



Patentability of computer programs in Europe.

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1. Patentability of computer programs "as such".

Unlike under U.S. patent law, under the [European Patent Convention](#) (EPC) and the national legislation of most European national patent regulations, computer programs are listed among categories that are not regarded as patentable. This exception only applies to the extent to which a patent application relates to the computer programs "as such". The reason for this exclusion is that computer programs or schemes are abstract (non-technical), whereas a patentable invention must relate to a technical field and have a technical character. In regard to computer programs, this exclusion also extends to things that are an integral part of the program and to applications for which the program is intended (word or data processing, algorithms, business methods). So, according to European patent laws, the "software" patents cannot be granted.

2. Patentability of computer-implemented inventions.

Although computer programs "as such" are not patentable, if the subject matter specifies computers, computer networks or another conventional programmable apparatus, or a program therefor, to carry out at least some parts of a scheme or having one or more features that are realised wholly or partly by means of computer program, it is to be examined as a "computer-implemented invention".

As the practice of European Patent Office (EPO) and many national patent offices indicates, computer-implemented inventions are patentable provided that such an invention has a technical character that involves what is called a "technical contribution to the prior art" or "solution of a technical problem" (e.g. a reduction in the number of mouse-clicks needed to perform an electronic business transaction, a reduction of memory access time, co-ordinating and controlling internal data using computers instead of humans to process secret/private/sensitive data in order to increase security or confidentiality, automating a known process which provides surprising speed or economy of scale benefits). The technical character of the contribution is thus one of requirements qualifying a computer-implemented invention for patentability, next to novelty, non-obviousness, and industrial applicability.

3. Technical contribution requirement in the practice of EPO.

According to the EPO's case law, a technical contribution is made in a computer-implemented invention, and such an invention is patentable if at least one of the following criteria is satisfied:

- **the underlying problem is of a technical nature** (e.g. prolonging the useful life of the X-ray tubes by connecting an X-ray device and a computer working with a data processing unit that controls the X-ray tube to achieve optimum exposure while avoiding overload - T 26/86, Koch and Sterzel X-ray apparatus decision),
- **the technical effects are obtained by solving the problem** (e.g. using a computer to implement a method for inputting rational angle values in a graphic drawing system to more precisely show the rotation of the graphic objects shown on the screen - T 59/93 decision),
- **the details of the solutions in the invention require technical consideration that implies a technical problem** (e.g. installing a transfer slip into a file in the computer

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memory unit in order to allow financial and inventory management of data) T 769/92 [SOHEI](#) case).

4. Claims to computer program products.

Claims involving computer program products are a special case. According to the practice of EPO, they are patentable if there are "**further technical effects going beyond the normal physical interactions between the program and the computer when the program runs or is loaded on a computer**" (a technical character could be found in the further effects deriving from the execution (by the hardware) of the instructions given by the computer program (EPO T 1173/97, [IBM](#) and [IBM II](#) decisions).

5. Legislative initiatives.

In order to eliminate differences existing in the protection of computer-implemented inventions offered by the administrative practices and the case law of the EU Member States, the directive on computer-implemented inventions was proposed in early 2002 and rejected by the European Parliament in mid-2005.