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Has been added in view of Art. 27 TRIPS

Patentable Inventions

Article 52 EPC2000 - Patentable inventions

(1) 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.

(2) 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.
Day-to-day Practice: What is an "Invention"?

T 258/03—"Auction method/HITACHI"

"Activities falling within the notion of a non-invention "as such" would typically represent purely abstract concepts devoid of any technical implications" (reasons 4.5)

However: "A method involving technical means is an invention within the meaning of Art. 52(1)" (headnote, reasons 4.3)

T 424/03—"Clipboard formats I/MICROSOFT"

"A method implemented in a computer system (e.g. having a memory) has technical character" and is thus an invention (reasons 5.1)

Claimed subject matter is typically regarded as being an "invention" within the meaning of Art. 52 EPC

Referral G 03/08: Alleges divergence in case law (question 2)
Opinion of Enlarged Board of Appeal: No divergence
Four Patentability Requirements of Art. 52 (1) EPC

- Invention, i.e. non-excluded as such (Art. 52(2) & (3) EPC)
- Industrial applicability (Art. 57 EPC)
- Novelty (Art. 54 EPC)
- Inventive step (Art. 56 EPC)

Mostly debated issue in practice

Opinion G 03/08 of Enlarged Board of Appeal

Day-to-day Practice: Inventive Step

T 641/00 – "SIM card/COMVIK": Modified "problem/solution approach"

1. technical field of invention
   - = technical field of person skilled in art

2. identify closest prior art
   - may be general purpose computer

3. difference claim ↔ prior art, identify effect of difference
   - emphasis is on technical effects (deducibility from original spec.)

4. deduce technical problem
   - may contain non-technical aspects as constraints to be met

5. technical features (forming alone or together claimed solution) obvious?
   - features contributing to solution of a technical problem or implying non-trivial technical considerations when being implemented → considered
   - features not contributing to solution of technical problem (i.e. not giving a technical contribution to the prior art) → no significance for inv. step

Opinion G 03/08 of Enlarged Board of Appeal: confirms approach
“The mere fact that mental activities are involved does not necessarily qualify subject matter as non technical” (reasons 16)

“Providing a technical tool for efficient search, retrieval and evaluation of images stored in an image processing apparatus” is a technical problem (reasons 14)

“Visually attractive nature of graphic design does not have technical character. However, (...) an arrangement of menu items (or images) on a screen may be determined by technical considerations. Such considerations may aim at enabling the user to manage a technical task (...)” (reasons 16)

“Functions/steps of processing the images in a specific format ... provide information to the user in the form of a technical tool for an intellectual task he has to master, and hence contribute to the technical solution of a technical problem of efficient search, retrieval and evaluation of images … “ (reasons 17)

“... analysing the text and dividing it into text segments relates to the physical arrangement of the overall image structure of the displayed text with a view to solving a technical problem, namely to improve the text presentation, i.e. readability, on a display.” (reasons 4.7)

... can thus be considered as contributing to a technical solution to a technical problem" (headnote, reasons 4.5 & 4.7)

“... enabling the user to perform their task more efficiently, relates to how, i.e. by what physical arrangement of the text, cognitive content is conveyed to the reader…

“The presentation of natural language text on a display in a manner which improves readability…”

T 1143/06 – "Data selection system/BRITISH TELECOM" of April 1, 2009: Dismisses the above approach (see below)
Case study: EP 97 120 468 (T 928/03 – Guide display device/KONAMI)

**Invention:**

1. A guide display device for use in a video game system of the type in which a couple of teams, each having a plurality of player characters (P1, P2, P3) displayed on a monitor screen (13), compete with each other on a single game medium (B), at least one of said teams being under the control of a game player through a controller (8) said guide display device comprising:
   - monitoring means for identifying the player character (P1) which keeps said game medium (B), and
   - guide displaying means for displaying a guide mark (G1) which accompanies the player character (P1) identified by said monitoring means and which indicates that said game medium (B) is kept by said player character (P1) identified by said monitoring means, characterized in that
     - said guide mark (G1) is ring-shaped and displayed on the image of the field plane (F) around the player character (P1) at a location near foot of said player character (P1).

**Prior art (WO 96/34364):**

- Triangular control mark m above head

**Technical Board of Appeal 3.5.1 decided at oral proceedings on June 2, 2006:**

- "Guide display device" represents physical entity (displaying means) having technical character (in view of T 258/03 – Auction method/HITACHI)

**Invention** within meaning of Art. 52 EPC

**Preliminary opinion:**

- "ring shaped" mark = natural candidate because mark should not conceal the player character
- "at a location near a foot" = natural design option
Case study: EP 97 120 468 – Main request (rejected)

Object: 
- Improved identification of player character
- Enhanced operability of video game system

Solution: 
- ring-shape
- around player character
- at location near the foot on virtual game field

Technical Board of Appeal decided: Main request NOT inventive

Case study: EP 97 120 468 – Auxiliary request

AUXILIARY REQUEST

1. A guide display device for use in a video game system (…)

   monitoring means
   guide displaying means for displaying a guide mark (G1) which accompanies the player character (P1)
   characterized in that
   guide mark (G1) is ring-shaped and displayed on the image of the field plane (F) around the player character (P1) at a location near foot of said player character (P1),
   guide displaying means further displays a pass guide mark (G3) accompanying another player character (P2) (…) to which said game medium (B) can most easily be passed from said player character (P1) (…),
   said guide displaying means displays said pass guide mark (G3) accompanying another player character (P2) such that a portion of the pass guide mark (G3) is displayed on the end of the display area even when said another player character (P2) and said pass guide mark (G3) come out of the display area of the monitor screen so as to properly indicate the direction in which the game medium (B) is to be passed by the player character (P1).
Case study: EP 97 120 468 – Arguments (auxiliary request)

Object: → advice user of guide display device
→ providing **more information**
→ despite **limited area** of display screen

Solution: → **guide mark (G1)**

→ **pass guide mark (G3)**
  also displayed when teammate outside of display area at edge of display indicating direction to teammate

Many possible solution alternatives:
→ Changing perspective (e.g. rotation, different camera, etc.)
→ Zooming in/out
→ Shifting display area (e.g. scroll buttons)
→ picture-in-picture with small 2D of complete game field

Case study: EP 97 120 468 – Auxiliary request (granted)

Prior art relating to GPS (D8: DE 40 33 832):

Technical Board of appeal argued:
→ Pass guide mark game-rule driven (does not contribute to inventive step)
→ Displaying indication to place outside of display known (e.g. highlighting of streets in GPS systems)

Our counterarguments:
→ GPS navigation different kind information needed: "what to do next" (e.g. turn left at next crossing), NOT where final destination
→ D8 rather suggests Scroll buttons (S1-S4)
  Zoom in/zoom out (W1, W2)

Technical Board of Appeal decided: Auxiliary request **INVENTIVE**
The game rule constraint has to be distinguished carefully from its technical implementation (reasons 5.3.3)

Specific guide mark (even though being per se "simple") was taken into account for and regarded as involving an inventive step (reasons 4.1.1)

While the fact that the team mates' locations should be known by the user may be regarded as a direct consequence of the game rules, the technical realization of how such locations are made known is not related to the game rules (reasons 5.3.3)

Technical contribution

When the fact that the team mates' locations should be known by the user may be regarded as a direct consequence of the game rules, the technical realization of how such locations are made known is not related to the game rules (reasons 5.3.3)

"Specific guide mark is serving a technical purpose (i.e. viewing) and not displayed only for sake of viewing, but for enabling a continued man-machine interaction, so that it can enter into the appraisal of inventive step" (reasons 4.1.1)

"Specific guide mark (even though being per se "simple") was taken into account for and regarded as involving an inventive step" (reasons 4.1.1)

T 1023/06 (3.2.4) – "Computer implemented game process/IGT": Particular display relieved the player of specific mental task "enabling him to comprehend the game results quicker" (reasons 3.7.3)

"an improvement of readability, which relates to how "cognitive content" is presented, constitutes a technical contribution" (reasons 3.7.3)

T 717/05 (3.4.3) – "Auxiliary game/LABTRONIX": Any display of information of the internal state of an apparatus conveys a cognitive content to the user, as this is the fundamental reason for its existence. To exclude all such systems from patent protection cannot be seriously envisaged" (Reasons 5.4)
Controversial Case Law: Designing Diagrams

**T 125/04 (3.5.1)** – Assessment system / COMPARATIVE VISUAL ASSESSMENTS
Task of designing diagrams non-technical, even if the diagrams arguably conveyed information in a way which a viewer may intuitively regard as particularly appealing, lucid or logical (Reasons 4.5)

**T 49/04 (3.4.3)** – Text processor/WALKER
- Rationale of T 125/04 explicitly dismissed (Reasons 4.6.3)
- Specific way how cognitive content is conveyed to the reader is a technical solution to a technical problem (Reasons 4.5)

**T 740/05 (3.5.1)** – Attention Management/ACCENTURE
- "designing diagrams is in general non-technical" (Reasons 2.3)
- even if "particular representation has been chosen taking a human being's capabilities of perception into account" (Reasons 2.5)
- "Since diagram has no effect besides the intellectual impact on the person interpreting it its features are from a technical point of view irrelevant" (Reasons 2.5)

Art. 52 (2) d) EPC: Presentation of information

**T 1143/06 (3.5.1)** – Data selection system/BRITISH TELECOM
- "Contrary to the statements made in decision T 49/04, a feature which relates to the manner how cognitive content is conveyed to the user on a screen normally does not contribute to a technical solution to a technical problem." (Reasons 4.5)
- Confirms approach of T 125/04 (3.5.1) – "Assessment system / COMPARATIVE VISUAL ASSESSMENTS" and implicitly of T 740/05 (3.5.1) – Attention management/ACCENTURE: "task of designing diagrams is non-technical" (Reasons 3.4)
- T 1143/06 related to the movement of the elements symbolising the data files over the screen in accordance with the relevance of the sort statements to the data file it represents.
- Regarded in isolation this feature must be held to be a "presentation of information" in the sense of Article 52(2)(d) EPC. In its claim context the feature can therefore only contribute to an inventive step if it additionally produces a technical effect.
- "The user's evaluation of the information is a mental act. Like any cognitive process it is at least in part subjective (...). Truly technical is thus only the system's response to the user's activation of the selection means." (Reasons 3.8)
  → Improved man-machine interaction should be still technical like in T 928/03 (3.5.1)
Open: Patentability of Model Inventions (1)

**T 49/99 – Information modeling/ INT. COMPUTERS**

Steps of abstract information modeling for an undefined physical system in a computer = "an intellectual activity which has all the traits typical of non-technical branches of knowledge", i.e. analogous to the non-inventions listed under Article 52(2)(a) and (c) EPC (Reasons 7)

Information modeling is a first stage of software development for systematically gathering data about the physical system to be modelled or simulated and to provide a real world model of the system on paper (Reasons 7)

Information modeling is an intellectual activity and should be treated like any other human activity in a non-technical field, which is, as such, not an invention under Article 52(1) EPC (Headnote I)

Only the purposive use of information modelling in the context of a solution to a technical problem may contribute to the technical character of an invention. (Headnote I)

Open: Patentability of Model Inventions (2)

**T 1227/05 – Circuit simulation I / INFINEON**

The independent method claims both entail the specific modeling of an adequately defined class of technical systems (circuits) and define specific measures, not just mental constructs, for targeted implementation and application of the circuit model under the technically relevant conditions of 1/f noise."

Simulation of a circuit subject to 1/f noise constitutes an adequately defined technical purpose for a computer-implemented method functionally limited to that purpose." (Headnote I; Reasons 3.1)

Specific technical applications of computer-implemented simulation methods are themselves to be regarded as modern technical methods which form an essential part of the fabrication process and precede actual production, mostly as an intermediate step. In that light, such simulation methods cannot be denied a technical effect merely on the ground that they do not yet incorporate the physical end product." (Headnote II, Reasons 3.4.2)

"The board’s rejection [in T 49/99] was based on claim elements whose subject-matter was more like a metalanguage for describing an abstract model than a description of technical features which implemented the model." (Reasons 3.5.2)
Conceptional methods and meta-methods of software creation do not comprise as a rule technical features relevant for the patentability and, thus, cannot sustain an inventive step, unless there can be shown, according to the specific circumstances of the case, that there exists a direct causal relationship with a technical effect relevant for a technical problem to be solved (headnote)

Simulation/Modeling of physical entities patentable

Conceptional programming methods / meta-methods not patentable, unless exceptionally direct causal relationship to technical effect

STILL OPEN: modeling of business processes in view of computer-implementation

Take opportunity to appeal suitable cases to TBA
## Conclusions – Current Case Law

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<th>Description</th>
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<td>Mostly inventive step (Art. 56 EPC) discussed (modified problem-solution approach) – Confirmed by Opinion of G 03/08 of Enlarged Board of Appeal</td>
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<tr>
<td><strong>Established</strong></td>
<td>Specific Graphical User Interfaces (GUI) may solve technical problem, e.g. how display is done, i.e. by what physical arrangement of cognitive content</td>
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<tr>
<td><strong>Controversial</strong></td>
<td>GUI: relieving user of mental task (at least) controversial whether or not regarded as technical solution to technical problem</td>
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<tr>
<td><strong>Established</strong></td>
<td>GUI: improving man-machine-interaction solves technical problem</td>
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<tr>
<td><strong>Open</strong></td>
<td>Modeling: patentable for physical entities; not patentable for conceptional programming methods; but for modeling of business processes not yet decided</td>
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Should you have any questions, please contact us any time:

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