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Case G3/08 -- Referral under Art. 112(1)b) EPC by the President of the EPO to the Enlarged Board of Appeal; "Patentability in the Field of Computing" – Amicus Curiae Brief by SAP AG, Walldorf Germany

Dear Madam, Dear Sir,

We would like to thank the President of the EPO and the Enlarged Board of Appeal for the opportunity to voice our opinion on the matter underlying the present proceedings, which is "patentability in the field of computing".

In a highly competitive global business environment, SAP depends on appropriate protection for its innovations. For SAP, this of course implies a balanced approach to avoid distortions. SAP strongly relies on the EPO's gatekeeper role to maintain the right balance on patentability issues.

From a general perspective, we are convinced that the right balance can only be developed under a *case driven approach* as taken by the EPO examining divisions and by the case law of the EPO Technical Boards of Appeal. In contrast, any *legislative* approach suggested so far to further specify patentability exemptions in specific technology areas like CII has proven to be a significant challenge, due to the highly complex nature of the present matter.

As to the present Referral, our arguments below will deal with both (I.) the Admissibility of the present Referral as currently formulated and (II.) substantive answers and reflections prompted by the Questions of the present Referral.

SAP AG

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Vorsitzender des Aufsichtsrats: Hasso Plattner, Registergericht Mannheim HRB 350269

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- (I.) The Admissibility of the present Referral is based on the assumption that there is divergence in the case law of the Boards of Appeal. While we defer the issue of admissibility to the Enlarged Board of Appeal, we respectfully submit that the Technical Board of Appeal Decisions cited in the Referral reflect a natural progression of case law consciously followed by the EPO Technical Boards of Appeal.
- (II.) The Questions raised by the present Referral also yield an opportunity to provide our interpretation of the current legal framework and of the examination practice of the EPO regarding computer implemented inventions. We believe that the EPO has developed within the existing framework an approach which offers flexibility for an appropriate patentability test in each individual case. Such flexibility is currently reached by applying the “technicality” filter at various layers, i.e. either in context of Art. 52 EPC, or in context of Art. 56 EPC. While we are generally satisfied with this approach, our Answers and Comments provided below point towards possible further developments where we are experiencing a need for modifications to the current approach.

I. Admissibility of the Referral as Currently Formulated

The Admissibility of the Questions raised by present Referral is based on the assumption that there is divergence in the case law of the Boards of Appeal. The following Table sets forth Board of Appeal decisions on which the Referral Questions are relying to establish such divergence. The Table illustrates that these decisions may be considered to have been superseded by other more recent decisions, or at least subject to different interpretation (where specifically noted in the Table below):

Question(s)	Decisions Superseded / Subject to Different Interpretation	Superseding Decisions	Comments
1, 2 (A) and (B)	T 1173/97 (Computer program product/IBM)	T 258/03 (Auction method/HITACHI) T 0931/95 (Controlling Pension Benefits System / PBS)	The T 1173/97 “(further) <i>technical effect</i> ” requirement is superseded; from the superseding decisions, as well as from T 424/03 and beyond (with particular view on Art. 69 EPC), the formulation of patent claims is actually essential to satisfy the Art. 52 EPC “ <i>technical character</i> ” test; see our related Answers and Comments to Questions 1 and 2 under II. below
3 (A) (B) and (C)	T 1173/97 (Computer program product/IBM)	T 258/03 (Auction method/HITACHI) T 0931/95 (Controlling Pension Benefits System / PBS)	The T 1173/97 “(further) <i>technical effect</i> ” requirement is superseded; see our related answers and comments to Questions 1 and 2 under II. below

	<p>T 163/85 (Colour television signal/BBC) (different interpretation)</p> <p>T 190/94 (Océ-Nederland vs. Mitsubishi) (different interpretation)</p>	<p>T 424/03 (Clipboard formats/MICROSOFT)</p> <p>T 125/01 (Gerätsteuerung/HENZE)</p>	<p>In the decisions cited by the present Referral, no “<i>technical effect on a physical entity in the real world</i>” was actually required as necessary; in contrast, in T 424/03 the enhancement of the <i>internal</i> operation of a computer system satisfied both the Art. 52 and the Art. 56 EPC test; T 125/01 confirms that restructuring a software control is qualified in analogy to a hardware control to establish a “<i>technical contribution</i>” in the light of Art. 56 EPC; see our related Answers and Comments to Question 3 under II. below</p>
4 (A) (B) and (C)	<p>T 833/91 (Simulation of computer program external interfaces – IBM)</p> <p>T 204/93 (System for creating software source code components; AT&T)</p> <p>T 769/92 (General purpose management system/SOHEI)</p>	<p>T 1177/97 (Translating natural languages/ SYSTRAN)</p> <p>T 127/03 (Order management/RICOH)</p>	<p>Question 4 is answered to some extent under the superseding decisions; beyond, Question 4 provides an opportunity for further Comments on the EPO's practice re. CII inventions, as presented under II. below</p>

II. Substantive Answers and Comments to the Referral Questions

QUESTION 1:

CAN A COMPUTER PROGRAM ONLY BE EXCLUDED AS A COMPUTER PROGRAM AS SUCH IF IT IS EXPLICITLY CLAIMED AS A COMPUTER PROGRAM?

ANSWER TO 1:

A COMPUTER PROGRAM CANNOT BE EXCLUDED AS A COMPUTER PROGRAM AS SUCH OR OTHERWISE UNDER ART. 52 EPC, ONCE THE PATENT APPLICANT LIMITS THE REQUIRED SCOPE OF PATENT PROTECTION BY INTRODUCING AT LEAST ONE TECHNICAL FEATURE - SUCH AS A “COMPUTER” - INTO THE PATENT CLAIMS

COMMENTS TO 1:

We agree that purely formal considerations of patent claim construction should not be sufficient to solve the subject matter of the present referral, as Question 1 correctly seems to suggest.

However, we think that some differentiation is necessary in this context:

1. The simple fact that a claim in a patent application is explicitly formulated as a *“computer program”* should not automatically qualify the claimed invention as a *“computer program as such”* under Art. 52 (2) and (3) EPC. Rather, in consistency with the established case law of the Boards of Appeal, what ultimately matters is the existence of a *“technical character”* (not necessarily to be confused with a *“further technical effect”*), considering the claims of a patent application as a whole, interpreted in the light of the patent specification.
2. It should not make a difference whether a claim is formulated, for example, as a *“computer program”* or as a *“computer implemented method”*. This means that the above conclusion re. *“technical character”* should equally apply regardless of whether a claim is formulated as *“computer program”* or as a *“computer implemented method”*. A difference drawn in this respect would amount to pure formality.
3. Apart from the above, we submit that the formulation of a claim plays a significant role for the evaluation under Art. 52 (2)/(3) EPC. In fact, under Art. 69 EPC, the extent of the protection conferred by a European patent or a European patent application is predominantly determined by the terms of the claims, as read in context of the specification. Consequently, by formulating a claim, for example, as a *“computer program (product)”*, a *“computer system”*, a *“computer readable medium”*, a *“computer implemented method”*, or in any other way implying the use of a computer, the patent applicant deliberately limits the required extent of protection to a computer implemented application of his invention. As there can be no serious doubt about a computer being of *“technical character”*, such deliberate limitation by the applicant should therefore be a convincing reason to overcome the Art. 52 (2) and (3) EPC hurdle.

In this context, turning more specifically on *“computer program product”* claims, we would also like to submit that nothing else stands in the way of explicitly formulating a patent claim in such way¹.

4. We would like to emphasise that a patent claim overcoming the Art. 52 (2) / (3) hurdle in the above indicated way, i.e. by being formulated to imply the use of a computer, *uniformly* satisfies the *“technical character”* test under Art. 52. This implies that once the *“technical character”* has been established, the exceptions listed under Art. 52 (2) no longer apply. By way of illustration, once a claim satisfies the technical character test under Art. 52 in the above mentioned way, it can no longer be regarded, for example, as a *“method of doing business as such”*².

¹ To the contrary: If no such apparatus type of claims were available for computer implemented inventions in Europe, it is significantly more difficult to establish infringement in certain instances. For example, in Germany, if an infringing computer program product is offered from a server abroad or in an intangible form, a patent holder armed with only *“computer implemented method”* claims would have a *“weaker”* form of patent protection when compared to any other field of technology where apparatus claims are available. More specifically, armed with only *“computer implemented method”* claims a patent holder would be limited to a claim of indirect infringement against a competitor thus requiring proof of a related intentional element or establishing direct infringement by end user customers instead of competitors, thus burdening end users.

² These conclusions are consistent with the legislative history of the EPC, which confirms a narrow interpretation for the exemptions in Art. 52 (2) (see more recently T 154/04, reasons 6. and 7.), such narrow interpretation being conferred by the EPO BoA by applying the *“technical character”*

QUESTION 2:

- (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?
- (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?

ANSWERS TO 2:

- (A) ALL ART. 52 REQUIREMENTS ARE MET ONCE THE PATENT APPLICANT LIMITS THE REQUIRED SCOPE OF PROTECTION TO ANY TECHNICAL FEATURE IN THE CLAIMS, BE IT JUST A “COMPUTER”, BE IT A “COMPUTER READABLE DATA STORAGE MEDIUM”, OR BE IT ANY OTHER TECHNICAL FEATURE.
- (B) NO “FURTHER TECHNICAL EFFECT” IS REQUIRED UNDER THE RECENT, SUPERSEDING CASE LAW.

COMMENTS TO 2:

As to Question 2 (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?”

Part (A) of Question 2 is already answered in the affirmative under Question 1 above. We submit that the formulation of a claim plays a significant role for the evaluation under Art. 52 (2)/(3) EPC. Under Art. 69 EPC, by formulating a claim in a way implying the use of a computer (also including, for example, a computer-readable data storage medium), the patent applicant deliberately limits the required extent of protection to a computer implemented application of his invention. As there can be no serious doubt about a computer being of “technical character”, such deliberate limitation by the applicant should therefore overcome the Art. 52 (2) and (3) EPC hurdle.

As to Question 2 (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?”

No. Notwithstanding the fact that our answer to Question 2 (A) is in the affirmative, our response to Question 2 (B) is that there would be no “further technical effect” necessary to avoid exclusion.

The standard under Decision T 1173/97, which introduced the “further technical effect” requirement in particular view of computer program product claims, has been superseded. In fact, Decision T 931/95 (Controlling Pension Benefits System / PBS) established that apparatus claims involving, for example, a computer system are recognised to be technical *per se*, and no “further technical effect” was required in this respect (reasons 5). Now, a computer program product claim that recites a computer as a technical feature is to be

requirement as *general criterion*, which is embodied in Art. 52 (2) and (3) (*ibid.*, reasons 7., last para., with further references).

examined under the same criteria as an apparatus claim that recites a computer as a technical feature, such as a computer system claim. Also, if a computer feature recited in a computer program product claim could not establish technical character without a *“further technical effect”* also being required, the computer feature would then be examined under different criteria compared to the criteria used in examining a computer system claim. This would contradict the principle that features in a claim are to be considered – without discrimination – as a whole (*“Gesamtbetrachtungslehre”*), which T 258/03 (Auction Method/Hitachi) confirmed to apply even independent of the claim category (reasons 4.1 and 3.5) by re-confirming, at the same time, Decision T 931/95 (see T 258/03, reasons 3.8).

QUESTION 3:

- (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?**
- (B) **IF QUESTION 3 (A) IS ANSWERED IN THE POSITIVE, IS IT SUFFICIENT THAT THE PHYSICAL ENTITY BE AN UNSPECIFIED COMPUTER?**
- (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?**

ANSWERS TO 3:

- (A) and (B) **A CLAIMED FEATURE DOES NOT NEED TO CAUSE A TECHNICAL EFFECT, AND THUS ALSO NOT A TECHNICAL EFFECT ON A PHYSICAL ENTITY IN THE REAL WORLD. UNDER THE RECENT AND SUPERSEDING CASE LAW, THERE IS NO *“(FURTHER) TECHNICAL EFFECT”* REQUIREMENT. BY INTRODUCING AT LEAST ONE TECHNICAL FEATURE - SUCH AS A *“COMPUTER”* - IN THE PATENT CLAIMS, A PATENT APPLICANT LIMITS THE REQUIRED SCOPE OF PROTECTION. CONSEQUENTLY, IT NO LONGER MATTERS UNDER RECENT CASE LAW WHETHER A *“(FURTHER) TECHNICAL EFFECT”* SHOULD LIE IN A *“PHYSICAL ENTITY”*, WHETHER SUCH *“PHYSICAL ENTITY”* MAY BE AN *“UNSPECIFIED COMPUTER”*, OR WHETHER ANY *“TECHNICAL EFFECTS”* ARE TO BE REGARDED DEPENDENT OR INDEPENDENT OF ANY *“PARTICULAR HARDWARE THAT MAY BE USED”*.**
- (C) **A PATENT CLAIMED WITH INTRINSIC REFERENCE TO A *“COMPUTER”* SATISFIES THE *“TECHNICAL CHARACTER TEST”* UNDER ART. 52 EPC, AND IS FURTHER QUALIFIED TO ESTABLISH A *“TECHNICAL CONTRIBUTION”* IN THE LIGHT OF ART. 56 EPC.**

COMMENTS TO 3:

As to Question 3 (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?”*

Part (A) of Question 3 is already answered in the negative under Question 2 above. This means that it is not necessary to require a *“(further) technical effect”* at all, be it on a *“physical entity”*, be it in the *“real world”*, be it *“inside a computer”*, or be it somewhere else.

And beyond, no such “(further) technical effect” requirement should either exist in view of any “technical contribution” test required in view of Art. 56 EPC.

We sincerely submit that no conclusion on the above can be drawn to the contrary from older Decisions cited in the Referral text, i.e. Decisions T 163/85 (Colour television signal/BBC) or T 190/94 (Océ-Nederland vs. Mitsubishi). In fact, no “technical effect on a physical entity in the real world” was required in these older Decisions. Rather, in view of Art. 52 EPC, Decision T 163/85 held it sufficient that a claimed television signal could be detected by technological means, despite the signal itself having a transient character. However, from these specific facts, a “technical effect on a physical entity in the real world” was not required. And no more could one refer to T 190/94 to hold this as a necessary criterion, even if one accepted it in any case as sufficient to establish “technical character”.

Further, the more recent Decision T 424/03 (Clipboard formats/MICROSOFT), as correctly cited in the Referral text, inherently confirms that no “technical effect on a physical entity in the real world” is required. Rather, in that Decision, an enhancement of the internal operation of a computer system was held to satisfy both the Art. 52 EPC and the Art. 56 EPC test. Said enhancement was achieved through a method to facilitate the data exchange among various software application programs across different data formats. But clearly, this decision does not require an effect on any physical entity beyond the computer itself. And nothing to the contrary can be found in the former Decision T 125/01 (Gerätesteuering/HENZE). Rather, the intrinsic conclusion that can be drawn from Decision T 125/01 is that restructuring a software control (in that case a control program for a car radio) is qualified in analogy to a hardware control to establish a “technical contribution” in light of Art. 56 EPC (reasons 4.2).

As to Question 3 (B) – “If Question 3 (A) is answered in the positive, is it sufficient that the physical entity be an unspecified computer?”

The question of whether a “(further) technical effect” is required at all and whether an “unspecified physical entity” or an “unspecified computer” is sufficient to satisfy such assumed “(further) technical effect” requirement becomes superfluous under the more recent and superseding Decisions. This means that a “technical effect” taking place in an “unspecified physical entity” or in an “unspecified computer” is sufficient to meet the “technical character” test, regardless of the nature of such physical entity, be it a television, a computer or something else. For example, Decision T 163/85 held it sufficient that a claimed television signal could be detected by an unspecified television, the signal itself having a transient character.

Moreover, while part (B) of Question 3 appears to be raised in specific context of the older Decisions T 163/85 and T 190/94, the more recent and superseding Decisions T 424/03 and T 125/01 have evolved the case law such that computer programs (including graphical user interfaces) are put on equal footing with hardware, in that they recognise that computer programs qualify for a “technical contribution” in light of Art. 56 EPC, and this finding is independent from any hardware being used.

As to Question 3 (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?”

Part (C) of Question 3 is already answered above in a straight forward way. Under more recent case law, a “technical effect” tied to any specific “physical entity” like a “specified computer” is not required in light of Art. 52 EPC. In the same way, in light of Art. 56, a “technical contribution” of claim features is not tied to the use of any particular hardware. Any “technical contribution” required in the sense of Art. 56 EPC can intrinsically lie, for example, in an improved functioning, handling or programming of computer programs (including graphical interfaces), independent of any particular hardware that may be used. And even

under the former Decision T 1173/97 (Computer program product/IBM), which still required a *"further technical effect"*, it was already recognised that such effect can lie in, for example, faster processing intrinsically caused by improvements within a computer program, without any specified computer or particular hardware being required.

As a conclusion, a patent claimed with intrinsic reference to a *"computer"* not only satisfies the *"technical character test"* under Art. 52 EPC, but is further admitted to qualify for any *"technical contribution test"* required under Art. 56 EPC.

QUESTION 4:

- (A) DOES THE ACTIVITY OF PROGRAMMING A COMPUTER NECESSARILY INVOLVE TECHNICAL CONSIDERATIONS?
- (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?
- (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?

ANSWERS TO 4:

- (A) UNDER T 1177/97, THE ACTIVITY OF PROGRAMMING A COMPUTER ALWAYS, AT LEAST IMPLICITLY, INVOLVES TECHNICAL CONSIDERATIONS.
- (B) ANY TECHNICAL FEATURE IN THE CLAIMS ESTABLISHES TECHNICAL CHARACTER IN VIEW OF ART. 52.
- (C) NO FURTHER TECHNICAL EFFECT IS REQUIRED UNDER THE MORE RECENT AND SUPERSEDING CASE LAW

ADDITIONAL COMMENTS:

1. General

Decision T 1177/97 (Translating natural languages/SYSTRAN) cited in the Referral text indeed holds that *"implementing a function on a computer system always involves, at least implicitly, technical considerations"* (reasons 3, 7th paragraph). The older Decisions T 833/91, T 204/93 and T 769/92 should be considered as superseded in that respect.

Following Decision T 1177/97, Decision T 172/03 (Order management/RICOH) as also cited in the Referral text adopts³ a very narrow definition of the *"person skilled in the art"* in context to a computer implemented invention and thus intrinsically of what is to be regarded as *"technical"*, while recognising that there may be borderline areas, like system analysis and design which are based on rather abstract and intellectual activities but nevertheless provide important results for developing complex software systems. Particularly such recognised *"borderline areas"* play a more and more significant role in recent developments so that along with the evolution of software, the perception of what is considered to involve *"technical considerations"*, i.e. what is to be regarded as being *"technical"*, evolves as well. Today, under the reality in the software industry, the required technical skills need to be much wider

³ See Reasons 6. – 10. of T 172/03.

than just the programming of computers. Actually, the required technical skills necessarily involve skills of computer scientists, software solution architects, software solution process and content experts, design experts, quality experts, service and support experts, and more. Accordingly, a broader concept of what is regarded as being "*technical*" and accordingly what considerations are to be regarded as "*technical considerations*" needs to be adopted in order to cope with these developments.

In consistency with our Answers and Comments to Questions 1 and 2, we further submit that any technical feature in the claim establishes technical character in view of Art. 52. This, again, follows from the fact that, by formulating a claim in a way to include a technical feature like a feature implying the use of a computer, the patent applicant deliberately limits the required extent of protection to a computer implemented application of his invention.

Notwithstanding our affirmative answers to Question 4 (A) and (B), we also submit again that technical features establish technical character regardless of whether they contribute to a "*further technical effect*", since the "*further technical effect*" requirement is superseded under the more recent case law.

Beyond the above considerations, Question 4 gives cause for discussing equal treatment of computer implemented inventions under the EPO's granting practice, as compared to inventions in other fields of technology.

2. A Broader Understanding of "Technical" is Necessary in View of Art. 27(1) TRIPS

In our view, the practice currently applied by the EPO in the field of computer implemented inventions takes a different approach as compared to what applies in other, so-called "classical" fields of technology. As a consequence, it has been repeatedly emphasised that such discrimination is not in line with, but rather contradicts Article 27(1) of the TRIPS Agreement⁴. And indeed, the more recent introduction of the wording "*...in all fields of technology...*" into Art. 52(1) EPC explicitly confirms the EPC Contracting States' motivation to bring Art. 52 in line with Art. 27(1) TRIPS⁵.

In this connection, it is noted that Art. 27 TRIPS, in particular the meaning of "*in all fields of technology*" needs to be construed autonomously⁶ on the basis of TRIPS, i.e. independently of national interpretation approaches. This approach is necessary particularly in view of avoiding different interpretations throughout the TRIPS Member States and thus contravene the objective of TRIPS to provide common minimum standards⁷ for all TRIPS Member States and thus achieve the objective and purpose of TRIPS, namely to promote effective and

⁴ Article 27 (1) TRIPS Agreement reads: „*Patentable Subject Matter – 1. Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.*” – No exception as to computer programs is mentioned in paragraphs (2) and (3) of Art. 27 TRIPS. – On these TRIPS related aspects, see in particular **Schiuma**, TRIPS and Exclusion of Software “as Such” from Patentability, IIC 2000, 36.

⁵ See the official motivation, Special Edition No. 4 OJ EPO, 2007, at p. 48; also cp. **Nack/Phélip**, GRUR Int 2001, 322.

⁶ See **Schiuma**, TRIPS and Exclusion of Software “as Such” from Patentability, IIC 2000, 36 (37-43), wherein the autonomous interpretation of TRIPS is indicated following the codified general principles (as laid down for example in Art. 31 Vienna Convention on the Law of Treaties) of the interpretation of a treaty in the light of its objective and purpose as well as under the principle of *de facto* effectiveness (*règle de l'effet utile*).

⁷ See Art. 1(1) TRIPS.

adequate protection of intellectual property and thus reduce impediments to international trade.

The autonomous interpretation of TRIPS leads to a broad understanding of *"all fields of technology"* in Art. 27(1) TRIPS to particularly broadly include computer programs. This interpretation can also be derived by the preparatory works of TRIPS, where at early stages of the negotiations in the Uruguay Round some countries were advocating including into TRIPS a list of exclusion from patentability also relating to discoveries, scientific theories, mathematical methods, business ideas and games. However, no discussions were held even at this stage to exclude computer programs from patentability. The report of the Director-General of GATT, Mr. Arthur Dunkel (so-called "Dunkel Draft") being the basis for the adopted wording of Art. 27 TRIPS, finally, did no longer contain the above advocated exclusion list while simply referring to the expression *"in all fields of technology"* and only maintaining the explicit exclusion list of Art. 27 (2) and (3) TRIPS⁸. In this respect it is further noted that excluding computer programs from a *"field of technology"* would also virtually expand the explicitly allowed extent of exclusion from patentability beyond the limits set by Art. 27 (2) and (3) TRIPS leading to a substantive weakening of the principles and objectives of TRIPS altogether.

As mentioned above, it is to be stressed that the strict approach currently adopted by the Boards of Appeal regarding the patentability of computer programs despite the above broad interpretation of *"in all fields of technology"* also represents a discrimination of computer programs contravening Art. 27 (1), 2nd sentence TRIPS which provides *"patents shall be available and patent rights enjoyable without discrimination as to [...] the field of technology"*.

3. Current Restrictions in the Treatment of Computer Implemented Inventions, as Compared to Other Fields of Technology

Beyond, the above considerations give reason to point towards possible corrections where we are experiencing a need for modifications to the current approach, i.e. where the current approach leads to critical restrictions in the patent granting practice.

A Search of Prior Art Needs to be Established

In order to correctly perform the assessment of inventive step under the *"modified problem solution approach"*, it is strictly necessary to determine the closest prior art by performing a related search.

Unfortunately, in a considerable number of patent applications, the Search and Examining Divisions of the EPO have issued *"no search"* declarations under Rule 63 EPC2000 (previously Rule 45). Despite patent applicants' further efforts and requests, the lack of a search report is not remedied during examination.

⁸ Article 27 (2) TRIPS Agreement reads: *"Patentable Subject Matter – 2. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law."*

Article 27 (3) TRIPS Agreement reads: *"Patentable Subject Matter – 3. Members may also exclude from patentability: (a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals; (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement."*

In view of the “*modified problem solution approach*” as well as from a general interest perspective, prior art searches are however a key issue, since the determination of the relevant prior art is the necessary starting point of a proper assessment of patentability, particularly of inventive step under Art. 56 EPC. Accordingly, prior art searches are essential precondition for a proper examination and thus form the indispensable basis upon which further experience and case law can be built at all, and this is all the more true for emerging fields of technology like computing.

However, from SAP’s experience, it is exactly CII patent applications which are seriously running the risk of receiving a “*no search declaration*” being followed by an overall Art. 52 and/or Art. 56 rejection upon examination. Also, lacking a search report, applicants cannot afford to delimit their claims from prior art normally to be searched by the patent office. We respectfully submit that under these premises, a considerable lack of legal certainty arises from the current practice, for both individual applicants and for the general interest.

The issue of “*no search*”, and the related risks of receiving an overall Art. 52 and/or Art. 56 rejection are aggravated by the fact that under the “*modified problem solution approach*”, the EPO search and/or examining divisions often tend to qualify technical features as “*notoriously well known*”⁹. Such assessments might be increasingly reached under an overall approach without in-depth examination of the claim features and of the patent specification in each individual case being granted.

In contrast, as we take it granted from T 1242/04 (Provision of product-specific data/MAN), T 690/06 (Financial records/AUKOL) and T 1515/07 (Cost estimate for a data processing system/SAP), in usual cases an additional search must however be carried out at least during examination, if a search under Rule 63 EPC2000 (previously Rule 45) is missing:

“(...) It is true that the case law allows discretion in this respect, but this discretion is limited to the special cases of notoriously known feature or those explicitly accepted by the applicant as known. In all other cases, an additional search should be performed (...). In particular, as long as no search has been performed an examining division should normally not refuse an application for lack of inventive step if the invention as claimed contains at least one technical feature which is not notorious (...)” [see T 1515/07, reasons 6, 2nd para., with further references].

And, in addition, the pertinent decisions confirm that

“(...) the term ‘notorious’ should be interpreted narrowly. (...)”
[see T 690/06, reasons 8; also cp. T 1242/04, reasons 8.2, 3rd para.].

While we do want to highlight positive experiences with EPO specific patent application processing mechanisms like extended search reports, we would also encourage the EPO to further apply the above-referenced case law. From our perspective, this reveals to be crucial for that the EPO can continue its excellent reputation to provide patent applicants with meaningful search, examination and quality.

Substantive Issues Arising Under the “Modified Problem Solution Approach”

In general, further concerns of a substantive nature can be identified under the currently applied “*modified problem solution approach*”. In fact, the “*modified problem solution approach*” appears to be “artificial” in certain aspects, thus bearing the risk of serious distortions leading to inappropriate results:

⁹ Synonymous formulations used are “commonplace features”, “features forming part of the common general knowledge”, “trivial technical features”, and the like.

A first "artificial" effect arising under the "*modified problem solution approach*" is the risk of any "*ex post*" assessment of patent applications. Such risk may, however, be imminent, in particular since T 641/00 (COMVIK) recognised the following [see Headnote 2.]:

"Although the technical problem to be solved should not be formulated to contain pointers to the solution or partially anticipate it, merely because some feature appears in the claim does not automatically exclude it from appearing in the formulation of the problem. In particular where the claim refers to an aim to be achieved in a non-technical field, this aim may legitimately appear in the formulation of the problem as part of the framework of the technical problem that is to be solved, in particular as a constraint that has to be met."

A second "artificial" effect under the "*modified problem solution approach*" is the difficulty - which often appears to be a matter of discretion - to "fragment" a claim into "*technical*" and "*non technical*" features. Here, the "*modified problem solution approach*" may actually lead to a somewhat "artificial isolation" of features held to be "*non-technical*" from features held to be "*technical*". This consideration is crucial, as both novelty and inventive step of an invention may appear in a *combination* of "*technical*" with "*non-technical*" features. There is no compelling reason to reject such "*combination inventions*" under an artificial isolation of "*technical*" from "*non-technical*" features, as currently practiced for CII inventions under the "*modified problem solution approach*". Rather than "isolating" or "discriminating" in such way, it was already recognised that "*technical*" and "*non technical*" features of a patent claim must be taken "*as a whole*" (so-called "*Gesamtbetrachtungslehre*"). This principle, which is intrinsic in the EPO case law since T 0931/95 ("PBS"), should equally apply for any inventive step considerations of CII patent claims. This approach would also be consistent with Art. 69 EPC defining that the scope of protection conferred by a patent is defined by the claims, i.e. by all of the features contained in the claims. In other words, features contained in the claim which limit the scope of protection of a patent on one side, should also be taken into account for the patentability on the other side.

Yours sincerely,

A handwritten signature in black ink, appearing to read "B. Fischer", with a checkmark at the end.

Dr. Bernhard Fischer
SAP AG
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