



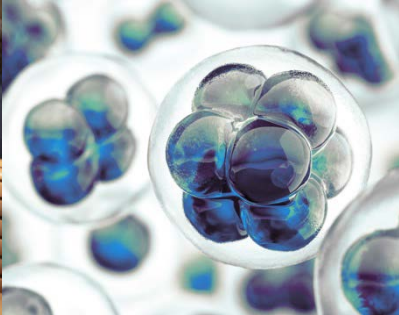
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Computer-implemented inventions: problem-solution approach

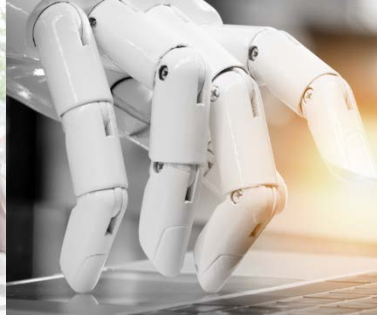
Guidelines G-VII, 5.4



CII GL Working Group



EPO



v. 0.1

Patentable subject-matter: Legal Basis, Art.52

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 applications**.

Article 52(2) EPC: The following **in particular** shall **not** be regarded as **inventions**:

- (a) Discoveries, scientific theories, **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**.

Article 52(3) EPC: [(a)-(d) excluded from patentability] ... **only ... as such**

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The content of this document does not form part of the Guidelines. This document should not be referred to in communications from the divisions. It is not meant as internal instructions, either.

The purpose of this document is to provide educational and training material for the corresponding section of the Guidelines and to present the current examination practice of the EPO related thereto.

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G-VII, 5.4 Inventive step and claims with technical and non-technical features

- Mix of **technical** and **non-technical features** is allowed
- The presence of an inventive step requires a non-obvious technical solution to a technical problem
- For the assessment of inventive step all features contributing to the technical character are taken into account (T641/00 Comvik, headnote 1)
 - including features appearing non-technical in isolation, but which in context of the invention contribute to produce a technical effect serving a technical purpose
- Features not contributing to the technical character cannot support the presence of an inventive step

G-VII, 5.4 Problem-solution approach for mixed-type inventions

- Inventive step **cannot** be based on **features not contributing to the technical character** of the invention
- All **features contributing to the technical character** **must** be identified and taken into account in the assessment
- An aim to be achieved in a non-technical field, formulated in a claim, may appear in the formulation of the objective technical problem (Comvik, headnote 2)

G-VII, 5.4 PSA for mixed-type inventions (1)

Steps of the PSA applied to mixed-type inventions (G-VII, 5.4):

- i. Determine the **features contributing to the technical character** of the claim, on the basis of the technical effect(s) achieved;
- ii. Determine the **closest prior art** considering this/these feature(s);
- iii. Determine the **difference(s)** with respect to the closest prior art;
 - ▶ If no differences (at all) then lack of novelty (Art. 54 EPC)

Else:

- Determine their **technical effect(s)** in view of the whole claim
- Identify from this/these difference(s) the **features making a technical contribution and those which do not;**

G-VII, 5.4 PSA for mixed-type inventions (2)

- ▶ If no technical contribution then lack of inventive step (Art. 56 EPC)
- ▶ If differences include features making a **technical contribution**:
 - Formulate **objective technical problem (OTP)** on the basis of the technical effect(s) achieved by this/these feature(s). If differences include also **features making no technical contribution**, this/these features and any **non-technical effect(s)** achieved by the invention may be used in the formulation of the OTP as a constraint to be met (Comvik, G-VII, 5.4.1).
 - Determine if claimed solution to OTP is obvious to skilled person; i.e. decide on inventive step (Art. 56 EPC).

G-VII, 5.4 Analysis of features contributing to the technical character

- Normally, the determination in step (i) is on a first-glance basis only.
- At the beginning of step (iii) the analysis is performed in a more detailed manner.
- This analysis may reveal that some features considered in step (i) as not contributing to the technical character of the invention do, on closer inspection, make such a contribution. The reverse situation is also possible.
- In such cases, the selection of the closest prior art in step (ii) might need to be revised.

G-VII, 5.4.1 Objective technical problem (1)

- The OTP is a technical problem which the skilled person in the particular technical field was asked to solve at the claim's priority date.
- The OTP must not refer to features of which the skilled person would only have become aware by knowledge of the solution claimed (G-VII, 5.2). This however applies **only** to the features of the claimed subject-matter which contribute to the technical character of the invention.

G-VII, 5.4.1 Objective technical problem (2)

- A mere appearance of a feature in the claim does not automatically exclude it from appearing in the problem formulation (e.g. an aim to be achieved in a non-technical field may appear in the problem formulation – Comvik, headnote 2)

G-VII, 5.4.1 Objective technical problem (3)

- **The formulation of the OTP** may refer to
 - **features which do not make any technical contribution** and/or to
 - **any non-technical effect achieved by the invention**as a given framework within which the technical problem is posed, e.g. in the form of **requirements specification** provided to the **person skilled in a technical field**
- Formulating the technical problem in accordance with these principles aims at ensuring that **inventive step is acknowledged only on the basis of features which contribute to the technical character** of the invention.

G-VII, 5.4.1 Technical effects (1)

- The **technical effects** used for formulating the objective technical problem have to be **derivable** from the application as filed when considered in the light of the closest prior art (G-VII, 5.2).
- Claims directed to a **computer-implementation of a non-technical method or scheme**, in particular **business method or game rules**
 - A modification to the underlying non-technical method or scheme aimed at **circumventing a technical problem** rather than addressing this problem in an inherently technical way, is **not considered to make a technical contribution** (T 258/03 Hitachi, T 414/12).

G-VII, 5.4.1 Technical effects (2)

- Consideration should be given to any **further technical advantages or effects** associated with the specific features of its implementation **over and above** the effects and advantages **inherent** in the underlying non-technical method or scheme. The latter do not qualify as **technical effects** for the purpose of defining the OTP.