COMMENT ON GUIDELINES FOR EXAMINATION OF COMPUTER RELATED INVENTIONS

SECTION 1: INTRODUCTION

1.   We, Lakshmikumaran and Sridharan, Advocates, have reviewed the first draft of Guidelines for Examination of Computer Related Inventions (Draft Guidelines) published on June 27, 2013. We are grateful that the Draft is open for public comments and we appreciate the transparency demonstrated by the Office of the Controller General of Patents, Designs and Trademarks. Our comments on the Draft Guidelines are provided below:

2.   The Draft Guidelines are intended as a tool to be used by the Indian Patent Office for streamlining the examination of applications related to computer-related inventions (CRI). Further, the Draft Guidelines also aim to clarify the scope of specific provisions of the Patent Act, 1970 (the Act), namely sections 3(k) to 3(n). The Draft Guidelines clearly admit that the same do not constitute any rule making. Yet, the Draft Guidelines attempts to define the scope of the different sections, namely section 3(k)-(n). We are of the opinion that the tests prescribed in this Draft to determine whether a claim is directed to a "computer program *per se*", breach accepted rules of statutory interpretation and tantamount to legislating as such.

3.   Second, while it is true that the Indian Patent law is entitled to evolve independently and not be subject to the shifts and phases in foreign jurisprudence, the fact that similar exclusions have been addressed by the Indian Patent Office's counterparts across the globe should be considered relevant. The issue relating to patenting computer related invention certainly cuts across borders and it may be prudent to at least objectively consider and take into account accepted practices across the globe. This exercise becomes more relevant when considering the fact that our judiciary, including the Supreme Court of India and the Intellectual Property Appellate Board (IPAB) have always relied on the decisions given by common law

courts, wherever the provisions of the law are similar or in *pari materia*. For example, the Supreme Court in the case of *Novartis v. UoI* (2013), and the IPAB in a whole host of decisions, such as the *Enercon* series of decisions and the *Yahoo* decision, has considered the principles laid down in other jurisdictions wherever contextually relevant to the Indian statute. Particularly relevant is the IPAB's reference in the *Yahoo* case to the decision handed down by the UK court in *Symbian* case in the context of Section 3(k) of the Patents Act, 1970.

4.   Third, as will be elaborated below, we observe that the Draft Guidelines fail to completely consider and address the entire legislatively history of Section 3(k). The phrase 'per se' traces its origin to the report issued by the Joint Parliamentary Committee (JPC) on the Patent (Second Amendment) Bill 1999, which report clearly indicated the intent to differentiate between stand alone computer programs, i.e., "computer programs per se", and other computer related inventions.   The importance of this report can be gauged from the following statement issued by the then Union Minister of Commerce & Industry on 9 May, 2002, when the said bill was introduced in the Rajya Sabha:

> "The Committee has reinforced the flexibilities already provided in the legislation with a view to address national and public interest requirements/concerns specially those relating to public health and nutrition. The JPC has after deliberation had modified the patentability of computer programs to only those computer programs which are "computer program per se"

SECTION 2: BACKGROUND & STATUTORY AMENDMENTS

5.   Referring to the Patents Act, 1970 as was originally enacted, the Patent Office initially states that, as such, no basis existed in the Act which would indicate that subject matter related to computer, i.e., CRI, is excluded from patentability. Therefore, for assessing the patentability of such inventions, it would be determined

whether the subject matter constituted a manner of manufacture.[1] As per the Patent Office, since inventions relating to mathematical methods, business methods, computer programs, mental acts, or algorithms did not constitute manner of manufacture, such inventions were not patentable under the Patent Act 1970 prior to amendments. It is not entirely clear on what basis the Patent Office automatically concluded that the aforesaid category of inventions would not constitute "manner of manufacture", considering that this issue was not legislatively addressed or addressed by case-law in India. Starting with this premise, the Patent Office, while outlining the developments in the Act as per the amendments of 2002 and 2005, concluded that it was never the intent of the legislature that inventions relating to the aforementioned categories should be patented.

Legislative History of Section 3(k)

6.   The Patents Amendment Act, 2002[2] introduced Section 3(k) in the Patents Act, 1970. Section 3(k) prohibits the patenting of "a mathematical or business method or a computer programme per se or algorithms". The Patent Amendment Act, 2002 was first introduced in the Parliament as the Patents (Second Amendment) Bill, 1999, henceforth referred to as the 2002 bill. The 2002 bill was subsequently referred to a Joint Parliamentary Committee (JPC) by both the houses of the Parliament for their comments and suggestions. Section 3(k), as present in the bill, did not include the phrase "per se" for computer programs and prohibited patenting of "a mathematical or business method or a computer program or algorithms". This phrase "per se" was introduced in the bill on the recommendations of the JPC.

7.   In its report[3], the JPC stated that their deliberations were motivated by an abiding concern to balance and calibrate intellectual property protection with national and public interest. The JPC clarified that the phrase "per se" was inserted

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[1] Paragraph 2.1 of the Guidelines
[2] http://indiankanoon.org/doc/1449261/ Last visited on July 12, 2013
[3] http://164.100.47.5/webcom/MoreInfo/PatentReport.pdf Last visited on July 12, 2013

in Section 3(k) to address the patentability of inventions relating to computer programs that may include certain other things ('ancillary thereto' or 'developed thereon'). The JPC further clarified that the intention of the bill was not to reject all computer related inventions, but was only to distinguish such inventions from claims directed to stand-alone computer programs or computer programs by themselves.

8.   The 2002 bill was passed by both the Houses of the Parliament as Patent Amendments Act 2002, with the phrase 'per se' included in Section 3(k). The acceptance of the phrase "per se" suggests the parliamentary intent that inventions related to computer programs are not to be denied patents to the extent the claims are not directed to stand-alone computer program or computer programs by themselves.

9.   In December 2004, an ordinance[4] was promulgated which introduced further amendments to Section 3(k) as it stood then. It was suggested at this time that the then existing provision be broken down into two:

> *a) Section 3(k): A computer program per se other than its technical application to industry or a combination with hardware."*
> *b) section 3(ka): A mathematical method or a business method or algorithm."*

10.   Being an ordinance, it lapsed automatically after 6 months. Subsequently, the Patent Third Amendment Bill came into picture, which was intended to bring India fully in compliance with the TRIPS mandate. The Ministry of Commerce and Industry referred the Patent Third Amendment Bill to the Group of Ministers of the Cabinet. The Group of Ministers retained both Sections 3(k) and 3(ka) as was in the Ordinance 2004. At this point in time, the Department of Industrial Policy and

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[4] http://lawmin.nic.in/Patents%20Amendment%20Ordinance%202004.pdf Last visited July 12, 2013

Promotion (DIPP) supported the amendment of Section 3(k) by splitting into two, that is, 3(k) and 3(ka) on the following grounds:

> *"This issue has been discussed by the JPC during the 2nd Amendment to the Patents Act. The proposed changes are more in the nature of a classification, due to confusing interpretations that have arisen. Section 3 of the Act contains details of items which are not inventions within the meaning of the Act and hence, are not patentable. This section also provides, inter alia, that "a mathematical or business method or computer programmes per se or algorithms" are not patentable. However, this provision has been subject to confusing interpretations, (such as whether 'per se' applies only to computers programme, or also to mathematical or business methods and also, whether technical applications of computer programmes are patentable or not). Given the emerging opportunities in the software sector and growing Indian strength in information technology, it is necessary to clarify the provisions in Section 3 (k) so as to allow patenting of a computer programme only in case it has technical applications to industry or is in combination with hardware. Software alone is already protected under copyright laws. It is also proposed to clarify that a mathematical or business method or algorithm will not be patentable. The Department of Information Technology has suggested the incorporation of such a clarification which is now proposed to be included."*

11.   The intention behind inserting the phrase "per se" is apparent from the above statement of the DIPP, that is, to clarify that the *per se* is applicable only to computer programs and not to business methods, mathematical methods or algorithms, and to further ensure that technical application of computer programs and/or its combination with hardware were not excluded subject-matter. When the final amendment act was passed in 2005, the Parliament retained Section 3(k) as it stood under the 2002 amendment.

12.   The history behind insertion of the phrase "per se" in the 2002 amendment suggests that a *carte blanche* exclusion of software patents was not intended.

Therefore, the term "per se" has to be understood as provided in the JPC report in the Patent (second Amendment) Bill 1999.

13. <u>In view of the above, it seems that the Patent Office appears to have concluded something much more concrete from the legislative history of Section 3(k). The conclusion drawn by the Patent Office in the Draft Guidelines are not supported by any factual record and to a large extent, completely undermines the JPC's suggestion to add the phrase "per se" in the 2002 amendment and contradicts the DIPP's stand. We propose that "computer program per se" should be interpreted as provided in the JPC report, that is, the invention is related to a "computer program per se" of the</u> claims are directed to a stand-alone computer program or a computer program by itself, and not otherwise.

<u>SECTION 3 – DEFINITIONS</u>

14. For many of the terms not defined in the Patents Act, 1970, the Patent Office has borrowed definition from various other legislations such as the Information Technology Act and the Copyright Act. If such terms have not been defined in other legislations, definitions have been taken from general dictionaries.

15. At the outset, we note that the Draft Guidelines goes on to provide definitions even for terms not used in the Patents Act, 1970. The relevance of such terms in implementing statutory provisions is unclear.

16. <u>Comments for Specific Definitions</u>

<u>Computer related inventions (CRI)</u> – This term has been coined by the Patent Office merely as a short-hand for the purposes of the Draft Guidelines. The prohibition under Section 3(k) of the Patents Act, 1970 is limited to "computer programmes per se" and, if at all, efforts must be made to define only that term. There is no reference to "computer related inventions" in the entire

scheme of the law and this term should not be introduced as any attempt to coin new words would only create confusion.

b. <u>Algorithms</u> – The Draft Guidelines, while defining *algorithms*, relies on a general dictionary meaning. The definition considers *algorithms* as *processes or set of rules to be followed in <u>calculation or other problem-solving operations</u>*, especially by a computer. This definition is very expansive as it is not limited to just calculations, but extends to all "problem solving operations". Further, it covers such rules of problem-solving, even when a computer may not be involved. In principle, most patents can be considered as solving one or more problems in the prior art and accordingly, many usual method claims can be understood as steps or rules to be followed to solve a problem in the prior art methods. Such methods, would then invite the exclusion under 3(k), even for inventions which do not use a computer. Accordingly, many such method implemented inventions would fail to qualify for a patent. Therefore, the broad approach adopted in the Draft Guidelines would seem to result in absurd consequences, which ought to be avoided[5].

Even the Patent Office acknowledges that the term is not defined in the Act and therefore, defining the term requires a proper judicial exercise of statutory interpretation. The Patent Office considers general dictionary meanings to be the start and end point of statutory interpretation, which actually contradicts various Supreme Court rulings on this subject[6].

On the other hand, the United States Supreme Court in *Gottschalk* v. *Benson* (*409 U.S. 63 (1972)*) has defined the term to mean "*a procedure for solving a given type of mathematical problem is known as an algorithm.*"

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[5] *See, e.g., Shamrao* v. *District Magistrate*, AIR 1952 SC 324, 327; *Central India Spinning, Weaving and Manufacturing Co. Ltd., Empress Mills ,Nagpur* v. *Municipal Committee, Wardha*, AIR 1958 SC 341, 346.

[6] *See, e.g., State Bank of India* v. *N. Sundara Money*, AIR 1976 SC 1111, 1114; *Commr. Of Income Tax, Orissa* v. *N.C. Budhraja & Co.*, AIR 1993 SC 2529, 2540.

We believe that this definition provides a more logical approach to defining the term and avoids the afore-noted slippery slope in the definition suggested in the Draft Guidelines. Therefore, the definition of the identical term as adopted by the US courts should be incorporated in the guidelines.

c. Per _se_ - The phrase _per se_ has been not been described by the Patent Office in conjunction with the phrase _computer programs._ As per a combined reading of what constitutes a computer program, the phrase _computer program per se_ should mean that set of instructions by itself or computer program by itself. While the Patent Office has taken an appropriate meaning of the term 'per se', it has not accordingly construed the phrase "computer programs per se". The aforesaid meaning is generally accepted even in the UK and before the EPO. We therefore suggest that the term "computer program per se" should be interpreted as a computer program by itself or a stand-alone computer program.

d. Technical Effect – At the outset, we note that although the term has been defined in one section of the Draft Guidelines, it has not been employed anywhere in the guidelines itself. We understand that the purpose of introducing these terms is to evaluate whether the computer program is used to invent an art or it is merely a stand-alone computer program.

We suggest that the focus should be to identify the "technical effect" achieved by the invention and where any "technical effect" is achieved, the subject-matter should be considered patentable. Or, if it is established that the claim involves a technical advance, the claim is patentable as the guidelines itself recognizes that the technical advancement comes with technical effect.

f. Mathematical Method - The Draft Guidelines define mathematical methods to be acts of _mental faculty._ There appears to be an overlap between what has been provided within this definition and the definition of a mental act as

covered under Section 3(m). Mathematical methods should be interpreted as the processes or activities that are performed on numbers, and outcome of which are also numbers and that the output numbers are not used to solve any technical problem.

SECTIONS 5 to 9 – EXAMINATION PROCEDURE & FLOW CHART

17.   The present sections are the most critical parts of the Draft Guidelines. The examination procedure as laid down in the present Draft Guidelines would form the basis on which the Patent Office proposes to examine the patent applications. The examination procedure requires that the criteria for novelty, inventive step, and industrial applicability should be satisfied for all the inventions before the patentability of an invention can be assessed. The test for determining whether any invention falls within the excluded category as enumerated under section 3(k) of the Act is provided in sub-section 5.4 and 6.1. The Draft Guidelines provide a standard which aims to cover both computer programs per se and algorithms in the same way.

18.   While providing the test, the Draft Guidelines state that it is relatively easier to assess the patentability of apparatus/system claims as compared to method/process claims. On one hand the Draft concludes that for the subject matter to be patentable, it must relate to *technological innovations;* on the other hand the Draft states that the exclusions in Sections 3(k)-(n) cover those inventions that do not possess such "technical character" and hence, not patentable.

19.   The Patent Office has further taken the stand, without any reasoning, that a computer program loaded on a general purpose known computer or related devices, would still be considered as "computer programme *per se.*" The only justification provided for this conclusion is that it is justified by the "spirit of the law". However, the Patent Office concludes that claims directed to a computer program and hardware will be allowed only if the claimed hardware is new or novel. In this

respect, Examiners have been directed to carefully consider as to how integrated the novel hardware is with the computer program. The Patent Office also stipulates that "whether the machine is program specific or the program is machine specific is important" to ascertain if the prohibition under Section 3(k) will apply.

20.   Although the illustrations that follow are intended to clarify on the manner in which these tests are to be applied, it is noteworthy that eight illustrations relate to claims directed to business methods and not to a computer program. It is evident that ant claim directed to "business methods" are devoid of technical effect, as it merely solves a business problem and not a technical problem, hence excluded from the patentability. The conclusions in these eight illustrations also suggest that the claims therein were rejected as being "business methods".

21.   There is a single illustration relating to the issue of "computer programs *per se*", i.e., illustration 9, the conclusions in the Draft Guidelines state the following:

> "...mere[ly] using a computer to automate what was previously done manually is not enough for an invention to be said to make a technical contribution....Although they are "technical" in the sense that they are carried out by technical means within the computer, they are merely programming steps and the interrelationships between them follow naturally from the automation process and may be termed as administrative solutions and cannot be held patentable"

22.   Even here, the illustration does not clearly elucidate the manner in which the general tests propounded by the Patent Office are to be applied.

23.   We observe that the illustrations do not serve the stated purpose of *fostering uniformity and consistency in the examination of such* (CRI) *inventions.* Instead, the illustrations add to further confusion. We therefore suggest that the interpretation of the exclusions should be modified as suggested hereinabove and the illustrations

should demonstrate the applications of such interpretation. Then only the stated purpose of "*fostering uniformity and consistency in the examination of such* (CRI) *inventions*" will be achieved.

Comments and Issues for the Proposed Test

OVERVIEW

24.   At the outset, the Draft Guidelines do recognize that claims having a "technical character", i.e. having technical effects, are to be granted patents. The Draft Guidelines also states that claims directed to a "computer program per se" is devoid of "technical character". However, the fundamental problem lies in assuming that only those programs that are integrated with novel hardware are not "computer programs per se". The Patent Office's suggestion is not grounded on any logic or reason. A claim directed to a process or system used in a given industry that may also involve computer program, nonetheless retains its "technical character" and therefore, should be eligible for patentability.

25.   If technological innovation or technical effect as defined above is the litmus test for granting patents, the Patent Office cannot take a generic stand that computer programs working in combination with a general purpose computer are *ipso facto* excluded. The Patent Office, without any basis in law or in jurisprudence, cannot conclude that computer programs in combination with the general purpose computer or the machine will never involve a technology innovation or a technical effect. After all, Section 83 provides that "the protection and enforcement of patent rights contribute to the promotion of technological innovation and to the transfer and dissemination of technology." Therefore, it is suggested that every claim should be examined on a case to case basis as to whether it produces technical effect or not. If the answer is yes, it is patentable.

26.   The Draft Guidelines recognize that the term "per se" has been suffixed to the computer program alone and does not apply to invention relating to mathematical methods, business method or algorithm. Yet, the test suggested by the Patent Office effectively only permits claims directed to "novel, inventive and industrially applicable computer or related device", which hardware would anyway be independently patentable subject matter even without any integration with software. In essence, the Patent Office has completely rendered the "per se" requirements to be *otiose*.

27.   In the definitions section of the Draft Guidelines, the Patent Office defines "per se" as "referring to something on its own rather than in connection with other things" and yet the Patent Office has not really applied this definition anywhere. The Patent Office's proposition that "per se" implies the need for a "novel, inventive and industrially applicable computer or related device" is neither supported by the Act nor can it be gathered from the definition adopted by the Draft Guidelines itself. The Patent Office should recollect the JPC's intent of distinguishing between stand alone computer programs and other computer related inventions.

SIMILAR PROVISIONS IN OTHER JURISDICTIONS NOT CONSIDERED

28.   The meaning of the expression *computer programme per se* may be discerned from the interpretation of similar case laws in other jurisdictions, particularly from the EPO and the UK,[7] where a similar exclusion is present in law, i.e., computer programs 'as such' are not patentable subject-matter. In general, it may be stated that neither the UK Patent Office nor the EPO adopt the narrow standard adopted in the Draft Guidelines.

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[7] Section 1(2) of the UK Patents Act, 1977; Art. 52(2) and (3) of the European Patent Convention

29. Specifically, in the UK, in the case of *Symbian Ltd.* v. *The Comptroller General of Patents*[8], the Court of Appeals (affirming the approach in Aerotel) adopted a four step approach to determine whether a given claim is excluded as a computer program as such:

(1) Properly construe the claim;

(2) Identify the actual contribution;

(3) Ask whether it (the actual contribution) falls solely within the excluded subject matter;

(4) Check whether the contribution is actually technical in nature.

30. The determinative question, as per the Court, which is to be addressed was whether the subject matter *reveals a "technical" contribution to the state of the art.* Such a technical contribution in case of computer programs, as per the Court, need not be realized through a novel or a modified hardware. The fact that the computer program makes a conventional computer system work better and in a more efficient manner is alone sufficient to establish the presence of a technical contribution. Such computer systems would, in fact, be different, i.e., would be faster and better when compared with conventional machines.

31. In understanding the manner in which such "technical contribution" can be established in a given case, the guidelines issued by the Intellectual Property Office of the UK, refers to the decision in the *AT&T* case[9], where the following five "signposts" were enlisted:

- whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

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[8] [2008] EWCA Civ 1066

[9] AT&T Knowledge Ventures' Application and CVON Innovations Ltd's Application [2009] FSR 19.

- whether the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run;

- whether the claimed technical effect results in the computer being made to operate in a new way;

- whether the program made the computer a better computer in the sense of running more efficiently and effectively as a computer;

- whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

32.   Under European law, as per the decision of the Enlarged Board of Appeals in G03/08, if a claim related to a computer program defines or uses "technical means" it is not excluded from patentability as a computer program 'as such'. The Enlarged Board has categorically stated that:

"T258/03 came to the conclusion that any claim involving technical means was not excluded from patentability by Article 52(2) EPC…, and since a claim directed to a method of operating a computer involved a computer it could not be excluded from patentability by Article 52(2) EPC…T 424/03, Microsoft, finally extended the reasoning applied in T 258/03 to come to the conclusion that a claim to a program ('computer executable instructions' in the claim in question) on a computer-readable medium also necessarily avoids exclusion from patentability under Article 52(2) EPC"

33.   Elaborating on this point further, the Enlarged Board of Appeals holds:

"Following this principle, a claim to a particular kind of computer-readable medium memory with certain special properties, e.g., a Blu-Ray disk, is evidently not excluded from patentability by Articles 52(2) and (3) EPC, whether or not it is new at the relevant date. But applying the principle consistently, the claim does not have to be a special kind of memory - "A

computer-readable data storage medium," specifying no further details, has the "technical effects" of being computer-readable and of being capable of storing data. And since there is no entry in the list of Article 52(2) EPC relating to computer-readable media as such there is no requirement for a "further" effect going beyond the basic properties of such a computer readable storage medium. In short, according to the logic of T 1173/97 the following claim is not excluded from patentability by Articles 52(2) and (3) EPC: 'A computer-readable storage medium.'"

34.   Finally, the Enlarged Board of Appeals concludes that

"The present position of the case law is thus that …a claim in the area of computer programs can avoid exclusion under Articles 52(2)(c) and (3) EPC merely by explicitly mentioning the use of a computer or a computer-readable storage medium."

35.   Neither the UK nor the EPO mandates the need for showing novel hardware in order to avoid the exclusion under Article 52(2)(c), a provision that is *pari materia* to Section 3(k).

RESTRICTED VIEW OF GENERAL PURPOSE COMPUTERS

36.   As mentioned earlier, the Draft Guidelines require that for any software related invention to be patentable, it should be coupled to a hardware that is novel, inventive and capable of industrial application[10]. Consequently, software implemented on a general purpose machine or a computer, are not patentable.

37.   The above mentioned principle however would yield unwarranted and absurd results. Let us consider, for example, an invention relates to a known mobile phone which implements a new feature, such as displaying on the mobile phone a

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[10] Paragraph 5.4.7 of the Guidelines, page 21 of 47

direction route-map for travelling to a destination, by means of integrating the mobile phone with a known network and a known GPS system. In this example, although, the change is implemented by a novel computer program using the known network, known GPS system, and the known mobile device, such an invention, according to the proposed guidelines, will not be given a patent. Just because, the creativity or a technical effect is implemented by means of a computer program, the invention is denied a patent. If the same feature is implemented by an electronic circuit, it would qualify for a patent. We urge the Patent Office to look into the fallacy of the test proposed for patentability of computer program.

38. Furthermore, recent developments show that design of Electronic Control Units (ECUs) can result in enhanced efficiency of internal combustion engines. As any skilled person would be aware, this is purely a matter of how the ECU is programmed to control ignition, fuel injection etc., whereas the ECU itself is a known piece of hardware. Such inventive systems would also be not allowable for patenting under section 3(k) considering that CRI has been defined in a broad and general way to include programmable apparatus.[11]

TEST FOR PATENTABILITY: SUGGESTED CHANGES

39. At the outset, the Draft Guidelines should clearly distinguish between cases where multiple exclusions under Section 3(k) may be involved, such as computer programs to implement business methods, from cases where only the exclusion "computer programs *per se*" is involved. In the former scenario, the Guidelines must take the approach as laid down by the IPAB in the *Yahoo* decision, subject to any changes to that proposition of law in appeal proceedings, if any. The Patent Office may recollect that the IPAB in that case had ruled that business methods, even if implemented using a computer and a computer program, will nonetheless be considered as non-patentable. This approach applies only if the real contribution lies

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[11] Paragraph 3.4 of the Guidelines, page 7 of 47

in a new or an improved method of doing business, or a new or an improved algorithm, or a new or an improved mathematical method; such claims should be denied the grant of patents.

40.   In the latter scenario, i.e., inventions implemented or enabled by a computer program which involve contributions not only to a new or an improved method of doing business, or a new or an improved algorithm, or a new or an improved mathematical method, but involves a contribution to solve a technical problem, the Draft Guidelines should consider such inventions outside the exclusion of the word "per se". The scope of the "per se" limitation in Section 3(k) is not to be construed as referring to a requirement of "novel hardware". Instead, this should be changed to cover any hardware features, irrespective of whether the features are novel or not. In any case, the additional requirement of novelty in Section 2(1)(j) anyway mandates that the combination should be 'new'. Even if the Patent Office were to actively consider the *Symbian* approach followed in the UK, the Indian Patent Office should also consider the broad considerations of "technical effect" recognized in the *AT&T* case.

41.   Based on the various suggestions made in the respective section and to achieve the stated purpose of "*fostering uniformity and consistency in the examination of such* (CRI or CPII) *inventions"*, we suggest that the following test for patentability be adopted for inventions which are implemented only by computer programs:

1) Properly construe the claim: Identify the scope of the invention from the language of the claim.
2) Identify the actual contribution of the invention: Whether the contribution is a new or improved system or method of doing a business, or a new or improved method or system of solving a mathematical problem, or a new or improved method or system of solving an algorithm. The contribution can be understood from the scope of the claim and the description of the invention.

3) If the answer to any of the questions in step 2 is yes, the invention is not patentable.

4) If not, ask if the actual contribution lies in the stand alone program itself or whether there is any "technical effect" (as discussed in the earlier section of this document)

5) If the answer to question 4 is that there is a "technical effect", then it is not a computer program per se. Otherwise it is a computer program per se.

6) If the claim is not directed to a computer program per se, check if the claim is novel, involving an inventive step, and capable of industrial application.

7) If the answer to question in step 6 is yes, grant a patent

42.   Let us now apply the above test to the cases illustrated in the Draft Guidelines. The analysis of the illustrated cases is provided in Annexure 1. As would be evident from Annexure 1, the proposed test provides a simple and transparent method of examination and also in line with the interpretation of similar provisions of the law in common law countries

ANNEXURE 1

Illustration 1: An application titled, **"**system and method for billing augmentation"

Step 1: *Construe the scope of the invention from the language of the claim:*

Claims are directed to a CRI for generating a bill based on a message received from the customer

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide an improved method of billing. Since the problem solved is in the nature of doing a business transaction, the contribution is to an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 2: No analysis can be provided since no details of claims and specification are given.

Illustration 3: An application for **"**generating a billing event"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for generating a billing event based on a first and a second information set.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide an improved method of billing. Since the problem solved is in the nature of doing a business transaction, the contribution is to an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 4: An application for "systems and methods for surveying nursing quality of nursing units"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for conducting a survey based on which the quality of nursing provided by nursing units, is determined.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for conducting a survey for determining nursing quality. Since the problem solved is in the nature of an administrative activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 5: An application for "systems and methods for determining compatibility between members of a social network"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for determining a social compatibility between members of a social network based on a compatibility score.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for determining compatibility score between individuals in a social network. Since the problem solved is in the nature of a business related activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 6: An application for "a method for adding value to a customer account"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for providing a value-added service to a customer based on a request received from the customer.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for providing or delivering a value-added service for a customer. Since the problem solved is in the nature of an administrative activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 7: An application for "a method for linking a consumer and a nutritional pharmacologist"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for linking a consumer and a pharmacologist, wherein the pharmacologist provides the consumer with personalized nutritional information through a central network.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for establishing a business connection between a consumer and a pharmacologist. Since the problem solved is in the nature of a business activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 8: An application for "method of operating a computer network search apparatus" (Yahoo Case)

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for allowing consumers to search for items for purchase over a network based on a user provided input. Once the appropriate item is identified an order is placed and processed, on payment of an amount.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for providing users with a platform for purchasing items.

Since the problem solved is in the nature of a business activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 9: An application titled **"a** computer performance optimization method" – No analysis can be provided since no details of claims and specification are given.

Illustration 10: An application titled **"a** transaction processing method and system"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for providing a system which is capable of providing product related information in response to a user request. The user request includes a product identifier, which is matched with chemical product data to provide the product related information.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for providing users with a platform for obtaining product information in response to user requests. Since the problem solved is in the nature of a business activity, the contribution can be said to be an improved method of doing a business.

Step 3: Since the answer to the Step 2 is yes, the invention is excluded by section 3(k) and therefore patent should be denied.

Illustration 11: An application titled **"**Type Checking System and Method thereof"

Step 1: *Construe the scope of the invention from the language of the claim*

Claims are directed to a CRI for type-checking based on one or more type checking rule sets. The type checking is implemented based on the rule sets and involves type checking each of the plurality of intermediate language representations. As a result of such type checking, the resulting computer system (functioning on programs) is less susceptible to errors occurring due to incomplete type checking of such programs, and hence is more stable.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for type checking programming language thereby providing an improved computing system which is less susceptible to errors, and consequently is more stable. More specifically, programs/applications which include type checking related errors are detected by the claimed system. Consequently, measures can be undertaken to address issues related to type-checking. The problem that has been addressed is technical in nature, and hence the contribution can be said to be also technical.

Step 3: Since the answer to the Step 2 is no, the procedure proceeds to Step 4.

Step 4: *Whether the actual contribution lies in the stand alone program*

As would be gathered, the contribution does not lie solely in the stand alone program. As can be gathered from the specification, once implemented, the claimed subject matter results in a computing device which is less error prone and more stable. More specifically,

- the claimed technical effect operates at the level of the architecture of the computer; that is to say whether the effect is produced irrespective of the data being processed or the applications being run.
- the invention makes the computer a better computer in the sense of running more efficiently and effectively (i.e., more stable and less prone to errors arising due to improper type checking) as a computer;

Step 5: *Claim novel, inventive and is capable of industrial application*

It is assumed, based on the illustration cited by the Patent Office that the subject matter is novel, inventive and capable of industrial application.

Based on the present example, the application should be allowed.

Illustration 12: An application for "a method for developing a computer model of an animal joint"

Step 1: *Construe the scope of the invention from the language of the claim*

For the purpose of the present illustration, only the method claim is considered. The method claims are directed to a CRI for developing a computer model of an animal

joint. As per the application, various biological processes are identified based on associated data. Based on the identified biological processes, a simulation of a biological state of the joint is generated.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for generating a simulation depicting the biological state of an animal joint. As a result of the invention, the system being provided is itself a different machine. As can be gathered from the specification, the problem that has been addressed is technical in nature, and hence the contribution can be said to be also technical.

Step 3: Since the answer to the Step 2 is no, the procedure proceeds to Step 4.

Step 4: *Whether the actual contribution lies in the stand alone program*

As would be gathered, the contribution does not lie solely in the stand alone program. As can be gathered from the specification, once implemented, the claimed subject matter results in *a new computing device,* which is capable of generating simulations representative of a biological state of the animal joint.

Step 5: *Claim novel, inventive and is capable of industrial application*

It is assumed, based on the illustration cited by the Patent Office that the subject matter is novel, inventive and capable of industrial application.

Based on the present example, the application should be allowed

Illustration 13: An application for "processing bit symbols generated by a data source, such as a video stream".

Step 1: *Construe the scope of the invention from the language of the claim*

The method claims are directed to a CRI for processing video signals. The processing of the video signals is based on various variables related to the video signals, and a statistical model. The statistical model in turn is based on statistical variables of the data source, which can include a video signal.

Step 2: *Identify the contribution of the invention*

The contribution of the present invention cannot be said to be a mathematical method. As mentioned in the previous sections, mathematical methods are processes

which are performed on numbers and the outcome of which are numbers. Such numbers are not representative of any information nor have any bearings on real-world applications. For the present application, the process is implemented on variables which are associated with the data source, for example, a video signal. Hence, the contribution of the present invention cannot be attributed to mathematical, i.e., statistical methods alone.

Furthermore, the contribution, as is apparent from the language of the claim and the specification, is to provide for a method of video processing. As a result of the invention, the system being provided is itself a different machine. As can be gathered from the specification, the problem that has been addressed is technical in nature, and hence the contribution can be said to be also technical.

Step 3: Since the answer to the Step 2 is no, the procedure proceeds to Step 4.

Step 4: *Whether the actual contribution lies in the stand alone program*

As would be gathered, the contribution does not lie solely in the stand alone program or the mathematical method. As can be gathered from the specification, once implemented, the claimed subject matter results in *a new and different computing device,* which is capable of processing video signals.

Step 5: *Claim novel, inventive and is capable of industrial application*

It is assumed, based on the illustration cited by the Patent Office that the subject matter is novel, inventive and capable of industrial application.

Based on the present example, the application should be allowed

Illustration 14: An application titled "Method, System and Mobile Communication Station Adapted for Selection of Access Network"

Step 1: *Construe the scope of the invention from the language of the claim*

The claims are directed to a method for selecting an access network from amongst different available networks. As per the application, the selection of the access network is based on radio quality of from each terminal, i.e., a mobile device, to the each of the networks, the utilization factor, and the perceived data quality.

Step 2: *Identify the contribution of the invention*

The contribution, as is apparent from the language of the claim and the specification, is to provide a method for selecting an access network by a mobile device based on parameters which are unique to, and available for telecommunication based systems. The contribution of the present invention cannot be said to be a mathematical method. As mentioned in the previous sections, mathematical methods are processes which are performed on numbers and the outcome of which are numbers. Such numbers are not representative of any information nor have any bearings on real-world applications. For the present application, the process is implemented on variables which are associated telecommunication networks. Hence, the contribution of the present invention cannot be attributed to mathematical methods alone.

Step 3: Since the answer to the Step 2 is no, the procedure proceeds to Step 4.

Step 4: *Whether the actual contribution lies in the stand alone program*

As would be gathered, the contribution does neither lie solely in the stand alone program nor the mathematical method. As can be gathered from the specification, once implemented, the claimed subject matter results in *a new and different computing device,* which is capable of selecting an access network based on the parameters mentioned before.

Step 5: *Claim novel, inventive and is capable of industrial application*

It is assumed, based on the illustration cited by the Patent Office that the subject matter is novel, inventive and capable of industrial application.

Based on the present example, the application should be allowed

Illustration 15-17: No analysis can be provided since enough details claims and specification are not given.

As can be seen from the above claims which are examined based on the proposed test, the test provides a simple and transparent method of examination and also in line with the interpretation of similar provisions of the law in common law countries.