



Stefan Steinbrener \*

# Patentability of computer- implemented inventions

\* Dr. rer. nat., chairman of Board of Appeal 3.5.1, member of the Enlarged Board of Appeal  
This paper gives the author's personal views



## Contents

- I. Introduction
- II. The law
- III. Current case law of the EPO boards of appeal
- IV. Status quo re computer-implemented inventions



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Article 52(1) EPC

*"European patents shall be granted for any inventions which are susceptible of industrial application, which are new and which involve an inventive step."*



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Article 52(2) EPC

*"The following in particular shall not be regarded as inventions within the meaning of paragraph 1:*

- (a) discoveries, scientific theories and mathematical methods;*
- (b) aesthetic creations;*
- (c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;*
- (d) presentations of information."*



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Article 52(3) EPC

*"The provisions of paragraph 2 shall exclude patentability of the subject-matter or activities referred to in that provision only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such."*



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Two "hurdles" for Patentability

- **Existence of invention [1<sup>st</sup> "hurdle"]**

distinction invention ↔ non-invention

- **Quality of invention [2<sup>nd</sup> "hurdle"]**

Novelty / inventive step / industrial applicability



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Current case law

- T 1173 / 97 – 3.5.1  
(Computer program product / IBM; OJ EPO 1999, 609)
- T 1194 / 97 – 3.5.2  
(Data structure product / PHILIPS; OJ EPO 2000, 525)
- T 931 / 95 – 3.5.1  
(Controlling pension benefits system /  
PBS PARTNERSHIP; OJ EPO 2001, 441)
- T 641 / 00 – 3.5.1  
(Two identities / COMVIK; OJ EPO 2003, 352)
- T 258 / 03 – 3.5.1  
(Auction method / HITACHI; OJ EPO 2004, 575)



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Definition of "invention"

- "Inventions" within the meaning of Article 52(1) EPC have technical character
- Any of the subject-matter listed in Article 52(2) EPC may comprise an invention if it has technical character (in particular because a technical problem is solved or technical effect achieved, technical interactions occur or technical considerations must be applied)



I. Introduction
II. The law
III. Current case law of the EPO boards of appeal
IV. Status quo re computer-implemented inventions

## Definition of “technical”

- Undefined legal concept / no general definition through European case law
- Grey area requiring interpretation to be staked out through a series of individual decisions



I. Introduction
II. The law
III. Current case law of the EPO boards of appeal
IV. Status quo re computer-implemented inventions

## Guidelines and structured approach

*"The vast majority of patent specifications are perfectly clear about the extent of monopoly they claim. Disputes over them never come to court. In borderline cases, however, it does happen that an interpretation which strikes one person as fair and reasonable will strike another as unfair to the patentee or unreasonable for third parties. That degree of uncertainty is inherent in an any rule which involves the construction of any document. It afflicts the whole law of contract, to say nothing of legislation. In principle it is without remedy, although I shall consider in a moment whether uncertainty can be alleviated by **guidelines** or a **"structured" approach to construction.**"*  
(emphasis added)

(Lord Hoffmann, House of Lords in *Judgement in the cause Kirin-Amgen Inc and others v. Hoechst Marion Roussel Limited and others* on 21 October 2004)



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Staking out the grey area:

- T 244 /00 – 3.5.1 (Remote-control / MATSUSHITA)
- T 258/97 – 3.5.1 (Multi-address call / CANON)
- T 49/99 – 3.5.1 (Information modelling / INTERNATIONAL COMPUTERS)
- T 1177/97 – 3.5.1 (Translating natural languages / SYSTRAN)
- T 125/01 – 3.5.1 (Gerätsteuerung / HENZE)
- T 643/00 – 3.5.1 (Searching image data / CANON)
- T 172/03 – 3.5.1 (Order management / RICOH)



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Examining for the existence of an invention [1<sup>st</sup> "hurdle"]

- Examining for the existence of an invention is not to be confused or mixed up with examining for novelty, inventive step and industrial applicability [different "hurdles"]
- Examining for the existence of an invention means assessing the invention as a whole, in the light of all technical and non-technical features



I. Introduction
II. The law
III. Current case law of the EPO boards of appeal
IV. Status quo re computer-implemented inventions

## Technical character of apparatus / method [1<sup>st</sup> "hurdle"]

- An apparatus in the sense of a concrete technical product has technical features providing a basis for technical character
- Methods can have technical character by virtue of their technical nature or their use of technical means for a non-technical purpose (see T 258/03 – Auction method/HITACHI)



I. Introduction
II. The law
III. Current case law of the EPO boards of appeal
IV. Status quo re computer-implemented inventions

## Examining for quality of invention [2<sup>nd</sup> "hurdle"] (1)

- Invention must be in a technical field
- If invention is based on a non-technical innovation, its technical realisation – if novel and not obvious – may be patentable
- Technical realisation begins with implementation of the non-technical concept "as such" by the technical expert, once this has been put to him by the non-technical expert (eg businessman or economist)



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Examining for quality of invention [2<sup>nd</sup> "hurdle"] (2)

- Features are analysed to establish which of them contribute to the technical character
- Features which make no contribution to technical character are not part of the technical solution
- Those features have to be ignored when assessing inventive step



I. Introduction

II. The law

III. Current case  
law of the  
EPO boards  
of appeal

IV. Status quo  
re computer-  
implemented  
inventions

## Computer programs

- All computer programs have technical character in so far as they cause physical changes in the hardware  
(see T 1173/97 – Computer program product/IBM)
- To be patentable, they must have a further technical effect going beyond a "trivial" technical interaction and giving rise to the requisite technical character
- If patentable, then as either computer-program or data-structure products with or without data carriers



## Key findings of the Board (1)

- T 1173 / 97 – 3.5.1  
Further technical effect required for computer programs
- T 1194 / 97 – 3.5.2  
Functional data to be distinguished from cognitive data
- T 931 / 95 – 3.5.1  
Controlling pension benefits program = business method "as such"



## Key findings of the Board (2)

- T 641 / 00 – 3.5.1  
Charging costs in a mobile phone system does not contribute to technical character
- T 258 / 03 – 3.5.1  
No technical contribution by changing auction rules so as to circumvent technical problem



### Key findings of the Board (3)

- T 244 /00 – 3.5.1  
Aesthetic aspects of display design = not technical
- T 258/97 – 3.5.1  
Use of different redialling schemes for a list of phone calls = not technical
- T 49/99 – 3.5.1  
Information modelling = not technical
- T 1177/97 – 3.5.1  
Linguistic aspects of automatic translation method = not technical



### Key findings of the Board (4)

- T 125/01 – 3.5.1  
Program controlling car radio module to improve operability = technical
- T 643/00 – 3.5.1  
Arrangement of menu items on screen to search and retrieve stored images = technical
- T 172/03 – 3.5.1  
Mere automation of constraints imposed by order management method = not technical