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

December 2011
"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.

Guidelines for Examination in the EPO

Case Law of the Boards of Appeal

Interpretation

EPC - The European Patent Convention
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 **do not** 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

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

non-technical aim may appear in formulation of problem
"A method of controlling payment and delivery of content"

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.

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 1

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

- Technical character
  - Art. 52 (2)(3)
- Novelty
  - Art. 54
- Further EPC requirements
  - Art. 56
- Inv. step

Part 3: Examples
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"

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

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