add to the prior art, so the invention is the contribution**. This contribution must be technical, inventive, new, and susceptible of industrial application. It is **not enough that the claimed object is technical**.
- The reason you have to look at the invention and not at the claimed object as a whole, is that you want to give patents to promote innovation. You **can only promote innovation if you look at the contribution, since that's the innovative part**.
- Computer programs as such are not patentable according to EPC Art 52: this means that **adding a computer program to a patentable invention does not render this invention unpatentable**, but **it doesn't mean that adding a (new) computer program to an otherwise unpatentable technical apparatus makes the computer program patentable**! (however, that's the way the EPO/CEC/JURI interpret that statement)
- The **CEC an JURI language confuses** things terribly, and **pretends the (computer-implemented) invention would be the mobile phone or the washing machine** (e.g., because it contains a known motor or antennae or even a computer), and says that additionally there must also be a technical contribution (possibly including non technical features –art 4.3– such as a new program driving the motor). **According to them however, the contribution is not required to be technical, new or susceptible of industrial application (so it can be pure software)**, it must only be not obvious.
- If you (like CEC and JURI) say that the invention is the claimed object, this implies that the invention and the technical contribution are two different things. **You can then apply some patentability test to the invention and some to the contribution**. This leads to **doubts such as "Should this invention (a mobile phone) be patentable?"** There is no answer, because a mobile phone is not an invention. The invention is something it may have, but you can never tell whether it should be patentable by looking at the whole mobile phone.

## Can you give an example of how the proposed directive allows software patents?

- Simplified, the **European Patent Convention states**:
  1. Art 52.2: **Programs for computers** shall **not** be regarded as **inventions**.
  2. Art 52.3 The provision "programs for computers shall not be regarded as inventions" shall **exclude patentability of programs for computers only to the extent to which a patent relates to programs for computers as such**.
- This is equivalent to the Swedish law (harmonized with the EPC in 1976):
  > "That which only constitutes a computer program, is never regarded as an invention."
  > *("Såsom uppfinning anses aldrig vad som utgör enbart ett datorprogram.")*

- This **contradicts article 2 of the directive**, which simplified says:

  > a "computer-implemented invention" means an invention the performance of which involves the use of a computer and having features which are realised by means of a computer program.

- Conclusion: article 2 in its present form is a Trojan Horse, not a washing machine.

## So how can we fix the directive?

- **Do not push** for amendments that mix the tests for patentability or which loosen its conditions. **Examples of bad amendments** are am4JURI (to recital 11, but note that the CEC article is no good either), am5JURI (to recital 12, restatement of scrapped article 3), am7JURI (recital 13(c)), am14JURI (to article 2 (a)), ITRE-6 (to article 2 (b)), am16JURI (to article 4) and am18JURI (comp-1 to article 5).
- **Do push** amendments that clearly restate Art 52 of the EPC and which introduce the requirement for handling of forces of nature in the definition of "computer-implemented invention" (and not just in the requirements for making a computer-implemented invention patentable). Introduce clear and strict definitions for the the terms "technical" and "industrial application". Hold up the right for publication and conversion (art 6(a) that was voted in JURI).
- The reason the **"forces of nature"** are so important as a condition to have an invention, is that a computer program as such can not control the forces of nature, so this condition will properly exclude them from patentability. All innovations that have been traditionally patentable, will remain so in the future this way, but you can stop the EPO's drift to granting patents on pure software and business methods this way.
- FFII will soon publish a list of amendments that are to be tabled by different political groups and will explain which ones limit patentability and clarify the current situation. Of course, all amendments will be accompanied by the detailed FFII analyses you've all come to love so much, similar to the analysis of the amendments tabled in JURI at <http://swpat.ffii.org/papers/eubsa-swpat0202/juri0304/index.en.html#tit>!