



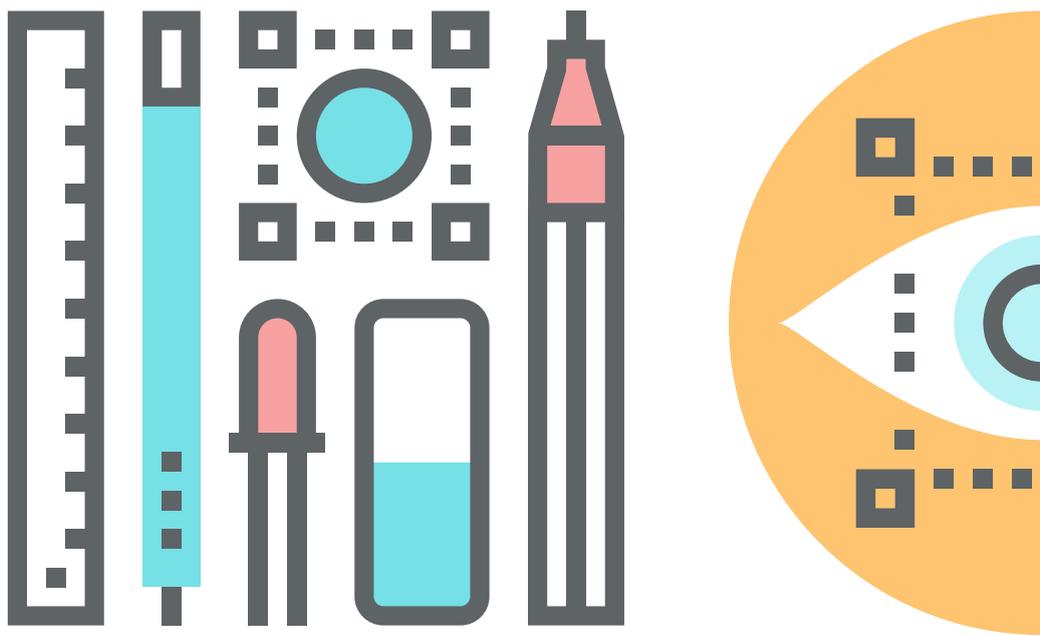
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30  
years

Exceeding Expectations  
Since 1985

# Patenting Computer-Related Inventions in India

## A HISTORICAL PERSPECTIVE





# INTRODUCTION

Twenty five months passed since the Indian Patent Office first published its much criticized draft Guidelines for Examination of Computer Related Inventions (the "Guidelines").<sup>1</sup> Numerous rounds of stakeholder engagements and representations seemed to yield no satisfactory outcome. However, within six months of taking over as the interim head of the Indian Patent Office, Mr. Rajiv Aggarwal, has released the final version of the Guidelines,<sup>2</sup> much to the delight of patent applicants and practitioners. That the Guidelines are already in force is only icing on the cake.

The final Guidelines offer much needed clarity on the vexing issue of determining subject matter eligibility of Computer Related Inventions ("CRI"), a.k.a. software inventions. A standout feature of the final Guidelines is its singular focus on the core issue of providing directions to Patent Examiners in the examination of applications directed to CRIs. The almost philosophical and legally unfounded bias against CRIs evident in the draft version is conspicuous in its absence. At the same time, deference to legislative intent and legal precedents in the final version is a welcome development indeed.

In this special edition of our IPR Amicus, we look at the evolution of Section 3 (what is not patentable) of the *Patents Act 1970* leading up to the amendments in 2002<sup>3</sup> and 2005<sup>4</sup>. We then discuss Section 3(k) related to CRIs in the context of the draft Guidelines of June 2013. We contrast the draft Guidelines with the salient features of the final Guidelines released on August 21, 2015. Finally, we offer some strategies for patent drafters and prosecutors when dealing with CRIs.

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<sup>1</sup> Guidelines for Examination of Computer Related Inventions published by the Indian Patent Office on June 28, 2013. Online: [http://www.ipindia.nic.in/iponew/draft\\_Guidelines\\_CRIs\\_28June2013.pdf](http://www.ipindia.nic.in/iponew/draft_Guidelines_CRIs_28June2013.pdf)

<sup>2</sup> Guidelines for Examination of Computer Related Inventions published by the Indian Patent Office on August 21, 2015. Online: [http://www.ipindia.nic.in/iponew/CRI\\_Guidelines\\_21August2015.pdf](http://www.ipindia.nic.in/iponew/CRI_Guidelines_21August2015.pdf)

<sup>3</sup> *The Patents (Amendment) Act, 2002*, Act 38 of 2002 [2002 Amendments].

<sup>4</sup> *The Patents (Amendment) Act 2005*, Act 15 of 2005 [2005 Amendments].

# EVOLUTION OF SECTION 3 OF THE PATENTS ACT 1970

The first major revision to the Indian Patents and Designs Act 1911 was made through the *Patents Act 1970* (Act 39 of 1970) that came into force on 20 April, 1972. Although it took nearly 25 years for the first major overhaul of the patent system post independence to come into force, efforts were underway within fourteen months of India's independence to "ensure that the patent system was more conducive to national interests."<sup>5</sup>

A Patents Enquiry Committee was appointed in 1948 and was presided by Dr. Bakshi Tek Chand, a retired Judge of the Lahore High Court. Based on the Committee's interim report, a compulsory licensing regime was first introduced in the Indian patent system in 1950.<sup>6</sup> Shortly after, the Patents Bill 1953<sup>7</sup> was tabled in the Parliament as a separate enactment for dealing with Patents in accordance with the final report of the Committee. The *Patents Bill 1953* generally followed the *U.K. Patents Statute of 1949* with some changes based on the Committee's recommendations. Section 3 of the *Patents Bill 1953*, for the first time, included an enumerated list of inventions not patentable. However, the Bill lapsed when the first Lok Sabha (the lower house of the Indian Parliament) was dissolved.

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## Section 3 of the Patents Bill 1953

3. *What is not patentable* - The following shall not be patentable under this Act:

- a. *an invention the use of which would be contrary to law or morality;*
- b. *the mere discovery of new properties of a known substance;*
- c. *a mere duplication of known devices or juxtaposition of known devices which function independently of one another;*
- d. *a substance prepared or produced by a chemical process or intended for food or medicine other than a substance prepared or produced by any method or process of manufacture particularly described in the complete specification of the invention or by its obvious chemical equivalent.*

*Explanation - In relation to a substance intended for food or medicine, a mere admixture resulting only in the aggregation of the known properties of the ingredients of that substance shall not be deemed to be a method or process of manufacture.*

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<sup>5</sup>Report on the Revision of the Patents Law," Justice N Rajagopala Ayyangar, September, 1959 at paragraph 1 [Ayyangar].

<sup>6</sup>The Patents Enquiry Committee was appointed on October 1, 1948 and included seven members, including Dr. Bakshi Tek Chand and Mr. K Rama Pai, former Controller of Patents as Member-Secretary. Amendments to sections 22, 23, and 23A to 23G of the Indian Patents and Designs Act, 1911 (Act 32 of 1950) were based on the interim report of the Committee submitted in August, 1949. The final report of the Committee was submitted in April 1950.

<sup>7</sup>Bill No. 59 of 1953

Nearly a decade after the first Patents Enquiry Committee was setup, Justice N Rajagopala Ayyangar was entrusted with the task of advising the Government on revisions to the Patents and Designs laws. Justice Ayyangar submitted his final report containing a comprehensive set of recommendations for the revisions to the Patents Law in September 1959.<sup>8</sup> Justice Ayyangar was unequivocal in his support for the statute "specifying with clarity which 'inventions' alone are patentable and which 'inventions' should not be patentable."<sup>9</sup> He reasoned that positively identifying patentable and non-patentable inventions would "(1) eliminate ambiguity and (2) prescribe in precise terms inventions for which patents should be refused in the interests of either of national economy or national health or well-being."<sup>10</sup> However, Justice Ayyangar's focus primarily lay on patents for chemical products and inventions relating to food and medicine. This was hardly surprising considering the state of a 12 year old nation wishing to protect its national interests and build a nascent industrial economy. Justice Ayyangar recommended that Section 3 of the *Patents Bill 1953* be revised to include an "exhaustive enumeration" of what is not patentable.<sup>11</sup> He also proposed to explicitly exclude food and medicinal products as well as products of chemical processes, while at the same time allowing patents to be granted for chemical processes themselves.<sup>12</sup>

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### *Justice Ayyangar's recommendations for Section 3*

3. *What is not patentable* - The following shall not be patentable under this Act and shall be deemed always not to have been patentable:

1.
  - a. *An invention which is frivolous or claims anything obviously contrary to well established natural laws.*
  - b. *An invention the use of which would be contrary to law or morality or injurious to public health.*
  - c. *The mere discovery of a scientific principle or the formulation of an abstract theory.*
  - d. *Methods of agriculture or horticulture.*
  - e. *Processes for medicinal, surgical, curative, prophylactic and other treatment of man and processes for similar treatment of animals or plants to render them free of disease or to increase their economic value or that of their products.*
  - f. *A claim to a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance.*

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<sup>8</sup> Ayyangar, *Supra* note 5.

<sup>9</sup> *Ibid.* at paragraph 48

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.* at paragraph 327.

<sup>12</sup> *Ibid.*

- g. *A mere discovery of any new property or new use for a known substance, or of the mere new use of a known process, machine or apparatus.*
  - h. *A mere arrangement or rearrangement or duplication of known devices each working in an old or well-known way.*
2. *No patent shall after the commencement of this Act be granted in respect of inventions claiming:*
- c. *substances intended for or are capable of being used as food or beverage or as medicine (for men or animals) including sera, vaccines, antibiotics and biological preparations, insecticide, germicide or fungicide, and*
  - d. *substances produced by chemical processes including alloys but excluding glass.*
3. *Notwithstanding anything in sub-section (2), inventions of chemical processes for the manufacture or production of the substances mentioned in that subsection shall be patentable.*

After another failed legislative attempt in 1966,<sup>13</sup> the Parliament of India finally passed the *Patents Act 1970* (Act 39 of 1970).<sup>14</sup> Several of Justice Ayyanagar's recommendations were incorporated in the final legislation, including most recitals of Section 3(1) in their originally proposed form. In addition, the *Patents Act 1970* accepted the recommendations of Justice Ayyanagar on restrictions on product patents and allowed only methods or processes of manufacture patentable for food, medicines and chemicals.<sup>15</sup> These restrictions were included as Section 5 of the *Patents Act 1970*.<sup>16</sup> Inventions relating to atomic energy were also excluded from patent protection.<sup>17</sup>

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## Chapter II of the Patents Act 1970 - Inventions not patentable

### 3. *What are not inventions*

*The following are not inventions within the meaning of this Act,-*

- a. *an invention which is frivolous or which claims anything obviously contrary to well established natural laws;*
- b. *an invention the primary or intended use of which would be contrary to law or morality or injurious to public health;*
- c. *the mere discovery of a scientific principle or the formulation of an abstract theory;*

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<sup>13</sup> *The Patents Bill 1965* based on the Ayyanagar Report died with the dissolution of the 3rd Lok Sabha in 1967.

<sup>14</sup> *The Patents Act 1970*, Act 39 of 1970 [Patents Act].

<sup>15</sup> Ayyanagar, *supra* note 5 at paragraph 327 Sections 3(2) and 3(3).

<sup>16</sup> *Patents Act*, *supra* note 14, at Section 5.

<sup>17</sup> *Ibid.* at Section 4.

- d. *the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant;*
  - e. *a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance;*
  - f. *the mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;*
  - g. *a method or process of testing applicable during the process of manufacture for rendering the machine, apparatus or other equipment more efficient or for the improvement or restoration of the existing machine, apparatus or other equipment or for the improvement or control of manufacture;*
  - h. *a method of agriculture or horticulture;*
  - i. *any process for the medicinal, surgical, curative, prophylactic or other treatment of human beings or any process for a similar treatment of animals or plants to render them free of disease or to increase their economic value or that of their products.*
4. *No patent shall be granted in respect of an invention relating to atomic energy falling within sub-section (1) of section 20 of the Atomic Energy Act, 1962.*
5. *In the case of inventions-*
- a. *claiming substances intended for use, or capable of being used, as food or as medicine or drug, or*
  - b. *relating to substances prepared or produced by chemical processes (including alloys, optical glass, semi-conductors and inter-metallic compounds),*
- no patent shall be granted in respect of claims for the substances themselves, but claims for the methods or processes of manufacture shall be patentable.*

By the time India turned 50 in 1997, it had become part of the newly created world trade body, the World Trade Organization (WTO). Accession to the WTO meant that India had to amend its patent laws to comply with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). India amended its Patents Laws in installments in 1999, 2002, and 2005, to meet its TRIPS obligations. The amendments in 1999<sup>18</sup> were retrospective to January 1, 1995, the birth date of the WTO. The 1999 amendments introduced a transition “mail-box” provision and exclusive marketing rights for pharmaceutical products covered under Section 5 of *the Patents Act 1970*.<sup>19</sup> The second set of significant changes to the Indian Patents Laws came about in 2002. The Patents (Amendment) Act 2002, among others, modified “Section 3 [...] to include exclusions permitted by TRIPS Agreement and also subject-matters like discovery of any living or non-living substances occurring in nature in the list of exclusions which in general do not constitute patentable invention.”<sup>20</sup>

The list of excluded subject matter under Section 3 grew from 9 to 15 with the 2002 amendments. Of particular interest to this article is the addition of Sections 3(k) to 3(n). Exclusions relating to literary, dramatic, musical or artistic work (Section 3(l)) were covered under copyrights. Other provisions relating to a mere scheme or rule or method for performing mental act or method of playing game (Section 3(m)) and presentation of information (Section 3(n)) were typically excluded elsewhere in the world. Even the exclusions under Section 3(k) for mathematical or business methods, computer programs per se and algorithms are analogous exceptions under to the European Patent Convention (EPC) Article 52. The final installment of amendments to the Patents Act 1970 came about in 2005.

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## Article 52 of the European Patent Convention

1. *European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.*
2. *The following in particular shall not be regarded as inventions within the meaning of paragraph 1:*
  - a. *discoveries, scientific theories and mathematical methods;*
  - b. *aesthetic creations;*
  - c. *schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;*
  - d. *presentations of information.*
3. *Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.*

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<sup>18</sup> *The Patents (Amendment) Act, 1999* (Act 17 of 1999).

<sup>19</sup> See Chapter IVA of the *Patents (Amendment) Act, 1999* (Act 17 of 1999). A detailed discussion of this chapter is omitted as being beyond the scope of this article.

<sup>20</sup> *2002 Amendments, supra* note 3 at paragraph 4(b) of Statement of Objects and Reasons.

The transition and exclusive marketing rights provisions of the 1999 Amendments were dispensed with and Section 3(d) of the 2002 Amendments was modified.<sup>21</sup>

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## Section 3 of the Indian Patents Act 1970 as amended in 2002

### 3. What are not inventions.

*The following are not inventions within the meaning of this Act,–*

- a. an invention which is frivolous or which claims anything obviously contrary to well established natural laws;*
- b. an invention the primary or intended use or commercial exploitation of which could be contrary to public order or morality or which causes serious prejudice to human, animal or plant life or health or to the environment;*
- c. the mere discovery of a scientific principle or the formulation of an abstract theory or discovery of any living thing or non-living substance occurring in nature;*
- d. the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant;*
- e. a substance obtained by a mere admixture resulting only in the aggregation of the properties of the components thereof or a process for producing such substance;*
- f. the mere arrangement or re-arrangement or duplication of known devices each functioning independently of one another in a known way;*
- g. ...(omitted)*
- h. a method of agriculture or horticulture;*
- i. any process for the medicinal, surgical, curative, prophylactic diagnostic, therapeutic or other treatment of human beings or any process for a similar treatment of animals to render them free of disease or to increase their economic value or that of their products.*
- j. plants and animals in whole or any part thereof other than micro organisms but including seeds, varieties and species and essentially biological processes for production or propagation of plants and animals;*
- k. a mathematical or business method or a computer program per se or algorithms;*
- l. a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions;*
- m. a mere scheme or rule or method of performing mental act or method of playing game*
- n. a presentation of information;*
- o. topography of integrated circuits;*

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<sup>21</sup>Section 3(d) of the Patents Act 1970, as amended by the Patents (Amendment) Act 2005 (Act 15 of 2005), has attracted significant attention in its own right. However, a detailed discussion of this provision is omitted as being beyond the scope of this article.

- p. an invention which in effect, is traditional knowledge or which is an aggregation or duplication of known properties of traditionally known component or components.*

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## *Section 3(d) of the Patents Act 1970 as amended in 2005*

*(d) the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.*

*Explanation - For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;*

Prior to the enactment of the 2005 amendments, the Government of India promulgated the Patents (Amendment) Ordinance 2004.<sup>22</sup> The ordinance was necessitated to meet the January 1, 2005 deadline to bring India's Patents Laws in compliance with the TRIPS Agreement. After much deliberation, it was deemed necessary, among others, to "modify and clarify the provisions relating to patenting of software related inventions when they have technical application to industry or in combination with hardware."<sup>23</sup> The ordinance proposed splitting Section 3(k) into 3(k) relating to computer programs per se and 3(ka) relating to mathematical or business methods and algorithms.

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## *Sections 3(d) and 3(k) of the Patents Act 1970 in the Patents (Amednment) Oridnance 2004*

### *3. In section 3 of the principal Act,-*

- a. in clause (d), for the words "new use", the words "mere new use" shall be substituted;*

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<sup>22</sup>The Patents (Amendment) Ordinance 200, Ordinance 7 of 2004.

<sup>23</sup>*Ibid.*, at Statement of Objects and Reasons.

- b. for clause (k), the following clauses shall be substituted, namely:–  
“(k) a computer program per se other than its technical application to industry or a combination with hardware;  
(ka) a mathematical method or a business method or algorithms.”

The 2004 Ordinance lapsed in due course and was replaced by the 2005 Amendments. It is significant to note that the 2005 Amendments did not adopt the changes to Section 3(k) as proposed in the 2004 Ordinance. The language of Section 3(k) reverted back to the one introduced by the 2002 Amendments and continues to be in force. As we shall discuss in the next section, this reversal in the language formed the basis for the draft Guidelines. However, the final Guidelines do not place any emphasis on the lapsed ordinance at all.

# THE GUIDELINES FOR EXAMINATION OF COMPUTER RELATED INVENTIONS

## The Draft Guidelines of 2013

Eight years after the final installment of amendments to the *Patents Act* 1970, the Patent Office published the Draft Guidelines for the examination of CRIs. The Draft Guidelines were received with much skepticism as amounting to rule-making by the Patent Office despite explicit claims to the contrary.<sup>24</sup> Several stakeholders criticized the emphasis on the requirement for novel hardware elements for the patentability of software-related inventions as going beyond the exclusions of the section 3(k).<sup>25</sup>

Indeed, the tone of the Draft Guidelines was set early in the piece with reference to the omission of the proposed amendments in the 2004 Ordinance. The Draft Guidelines noted (emphasis added).<sup>26</sup>

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<sup>24</sup>Draft Guidelines, *supra* note 1 at Section 1, page 1.

<sup>25</sup>See, for example, the comments on the Draft Guidelines submitted by the Federation of Indian Chambers of Commerce and Industry (FICCI). Online: [http://ipindia.nic.in/iponew/CRI\\_Comments\\_Feedbacks/related\\_doc/Draft%20Guidelines%20for%20Computer%20Related%20Inventions-updated-20130715-1.pdf](http://ipindia.nic.in/iponew/CRI_Comments_Feedbacks/related_doc/Draft%20Guidelines%20for%20Computer%20Related%20Inventions-updated-20130715-1.pdf)

<sup>26</sup>Draft Guidelines, *supra* note 1 at Section 2.4, page 6.

It is arguable whether the language and the clarification proposed by the 2004 Ordinance in fact attempted to “widen” the scope of exclusion under Section 3(k) or merely to clarify the exclusions for computer programs *per se*.

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## Excerpt from the Draft CRI Guidelines

Therefore, the re-instatement of the original phraseology of section 3 (k) clearly indicates that **the legislature intended to retain the original scope of exclusion and did not approve its widening under this sub-section as attempted through the ordinance.**

Nevertheless, the Draft Guidelines went on to categorically reject “a computer program which may work on any general purpose known computer” as not meeting the requirements of the law as to patent-eligible subject matter.<sup>27</sup> The Draft Guidelines emphasized that a novel hardware feature must be present for a computer program to be considered patentable. In this regard, the Draft Guidelines cautioned Examiners to focus on “the underlying substance of the invention, not the particular form in which it is claimed.”<sup>28</sup> Moreover, the Draft Guidelines asserted that, without disclosure of structural features, “means plus function claims shall be rejected as the means are nothing but computer program *per se*.”<sup>29</sup>

The emphasis on novel hardware as a precursor to patent-eligibility was roundly criticized by the industry as a “no new hardware – no patent” approach going against the legislative intent of restricting the “exclusion only to stand alone computer programs, i.e., ‘computer programs *per se*’.”<sup>30</sup> In fact, as we pointed out in our submission to the Patent Office,<sup>31</sup> the Draft Guidelines erred in omitting to consider the legislative history, in particular, the deliberations of the Joint Parliamentary Committee (JPC) entrusted to review the 2002 Amendments as well as the submissions of the Department of Industrial Policy and Promotion on this matter. A *carte blanche* exclusion of software patents was never the intention.

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<sup>27</sup> *Ibid.*, at Section 5.4.6, page 20.

<sup>28</sup> *Ibid.*, at Section 6.2, page 32.

<sup>29</sup> *Ibid.*, at Section 7, page 36.

<sup>30</sup> See comments on the Draft Guidelines on Computer Related Inventions by the National Association of Software and Services Companies (NASSCOM). Online: [http://ipindia.nic.in/iponew/CRI\\_Comments\\_Feedbacks/related\\_doc/NASSCOM-feedback%20to%20CRI%20guidance.pdf](http://ipindia.nic.in/iponew/CRI_Comments_Feedbacks/related_doc/NASSCOM-feedback%20to%20CRI%20guidance.pdf).

<sup>31</sup> See comments on the Draft Guidelines submitted by Lakshmikumaran & Sridharan. Online: [http://ipindia.nic.in/iponew/CRI\\_Comments\\_Feedbacks/related\\_doc/RP-Comments-on\\_Guidelines\\_for\\_CRI-Main\\_26jul13\\_clean.pdf](http://ipindia.nic.in/iponew/CRI_Comments_Feedbacks/related_doc/RP-Comments-on_Guidelines_for_CRI-Main_26jul13_clean.pdf)

# The Final Guidelines of 2015

Following several rounds of stakeholder meetings on the Draft Guidelines, progress seemed to be stalled on finalizing the guidelines. At last, the Patent Office published the final version of the Guidelines in August 2015, twenty five months after the Draft Guidelines were first released. In the Final Guidelines, the Patent Office appears to have adopted a more rational framework by adhering to legal principles rather than to the mere rhetoric evident in the draft version.

The Final Guidelines sets a positive tone from the outset and seeks to determine patent-eligible subject matter based on considering “the claims, taken as a whole” and not denying a patent if in substance the claims “do not fall in any of the excluded category.”<sup>32</sup>

Even in the determination of patent eligibility of claims directed to mathematical and business methods, which have an absolute bar under Section 3(k), the Final Guidelines urge the Examiners to consider the claim as a whole before rejecting the claims. Specifically, the Final Guidelines states that the mere recitation of a mathematical formula in a claim “would not necessarily render the claim to be a mathematical method.”<sup>33</sup> Similarly, the mere usage of business-related terminology, such as enterprise, business rules, supply-chain, commerce, transactions, payments, etc., “should not lead to the conclusion of a Computer Related Invention being just a ‘Business Method.’”<sup>34</sup>

The Final Guidelines clearly identifies two categories of claims as being directed to computer programs *per se*, and hence patent ineligible.<sup>35</sup>

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## *Ineligible Claims under the Final CRI Guidelines*

1. *Claims directed at computer programs/ set of instructions/ Routines and/or Sub-routines written in a specific language*
2. *Claims directed at “computer program products” / “Storage Medium having instructions” / “Database” / “Computer Memory with Instruction” i.e. computer programs per se stored in a computer readable medium.*

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<sup>32</sup>Final Guidelines, supra note 2 at Section 4.5, page 10. The positive tone is evident when one considers the “Form and Substance” discussion at Section 6 of the Draft Guidelines, which emphasis the exclusion aspect of the determination.

<sup>33</sup>*Ibid.*, at Section 4.5.1, page 10.

<sup>34</sup>*Ibid.*, at Section 4.5.2, page 11. It is significant to note that the Patent Office has taken note of the comments from stakeholders in response to the Draft Guidelines. See, for example, the comments from Tata Consultancy Services on the Draft Guidelines, page 2. Online: [http://ipindia.nic.in/iponew/CRI\\_Comments\\_Feedbacks/related\\_doc/TCS%20Response%20to%20Draft%20CRI%20Guidelines.pdf](http://ipindia.nic.in/iponew/CRI_Comments_Feedbacks/related_doc/TCS%20Response%20to%20Draft%20CRI%20Guidelines.pdf).

<sup>35</sup>*Ibid.*, at Section 4.5.4, page 11.

These exclusions are based on the views expressed by the JPC on the 2002 Amendments with respect to the term “*per se*” used in conjunction with computer programs.<sup>36</sup>

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## Excerpt from the JPC Report

*In the new proposed clause (k) the words “per se” have been inserted. This change has been proposed because sometimes the computer program may include certain other things, ancillary thereto or developed thereon. The intention here is not to reject them for grant of patent if they are inventions. However, the computer programs as such are not intended to be granted patent. This amendment has been proposed to clarify the purpose.*

In view of the legislative intent as evident above, the Final Guidelines direct the Examiners that when claims are not directed to a computer program “in itself,” have industrial applicability and fulfil other criteria for patentability, then “the patent should not be denied.”<sup>37</sup>

When assessing claims involving computer programs, the Final Guidelines identify three determinants, any one of whose presence is an indication of patent eligible subject matter.<sup>38</sup> The first two determinants, namely, novel hardware and novel hardware in conjunction with a novel computer program are straight forward and need no further discussion. However, the third determinant – novel computer program with known hardware, under which a majority of computer related inventions would fall, requires further consideration.

Unlike the Draft Guidelines, the Final Guidelines do not outright reject the claims directed to a novel computer program with a known hardware. Instead, the Final Guidelines focus on the interactions between the novel software and the known hardware. When such interactions go beyond “normal” interactions, and bring “a further technical effect,” the claims may not be considered as excluded subject matter under Section 3(k).<sup>39</sup>

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<sup>36</sup>Report of the Joint Parliamentary Committee on the Patents (Second Amendment) Bill, 1999, presented to the Rajya Sabha on December 19, 2001. Online: <http://164.100.475/webcom/MoreInfo/PatentReport.pdf>.

<sup>37</sup>Final Guidelines, *supra* note 2 at Section 4.5.4, page 12.

<sup>38</sup>*Ibid.*, at Section 5.1, page 13.

<sup>39</sup>*Ibid.*

The Final Guidelines set out a six pronged test to ascertain whether claims have the requisite technical advancements to escape the exclusion under Section 3(k).<sup>40</sup> If a claim under examination satisfies *any one* of the six prongs, then the claim does not fall within the purview of Section 3(k).<sup>41</sup> The Final Guidelines direct the Examiners to assess the technical advancement in the claimed subject matter. If the technical advancement or technical contribution is on a process outside the computer environment, at the architecture level of a computer, or is by way of a change in the hardware or the functionality of the hardware, then the claim is patent eligible. Moreover, if the technical contribution of a claim results in the computer being made to operate in a new way or makes it a “better computer,” then the claim is patent eligible. Also, if any changes in the hardware or the functionality of the hardware amount to a technical advancement, then the claim cannot be excluded under Section 3(k). These factors are analogous to the factors identified by the UK High Court in the matter of AT&T and Cvon vs. The Comptroller General of Patents.<sup>42</sup>

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## *Factors Determinative of Technical Advancement*

- i. whether the claimed technical feature has a technical contribution on a process which is carried on outside the computer;*
- ii. whether the claimed technical feature operates at the level of the architecture of the computer*
- iii. whether the technical contribution is by way of change in the hardware or the functionality of hardware*
- iv. whether the claimed technical contribution results in the computer being made to operate in a new way*
- v. in case of a computer program linked with hardware, whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer;*
- vi. whether the change in the hardware or the functionality of hardware amounts to technical advancement.*

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<sup>40</sup> *Ibid.* at Section 6.1, pages 13-14.

<sup>41</sup> *Ibid.* at Section 6.1, page 14.

<sup>42</sup> *AT&T Knowledge Ventures, CVON and the Comptroller General of Patents, [2009] EWHC 343 (Pat), paragraph 40.*

The Final Guidelines provide a rational and cogent analysis for the determination of patent eligible subject matter under Section 3(k) for mathematical and business methods as well as for computer programs *per se*. However, the Final Guidelines fall short in providing the same level of direction when dealing with algorithms.

The definition of algorithm provided at Section 3.1 and the discussion of claims directed at algorithm at Section 4.5.3 of the Final Guidelines lack specificity. For example, algorithm is defined as "a set of rules that must be followed when solving a particular problem," based on the definition provided in the Oxford Advanced Learner's Dictionary.<sup>43</sup> However, according to the discussion at Section 4.5.3, an algorithm is not just limited a set of rules, but also includes "a set of procedures or any sequence of steps or any method expressed by way of a finite list of defined instructions."<sup>44</sup> The Final Guidelines also imply that algorithms in all forms, "whether for solving a problem or otherwise, and whether employing a logical, arithmetical or computational method, recursive or otherwise, are excluded from patentability."<sup>45</sup> This is somewhat contradictory to the otherwise uniform approach of considering the "claim as a whole" in determining whether "in substance," a claim is directed to an excluded category.

However, Example 8.9 of the Final Guidelines offer some direction when dealing with subject matter allegedly directed to an algorithm.<sup>46</sup> The Intellectual Property Appellate Board (IPAB) held that "when the claims do not claim, or contain any algorithm or its set of rules as such, but only comprise of some process steps to carry out a technical process or achieve a technical effect [...] the objection that invention is not patentable under section 3(k) fails or [is] not valid."<sup>47</sup> Thus, we hope that the IPAB decision along with the six prong test for the assessment of technical advancement discussed earlier will be considered in the assessment of whether a claim is directed to an algorithm.

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<sup>43</sup>Final Guidelines, supra note 2 at Section 3.1, page 5.

<sup>44</sup>*Ibid.*, at Section 4.5.3, page 11.

<sup>45</sup>*Ibid.*

<sup>46</sup>*Ibid.* at Example 8.9, page 18

<sup>47</sup>*Ibid.*, citing IPAB Order 224/2010 at page 55. Online: <http://www.ipabindia.in/Pdfs/Order-224-10-ORA-20-09-PT-CH.pdf>.

# CONCLUSIONS – PRACTICAL CONSIDERATIONS

The provisions under Sections 3(k), 3(m) and 3(n) are not unique to India. Article 52 of the European Patent Convention includes similar provisions for delineation of patent ineligible subject matter. With the coming into force of the Final Guidelines, we hope that the Indian Examination practices for determination of patent eligible subject matter are better aligned with those followed by the European Patent Office. Although the United States does not have an explicit exclusion list in its patent statutes, the USPTO practices for assessing the judicial exceptions under 35 USC 101 post Alice are moving towards the European framework. As such, there appears to be a harmonizing trend in the examination of computer related inventions.

Patent drafters and prosecutors would be well advised to familiarize with these developments in order to secure the best scope of protection for patent applicants across jurisdictions. When drafting a single patent application for multiple jurisdictions, it may be worthwhile to have common minimum standard for computer related applications. We offer some pointers for consideration having regard to the Indian scenario in light of the Final Guidelines.

## *Practical Context/Application*

The specification should set out the computer related invention in a practical context or a practical application. For example, inventions relating to Big Data analytics may be tied to specific applications of the analytics. The specific applications could be in disaster management, traffic control, power grid optimization, or the like. Tying the underlying method to such practical applications may help an Examiner better relate to and understand the underlying concepts.

## *Interactions with Hardware Elements*

The specification should intertwine hardware elements with the software features of the invention throughout. Standalone stock description of hardware elements either preceding or following the description of the software implemented invention only lends credibility to the argument that the claims are directed to software per se and implemented using a general purpose computer. Also, specific functional hardware elements such as transmitters, receivers, signal processors etc. should be described than merely reciting standard elements such as CPU, memory, database, input/output devices.

## *Technical Problem*

More and more emphasis is being made on the nature of the problem being solved by an invention. The Examiners are looking to set up a technical problem based on their understanding of the description and/or the claims. Why not make their tasks simpler by explicitly identifying a technical problem in the specification?

## *Technical Effects*

Many a times, the description and the claims are oriented to the technical problem and the technical solution. The technical effects of the claimed solutions are only implicitly discernable. Describing the technical effects explicitly in the specification would assist during prosecution of the application without having to rely on standard or stock effects such as better efficiency, improved performance, or lower power consumption etc.

The Final Guidelines are a vast improvement over the draft version. We believe that these Guidelines will go a long way in achieving the Patent Office's stated goal of fostering uniformity and consistency in the examination of computer related inventions.

Founded by V. Lakshmikumar and V. Sridharan in 1985, Lakshmikumar & Sridharan (L&S) is one of the largest integrated law firms in India with over 350 professionals including 44 partners.

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