Patentability of Computer Software and Business Methods in Europe

Dr. Clara Neppel
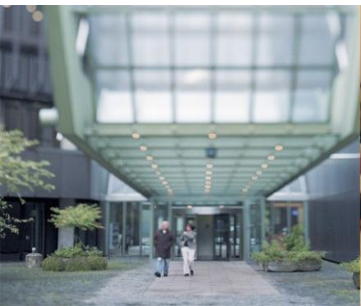
Examiner, Scenario Analyst

Directorate 2.2.21 (Computers)

European Patent Office │ Munich, Germany

cneppel@epo.org │ www.epo.org

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Examination practice at the EPO - Example

"A method of promoting toy sales,

comprising the step of
placing the toys on the lower shelves of the store,
where they are easily accessible for children."

classified in IPC class G06Q
> 230,000 published applications (March 2011)

G06Q:
Data processing systems or methods,
specially adapted for
administrative, commercial, financial, managerial, supervisory
or forecasting purposes

Key requirements for patentability

The four key requirements are set out in Article 52(1) EPC:

"*European patents shall be granted*

- for any **inventions**, in all fields of **technology**,

provided that they

- are **new**,
- involve an **inventive step**
- and are susceptible of **industrial application**."

Key requirements for patentability

Article 52(2) and (3) set out a non-exhaustive list of items that are not to be regarded as inventions:

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.

(3) Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities **as such**.

What is an Invention?

There is no positive definition of the term "invention" in the EPC.

EPC - The European
Patent Convention

Interpretation

Guidelines for
Examination in the EPO

Case Law of the
Boards of Appeal

What is an Invention?

Non-Inventions

- Narrow Interpretation

- Activities falling within the notion of a **non-invention** would typically represent purely abstract concepts devoid of any technical implication.

- A non-invention has no technical character.

T 258/03 (HITACHI)

Technical Character

Further requirement for patentability
**implicitly** contained in the EPC:

the invention must be of **"technical character"**
to the extent that it
- must relate to a **technical** field → R.42(1)(a) EPC
- must concern a **technical** problem → R.42(1)(c) EPC
- must have **technical** features in terms of which the matter for which
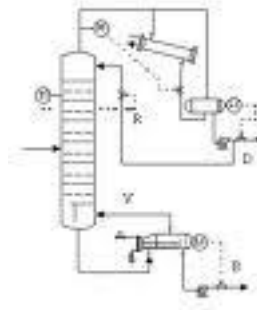 protection is sought can be defined in the claim → R.43(1) EPC

Guidelines, C-IV 1.2

- no general definition of „technical"

=> interpret grey areas
    series of individual Board of Appeal decisions
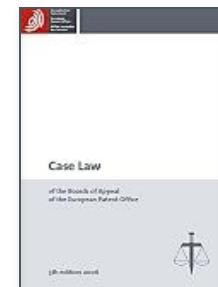
Technical is...

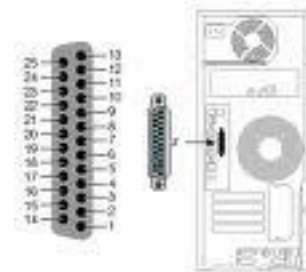☐ processing **physical data** parameters or control values of an industrial process

☐ processing which **affects the way a computer operates**

    ☐ saving memory, increasing speed

    ☐ security of a process, rate of data transfer etc.

☐ the **physical features of an entity**

    ☐ memory, port etc.

Things that <u>do not</u> contribute to the technical character of a claim

- **aspects which relate solely to the non-inventions listed in Art. 52(2), e.g.:**

  – marketing, trading and insurance

  – choosing a desirable job candidate out of all candidates

  – order processing and administration

- **the processing of non-physical data:**

  – e.g. prices, company information, customer profiles

- **for computer programs:**

  – technical effects inherent in running any computer program, e.g. transistors switching, data being read from and written to memories, etc.

Exclusion

☐ **Subject-matter *is not* excluded from patentability**

✕ **Subject-matter *is* excluded from patentability**
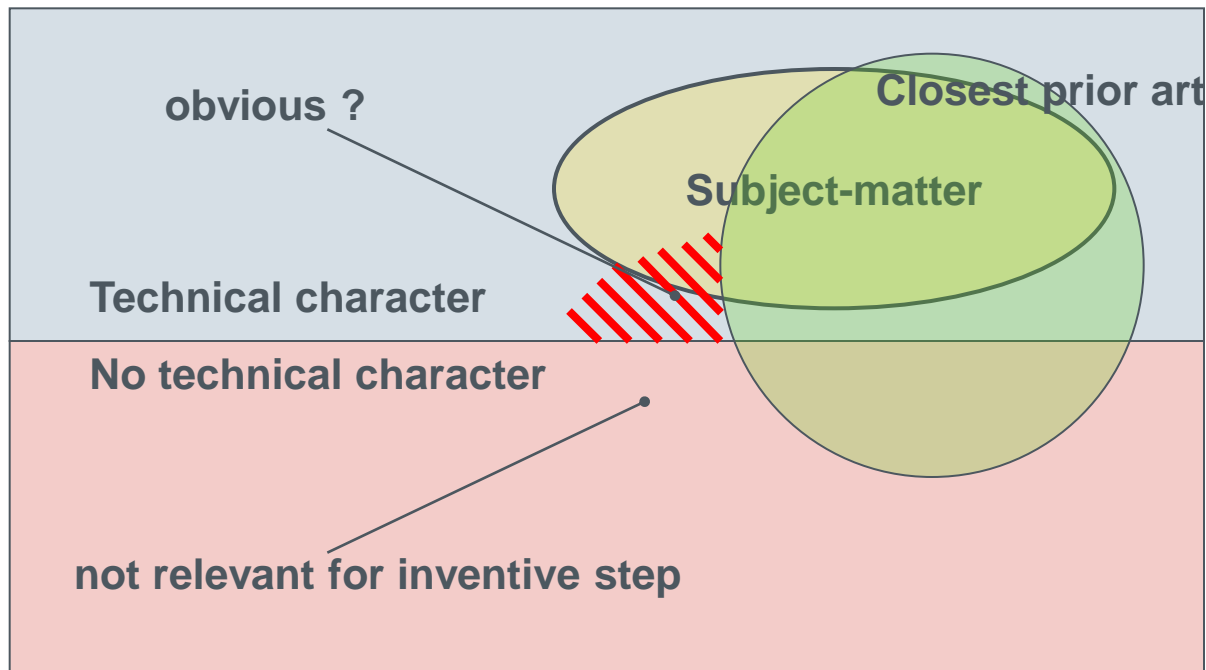
**At least one feature has technical character =>
subject-matter has technical character.**

Inventive step

non-technical aim may appear in formulation of problem

Problem and solution approach

Establish closest prior art

Determine differentiating features and their technical effects

Formulate an objective technical problem

Decide whether the proposed solution is obvious for the skilled person

Example from Business Methods

"A method of controlling payment and delivery of content"

user

content provider

Regulation: access to content is free
- if user is from a country with GDP < limit value AND
- if the requested content is scientific content

Example 1. Exclusion

A method of controlling payment and delivery of content, the method comprising:

- a provider receiving a request for content from a user;
- the provider accessing content information describing the requested content;
- the provider accessing regulation information describing at least one regulation that is related to the payment and the content information of the requested content and to geographical information of the user;
- determining the geographic location of the user;
- the provider determining whether the requested content satisfies the at least one regulation;
  - if so, delivering the requested content to the user for free;
  - if not, transmitting a payment request to the user.

Non-tecchnical process/ aspects

Clearly Technical Aspects

**none**

Example 2: mix of technical and non-technical

A **computer-implemented** method of controlling payment and delivery of content within **a computer system** comprising **a** user **terminal, a** provider **server** and **a database which are connected via a communication network**, the method comprising:

– the provider **server** receiving a request for content from the user **terminal**;

– the provider **server** accessing **in the database** content information describing the requested content;

– the provider **server** accessing regulation information **in the database** describing at least one regulation that is related to the payment and the content information of the requested content and to geographical information of the user;

– determining the geographic location of the user;

– the provider **server** determining whether the requested content satisfies the at least one regulation;

  • if so, delivering the requested content to the user **terminal**
  • if not, transmitting a payment request to the user **terminal**.
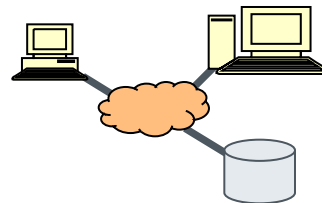
= [business process] + **Does this merit a patent?**

Example 2: notoriously well known technical features

Clearly Technical Aspects

A computer implemented method comprising:

- a **server** receiving data from a **terminal** over a communication **network**;

- the server accessing data in a **database**;

- the server processing the accessed and received data;

- the server transmitting the processing result to the terminal;

Non-Technical Aspects/ Process

Same business process as in Example I

**no technical interaction
=> no technical contribution**

The subject matter of the claim defines technical and non-technical aspects and thus has **technical character.**
assessing inventive step

How we examine CII of *any* kind: Identified technical features

2. If there are notoriously **well known technical features** and the technical effect goes not beyond the expected one

⟶ **Inventive step** objection on basis of general knowledge of the notoriously known technical features (Art. 56 EPC)

⟶ The search report will contain a statement that no documentary evidence of the general knowledge of the skilled person was needed (or will cite evidence of appropriate technical knowledge)

Example III: Computer-Implemented Business Method

- A **computer-implemented** method of controlling payment and delivery of content within **a computer system** comprising **a** user **terminal, a** provider **server** and **a database which are connected via a communication network**, the method comprising:
  - the provider **server** receiving a request for content from the user **terminal**;
  - the provider **server** accessing **in the database** content information describing the requested content;
  - the provider **server** accessing regulation information **in the database** describing at least one regulation that is related to the payment and the content information of the requested content and to geographical information of the user;
  - determining the geographic location of the user;
  - the provider **server** determining whether the requested content satisfies the at least one regulation;
    - if so, delivering the requested content to the user **terminal**
    - if not, transmitting a payment request to the user **terminal**.

  - ☐ wherein the geographic location of the user is determined by GPS using the chip with the features x, y, z

How we examine CII of *any* kind: Identified technical features

3. If there are **technical features** and/or interaction between these and other **features indirectly or directly affecting the function** of the technical features
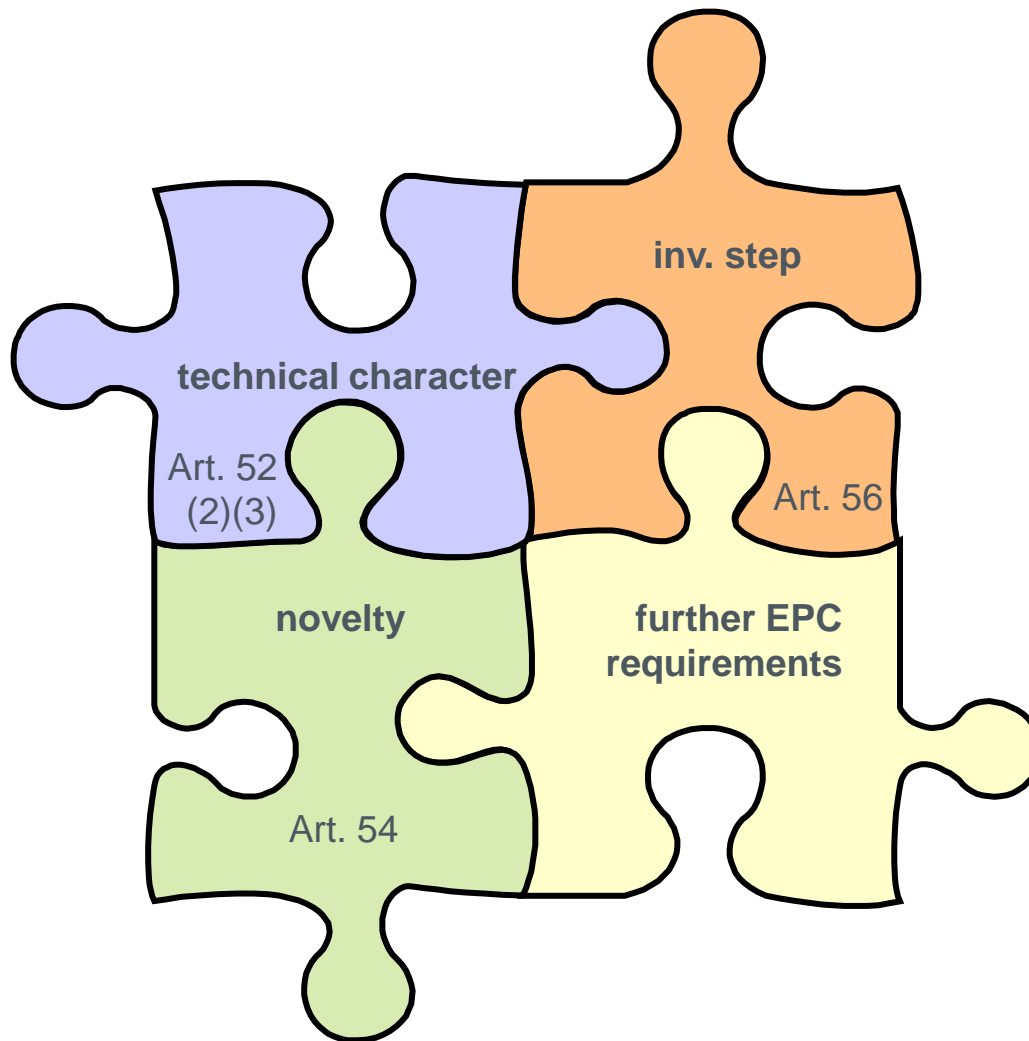
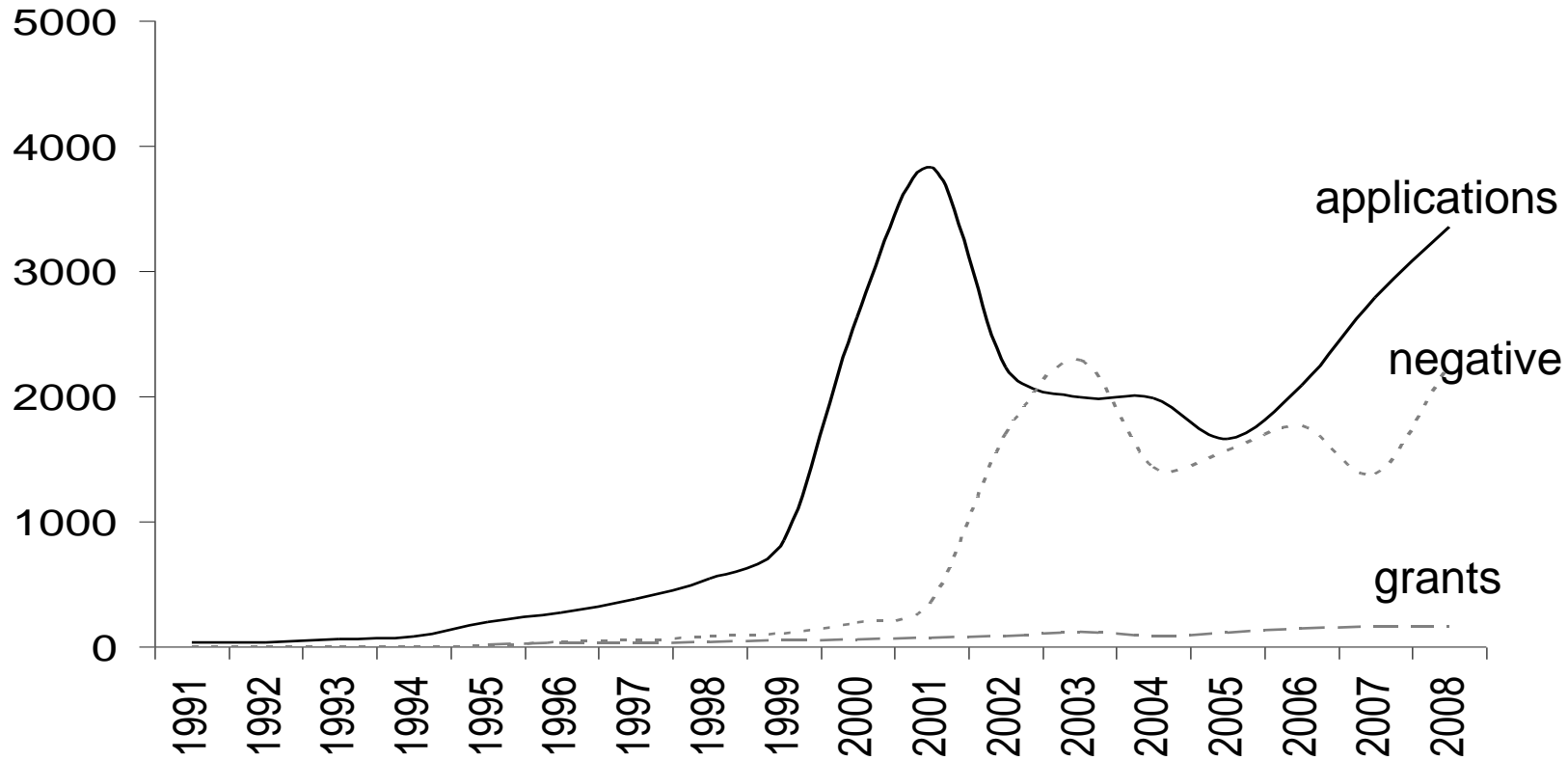→ Novelty and Inventive step examination
Article 54 or 56 EPC

→ The search report will cite evidence of appropriate technical knowledge relevant to the field of technology

Basic Components for the Grant of CII-Applications

Business methods at the EPO

Classification tree G06Q:

G06   Computing, calculating, counting
G06Q   Data processing systems or methods, specially adapted for
              administrative, commercial, financial, managerial, supervisory or forecasting purposes

G06Q10   Administration
G06Q20   Payment schemes
G06Q30   Commerce
G06Q40   Finance

Other forms of IP protection?

Trade marks:

• Made by "Nokia"

• Product "N95"

• Software "Symbian", "Java"

© Nokia

Patents:

• Data-processing methods

• Semiconductor circuits

• Chemical compounds

• …

Copyrights:

• Software code

• Instruction manual

• Ringtone

• …

Trade secrets:

?

Designs (some of them registered):

• Form of overall phone

• Arrangement of buttons in oval shape

• Three-dimensional wave form of buttons

• …

Copyright – What can be protected?

Basic principle:

Copyright should not protect abstract ideas or functional objects, but rather the expression of such ideas.

➡️ Ideas and principles should be left free for anyone to use.

under copyright law:
unauthorised copying is not permitted

- **literal copying:**
  literal use of words and expressions used by the author

- **non-literal copying:**
  use of the essence of the author's expressions
  without using the actual words

Copyright – Infringement

Challenging questions:

How should literal and functional features be distinguished in software?

Is copyright infringed if the functional parts of the software code are copied?

→ judging copyright infringement: jurisprudence is not uniform

Copyright infringement - Case law

UK: Case Law

1. "The making of a computer program which emulates another program but which does not copy the other program's code or graphics is not an infringement."

2. "Ideas which underlie the program are not protected by copyright"

Germany: Case Law

BGH: "The idea underlying a TV show (TV format) is not protected by copyright because copyright protects only the result or expression of an individual activity of the mind.

Conclusions

- Functional aspects of are surely better protected by patent law than copyright.

- Examination practice for business methods not uniform across patent offices

- In Europe service innovations might meet the requirements of the patent system in the technical implementation

- Copyright is a substitute for businesses (SMEs) that cannot afford the highly expensive and time consuming process of obtaining a patent.

- Copyright protects against piracy,
patents protect against imitation by competitors.

Any Questions?

Thank you
for your attention!

cneppel@epo.org

Annex: Classification - Business Methods

G06Q: Data processing systems or methods, specially adapted for administrative, commercial, financial, managerial, supervisory or forecasting purposes

G06Q10/00	**Administration, e.g. office automation, reservation; Management, e.g. resource or project management**
G06Q20/00	**Payment schemes, architectures or protocols**
G06Q30/00	**Commerce, e.g. marketing, shopping, billing, auctions or e-commerce**
G06Q30/00A	Marketing, e.g. market research and analysis, surveying, promotions, advertising, buyer profiling, customer management, rewards; price estimation and determination
G06Q30/00B	Billing; Invoicing, e.g. tax processing in connection with a sale
G06Q30/00C	Data processing in buying/selling transactions
G06Q40/00	**Finance, e.g. banking, investment or tax processing; Insurance, e.g. risk analysis or pensions**