

Software Patents - The Proposal for a EU-Directive -

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Overview

- I. Fundamental Problems of Patentability of Software
- II. International legal framework
- III. Recent trends (e.g. Germany)
- IV. The EU-Proposal
- V. Consequences
- VI. Conclusion

I. Fundamental Problems of Software-Patents

- 2 pillars of Patent-Law:
 - No Patents on methods and algorithms
 - Patents on technical innovations
- Software as an in-between: Technical adaptation of a method/algorithm

I. Fundamental Problems of Software-Patents

- Political implications: Patent on Software implies a wider application of int.prop.rights/monopolies to ideas/algorithms
- Vice Versa: A restrictive interpretation implies a withdrawal of Patent Law as software substitutes technical/hardware solutions

I. Fundamental Problems of Software-Patents

- Incremental innovations characteristic for software development
- Interoperability
- Network effects reinforcing monopoly tendencies resulting of patents
- Difficult assessment of novelty: no databases for the state of the art available

I. Fundamental Problems of Software-Patents

- Two layers of the discussion:
 - Computer programs: technical or not?
 - If deemed to be technical: Which perspective shall be relevant in order to assess the novelty – Software engineers or others (Economists, Linguists -> methods/algorithm-experts)?

II. The International Framework

- Art. 27 TRIPS:
 - Patents shall be available „in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application“
 - Hence: Computer programs not per se excluded! (as far as they are considered to be part of a technology)

II. The International Framework

- Art. 52 EPC
 - (1) European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step.
 - (2) The following in particular shall not be regarded as inventions within the meaning of paragraph 1:
 - (a) discoveries, scientific theories and mathematical methods;
 - (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;

No success to abolish 52(2 c)

III. Recent Trends

- Germany: Technical implementation necessary
 - Analytic tools for recognition of language/speech: Patentability (+) (Supr.Court 11.5.2000 X ZB 15/98)
 - Tools to find wrong wording: Patentability (-) (Supr.Court 17.10.2001 – X ZB 16/00)
 - Patents for: CAD/CAM-programs, operating systems, engineering tools
 - No Patents for: Word-processing, tabulating and calculation programs, commercial applications
- Problem in the EU according to the EPC: One EPO – but Divergence of interpretations (no single jurisdiction)
- US: Patent eligibility of commercial methods (State Street Bank; Amazon/Barnes and Nobles)

III. Recent Trends: EPO

- Koch & Sterzel: Program for optimum exposure in an X-Ray tube while protecting against overloading – Patent (+)
- Vicom: improved method of processing images involving an increase in processing speed – Patent (+)
- Sohei: interface to combine functions of independent systems where the exercise of technical skills was needed before computer programming could be used – Patent (+)
- Controlling Pension Benefits – Patent (-)
- Word Processing/Thesaurus – Patent (-)

IV. Proposal for a EU-Directive

- Aim: Harmonisation of Treatment of Software Patents
- No Replacement of the EPC (different members)
- Method: In Principal legislating the court`s rulings
- Core Elements:
 - Concentration on computer-implemented inventions
 - No Patents on Algorithms
 - No Patents on mere ideas/commercial methods

IV. Proposal for a EU-Directive

- Art. 2 a:
- „Computer-implemented invention means any invention the performance of which involves the use of a computer, computer network or other programmable apparatus and having one or more *prima facie novel* features which are realised wholly or partly by means of a computer program or computer programs ((words in italics shall be dropped accord. to the Council))

IV. Proposal for a EU-Directive

- No patent eligibility of isolated programs (protection only by means of intellect.prop.rights) (programs „as such“ – Technology) – recital 7
- Difficult assessment of programs running on computers: belongs to a field of technology!

IV. Proposal for a EU-Directive Technical Contribution

- Art. 2b: „a contribution to the state of the art in a technical field which is not obvious to a person skilled in the art“
- Commission: Applying the EPO-“problem-solution“-approach (whether obvious or not)
- Council: Art. 2b S. 2: „The technical contribution shall be assessed by consideration of the difference between the state of the art and the scope of the patent claim considered as a whole, which must comprise technical features, irrespective of whether or not these are accompanied by non-technical features“

IV. Proposal for a EU-Directive: Technical Field

- Art. 4 I: „ a condition involving an inventive step that a computer-implemented invention must make a technical contribution“ (Council)
- Art. 4 II (Council): „A computer-implemented invention shall not be regarded as making a technical contribution merely because it involves the use of a computer, or other apparatus. Accordingly, inventions involving computer programs which implement business, mathematical or other methods, which inventions do not produce any technical effects beyond the normal physical interactions between a program and the computer, network, or other apparatus in which it is run, shall not be patentable“.

IV. EU-Proposal: Form of Claims

- Art. 5 (Council): „...invention may be claimed as a product, that is as a programmed computer, a programmed computer network or other programmed apparatus, or as a process carried out by such a computer, computer network or apparatus through the execution of software“
- A claim to a computer program, either on its own or on a carrier, shall not be allowed unless that program would, when loaded in a computer, programmed computer network or other programmable apparatus, implement a valid patent claim relating to the same application in accordance with paragraph 1

IV. EU-Proposal: Relationship to the Directive on Legal Protection of Computer Program

- Applicability of both Directives
- Consequences for decompilation, interoperability and Copying:
 - not being touched upon by the Patent-Proposal
 - However, regulated by the Computer Program-Directive
- Art. 6 (recital 18): exceptions of the Program-Directive apply also for Patent Law (reengineering/interoperability)

V. Consequences

- No explicit definition of „technical“
- Open Source Movement: „adv.transformation of material objects, relation between cause and effect can only be validated by experimentation with natural forces and not by computational deduction from prior knowledge
- Reference to a physical environment still needed (Recital 12, 13, 13c (new - Council))
- Hence: computer programs are not per se technical!
- Jurisprudence on the question of „technical“ still remains debated – no total harmonisation

V. Consequences - Non obvious contribution

- Novelty: related to the software , not hardware
- Non-obvious contribution must be technical in character, may take also non-technical aspects into consideration
- However: heavily debated as the inclusion of non-technical contributions may open the field for the indirect patent eligibility of business methods (see Europ.Parliament – Proposal for an Amendment)

V. Consequences - Claims

- Hence: No program on a carrier or in isolation from a machine! (Difference to the practice of the EPO and Germany (Supr.Court 17.10.2001 X ZBV 16/00))
- See also Recital 7a (new Council): expression of a comp.program in source code or object code or in any other form (program as such) cannot constitute a patentable invention

VI. Conclusion: Progress or not?

- The essential problem „technical“ still open
- However: clarification conc. the need for a technical background, bending back recent supreme court rulings in Member States
- Real step forward: Chance to unify the jurisprudence by opening the way to the Europ.Supr.Court
- Core issue for the future: assess the borderline between technology – algorithm/methods
- Only case by case solutions preferable – too much uncertainty concerning future developments (guidelines), diff. Idiosyncrasies with regard to diff. types of software