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**To:**  
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**Subject: Amicus curiae brief concerning case G 3/08**

Dear Sirs,

Enclosed please find my personal statement on the Referral under Article 112(1)b EPC by the President of the EPO to the Enlarged Board of Appeal concerning case G 3/08. Having a technical background as an industrial mathematician, I am currently writing on a thesis concerning computer-implemented inventions in the course of studies on "patent and licensing management". Therefore, I would like to give my views on this subject and my answers to the nine questions raised by the President of the EPO and hope that they can contribute to a more precise definition of computer programs (and computer-implemented inventions) in Article 52 EPC and to a more consistent ruling in this complex area in future. However, it should be noted that the set up of a proper and consistent law framework should also consider the possible impacts and consequences on the economy in this context.

Best regards,

  
Josef Synka

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# General views on patents and computer-implemented inventions related to Case G 3/08

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Dr. Josef Synka

A patent, in its original form, is granted to provide an opportunity for an inventor to protect his novel and inventive technical idea from unauthorized use by others, i.e. without paying. The invention, thereby, is protected for a certain period of time (20 years) so that the inventor can take advantage of it either by exploiting it directly in his or her business or indirectly via licensing. In any case, if not withdrawn before, the invention and the claims made in the patent application concerning this invention are published after some time (18 months of filing the application). This is done to inform the public about new (i.e. not state-of-the-art) inventions and to foster competition and new inventions in this or related areas. Further, a patent must/should not be in conflict with the moral and ethical standards of a country, which thus excludes the human body in every phase of its development and in most countries also weapons and torture materials and techniques from patenting, to name but a few examples.

While it is often argued that patents stop technical progress, this is not true in general as long as the main patenting principles, as outlined above, are followed. However, there are certain subject matters which must be excluded from patenting since otherwise these basic principles of patenting could not be maintained, such as discoveries (not an invention by man, existed even before man's appearance on earth), scientific theories and mathematical methods (cannot be circumvented (usually „set in stone“) - would prohibit future technical progress if it was patentable), aesthetic creations (aesthetics is a matter of good/bad taste and thus cannot be discussed; non-technical), schemes, rules and methods for performing mental acts (thoughts/ideas are (and must be) free in order to ensure progress), for playing games or doing business (in general, of no technical character), and for computer programs (at least basic programs, e.g., for graphical representations of data), and, finally the reproduction of information (again, progress would be restricted otherwise – at least in most cases). As one can see, in some cases the wordings “in general”, “at least”, or “at least in most cases” were used. Similar views obviously led to the “as such” clause as formulated in the additional paragraph (3) of Article 52 of the European Patent Convention (EPC), where the subject-matters or activities - stated as exceptional cases in the text above or as „non-inventions“ in paragraph (2) of Article 52 of the EPC - are to be excluded only to the extent to which a European patent application or claims thereof relate to them as such. However, the phrase „as such“ as used in paragraph (3) of Article 52 is less explanatory than the different wordings used in our explanations, given in parentheses above.

But, these general views on and principles for patenting, originally set up for the technical world of the “past”, which was mainly governed by mechanical inventions (merely “hardware”), have to be consistently transformed to our technical world of today, which is mainly „computer-driven“, i.e. governed by software-hardware interactions, to yield new or improved tools (handys, hearing devices, infotainment systems etc.), technical effects (infotainment systems, new devices for data storage or data processing and so on) or simply modifications thereof, which are new, inventive and commercially relevant. In order to provide a basis for a proper and consistent ruling on the patentability of computer programs or

computer-implemented inventions (CIIs), let us first pose and answer the following general question:

**GQ** When does a computer program (which is always stored either on a computer, an arbitrary data carrier or another specific physical device to be processed) satisfy the technical criterion for patentability in the sense of Article 52 (1) EPC?

The technical criterion should be considered as satisfied, if and only if the software enables a technical effect directly (direct cause), e.g. if the software supports a hardware (physical entity in the real world) in such a way that a technical part of a process can be realized and thus replaced or enhanced, or if the computer program causes a technical effect in combination with another technical feature claimed in the application (indirect cause), whereby the claims as a whole have to be looked at. As an example for a direct cause we could also state the case where the software-hardware combination is able to replace a mechanical part in a former process, for which a patent would have been granted provided that all the other criteria for patentability were satisfied by the claims for the proposed invention. For the indirect cause we refer to an example of an infotainment / telematics system, where the technical criterion of patentability is clearly violated by a mere claim for the reordering of the menu items on the touchscreen of the car device, but might be approved as being satisfied when it is argued (claimed) that the reordering causes fewer errors by and less distraction of its user during driving and thus leads to the technical effect of enhanced security (or reduced security risks) compared to state-of-the-art systems. The „as a whole“ approach means that as long as non-technical means contribute to a technical process or cause a technical effect, the technical criterion should be considered as being met and the respective claim should not be excluded from patentability.

Based on this answer, let us now turn to the nine questions, as raised in Case G3-08, the written statement of the President of the EPO, and provide a consistent answer to them:

**Q1** Can a computer program only be excluded as a computer program as such if it is explicitly claimed as a computer program?

**No**, the wording used should be irrelevant. The acceptance or exclusion should primarily be made on technical grounds: if it neither causes a technical effect in combination with a further technical feature claimed (indirect cause) nor does it realize a part of a technical process (direct cause), then it should be excluded from patentability, i.e., if GQ is answered in the negative (example: if the software is merely used for graphical representations of measurements, but neither does it support nor control the measurement process). However, it should be noted that the technical criterion is only one of four criteria (technical, new, inventive and industrially applicable) which an invention has to pass to be granted a patent.

**Q2 (a)** Can a claim in the area of computer programs avoid exclusion under Art. 52 (2)(c) and (3) merely by explicitly mentioning the use of a computer or a computer-readable data storage medium?

**No**, the explicit mentioning of a computer or a computer-readable data storage medium should not be sufficient. It must be ensured that the computer program yields either a direct or at least an indirect cause of a technical effect on the aforementioned hardware which goes beyond the “normal” physical interactions between software and hardware.

Q2 (b) If question 2(a) is answered in the negative, is a further technical effect necessary to avoid exclusion, said effect going beyond those effects inherent in the use of a computer or data storage medium to respectively execute or store a computer program?

**Yes**, see arguments used in answer to the general question GQ.

Q3 (a) Must a claimed feature cause a technical effect on a physical entity in the real world in order to contribute to the technical character of the claim?

**No**, it must not necessarily be a technical effect on a physical entity in the real world. It should be sufficient if the cause-and effect with an effect of technical character is achieved via a further technical feature claimed in the application. Thereby, this further technical feature can e.g. be enhanced security achieved by a faster response of the underlying system to interrupts (interactions) due to new software tools or constructs. The extent to which these new tools or constructs (or combinations thereof) also satisfy the invention criterion is to be considered in a separate assessment step.

Q3 (b) If question 3(a) is answered in the positive, is it sufficient that the physical entity be an unspecified computer?

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Q3 (c) If question 3(a) is answered in the negative, can features contribute to the technical character of the claim if the only effects to which they contribute are independent of any particular hardware that may be used?

**Yes**, look e.g. at the infotainment example, outlined in the answer to the general question GQ.

Q4 (a) Does the activity of programming a computer necessarily involve technical considerations?

**No**, not necessarily. For example, for the mere graphical representation of e.g. measurement data, which are already stored in the computer, no technical considerations are required. However, it should not be the technical considerations of programming (which might be larger for a low-level than for a high-level language) that matter in the decision whether the technical criterion is satisfied or not by a claimed feature, but the technical effect(s) which it causes.

Q4 (b) If question 4(a) is answered in the positive, do all features resulting from programming thus contribute to the technical character of a claim?

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Q4 (c) If question 4(a) is answered in the negative, can features resulting from programming contribute to the technical character of a claim only when they contribute to a further technical effect when the program is executed?

**Yes**, they may contribute indirectly to a technical effect, as described in the answer to general question GQ. In any case, the application and its claims must be looked at as a whole!