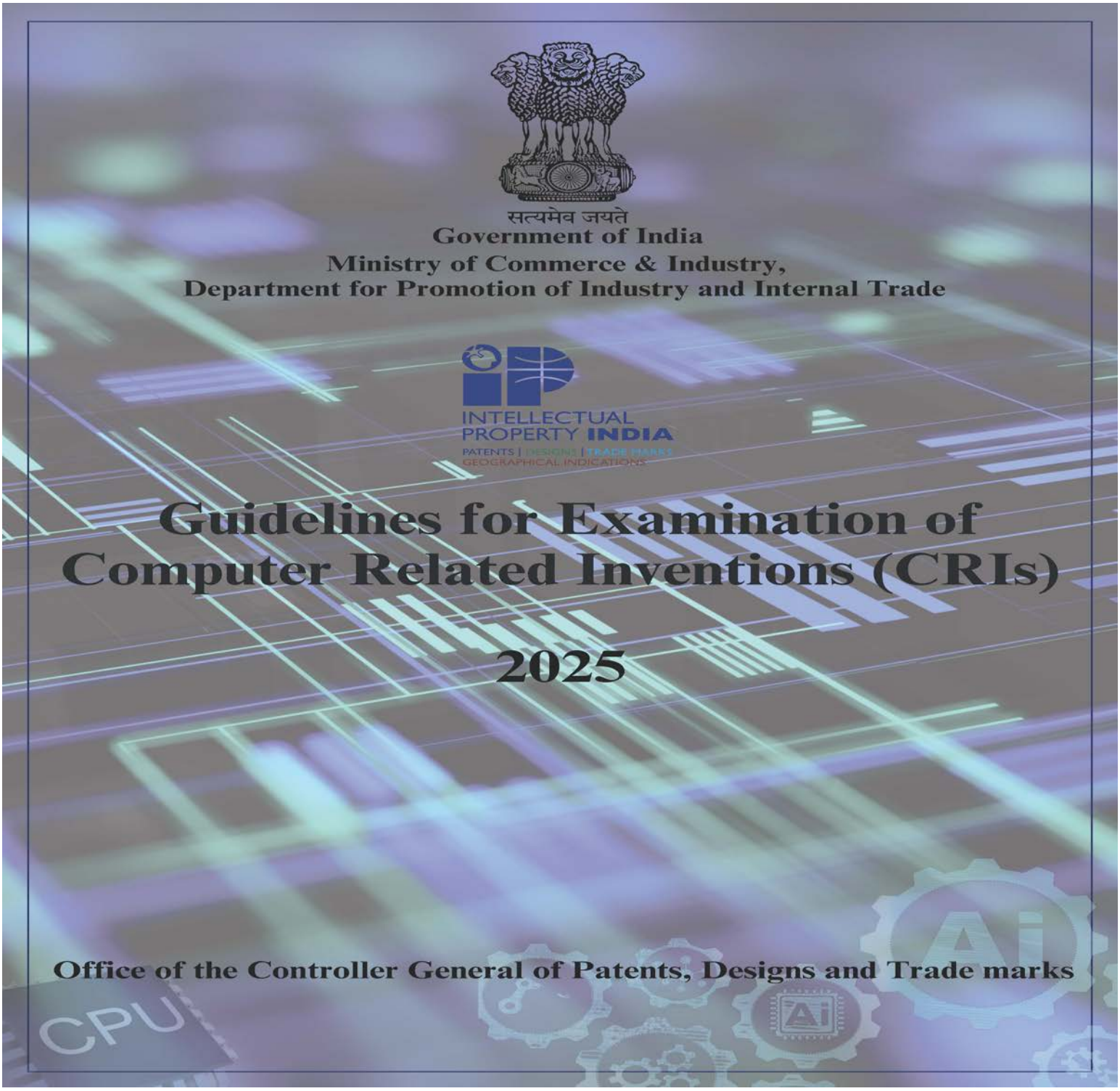
सत्यमेव जयते
Government of India
Ministry of Commerce & Industry,
Department for Promotion of Industry and Internal Trade
INTELLECTUAL
PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS
GEOGRAPHICAL INDICATIONS
Guidelines for Examination of Computer Related Inventions (CRIs)
2025
Office of the Controller General of Patents, Designs and Trade marks
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Contents

1. Introduction

1.1. Information Technology has gained special significance in the past few decades. It has emerged as a vital tool for scientific development. The term “Information Technology” encompasses the whole gamut of inputting, storing, retrieving, transmitting and managing data through the use of computers and various other networks, hardware, software, electronics and telecommunication equipment. Industry has witnessed rapid growth due to the computerization of activities which were hitherto carried out manually or mechanically. The advent of the internet and the World Wide Web (www) coupled with the exponential growth of processing and storage power has led to capabilities previously unheard of. Recent developments in the field of Information and Communication Technology (ICT) and Computer Science, such as advancements in artificial intelligence (AI), blockchain technology, quantum computing, cloud computing and the Internet of Things (IoT), are rapidly transforming industries and reshaping innovation. These technologies often involve complex algorithms, data processing techniques, and hardware-software integrations. In recent times centric to this advancement are Artificial Intelligence (AI), Machine Learning, Natural Language Processing and Large language Model which are now recognized as core technologies that can revolutionize industries by enabling sophisticated automation, customized user experiences, and predictive analytics. These technologies are increasingly integrated into fields such as healthcare for early diagnostics, finance for risk management, and education for adaptive learning, enhancing overall system intelligence. Additionally, AI-driven natural language processing technologies are revolutionizing human-computer interactions by enabling virtual assistants, automated translation, and sentiment analysis tools, thus broadening accessibility and functionality. Cloud computing has significantly catalyzed this evolution, providing scalable and cost-effective solutions for data storage and processing, essential to modern IT architectures. The shift to cloud-based infrastructure allows organizations to handle extensive data volumes, facilitate collaboration, and deploys applications rapidly, making it a fundamental component in IT frameworks. Meanwhile, edge computing, a complementary technology to cloud computing, enables data processing near the source, reducing latency and accelerating real-time analytics—capabilities vital for the Internet of Things (IoT) and smart city applications. Quantum algorithms promise to solve complex problems in mere seconds, challenges that would take classical computing systems centuries to process. This capability could significantly impact fields such as cryptography, climate modeling, and pharmaceutical development. Quantum computing, regarded as a keystone technology of the future,

is the focus of substantial investment from technology giants and research institutions striving to advance its commercialization. Cyber security remains a critical priority as digital transformation accelerates and cyber threats grow in complexity and frequency. Advances in cyber security technology, including AI-driven threat detection, empower systems to identify and mitigate cyber attacks in real time, while blockchain technology provides enhanced data security through distributed ledger mechanisms. Privacy-centric computing techniques, such as homomorphic encryption and differential privacy, are also emerging as critical components, allowing organizations to extract insights from data without compromising individual privacy, thereby meeting regulatory and compliance requirements. The adoption of 5G/6G technology is further shaping the IT landscape by delivering faster, more reliable connectivity that supports advanced applications in field of communication such as in Internet of Things (IoT), augmented reality (AR), and virtual reality (VR). High-speed 5G/6G technology networks facilitate real-time data transmission across devices, creating new possibilities for remote work, smart infrastructure, autonomous vehicles, and immersive gaming and educational experiences. Collectively, these advancements are constructing a robust, interconnected, and intelligent digital ecosystem, paving a way for new patentable innovations. The convergence of technologies including AI, cloud computing, cyber security, quantum computing, 5G, and many more is driving a surge in patent applications, reflecting both the originality and applicability of these developments. As society and industry increasingly embraces a digital future, careful consideration of these issues is essential to ensure responsible and sustainable technological progress. However, this rapid pace of innovation brings a need to develop a complementary regulatory system for patent examination.

1.2. Creators of knowledge in the domain of Computer Related Inventions (CRIs) have consistently endeavored for appropriate protection of their patent rights. The patent regimes have to cope up with the challenges of processing of patent applications related to CRIs. While examining applications for patent in these cutting-edge fields, it is essential to consider how these innovations transcend traditional software and algorithms to provide a technical solution. The core elements in the application of Information Technology are computers and their peripherals. CRIs comprise inventions which involve the use of computers, computer networks or other programmable apparatus and techniques related thereto and include such inventions having one or more features of which are realized wholly or partially by means of a computer hardware/software.

1.3. The aim of this document is to provide guidelines for the examination of patent applications in the field of CRIs by the Indian Patent Office so as to further foster consistency in the examination of such applications. The objective of this document is to bring out clarity in terms of exclusions expected under section 3(k) so that eligible applications of patents relating to CRIs can be examined efficiently and effectively.

1.4. The guidelines discuss various provisions relating to the patentability of CRIs. The procedure to be adopted by the Patent Office while examining such applications and the jurisprudence that has evolved in this field has also been discussed. Various examples and case laws relating to CRIs have also been incorporated for better understanding of the issues involved**.** It is important to mention that these guidelines do not constitute rule making. In case of any conflict between these guidelines and the statutory provisions of the Patents Act, 1970 (as amended), herein after referred as "the Act", or the Patents Rules, 2003 (as amended), herein after referred as "the Rules", made there under, the said provisions of the Act and Rules will prevail over these guidelines. The guidelines are subject to revision from time to time based on interpretations by Courts of law, statutory amendments and valuable inputs from the stakeholders.

2. Terms/Definitions

The terms/definitions often used while dealing with CRIs are summarized hereunder. The terms which are defined in any of the Indian statutes have been construed accordingly and those which have not been given any statutory definition are normally construed in accordance with their use and ordinary dictionary meaning or judicial pronouncements.

2.1 Algorithm

The term "algorithm" is not defined in Indian statutes. However, Hon'ble Madras High Court in the matter of Microsoft Technology Licensing LLC vs Assistant Controller of Patents And

Designs[1] on 3 July, 2024 at Para 25 stated: *"...An algorithm may be defined as a set of rules or instructions for solving a problem, typically through a sequence of steps or operations. Devising an algorithm would also, therefore, be an intellectual exercise and intellectual property protection would be limited to copyright protection, subject to originality, for the form of expression. While the expression is commonly used in the context of software-based routines in computers, as is evident from the above, it can be used in other contexts..."*.

2.2 Computer

The term "computer" is defined in The Information Technology Act, 2000 (No. 21 of 2000) as *"any electronic, magnetic, optical or other high-speed data processing device or system which performs logical, arithmetic, and memory functions by manipulations of electronic, magnetic or optical impulses, and includes all input, output, processing, storage, computer software, or communication facilities which are connected or related to the computer in a computer system or computer network."*

2.3 Computer Network

The term "computer network" is defined in The Information Technology Act, 2000 (No. 21 of 2000) as *"the interconnection of one or more computers through –*
(i) the use of satellite, microwave, terrestrial line or other communication media; and
(ii) terminals or a complex consisting of two or more interconnected computers whether or not the interconnection is continuously maintained;"

2.4 Computer Programme

The term computer programme has been defined in the Copyright Act 1957 under Section 2(ffc) as *""computer programme" means a set of instructions expressed in words, codes, schemes or in any other form, including a machine readable medium, capable of causing a computer to perform a particular task or achieve a particular result;"*

[1] *Microsoft Technology Licensing LLCvs Assistant Controller of Patents(3 July, 2024) ((T) CMA (PT) No.49 of 2023[OA/36/2020/PT/CHN])*

2.5 Computer System

The term “computer system” is defined in The Information Technology Act, 2000 (No. 21 of 2000) as *“a device or collection of devices, including input and output support devices and excluding calculators which are not programmable and capable of being used in conjunction with external files, which contain computer programmes, electronic instructions, input data and output data, that performs logic, arithmetic, data storage and retrieval, communication control and other functions;”*

2.6 Data

The term “data” is defined in the Information Technology Act, 2000 (No. 21 of 2000) as *“a representation of information, knowledge, facts, concepts or instructions which are being prepared or have been prepared in a formalised manner, and is intended to be processed, is being processed or has been processed in a computer system or computer network, and may be in any form (including computer printouts, magnetic or optical storage media, punched cards, punched tapes) or stored internally in the memory of the computer;”*

2.7 Firmware

The term “firmware” is not defined in Indian statutes and hence, for interpretation of this term, the general dictionary meaning is being used.

The Oxford Advanced Learners Dictionary defines “firmware” as *“a type of computer software that is stored in such a way that it cannot be changed or lost”.*

The Cambridge Dictionary defines “firmware” as *“a computer program or data that is stored on a chip and that cannot be changed or lost”.*

2.8 Function

The term “function” is defined in the Information Technology Act, 2000 (No. 21 of 2000) as *“"function", in relation to a computer, includes logic, control arithmetical process, deletion, storage and retrieval and communication or telecommunication from or within a computer;”*

2.9 Hardware

The term “hardware” is not defined in Indian statutes and hence, for interpretation of this term, the general dictionary meaning is being used.

The Oxford Advanced Learners Dictionary defines “hardware” as *“the physical and electronic parts of a computer, rather than the instructions it follows”.*

The Cambridge Dictionary defines “hardware” as *“the physical and electronic parts of a computer, rather than the instructions it follows”.*

2.10 Information

The term “information” is defined in The Information Technology Act, 2000 (No. 21 of 2000) as *"information" includes data, message, text, images, sound, voice, codes, computer programmes, software and databases or micro film or computer-generated micro fiche;”*

2.11 Per *se*

The term “per *se*” is not defined in Indian statutes including the Act, However, Hon’ble Madras High Court in the matter of Microsoft Technology Licensing LLC vs Assistant Controller of Patents and Designs[2] on 3 July, 2024 at Para 25 stated: “...*Black's Law Dictionary (Thomson Reuters, 11th ed., 2019, p. 1378) defines 'per se' as follows: “of, in, or by itself; standing alone, without reference to additional facts; this phrase denotes that something is being considered alone, and not with other collected things...”*

2.12 Software

The term “software” is not defined in Indian statutes and hence, for interpretation of this term, the general dictionary meaning is being used. The Oxford Advanced Learners Dictionary defines “software” as *“the programs, etc. used to operate a computer”*.

[2] *Microsoft Technology Licensing LLC vs Assistant Controller of Patents (3 July, 2024) ((T) CMA (PT) No.49 of 2023 [OA/36/2020/PT/CHN])*

The Cambridge Dictionary defines "software" as *"the instructions that control what a computer does; computer programs"*.

2.13 Secure system

The term "secure system" is defined in the Information Technology Act, 2000 (No. 21 of 2000) as:
"Secure system means computer hardware, software, and procedure that–
(a) are reasonably secure from unauthorised access and misuse;
(b) provide a reasonable level of reliability and correct operation;
(c) are reasonably suited to performing the intended functions; and
(d) adhere to generally accepted security procedures;"

2.14 Manual

The term "Manual" as hereafter appears means "Manual of Patent Office Practice and Procedure" issued by the Office of CGPDTM, as may be amended from time to time, unless there is anything repugnant in the subject or context.

3. Legal Provisions and recent jurisprudence relating to CRIs

3.1 The Patents (Amendment) Act 2002 (No. 38 of 2002) came into effect on 20th May, 2003. The Act defines "invention"[3] under section 2(1)(j) as ""*Invention" means a new product or process involving an inventive step and capable of industrial application*;"

"Inventive step"[4] under section 2(1)(ja) as " "Inventive Step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art; "

[3] *Definition of 'Invention' under The Patents Act 1970, after 2002 Amendments*
[4] *Definition of 'Inventive Step' under The Patents Act 1970, after 2005 amendments*

Further, "capable of industrial application"[5] under section 2(1) (ac) as *""capable of industrial application", in relation to an invention, means that the invention is capable of being made or used in an industry;"*

3.2 The Patents (Amendment) Act, 2002 also amended the exclusions from patentability under section 3 for CRIs as under:

(k) a mathematical or business method or a computer programme 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;

3.3 While examining the Patents (Amendments) Bill, 2002the Joint Parliamentary Committee expressed the following views regarding suffix *"per se"* to computer programme in section 3(k):

"In the new proposed clause (k) the words ''per se" have been inserted. This change has been proposed because sometimes the computer programme 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 programmes as such are not intended to be granted patent. This amendment has been proposed to clarify the purpose."[6]

3.4 Recent jurisprudence

In the recent times, hon'ble courts have expressed their views while interpreting the extent, meaning and legislative intent with regard to provisions of section 3(k). The

[5] *Definition of 'Capable of Industrial Application' under The Patents Act 1970*
[6] *Report of the Joint Committee presented to the Rajya Sabha on 19th December, 2001 and laid on the table of Lok Sabha on 19th December 2001*

same has helped in evolution of jurisprudence with regard to CRIs. Below are the relevant excerpts from few of the related case laws in chronological order:

3.4.1 Hon'ble Delhi High Court in the matter of Ferid Allani vs. Union of India & Ors[7] on 12 December, 2019 at para11 stated:

"11. ...Across the world, patent offices have tested patent applications in this field of innovation, on the fulcrum of "technical effect" and "technical contribution". If the invention demonstrates a "technical effect" or a "technical contribution" it is patentable even though it may be based on a computer program..."

3.4.2 Hon'ble Delhi High Court in the matter of Microsoft Technology Licensing, Llc vs The Assistant Controller Of Patents And Designs[8] on 15 May, 2023 at para 41 stated:

"41. …The invention provides a technical solution to the security risk associated with using cookies to authenticate users for sub- locations within a network location. The use of two different cookies for providing authenticated access to a client computer accessing sub-location(s) in a network location ensures that even if both cookies are stolen by a malicious user, the malicious user cannot gain unhindered access to other sub- locations within the network location. This technical solution goes beyond the user-interface level and provides a technical effect and contribution, that is patentable. The technical aspects of the invention, such as the use of cookies and two-factor authentication, are fundamental to the functioning of computer networks and are not limited to the user-interface. These aspects are vital for safeguarding access to network locations and their corresponding sub- locations, representing a critical concern for both businesses and individuals. Additionally, the use of multiple cookies for authentication is a technical solution that goes beyond mere user interface design and involves complex network-level communication protocols. The technical aspects of the invention are closer to the heart of computer and network technology, rather than user-interface..."

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[7] *Ferid Allani vs. Union Of India & Ors [W.P.(C) 7/2014 & CM APPL. 40736/2019]*

[8] *Microsoft Technology Licensing, Llc vs The Assistant Controller Of Patents And Designs [C.A. (COMM.IPD-PAT) 29/2022]*

3.4.3 Hon'ble Delhi High Court in the matter of Opentv Inc vs The Controller Of Patents And Designs[9] on 11 May, 2023 at paras 67 and 72-74 stated:

"67. …the exclusion in respect of business methods is an absolute one and is not restricted by the words 'per se' as in the case of computer programs…"

"72. …The qualifier `as such'thus applies in both U.K. and Europe to all categories of excluded inventions including business methods. Thus the bar is not absolute and if there is something more than the business method itself, patenting could be permissible. However, in India, the phrase 'per se' does not qualify business methods. Thus, the patentability of inventions based on methods of doing business or financial transactions, raised on the basis of decisions from the U.K. and European Patent Office which analyse the technical effect of a business method invention would not be squarely applicable in India. The bar in India to grant of business method patents has to be read as an absolute bar without analysing issues relating to technical effect, implementation, technical advancement or technical contribution…"

"73. …Thus, the only question that the Court or the Patent Office while dealing with patent applications involving a business method, needs to consider is whether the patent application addresses a business or administrative problem and provides a solution for the same…"

"74. …In order to judge as to whether a particular patent application seeks to patent business methods or not, at the outset, the following aspects, ought to be considered - (i) whether the invention is primarily for enabling conduct or administration of a particular business i.e., sale or purchase of goods or services; (ii) whether the purpose of the invention is for claiming exclusivity or monopoly over a manner of doing business; (iii) whether the invention relates to a method of sale or purchase of goods or services or is in fact a computer program producing a technical effect or exhibiting technical advancement. If it is the latter, it would be patentable but not if it is the former..."

[9] *Opentv Inc vs The Controller Of Patents And Designs[C.A. (COMM.IPD-PAT) 14/2021]*

3.4.4 Hon'ble Delhi High Court in the matter of Raytheon Company vs Controller General Of Patents And Designs[10] on 15 September, 2023 at para 21 stated:

"21. ...in case of computer related inventions, the patent office needs to examine if there is a technical contribution or as to what is the technical effect generated by the invention as claimed...The requirement of novel hardware is a higher standard which lacks any basis in law…"

3.4.5 Hon'ble Delhi High Court in the matter of Microsoft Technology Licensing Llc vs The Assistant Controller Of Patents And Designs[11]on 16 April, 2024 at paras 33, 34 and 35 stated:

"33. …in case of an invention involving computer programmes, to circumvent the limitations imposed by Section 3(k) of the Act, a patentee must demonstrate that the overall method and system disclosed in the patent application, upon implementation in a general-purpose computer, must contribute directly to a specific and credible technical effect or enhancement beyond mere general computing processes. Therefore, the inventive contribution of a patent should not only improve the functionality of the system but also achieve an innovative technical advantage that is clearly defined and distinct from ordinary operations expected of such systems…"

"34. …From the claim construction analysis carried out, it is clear that the subject patent application discloses a method and system that not only provides a real world application for complex mathematical transformations, including lapped transforms and reversible overlap operators, but also integrates these operations into a hardware setup (processor [4710] and data storage buffer [4740]) that performs digital media data compression. This integration significantly enhances the functionality of the hardware components of the subject patent application by enabling efficient and reversible compression, which directly contributes to improved

[10] *Raytheon Company vs Controller General Of Patents And Designs [C.A. (COMM.IPD-PAT) 121/2022]*
[11] *Microsoft Technology Licensing Llc vs The Assistant Controller Of Patents And Designs [C.A.(COMM.IPD-PAT) 185/2022]*

system performance and efficiency. Therefore, clearly the subject patent application enhances the functionality of the general-purpose computers that would implement the subject patent application…"

"35. …Clearly, in the understanding of the Court, this optimization is not merely a theoretical improvement but is applied in practical hardware configurations, contributing a clear technical effect of enhanced data compression capabilities and reduced storage requirements during processing. Accordingly, the integration of the described methods and techniques into a digital media processor, as detailed in Claims involving specific hardware components of data storage buffers and processors, transforms the capabilities of general-purpose computing hardware into a specialised apparatus capable of efficient and effective data compression, which it otherwise was not expected to be capable of. This transformation also meets the criteria of further technical effect as stated to be a requirement in Lava (supra), wherein an invention that incorporates computer programmes or algorithms in such a way that it significantly enhances the hardware's functionality is considered patentable, as long as it meets the criteria for patentability …"

3.4.6 Hon'ble Madras High Court in the matter of Microsoft Technology Licensing LLC vs Assistant Controller of Patents And Designs[12] on 3 July, 2024 at para 36 stated:

"36.…Thus, even when the claimed invention relates to a CRI, if it results in a technical effect that improves the system's functioning and efficacy (effect on hardware), or provides a technical solution to a technical problem and is, therefore, not limited in its impact to a particular application or data set, it would surmount the exclusion under section 3(k) of the Patents Act…"

[12]*Microsoft Technology Licensing LLC vs Assistant Controller of Patents and Designs [[(T) CMA (PT) No.49 of 2023, [OA/36/2020/PT/CHN]]*

3.4.7 Hon'ble Delhi High Court in the matter of Ab Initio Technology Llc vs Assistant Controller Of Patents And Designs[13] on 30 July, 2024 at para 38 stated:

"38. …'Technical effect' is the bridge or the connect between an input and the processor. If an ingenious input system/method is able to allow the processor to give a more efficient and faster output and computation, the effect, in this Court's opinion, would be 'technical'. A 'technical effect' cannot be just about nuts and bolts, or hardware tweaks and transformations. If an innovative input [in form of a program] allows the hardware to process the output faster, then it would amount to a 'technical effect'. In other words, a well-designed innovative input in the form of a process, system, or method which enhances the computational ability of the processor would undoubtedly result in a 'technical effect' and which goes beyond the usual 'user interface'…"

3.4.8 Hon'ble Delhi High Court in the matter of Blackberry Limited vs Assistant Controller Of Patents And Designs[14] on 30 August, 2024 at paras 48 and 52 stated:

"48. …Accordingly, it is evident that insofar as algorithms are concerned, if the invention relates purely to a set of instruction or policies which determine the flow without any substantial change in the hardware, such instructions even if they have a bearing on the manner in which the flow of data occurs would not be entitled to patent protection in India…"

"52…Insofar as the patentability of inventions incorporating algorithms is concerned, if the invention relates purely to a set of instruction or policies which determine the flow without any substantial change in the hardware, such instructions even if they have a bearing on the manner in which the flow of data occurs would not be entitled to patent protection in India. But if the algorithm instructions are thereafter implemented through computer software coded for this purpose and result in a technical effect or technical contribution then the test applicable to computer

[13] *Ab Initio Technology Llc vs Assistant Controller Of Patents and Designs [C.A. (COMM.IPD-PAT) 26/2021]*

[14] *Blackberry Limited vs Assistant Controller Of Patents And Designs [C.A. (COMM.IPD-PAT) 229/2022]*

software can also be applied and patentability can be adjudged. In such a case the inventive feature would have to be the implementation and not the algorithm itself…"

4. Examination Procedure Related to CRI Applications

The examination procedure of patent applications relating to CRIs is the same as that for other inventions to the extent of consideration of novelty, inventive step, industrial applicability and sufficiency of disclosure, clarity, definitiveness etc. The determination that the subject matter relates to one of the excluded categories requires greater skill on the part of the Examiner and these guidelines focus more on this aspect.

4.1 Novelty

Novelty is the foremost requirement to determine the patentability of any invention. No invention can be held patentable if the subject matter as described and claimed was disclosed before the date of filing, or before the date of priority, as the case may be. The determination of novelty in respect of CRIs is no different from any other field of invention.

In Telefonktiebolaget Lm Ericsson (Publ) vs Lava International Ltd[15] on 28 March, 2024, Hon'ble Delhi High Court while proposing a 7-step approach for novelty determination have stated at para 87-88 that:

"87.…Taking into consideration the judgements given by various Courts, and the guidance given in the Manual, I have deemed it appropriate to develop a step-wise approach for determination of novelty.

88. When assessing the novelty of an invention, a Judge or even a patent examiner ought to follow a systematic approach to ensure a thorough and unbiased analysis of the invention claimed and the prior art cited. Another important aspect of the test for assessment of novelty in an invention is to maintain a distinction between the test of novelty and test for inventive step or lack of obviousness. I am of the view that the following steps, which may be referred to as the ***'Seven Stambhas Approach'*** *serve as guiding Stambhas are referred to as*

[15] *Telefonktiebolaget Lm Ericsson (Publ) vs Lava International Ltd [CS(COMM) 65/2016]*

columns or pillars in Indian Architecture principles and provide a clear framework for assessing novelty, reflecting the distinction between novelty and non-obviousness:

(i) Understanding of the Claims of the Invention *• The determination of lack of novelty should begin with the understanding of the Claims of the invention as it is the Claims that define the boundaries of the invention and what the applicant considers as their novel contribution.*

(ii) Identify Relevant Prior Art *• Collecting the prior art, including any public disclosure, publication, patent, or patent application that predates the filing date of the patent application which is relevant to the Claims of the patent.*

(iii) Analyse the Prior Art *• Conducting a detailed analysis of the identified prior art to ascertain its relevance to the Claims of the invention. This step involves searching and documenting both the similarities and the differences, if any, between the Claims of the invention and the text of the prior art.*

This step requires comparing the technical details and features of the prior art against those claimed in the invention.

(iv) Determine Explicit and Implicit Disclosures *• Examining whether the prior art explicitly or implicitly discloses the same invention. Explicit disclosure means the prior art directly describes the invention claimed. Implicit disclosure refers to whether the prior art describes elements or aspects so similar to the claimed invention that a direct link can be drawn.*

(v) Assessment material differences while considering the entire scope of the Claims *• Identifying the material differences between the claimed invention and the prior art, if any, such that a material difference would indicate that the claimed invention has not been disclosed in the prior art and, therefore, the invention, is novel.*

(vi) Verifying Novelty in light of Comprehensive Scope and Specific Combination of Claimed Elements *• Evaluation of novelty of the invention is carried out in light of the comprehensive scope of its claims, not just individual elements. • The invention is novel only if the combination of claimed elements as a whole has not been previously disclosed.*

(vii) Documentation of the Analysis and Novelty Determination *• Specify the finding of the examination of novelty, while providing a clear rationale for the said determination. The*

specific documentation must include references to specific sections of the prior art examined and a reasoning as to how the section affects the novelty of the claims and the inventive concept of the invention.

• *Based on the analysis, issue a formal decision, if the invention or any of its claimed elements is found in the prior art, the invention is not novel. Conversely, if the invention is not disclosed by the prior art, it is considered novel."* **[Emphasis added]**

Apart from the above, the novelty criterion is judged under various provisions of the Act and the Rules made thereunder and also based on the procedures laid out in chapter 08.03.02 of the Manual.

4.2 Inventive step

Inventive step is decided in accordance with the provisions of section 2(1) (ja) of the Act. The determination of inventive step with regard to CRIs is carried out in like manner as in other categories of inventions.

> *As per 2(1) (ja), "inventive step" means a feature of an invention that involves technical advance as compared to the existing knowledge or having economic significance or both and that makes the invention not obvious to a person skilled in the art;*

Hon'ble Supreme Court of India on inventive step: In Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd[16] it was held that *"…The 'obviousness' has to be strictly and objectively judged. For this determination several forms of the question have been suggested. The one suggested by Salmond L. J. in Rado v. John Tye & Son Ltd. is apposite. It is: "Whether the alleged discovery lies so much out of the Track of what was known before as not naturally to suggest itself to a person thinking on the subject, it must not be the obvious or natural suggestion of what was previously known…"*

"…Another test of whether a document is a publication which would negative existence of novelty or an "inventive step" is suggested, as under:" Had the document been placed in the hands of a competent craftsman (or engineer as distinguished from a mere artisan),

[16] *Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)*

endowed with the common general knowledge at the 'priority date', who was faced with the problem solved by the patentee but without knowledge of the patented invention, would he have said, "this gives me what I want?" (Encyclopaedia Britannica; ibid). To put it in another form: "Was it for practical purposes obvious to a skilled worker, in the field concerned, in the state of knowledge existing at the date of the patent to be found in the literature then available to him, that he would or should make the invention the subject of the claim concerned?..."[17]

In the F. Hoffman la Roche v Cipla[18] case the Hon'ble Delhi High Court had observed that the obviousness test is what is laid down in Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)[19]and that *"Such observations made in the foreign judgments are not the guiding factors in the true sense of the term as to what qualities that person skilled in the art should possess. The reading of the said qualities would mean qualifying the said statement and the test laid down by the Supreme Court."*

Hon'ble High Court further added "*From the bare reading of the afore quoted observations of Supreme Court, it is manifest that the Hon'ble Supreme Court has laid down the test for the purposes of ascertaining as to what constitutes an inventive step which is to be seen from the standpoint of technological advancement as well as obviousness to a person who is skilled in the art. It is to be emphasized that what is required to be seen is that the invention should not be obvious to the person skilled in art. These are exactly the wordings of New Patents Act, 2005 u/s Section 2(ja) as seen above. Therefore, the same cannot be read to mean that there has to exist other qualities in the said person like unimaginary nature of the person or any other kind of person having distinct qualities……. Normal and grammatical meaning of the said person who is skilled in art would presuppose that the said person would have the knowledge and the skill in the said field of art and will not be unknown to a particular field of art and it is from that angle one has to see that if the said document which is prior patent if placed in the hands of the said person skilled in art whether he will be able to work upon the same in the workshop and achieve the desired result leading to patent which is under challenge. If the answer comes in affirmative, then certainly the said invention under challenge is anticipated by the prior art or in other words, obvious to the person skilled in art as a mere workshop result and otherwise it is not. The said view propounded by Hon'ble Supreme Court in Biswanath Prasad (supra) holds the field till date and has been*

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[17] *Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)*

[18] *F. Hoffmann-La Roche Ltd vs Cipla Ltd., Mumbai Central, ... on 7 September, 2012*

[19] *Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)*

followed from time to time by this Court till recently without any variance….. Therefore, it is proper and legally warranted to apply the same very test for testing the patent; be it any kind of patent. It would be improper to import any further doctrinal approach by making the test modified or qualified what has been laid down by the Hon'ble Supreme Court in of Biswanath Prasad (supra)."

The "obviousness" must be strictly and objectively judged[20]. While determining inventive step, it is important to look at the invention as a whole. It must be ensured that inventive step must be a feature which is not an excluded subject itself. Otherwise, the applicant by citing economic significance or technical advance in relation to any of the excluded subjects can insist upon grant of patent thereto. Therefore, this technical advance comparison should be done with the subject matter of invention and it should be found it is not related to any of the excluded subjects.

Accordingly, the following points need to be objectively judged to ascertain whether, looking at the invention as a whole, the invention does have inventive step or not:

1. Identify the "person skilled in the art", i.e.**,** competent craftsman or engineer as distinguished from a mere artisan;

2. Identify the relevant common general knowledge of that person at the priority date;

3. Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;

4. Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed;

5. Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of inventive ingenuity?

[20] *Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries Ltd (AIR 1982 SC 1444)*

Recently, in Telefonktiebolaget Lm Ericsson (Publ) vs Lava International Ltd[21] on 28 March, 2024, Hon'ble Delhi High Court has further emphasised on the above mentioned 5-step analysis approach for Inventive Step determination.

4.3 Industrial Applicability:

In patent law, industrial applicability or industrial application is a patentability requirement according to which a patent can only be granted for an invention which is capable of industrial application, i.e. for an invention which can be made or used in some kind of industry.

It has been defined in section 2(1) (ac) of the Act as follows:

> "*capable of industrial application", in relation to an invention, means that the invention is capable of being made or used in an industry*;

The requirement of workability and usefulness are both connected to the requirement of industrial applicability. If an invention is not workable, it means that it is also not industrially applicable. The patent specification must disclose a practical application and industrial use for the claimed invention wherein a concrete benefit must be derivable directly from the description coupled with common general knowledge. Mere speculative use or vague and speculative indication of possible objective will not suffice.

4.4 Sufficiency of Disclosure:

Grant of patents is quid pro quo[22] to disclosure. It is for the disclosure of invention by the applicant that the patent rights are granted to him for a limited period of time, if all criteria of patentability are fulfilled. The requirement of "Sufficiency of Disclosure" is essential to determine whether the application is sufficiently clear, informative, and meets statutory requirements for disclosure. These requirements aim to ensure that the invention can be understood, replicated, and practically applied by a person skilled in the relevant technical field. This requirement ensures that patent fulfils its purpose as tool for technological advancement, fair competition, and public benefit and fosters a balanced and effective

[21] *Telefonktiebolaget Lm Ericsson(Publ) vs Lava International Ltd [CS(COMM) 65/2016]*
[22] *something for something" or "this for that" in Latin*

patent system by supporting innovation while safeguarding public access to technological knowledge.

The requirement for "sufficiency of disclosure" under the Act is established in Section 10 of the Act, under the section titled "Content of Specification". Specifically, Section 10 (4) of the Act provides that any Complete Specification shall:

> *(a) fully and particularly describe the invention and its operation or use and the method by which it is to be performed;*
> *(b) disclose the best method of performing the invention which is known to the applicant and for which he is entitled to claim protection;*
> *(c) end with a claim or claims defining the scope of the invention for which protection is claimed;*
> *(d) be accompanied by an abstract to provide technical information on the invention."*

The Act requires the applicant to specify “what” is the invention and “how” to perform it. The invention shall be described fully and particularly to satisfy the “what” requirement and further the best method of performing the invention known to the applicant to satisfy the “how” requirement. The Complete Specification should therefore disclose the invention fully and particularly to meet the requirement of the Act and should also enable a person skilled in the art to work the invention without any assistance of the patentee or any further undue experimentation. The description must be unambiguous, clear, correct and accurate. It must not contain any statements which may mislead the person skilled in the art to whom the specification is addressed. While the requirements of sufficiency of disclosure is considered generally in all fields of invention; in cases of patent application concerning CRIs, these requirements are considered as fulfilled if the specification addresses the “What” and “How” requirements.

Fully and particularly (What):

If the patent application relates to apparatus/system/device, i.e., hardware-based inventions, each and every feature of the invention shall be described with suitable illustrative drawings. If the invention relates to “method”, the necessary sequence of steps shall clearly be described so as to distinguish the invention from the prior art with the help of the flowcharts and other information required to perform the invention along with their implementing mechanism. The specification shall describe the working relationship of different components together with connectivity. It shall also describe the desired

result/output or the outcome of the invention as envisaged and any intermediate applicable components/steps.

Best Method of performing the invention (How):

The best mode of performing and/or use of the invention shall be described with suitable illustrations. The specification should not limit the description of the invention only to its functionality rather it should specifically and clearly describe the implementation of the invention.

It is important to note that in the matter of Caleb Suresh Motupalli vs Controller Of Patents[23] on 29th January, 2025 at para 21, 23-24, 26, 30-32, Hon'ble Madras High Court stated that:

> *"…21. The claimed invention proposes to solve the problem of loss of agency and control by humans as a result of increased AI capabilities, by creating a super-augmented persona. To this end, independent Claim Nos. 14, 20 and 25 provide for, inter alia, an user interface comprising a persona-extender, persona-augmenter, ecosystem indicia which provide for an integration technology for integrating the extended persona with plurality of objects, other extended persona of other actors; a delegated processing unit indicium which provides for the actor to non-invasively delegate grunt work or low level processing to delegated processing unit. The metaphor environment performs a black-box modernization technique to provide persona extender or persona augmenter to the actor…"*
>
> *"…23.* ***For determining whether the teachings in the complete specification support these claims, the court must assume the mantle of a notional PSITA.*** *The PSITA can be one technical expert or a team consisting of multiple experts depending on the nature of the invention. The appellant argued that the multifaceted interdisciplinary nature of the claimed invention necessitates that the invention be examined by a PSITA team consisting of relevant experts. Without doubt,* ***the claimed invention pertains to the field of AI, more particularly, Augmented Reality and Mixed Reality. Therefore, the PSITA is a software engineer with expertise in AI and allied fields or a team having***

[23] *Caleb Suresh Motupalli vs Controller Of Patents[23] [C.M.A. (PT) No. 2 of 2024]*

experts well-versed in AI, black- box modernization techniques, Object Oriented Analysis and Design techniques*…"*

"…24. On perusal of the complete specification by assuming the mantle of the said PSITA team, I find that the disclosures therein do not sufficiently enable the product, method or means claims. The perceived problem of loss of human control is proposed to be solved using the necktie persona- extender/environment integrator… the complete specification teach that through the black-box modernization technique, the computer works towards extending human minds and bodies beyond their conventional boundaries; the computer is recast as the necktie persona-extender/integrator; the hardware of the extender/integrator consists of the pocket data processing device connected to a global network with handwriting, speech, gesture and image synthesizing/processing software, a camera on the forehead, earphone with microphone and a projector. Distributed Object Technology (DOT) and its middleware provide the necessary integration technology whereas the browser and the web provide for the extension technology.…

…26. On carefully examining the complete specification and the relevant prior art documents, I find that the appellant has merely coalesced the disclosures and discussions in the patent and non-patent literature, which largely relate to harnessing AI capabilities for advancing human operations, to arrive at the claimed invention. Significantly, black-box modernization, DOT, object oriented analysis and design techniques, which lie at the heart of the claimed invention and form the bedrock for enabling the claimed technical features, persona extension and augmentation, are disclosed in the prior art document D3 for modernizing outdated information systems. ***The teachings in the complete specification of the claimed invention do not provide any directions for the adoption of these technologies*** *for persona extension and augmentation.* ***In order to meet enablement requirements, undue levels of experimentation entailing the deployment of inventive faculty should not be required to work the invention.*** *A fair reading of the complete specification does not lay bare the purported working and usage of the aforementioned techniques…Absent such teachings and the techniques not being common general knowledge for persona extension and augmentation, in my view, undue experimentation requiring the use of inventive faculty is necessary to achieve the promised result…….30. Upon a fair reading of the specification, I find that it does not contain any details as regards the conventional information processing and user interface design techniques to mitigate n- entropy as claimed in Claim…nor the conventional wired or wireless integration or*

interfacing techniques used for layering of the cyberspace over the meatspace to form the labourspace as claimed…As for the working of the CNSOA…the complete specification in Page 14, merely ***mentions the usage of standard "Object Oriented Analysis and Design" techniques for integration but glaringly lacks any teachings or working examples regarding its usage in achieving the integration as claimed****…the complete specification contains an elaboration of the proposed decussation and biblical and natural element analogy but is* ***devoid of any technological enablement of the features in the claim****. For the aforementioned lack of technical criteria in the complete specification to work the claims for achieving the intended result, the claimed invention fails the enablement test under Section 10(4)(a) of the Patents Act…"*

"…31. Section 10(4)(b) of the Patents Act requires the complete specification to disclose the "best method of performing the invention which is known to the applicant and for which he is entitled to claim protection." While grappling with the question of whether the patent-in-suit relating to "improvements in or relating to soil cultivating implements" discloses the best mode of performing the invention, Lord Justice Nicholls in C Van Der Lely NV v. Ruston's Engineering Co. Ltd. ('Van Der Lely') [1993] RPC 45 propounded that ***the standard for ascertaining whether the claimed invention discloses its best mode of performance is to be determined as per practice and not in theory…****the complete specification is bereft of a) any teachings to use the object oriented analysis technique to achieve the promised integration and b) any technical feature to result in the decussation of the pyramids hosting the actors. Therefore, the claimed invention fails under section 10(4)(b) as it does not disclose* ***any workable criteria to arrive at the intended result****, let alone the best mode of performing the invention……32. Section 10(5) of the Patents Act requires the claims of the invention to be clear and succinct and to be fairly based on the matter disclosed in the specification. Elucidating the rule of clarity and succinctness, the UK Court of Appeal in The General Tire & Rubber Company v. The FirestoneType and Rubber Company Limited and Others [1972] R.P.C. 457, posited that the rule requires the patentee to provide "as clear a definition as the subject matter admits of" and the question of definition has to be decided as a "practical matter" and the puzzles set out at the edge of the claim carry little weight. The principle underlying the second part of the provision, the fair basing rule, was formulated in Biogen Inc v Medava Plc, [1997] R.P.C. 1.* ***The rule requires that the specification must enable the invention to be performed to the full extent of the monopoly claimed.*** *Further, in Van Der Lely, it was held that* ***a claim covering an unimplementable or an unworkable embodiment is not fairly based on the specification…"*** **[Emphasis Added]**

In case of disclosures for the inventions in the field of disruptive technologies like AI, Blockchain, Machine Learning, IoT, Big Data, Quantum Computing etc., many times the problem statements itself may be extrapolated and camouflaged as a proposed solution, therefore, the disclosure requirements are critical and need to be specific and particular to the invention. For example in field of AI, applications fully and particularly describing the invention means the disclosure must encompass all components, operations, and interconnections essential to understanding the invention. The invention must disclose specific implementation elements critical to reproducing the AI model's functionality, such as training data sources, data pre-processing steps, chosen learning models (e.g., neural networks, decision trees), and any applied loss functions. For example, the following details can be checked for ascertaining these disclosure requirements:

a) In AI systems, while the inputs and outputs are typically known, the logic that transforms input into output may be complex or abstract. Description should aim to clarify this transformation as much as possible by detailing any known processes and variables. If test results or other forms of evidence validate the accuracy of the model's output, these should be included, especially when the AI is used for precise applications where reliability is essential.

b) For a trained AI model, clearly defining the correlation between input and output data is critical. This correlation is considered fully described when:

   i. The training data used for the model is explicitly identified,
   ii. A link between the training data's characteristics and the technical problem the invention addresses is made,
   iii. The specific learning model and training methodology are comprehensively described, and
   iv. The model, when trained, is shown to effectively address the technical problem with predictable results.

c) If data pre-processing plays a key role in the invention, all steps and functions of pre-processing should be disclosed, along with how they correlate to the end model. If this correlation isn't clear or if a person skilled in the art might struggle to understand the link between raw data and processed learning data, the application risks failing to meet the enablement requirement.

d) For AI applications utilizing reinforcement learning, the application must specify how the system interacts with its environment, including agent interactions, states, actions, and rewards. Omitting these details, or failing to describe them in a way that a person skilled in the art can deduce, could result in a nonenabling disclosure.

e) AI inventions that improve a computer's internal structure or operations should describe how the algorithm interacts with the hardware or system structure. This includes specifying how the model optimizes internal performance metrics like data storage, scheduling, or processing speeds, offering the necessary technical context.

f) When the invention's technical effect depends on specific traits of the training dataset, these traits must be disclosed unless a person skilled in the art could identify them without undue experimentation. In most cases, it's sufficient to describe the data's defining characteristics rather than the specific dataset itself.

g) Blockchain patent applications are required to include comprehensive descriptions of the cryptographic techniques used, the specific data structures involved, the consensus mechanisms employed, and any interactions with hardware or network systems. These detailed disclosures enable others to fully understand, replicate, and assess the functionality and innovation of the blockchain technology described. Blockchain patent applications must clearly define elements like distributed ledgers, consensus mechanisms, cryptographic processes, and network configurations. Clear descriptions of consensus mechanisms and data layouts (e.g., block structures, linkages) are crucial for enablement.

h) If the invention employs a novel machine learning technique, a comprehensive description is mandatory. This should cover essential aspects, such as the structure of neural networks, activation functions, network topology, convergence criteria, metadata and the learning mechanisms used. Each component of the algorithm should be disclosed to the extent it is necessary to achieve the invention's claimed technical effects, ensuring that a person skilled in the art can replicate the process accurately.

4.4.1 Claims:

1. The claims should clearly define the scope of the invention and should take care of unity of invention requirements as defined under section 10(5) of the Act.

2. The claim(s) of a Complete Specification should be clear and succinct and should be fairly based on the matter disclosed in the specification.

3. The claims in the field of CRIs need to be construed to ascertain the substance of the claim without wholly relying on the forms and types of the claims.

4.4.2 Form and substance:

The sub-section 3(k) excludes a mathematical or business method or a computer programme per se or algorithms from patentability. While the judgment of mathematical methods or business methods is comparatively easier, it is the computer programme per se or algorithms related inventions that require careful consideration of the Examiner. Computer programmes are often claimed in the form of method claims or system claims with some "means" indicating the functions of flow charts or process steps. The algorithm related claims are even wider than the computer programmes claimed by themselves as a single algorithm can be implemented through different programmes in different computer languages. If, in substance, claims in any form such as method/process, apparatus/system/device, computer program product/ computer readable medium belong to the said excluded categories, they would not be patentable.

Even when the issue is related to hardware/software relation, the expression of the functionality as a "method" is to be judged on its substance. It is well-established that, in patentability cases, the focus should be on the underlying substance of the invention, not the particular form in which it is claimed. The Act clearly excludes computer programmes per se and the exclusion should not be allowed to be avoided merely by camouflaging the substance of the claim by its wording.

4.4.3 Means plus Function:

The claims concerning CRIs are often phrased in means for performing some function such as means for converting digital to analog signal etc. These types of claims are termed as

means plus function format. The “means” mentioned in the claims shall clearly be defined with the help of physical constructional features and their reference numerals to enhance the intelligibility of the claims. The claims in means plus function form shall not be allowed if the structural features of those means are not disclosed in the specification.

4.5 Determination of excluded subject matter relating to CRIs:

Along with determining the merit of invention as envisaged under Sections 2(1)(j), (ja) and (ac), the Examiner should also determine whether or not they are patentable inventions under Section 3 of the Act. The sub-section 3(k) excludes mathematical methods or business methods or computer programme per se or algorithms from patentability. Computer programmes are often claimed in the form of algorithms as method claims or system claims with some “means” indicating the functions of flow charts or process steps. It is well-established that, while establishing patentability, the focus should be on the underlying substance of the invention and not on the particular form in which it is claimed.

What is important is to judge the substance of claims taking whole of the claim together. If any claim in any form such as method/process, apparatus/system/device, computer program product/ computer readable medium falls under the said excluded categories, such a claim would not be patentable. However, if in substance, the claim, taken as whole, does not fall in any of the excluded categories, the patent should not be denied.

In the recent times, Hon’ble courts have specified various criteria that can be helpful in interpreting the provisions of section 3(k) and deciding whether the subject matter of the claimed invention is patentable or non-patentable.

4.5.1 Claims directed as “Mathematical Method”:

Mathematical methods are a particular example of the principle that purely abstract or intellectual methods are not patentable. Mathematical methods like method of calculation, formulation of equations, finding square roots, cube roots and all other similar acts of mental skill are therefore, not patentable. Similarly mere manipulations of abstract idea or solving purely mathematical problem/equations without specifying a practical application also attract the exclusion under this category. However, mere presence of a mathematical formula in a claim, to clearly specify the scope of protection being sought in an invention, may not necessarily render it to be a “mathematical method” claim. Also, such exclusions may not apply to inventions that include mathematical formulae and resulting in systems for

encoding, reducing noise in communications/ electrical/electronic systems or encrypting/ decrypting electronic communications.

Hon'ble Madras High Court in the matter of Microsoft Technology Licensing LLC vs Assistant Controller of Patents and Designs[24] on 3 July, 2024 at Para 23 stated:

> *"…A mathematical method is a specific approach to resolve a mathematical problem or question and would typically involve a series of steps. Consequently, at the idea or concept level, it would be ineligible for any kind of intellectual property protection. The CRI Guidelines 2017 suggest - and, in my view, correctly - that the mathematical method exclusion is intended to exclude the mere expression of an intellectual exercise, such as a method of calculation, the formulation of equations and the like. By way of illustration, Brent's method in numerical analysis to find the root or the Adams' method of solving differential equations would be excluded. Said Guidelines also clarify - again, correctly - that the mere presence of a mathematical formula in a claim would not necessarily render it 'a mathematical method' claim…".*

4.5.2 Claims directed as "Business Method":

The term "Business Methods" involves whole gamut of activities in a commercial or industrial enterprise relating to transaction of goods or services. The claims drafted not directly as "business methods" but apparently with some unspecified means are held non-patentable. However, if the claimed subject matter specifies an apparatus and/or a technical process for carrying out the invention even partly, the claims shall be examined as a whole. When a claim is "business methods" in substance, it is not to be considered a patentable subject matter. However, mere presence of the words such as "enterprise", "business", "business rules", "supply-chain", "order", "sales", "transactions", "commerce", "payment" etc. in the claims may not lead to conclusion of an invention being just a "Business Method", but if the subject matter is essentially about carrying out business/ trade/ financial activity/ transaction and/or a method of buying/selling goods through web (e.g. providing web service functionality), the same should be treated as business method and shall not be patentable.

[24] *Microsoft Technology Licensing LLC vs Assistant Controller of Patents (3 July, 2024) ((T) CMA (PT) No.49 of 2023 [OA/36/2020/PT/CHN])*

In the matter of Opentv Inc vs The Controller of Patents And Designs[25] on 11 May, 2023 at paras 72, 74, 79 and 81 stated:

> "*72**.** …The bar in India to grant of business method patents has to be read as an absolute bar without analysing issues relating to technical effect, implementation, technical advancement or technical contribution**…***"

> "*74**.** …In order to judge as to whether a particular patent application seeks to patent business methods or not, at the outset, the following aspects, ought to be considered - (i) whether the invention is primarily for enabling conduct or administration of a particular business i.e., sale or purchase of goods or services; (ii) whether the purpose of the invention is for claiming exclusivity or monopoly over a manner of doing business; (iii) whether the invention relates to a method of sale or purchase of goods or services or is in fact a computer program producing a technical effect or exhibiting technical advancement. If it is the latter, it would be patentable but not if it is the former**…**"*

> *"79. …In the present case, a perusal of the entire specification shows that various known components and technologies are being adapted in a manner so as to enable giving of a gift without human intervention except at the beginning where the gift and recipient is chosen by the sender. The same is described in the form of a network in different embodiment formats and for the purpose of transmitting different media formats as well. The media could be subscription for a service, a DVD, a VC or any other tangible or intangible media. Though, there is no doubt that there is a two-way communication, the purpose of the invention is primarily to enable giving of a media in tangible or intangible format to the recipient. Such a giving of a media irrespective of whether is worded as a method or as a system would be nothing but a method for doing a particular business i.e., for giving of a media as a gift…"*

> *"81. …The subject invention is therefore directed purely towards a method of giving a media as a gift which is nothing but a method of selling a media for gift purposes and is hence a business method. The subject invention is attracted by the exclusion from patentability under Section 3(k) of the Act...***"**

[25] *Para 74- Opentv Inc vs The Controller Of Patents And Designs [C.A.(COMM.IPD-PAT) 14/2021]*

4.5.3 Claims directed as "Algorithm":

Hon'ble Madras High Court in the matter of Microsoft Technology Licensing LLC vs Assistant Controller of Patents and designs[26]on 3 July, 2024 at Para 25 stated:

> *"…An algorithm may be defined as a set of rules or instructions for solving a problem, typically through a sequence of steps or operations. Devising an algorithm would also, therefore, be an intellectual exercise and intellectual property protection would be limited to copyright protection, subject to originality, for the form of expression. While the expression is commonly used in the context of software-based routines in computers, as is evident from the above, it can be used in other contexts"*.

Further, Hon'ble Delhi High Court in the matter of Blackberry Limited vs Assistant Controller Of Patents And Designs[27] on 30 August, 2024 at paras 51 and 52 stated:

> **"***51. …The only technical effect of such instructions would be that the data would be regulated in a manner so as to determine the transmission either in favour of secondary servers or primary servers. Such an algorithm, in the opinion of this Court, is a pure algorithm which is not patentable under Indian Law, i.e. The Patents Act, 1970…***"**
>
> "52…*if the invention relates purely to a set of instruction or policies which determine the flow without any substantial change in the hardware, such instructions even if they have a bearing on the manner in which the flow of data occurs would not be entitled to patent protection in India. But if the algorithm instructions are thereafter implemented through computer software coded for this purpose and result in a technical effect or technical contribution then the test applicable to computer software can also be applied and patentability can be adjudged. In such a case the inventive feature would have to be the implementation and not the algorithm itself* **...**"

[26]*Microsoft Technology Licensing LLCvs Assistant Controller of Patents((T) CMA (PT) No.49 of 2023[OA/36/2020/PT/CHN])*

[27] *Para 52- Blackberry Limited vs Assistant Controller Of Patents And Designs[C.A. (COMM.IPD-PAT) 229/2022]*

4.5.4 Claims directed as "Computer Programme per se":

Claims which are directed towards computer programme per se are excluded from patentability, like:

i. Claims directed at computer programmes/ set of instructions/ Routines and/or Sub-routines.

ii. Claims directed at "computer programme products" / "Storage Medium having instructions"/ "Database" / "Computer Memory with instruction" stored in a computer readable medium.

With regard to exclusion of computer programme per se from patentability, Hon'ble Delhi High Court in the matter of Ferid Allani vs. Union Of India & Ors[28] on 12 December, 2019 at para 11 stated:

> "*11. ...Across the world, patent offices have tested patent applications in this field of innovation, on the fulcrum of "technical effect" and "technical contribution". If the invention demonstrates a "technical effect" or a "technical contribution" it is patentable even though it may be based on a computer program…*"

Further, Hon'ble Delhi High court in the matter of Microsoft Technology Licensing, Llc vs The Assistant Controller Of Patents And Designs[29] on 15 May, 2023 at para 39 stated:

> *"39. …The fact that the claimed invention involves a set of algorithms executed in a pre-defined sequential manner on a conventional computing device does not necessarily imply that it lacks a technical effect or contribution. It is possible that the invention provides a technical solution to a technical problem, and the computer program use is merely a means to achieve the technical solution. If the subject matter is implemented on a general-purpose computer, but results in a technical effect that improves the computer system's functionality and effectiveness, the claimed invention cannot be rejected on non-patentability as "computer program per se…".*

[28] *Ferid Allani vs. Union Of India & Ors [W.P.(C) 7/2014 & CM APPL. 40736/2019]*
[29] *Microsoft Technology Licensing, Llc vs The Assistant Controller Of Patents And Designs[C.A.(COMM.IPD-PAT) 29/2022]*

Technical effect/ Technical contribution:

The term "technical effect" is not defined in Indian statutes. Hon'ble Courts have referred to and interpreted this term in context of patent examination at various instances, wherein courts have affirmed that inventions delivering technical solutions can qualify for patent protection even if they rely on algorithms or software.

A non-exhaustive list of what could possibly be technical effect(s) are as follows:

a) **Higher speed:** If the claimed invention:
   i. enhances the computational ability of the processor for more efficient processing,
   ii. reduces the time period in scheduling job execution in HPC,
   iii. enables hardware to process the output faster

b) **Reduced hard-disk/memory access time:**If the claimed invention:
   i. reduces the use of memory space in the system and augments efficiency,
   ii. creates a more efficient storage system,
   iii. creates more effective data compression technique

c) **Better control of robotic arm**: If the claimed invention results into more efficient arm maneuvering for multiple and distinct operations/tasks, more accurate arm positioning at target spot, more efficient intricate movements such as in surgical procedures etc.

d) If the claimed invention leads to **improved reception/transmission of a radio/electromagnetic/communication signal**

e) If the claimed invention results in to **real-time monitoring and control of devices leading to technical solution to a technical problem**

f) **Security enhancement in computer networks/system:** If the claimed invention leads to improved security of the authentication process, enhanced encryption/decryption technique etc.

g) If the claimed invention leads to **Efficient Image Processing/Signal Processing to solve a technical problem**

Other than the above non-exhaustive list of technical effects, more may be determined on a case-to-case basis.

4.5.5 A literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever including cinematographic works and television productions

The above criterion is to be judged as per the procedures as laid out in chapter 08.03.05.11 of the Manual.

4.5.6 A mere scheme or rule or method of performing mental act(s) or a method of playing game(s)

The above criterion is to be judged as per the procedures as laid out in chapter 08.03.05.12 of the Manual.

4.5.7 Presentation of information

The above criterion is to be judged as per the procedures as laid out in chapter 08.03.05.13 of the Manual.

4.5.8 Topography of integrated circuits

The above criterion is to be judged as per the procedures as laid out in chapter 08.03.05.14 of the Manual.

5. Examples

5.1 Patentable Claims: Following are few illustrative examples of CRI patentable claims:

Example 1:

A method of authenticating a user of a computer (102) for at least one sub-location of a network address, comprising: providing a network address having the at least one sub-location, wherein the network address is a domain that requires at least two cookies to provide user authentication to access the at least one sub-location; providing a first cookie to the computer (102) for user authentication for the network address, wherein the first cookie

provides user authentication for the network address and does not provide authentication for the sub-location; providing a second cookie to the computer (102) for user authentication for a first sub-location of the network address, when the computer (102) attempts to access the first sub-location for the first time after the computer (102) receives the first cookie, wherein the providing comprises validating the first cookie to authenticate the user for the network address; and when the user attempts to access the first sub-location after the first time with the first cookie, then obtaining the second cookie from the computer (102) for validating the second cookie to authenticate the user for the first sub-location of the network address.

Example 2:

A method for associating a command surface with active components, comprising: associating a command surface on a web page with a first component associated with a first application and with a second component associated with a second application that is unrelated to the first component; wherein the command surface includes user selectable commands for performing actions; identifying a first command list for the first component that identifies the commands included on the command surface that the first component is registered to receive notifications from and identifying a second command list for the second component that identifies the commands included on the command surface that the second component is registered to receive notifications from, wherein the first and second command list are identified by polling the first and second component respectively to acquire their command lists, wherein the first and second components are able to modify their command registration, wherein the first component and the second component are both registered to receive notifications from at least one same user selectable command included on the command surface; associating each of the commands in the first command list with the first component and associating each of the commands in the second command list with the second component (330); determining when one of the commands included on the command surface is activated (410); determining when the first component should receive the command based on the commands being associated with the first component and determining when the second component should receive the command (420) based on the commands being associated with the second component; and dispatching the command to the first component for processing when determined that the first component should receive the command and dispatching the command to the second component for processing when determined (440) that the second component should receive the command.

Example 3:

A computer implemented method for processing data including: identifying, by an identification processing module (1706), a plurality of subsets of fields of data records of a data source, each subset including at least a first field and a second field; partitioning by a partition component (1714), data records into multiple parts independent of values occurring in the fields of those data records; for each of the multiple parts, forming, by an attach value component (1718), data elements from the data records in that part, each data element identifying the first field and the second field of a given subset and identifying corresponding values occurring in the first and second fields; for each part of the multiple parts, determining, by a rollup component (1720), counts based on the values that occur in the first field and the values that occur in the second field of the data elements in that part; combining by a rollup component (1722), at least some of the counts from data elements of different parts to generate accumulated counts; for each of one or more of the plurality of subsets of fields, selecting by a global rollup component (1724), a distribution of values that are most frequently occurring in the second field of a plurality of records based on the accumulated counts, the plurality of records having a common value occurring in the first field; identifying by a functional relationship processing module (1728), one or more of the plurality of subsets of fields as having a functional relationship, based at least in part on the selected distribution of values; and presenting,by a presentation component, the identified functional relationship to a user.

Example 4*:*

A method of operating a computing device in a computing system (100), the computing system (100) comprising a plurality of host devices (170A, 170B) interconnected by a network that is organized into enclaves (110A, 110B, 110C, 110D), the method comprising: in an intermediary computing device (140A, 140B, 140C, 140D) that is an intermediary between a first host device in a first enclave and a second host device in a second enclave: detecting a message (610) between the first host device in the first enclave and the second host device in the second enclave transmitted in accordance with a security association between the first host and the second host device, wherein the intermediary computing device (140A, 140B, 140C, 140D) is in an intermediary enclave between the first enclave and the second enclave, and wherein the intermediary computing device (140A, 140B, 140C, 140D) is separate from the first enclave and from the second enclave; based on key derivation information in the message and a pair-wise enclave key for communications between the first enclave and the second enclave, generating a security association key (740), wherein the pair-wise enclave

key was generated in response to an interaction between the first enclave and the second enclave based on an organization key (210) from an organization key server (148) and on enclave key derivation inputs (222) for the first enclave and for the second enclave; and performing a cryptographic function (220) on the message with the generated security association key (630).

Example 5:

A method for protecting a session initiation protocol (SIP) infrastructure, comprising: performing an initial authentication with a mobile device in an access gateway (112), the access gateway (112) being a point of attachment; forwarding a first message from the mobile device (102) to an edge proxy via the access gateway (112); receiving a second message over a secure tunnel from the edge proxy, the second message querying the access gateway (112) to provide visited network information for a user of the mobile device (102); and responding to the second message by providing the visited network information from the access gateway (112) to the edge proxy for use in a final authentication of the mobile device (102).

Example 6:

A method (1300) of compressing data, the method (1300) comprising: converting (1301), by a compression device (200), each of a plurality of data blocks, of apre-defined data block size, into a matrix, of a pre-defined matrix size, so asto enable bit-level data manipulation; compressing (1302), by the compression device (200), each of the plurality of data blocks by processing the corresponding matrix to form a minimum state matrix based on a sequential set of compression rules, wherein processing the corresponding matrix to form the minimum state matrix comprises reorganizing matrix so as to form an identity matrix or a near identity matrix; dynamically adjusting, by the compression device (200), pre-defined matrix size based on the characteristics of the data blocks; deriving (1303), by the compression device (200), a granular metadata for each of the plurality of data blocks based on the corresponding minimum state matrix; and storing (1304), by the compression device (200), the granular metadata and the sequentialset of compression rules for each of the plurality of data blocks.

Example 7:

A system (100) for detecting speed limit traffic sign implemented in a vehicle, said system (100) comprising: an image sensor (102) for imaging field of view of a vehicle driver, the image sensor (102) captures one or more image frames of the field of view; and a processor (202) coupled with a memory (206), the memory (206) storing instructions executable by the processor (202) to: receive the one or more image frames from the image sensor (102) and define a Region of Interest (ROI) for each image frame, of a set of image frames selected from said received one or more image frames, characterized in that: the ROI is defined based on a section of each image frame, and wherein each ROI is resized to at least a first resolution image and a second resolution image, wherein the first resolution image pertains to half of resolution of the ROI for effective detection of the at least one speed limit traffic sign in a far region, and the second resolution image pertains to quarter of resolution of the ROI for effective detection of the at least one speed limit traffic sign in a near region; detect a circular object in the ROI of each image frame based on determination of points of symmetry by analyzing gradient values of respective pixels of a horizontal edge image and a vertical edge image, the horizontal edge image and the vertical edge image being obtained from each of the first resolution image and the second resolution image; and detect at least one speed limit traffic sign based on the detected circular object using one or more classifiers using a Convolutional Neural Network (CNN).

Example 8:

A method for reducing network protocol latency for at least one application on an electronic device (402), the method comprising: pre-resolving, by a Domain Name System (DNS) yielder unit (502), a plurality of DNS queries for the at least one application, wherein the plurality of DNS queries are pre-resolved before triggering at least one query by the at least one application for DNS resolution, wherein pre-resolving the plurality of DNS queries for the at least one application includes: monitoring the plurality of DNS queries triggered by the at least one application to identify at least one frequently triggered DNS query; caching the at least one frequently triggered DNS query and at least one DNS response fetched for the at least one frequently triggered DNS query from a DNS server (406); receiving at least one DNS query from the at least one application to resolve at least one domain name; comparing the at least one DNS query with the at least one frequently triggered DNS query; and providing the at least one cached DNS response to the at least one DNS query in response to determining the at least one DNS query is the at least one frequently triggered DNS query.

Example 9:

A security control, SC, system comprising one or more SC computing devices (250, 500) for automating security controls between computer networks, the one or more SC computing devices (250, 500) comprising at least one processor and a memory, the one or more SC computing devices (250, 500) includes and/or is in communication with a prism (504), a policy decision point, PDP, (508) and a policy enforcement point, PEP, (510), wherein the prism (504) includes a token manager (506), the SC system configured to: receive, at the prism (504), from a user device, a request to access a service including a system identifier, the system identifier identifies a computer system requesting access to a service controlled by the one or more SC computing devices (250, 500); build, at the token manager (506), a token request based on the received request, wherein the token request includes a target endpoint and an action on the endpoint; transmit, from the token manager (506), the token request to the PDP (508); read, at the PDP (508), a client distinguished name of a certificate from a multiplexed transport layer security protocol provided over the user session; correlate, at the PDP (508), the token request to at least one security policy associated with the system identifier by querying a cache for the at least one security policy, retrieving a group distinguished name of the target endpoint and the action on the endpoint, and querying the at least one retrieved security policy for membership of the client distinguished name to access the target endpoint; generate, at the PDP (508), an access token in response to the token request and transmit the access token to the token manager (506), wherein the access token is included in an authorization request at the prism (504); invoke, by the prism (504) through the PEP (510), the service using the authorization request; validate, at the PEP (510), the access token using the at least one security policy; and authorize, at the prism (504), the user device to access the service based on the at least one security policy.

Example 10:

A method of image reconstruction comprising: obtaining a captured image (X) having a resolution which is higher than a display resolution of an apparatus; creating a low resolution image of the captured image (X) for matching to the display resolution, the low resolution image including a time stamp associated with a time that the low resolution image is created or displayed; extracting a sub-band information (8) associated with the low resolution image; encoding the sub-band information; storing, in a buffer of the apparatus in a single data file format, the low resolution image, the encoded sub-band information, and at least one parameter (P) regarding at least one of the creating of the low resolution image, the extracting of the sub-band information (8), or the encoding of the sub-band information;

displaying the low resolution image; modifying the at least one parameter independently from the displaying of the low resolution image while displaying the low resolution image; storing the modified at least one parameter in the buffer; receiving selection of the low resolution image; decoding the encoded sub-band information associated with the low resolution image based on the at least one parameter; reconstructing a high resolution Image of the captured Image (X) based on the low resolution image and the decoded sub-band information; and storing, in a storage of the apparatus, the reconstructed high resolution image, wherein the low resolution image has a resolution that is lower than a resolution of the captured image (X) and the high resolution image has a resolution that is higher than that of the low resolution image.

5.2 Non-Patentable Claims: Following are few illustrative examples of non- patentable CRI claims:

Example 1:

A method for providing a media item as a gift, the method comprising: causing, by a headend system (114), presentation of a media item on a user interface of a device of a user over a distribution network (104); receiving, while the media item is being presented on the user interface by the headend system (114), an indication to gift a version of the media item from the user over a network (126) which forms a return channel; in response to the receiving of the indication, causing, by the headend system (114), display of a list of a plurality of different versions of the media item over the distribution network (104); receiving, by the headend system (114), a selection of a version of the media item from the list of the plurality of different versions of the media item over the network (126); receiving, by the headend system (114), a selection of the at least one recipient for the version of the media item from a list of potential recipients that is caused to be displayed on the user interface from the user device over the network (126); processing, by the headend system (114), a purchase transaction based on the selection of the version of the media item and the at least one recipient; and triggering, delivery of the version of the media item to the at least one recipient over the distribution network (104).

Example 2:

A system for administration of wireless systems, comprising: a primary wireless server (1002) communicatively operable with a plurality of mobile wireless clients (1004), the primary wireless server (1002) including: primary configuration data associated with at least one of

the plurality of mobile wireless clients (1004) supported by the primary wireless server (1002); a primary database operable on the primary wireless server (1002) and configured to store information associated with users of the mobile wireless clients (1004) including a user identification for each mobile wireless client (1004); and a primary program configured to control dissemination of information from the primary database to one or more of the plurality of mobile wireless clients (1004); at least one secondary wireless server (1010) communicatively operable with at least one of the plurality of mobile wireless clients (1004), the secondary wireless server (1010) including: a secondary database operable on the least one secondary wireless server (1010) and configured to store information associated with users of at least one of the mobile wireless clients (1004) including a user identification for the at least one mobile wireless client (1 004); and a secondary program configured to control dissemination of information from the least one secondary database to the at least one of the plurality of mobile wireless clients (1004); at least one program executable on the at least one of the plurality of mobile devices (1004) to detect the presence of the primary configuration data and determine if secondary configuration data associated with the secondary wireless server (1010) can be used to configure the at least one of the plurality of the mobile wireless clients (1004), the determining including an evaluation of policies associated with each of the primary and secondary configuration data to identify logically unresolvable conflicts between the policies and resolve identified conflicts in favor of the primary configuration data; and wherein the primary and secondary configuration data at least in part governs the permissible modes of operation for the at least one of the plurality of mobile devices (1004).

Example 3:

A transaction reward system (30) comprising: a reward and transaction processor system (32) arranged to store information indicative of reward entitlement information associated with a purchaser (16), and to apply at least a portion of an available reward to offset a cost of a purchase made by the purchaser (16); a reward interface (34) arranged to receive reward redemption information from the purchaser (16) via a first communication from the purchaser (16), and to communicate the reward redemption information to the reward and transaction processor system (32); and a transaction interface (36) arranged to receive information concerning a purchase from a retail processor (38, 40) associated with a retailer via a second communication from the retail processor (38, 40), and to communicate information indicative of a transaction made by the purchaser (16) to the reward and transaction processor system (32); wherein the purchaser (16) can select at least a portion of an available reward for a purchase and the reward and transaction processor system (32) is

arranged to offset the selected reward against a cost of the purchase in accordance with the reward redemption information.

Example 4:

A configuration entity adapted to be executed on a processor (36) to present information with respect to a process element to a user on a user interface during operation of a process, the configuration entity comprising: a computer readable memory (35); and a configuration object (42, 42e) representing a process element and configured to be joined with one or more other configuration objects to create process configuration modules (39), wherein the configuration object is stored on the computer readable memory and adapted to be executed on the processor, the configuration object including: (i) a display graphic representing the process element within the process and adapted to be displayed on the user interface during operation of the process; (ii) a communication interface adapted to communicate with the process to receive parameter information pertaining to the process element during operation of the process; (iii) a parameter storage adapted to store the parameter information; and (iv) a configuration attribute storage adapted to store configuration information pertaining to the process element within the process.

Example 5:

A system for supporting retrieval and replay of database trace data, comprising: a processor to: instruct a first functional element for retrieving database trace data, wherein retrieval of trace data refers to acquiring the trace data electronically; make a first exposed function call whereby computer processes initiate the operation of said first functional element by automated functions; instruct a second functional element for storing database trace data; instruct a third functional element for replaying database trace data; and make another exposed function call different from the first exposed function call whereby the computer processes initiate the operation of said third functional element, wherein said third functional element comprises a plurality of machine readable instructions for gathering reported database errors associated with a replay

Example 6:

A method for assisting innovators using an innovator assistance system (200), the method comprising: receiving, at the innovator-assistance system (200), an input data from a computing device (102) associated with an innovator, the input data comprising description

related to intellectual property rights (IPR) issues; determining keywords from the description related to the IPR issues; mapping the keywords of the description with keywords of descriptions stored in a database (112) coupled to the innovator-assistance system (200), to obtain a previouslystored elucidation for the clean description in the database (112); and extracting the previously-stored elucidation from the database (112) based on the mapping of the keywords, wherein for the keywords of the description not mapping with the keywords of the descriptions stored in the database (112), determining a type of IPR involved using the keywords of the description related to the IPR issues; selecting one of IPR-expert's computing devices (104) based on the construction of n-gram out of the keywords of the description related to the IPR issues; disseminating the description related to the IPR issues to the one of IPRexpert's computing devices (104) connected to a network (108) of the innovatorassistance system (200); receiving an IPR-expert generated elucidation from the selected IPR expert's computing device (104) within a predefined time; and posting the IPR-expert generated elucidation in response to the input data, comprising description related to IPR issues, received from the computing device (102) associated with the innovator.

Example 7:

A process (100) for designing a model for effective software cost estimation, said process (100) including: providing a framework (202) for measuring and analyzing footprints of project/product estimation with actual development cost; linking, by a linking unit (204), within requirements repository and proposed software cost estimation model, wherein the requirement Repository is a stack of various requirements shared by customers and identified by requirement analyst, wherein requirements are well defined, conceptually segregated and prioritized, characterized in that; setting, by anchor point setting unit (206), anchor points at logical places in software estimation lifecycle as per necessity, wherein anchor pints are the logical points, which are set by an estimation expert at different locations in software estimation lifecycle; measuring and analyzing, by a processing unit (208), footprints of estimations and actual development of software project status, wherein footprints help to trace numerous activities involved in various phases of software project development; measuring, by a controlling unit (210), productivity while estimating a software project, wherein footprints of project estimations along with time and development of activities help estimation expert and project manager to monitor the entire cycle of estimated software project development and actual development of software project; providing, by a reporting unit (212), an efficient reporting system; creating an activity stack including a multiple activities to accomplish project development; and creating a Resource Catalogue which is a stack of resources, which are selected after analyzing their work experiences, skills sets, the speed of work and approach towards work; Creating a complexity Catalogue including a stack of various technical and nontechnical complexities, which may occur in the project;

Core Cost Parameters stack of transitory costs as well as long-term costs (operational cost); and Buffer Cost Parameter stack of transitory as well as long-term costs, which may associate with activity in project development.

Example 8:

A method and system for automated bid configuration and search engine for enabling the user to search for the bids for goods or service within the user's or customer's desired budget and preferred vendors; wherein the method comprises:

a) Submitting bidding details by the customer in the bid calendar;
b) Performing search in the seller data for the relevant bids;
c) creating a new auction on identification of one or more eligible bids and notifying the sellers of the auction so created.
d) within a bid discovery period presenting the customer with the multiple bids wherein the customer selects the most desirable bid and proceeds with the purchase or customer selects multiple bids and initiates a reverse bidding process and notifying the sellers of the reverse auction.
e) in this reverse auction within a predetermined time period or "Bidding Term" the best bid out of multiple bids or the winning bid as submitted by the participating sellers, wherein sellers modify the bids with lower monetary value or higher worth value is selected

f) the best fit bid or as defined "Cool bid" as per customer requirements is selected and notified to the customer via emailing voucher thereby generated in respect of the winning bid.

Example 9:

A method for configuring and validating rules which comprises:

- *Receiving a query from a computing device;*
- *identifying, one or more rule parameters associated with the query based on at least one predefined rule template, wherein one or more rule values present in the query are used to identify the one or more rule parameters;*
- *determining a rule template corresponding to the query from template data (130), based on the one or more rule values present in the query and a parameterized rule is defined in the software code as the rule template, wherein one or more new rules are dynamically generated and validated based on the one or more rule templates, and wherein one or more existing rules are dynamically deleted or modified based on the one or more rule*

templates, and the one or more new rules are validated to ensure no duplicate rules are defined and no multiple rules with same parameters having conflicting inference are active simultaneously;

- *retrieving an active rule corresponding to the determined template is retrieved from a rule repository 128 based on the one or more rule parameters; and*
- *ascertaining an inference to be sent as a response to the query based in part on the at least one active rule and the one or more rule values.*

Example 10:

A computer-implemented system (12, 200, 300, 400, 1000) for programming a unified messaging (UM) application (14), by the way of a computer (912) including a processing unit (914) coupled to a system memory (916) via a system bus (918), comprising:

- *a user interface (936, 940); a programming environment (10, 910) operating on at least one computing device and accessed via the user interface (936, 940) for composing in an eXtensible Markup Language (XML) a UM finite state machine (FSM) (20) comprising menu states (72, 80, 82, 84) defined by a plurality of user prompts (22) and transitions (24) between user prompts, each transition defined by a particular user response (74, 76, 78) to a prompt;*
- *an UM software component including an existing UM code (161) called by the UM FSM (20);*
- *an XML feature utilized by the programming environment (10, 910) to create a valid menu state based upon the UM software component, wherein the XML feature includes a wrapping tool (156) that is used by the programming environment (10, 910) to validate the existing UM code (161) during a compilation phase, when the existing UM code (161) is present and generate a binary UM FSM (160), and assures that XML definition files do not reference a method or variable that does not actually exist in the UM code that is compiled, and that such methods and variables have the correct type;*
- *to generate an error when the existing UM code (161) is absent during the compilation phase, wherein the wrapping tool (156) on determining a reference to a non-existing method or variables, is to generate a wrapper, and then, during compile phase generate a build break, which on successful compilation, produces the build time binary UM FSM (160) which is exported from the programming environment (10, 910) along with the UM definition files (162);*
- *a verification tool (156) invoked during execution of the binary UM FSM (160) that confirms that a version of the existing UM code (161) present during a compilation phase is the same as a version of the component available at execution on a UM execution machine (16).*

6. Saving Clause of Provisions of Manual

Chapter 08.03.05.10 of the Manual, containing provisions pertaining to section 3(k) of the Act shall stand deleted with coming into force of these Guidelines for examination of CRIs.

7. Applicability of Guidelines

These Guidelines shall be applicable with immediate effect.

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