Software[1] Patents which are generally referred to as Computer Related Inventions[2] have been a debatable issue in India and worldwide. Recently, the single bench of the Delhi High Court had made significant observations about the patent eligibility of Computer Related Inventions in *Ferid Allani V. Union of India & Others[3]*. The Court ordered the Indian Patent Office ("IPO") to re-examine the petitioner's patent application, in light of the judicial precedents, settled practices of patent offices including some of its published guidelines which have been issued for Computer Related Inventions. Further, the Court directed the IPO to take a decision on the patent within a period of two months, after granting a hearing to the patent applicant. Accordingly, it is understood that the IPO had re-examined the patent application (in light of the said ruling) and have once again refused to grant the patent vide its detailed order dated 01/02/2020. However, in a larger perspective, it is the decision of the Delhi High Court that assumes significance. It is significant for its reiteration a) that section 3(k) of the Indian Patent Act 1970 does not "per-se" bar patentability of a Computer Related Invention and b) if an invention demonstrates technical effect or technical contribution, the same shall not fall within the ambit of section 3(k), thus patentable, though based on the computer program. This article analyses the significant observations of the Delhi High Court, India's perspective in granting for software patents (and Computer Related Inventions) while noting the position in the United States and European Union.

Brief Facts Of
The Case
Ferid Allani
("Petitioner") filed a patent application[4] seeking grant of a patent consisting of both method claims (claims 1 to
8) and device claims (claims 9 to 14) for his invention titled "a method and device for accessing information sources and services on the web". It was claimed that the invention provided a method and a corresponding device for accessing information sources and services on the web. During the patent prosecution process, it was stated that a) the invention achieves objective in
a manner that is quicker and easier to use than the methods known at the time

of invention. b) It provides users poorly accustomed to computer tools and
search engines with an efficient guide to useful information sources and/or
to
the most frequently consulted information sources.
The IPO
rejected the patent application on the ground that the method claims 1-8 are
computer programs per se under <u>Section 3(k)</u> and device claims 9-14 lack
novelty and inventive step under <u>Section 2((i)(j)</u>. The Petitioner appealed
against the IPO order with the Intellectual
Property Appellate Board ("IPAB").
However, IPAB turned down the appeal citing a lack of disclosure of technical
effect or technical advancement in the application. The Petitioner filed a
writ
petition before the Delhi High Court against the IPAB decision.
Significant Reasoning By The Delhi High Court
After hearing the arguments of the parties, the Court directed the IPO
to re-examine the Petitioner's patent application within a period of two
months, after granting a hearing to the patent applicant. Post this order,
it is understood that the IPO
had re-examined the patent application (in light of the said ruling) and came
to conclusion that the objections as regards lacking novelty still persisted
and the invention fell within the ambit of Section 3(k). For the ame reasons,
the patent application, once again was refused. However, in a larger sense,
it
is the reasoning of the Delhi High Court
which assumes significance. Some of the significant points of reasoning of
the
Delhi High Court are described below, along with the relevant excerpts:
1. A liberal approach towards the Computer Related Inventions? Certainly, a
   reiteration that section 3(k) bars only "computer programs per se" and not
   all
   inventions based on the computer programs. The relevant excerpts (Para 10 of
   the Court's ruling) are reproduced below:
   "Moreover, Section 3(k)
   has a long legislative history and various judicial decisions have also
   interpreted this provision. The bar on patenting is in respect of `computer
   programs per se….' and not all inventions based on computer programs. In
   today's digital world, when most inventions are based on computer programs,
   it
   would be retrograde to argue that all such inventions would not be
   patentable.
   Innovation in the field of artificial intelligence, block-chain technologies
   and other digital products would be based on computer programs, however the
   same would not become non-patentable inventions – simply for that reason. It
   is rare to see a product which is not based on a computer program. Whether
   they
   are cars and other automobiles, microwave ovens, washing machines,
   refrigerators, they all have some sort of computer programs in-built in them.
   Thus, the effect that such programs produce including in digital and
   electronic
   products is crucial in determining the test of patentability…. The words `per

*se" were incorporated so as
to ensure that genuine inventions which are developed, based on computer
programs are not refused patents"*

- The patent applications must be examined to check if the invention
results in technical effect or technical contribution (Para 11 of the Court's
ruling).
*"Across the world, patent
offices have tested patent applications in this field of innovation, on the
fulcrum of `technical effect" or a 'technical contribution". If the invention
demonstrates a technical effect or technical contribution it is patentable
even
though it may be based on a computer program."*

- Guidelines and judicial precedents should be considered in determining
whether the invention results in a technical effect or technical
contribution.
The relevant para is interspersed below (Para 13 of the Court's ruling):
*"Insofar as Computer Related Inventions are concerned, there are
three sets of guidelines that have been published by the Patent Office. The
initial Guidelines are termed as "Draft Guidelines", the second document is
described as "Guidelines" and the one
issued in 2017 is termed `Revised Guidelines'. While the
initial 2013 Draft Guidelines defines "technical effect", the said definition
is not to be found in the later guidelines. The meaning of "technical effect"
is no longer in dispute owing to the development of judicial precedents
and patent office practices internationally and in India. There can be no
doubt
as to the fact that the patent application deserves to be considered in the
context of settled judicial precedents which have now laid down the
interpretation of Section 3(k), the Guidelines and other material including
the
legislative material."*
Interestingly, the ruling is similar to the findings of Justice Manmohan
Singh of the Delhi High Court in the case of *Telefonaktiebolaget LM
Ericsson v. Intex[5]*, where Swedish telecom giant, Ericsson was granted an
injunction
against Intex for any devices that infringed on the eight Standard Essential
Patents that are part of Ericsson's portfolio.
Patenting
Software Inventions: A Debatable Issue In India
Granting Software Patents has been a debatable
issue due
to three major reasons: a) the language of Section 3(k); b) Guidelines issued
by IPO from time to time and c) Inconsistent decisions by the IPO. Section
3(k), as in the current form,
prohibits the patenting of "a mathematical or business method or a computer
program *per se* or algorithms".
However, when Section 3(k) was initially presented in the Parliament as
Patents
(Second Amendment) Bill, 1999, the phrase "per se" for computer programs was
not there. The phrase "per se" was introduced in the Bill on the
recommendations of the Joint Parliamentary Committee ("JPC"), subsequently

passed by the Parliament. The phrase "per se"
has been a contentious issue, ever since.
While
some argue that a software must not be protected under patents (and only as a
copyright), others suggest that the inclusion of the word "per se" reflects
the
parliament's intent to exclude only computer programs under Section 3(k)
i.e.,
in other words, inventions implemented by software which are more than mere
computer programs – can be patented.
It
is pertinent to note that the IPO has published three guidelines for
examining
the Computer Related Inventions. The first set of guidelines was published in
August 2015. Expectedly, it shed light on the *per se* issue,
with a reference to Oxford Advanced Learners Dictionary definition of '*per
se*' as 'by itself' – to show that you are referring to something on its
own, rather than in connection with other things. However, the other content
of
the guidelines generated controversy, given its liberal approach and
overreaching impact favouring the software claims. This made IPO issue a
notification
suspending the guidelines.
The
second set of guidelines published in February 2016 was expected to fix the
issues present in the first set. However, it broadened the exclusion rule (in
a
form of a three-step test) under Section 3 (k) by stating that software of
any
nature, unless in conjunction with novel hardware, cannot be patented. Hence,
the guidelines were replaced with the revised guidelines for Examination
of Computer Related Inventions, 2017 via an <u>Order</u> from the Controller
General ("Third set"). The Third set done away
with this test and instead focussed on substance of the invention over the
form,
while examining the patent application. It stated
"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 Patents 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[6]”.
According to the revised guidelines, inventions technical nature shall be ascertained from the nature of the claims . It stated "*Thus, 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[7].*
Thus, the Third Set
focus on substance over form as against the novel hardware requirement contemplated in the second set. This means that while examining an application
relating to Computer Related Invention, its substance is considered and a claim
is taken as a whole and the claims do not fall in any of the excluded categories. The Examiner can proceed with other steps to determine patentability with respect to the invention.
Adding to the confusion
is the inconsistent decisions by the IPO in examining the software-related patent applications. While IPO has granted the patent to few inventions[8], it has refused others even if they met the same tests and standards, the infamous instance being the 756/DEL/2004 filed by Microsoft for an invention to secure local network.
Software Patent: Position In The United States And Europe
In the United States of America:
The USA, in the earlier days, adopted a liberal approach in granting Software Patents. This is mainly due to the then judicial precedent i.e., the decision of the US Supreme Court[9] which stated patentable subject matter to include anything under the sun made by man, but the laws of nature, natural phenomena and abstract ideas are three specific areas which are not patentable.
However, on 19 June 2014, the Supreme Court passed a crucially important judgement in the case of *Alice vs CLS Bank*[10] (based on Mayo framework) contemplating a two-step assessment.
Firstly, one has to determine whether the claims are
being excluded from patenting. Examples of such concepts are abstract ideas (which sometimes include certain abstraction levels of software), natural laws
and natural phenomena[11]. The second determining factor is to establish if the elements of the claim can be seen as an inventive concept, which is sufficiently concrete to transform the claimed abstract idea into an application for which a patent can be applied; those elements must help in obtaining something that is "significantly more" than a non-admissible abstract
idea[12]. Prior to this decision, three rulings of the US
Supreme Court assume significance. Firstly, in Bilski[13], the five-justice majority held that the claimed
method was ineligible because it was an abstract idea, and declined to rule that business methods were all ineligible. Next, in Mayo[14], the Court invalidated a patent on a medical

diagnostic test claiming so broadly that it "pre-emptively" covered the underlying natural principle or law of nature on which the test was based[15]. In a key passage in the Mayo opinion, the Court explained[16]:

"[A] process that focuses upon the use of a natural law [must] also contain other elements or a combination of elements, sometimes referred to as an "inventive concept," sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself."

In other words, the implementation could not be trivial or conventional-it had to be sufficiently creative that it added something of substance to the natural law.

A year after the Mayo ruling, the Court decided the Myriad case[17]. Here, the issue was whether the product of nature could be patented. The narrow holding was that DNA was not subject to patenting but cDNA was. The point of more general interest in the case, however, was that the Court equated laws of nature, natural phenomena and abstract ideas to the products of nature at issue, so that the same legal rule applied to the patent eligibility of all of them-although the opinion slurs over this point without explanation[18].

Hence, based on the aforesaid analysis, and specifically two-step tests (as laid down in Alice decision), it appears that in the US, implementing an abstract idea using a computer, will not confer patent eligibility. It is only the improvement in a manufacturing process or other technological process in an inventive way using a computer may confer patent eligibility, despite the existence of an underlying abstract idea or principle. This position is reaffirmed by one of the earlier Federal Circuit decision, post-Alice era, where the Court invalidated a patent on processing digital graphics data. The Court set a legal principle that *"A claim may be eligible if it includes additional inventive features such that the claim scope does not solely capture the abstract idea[19]"*

In Europe:

While the two-step process is the current principle in the USA for evaluating patent eligibility, in Europe, Article 52 and Article 53 are the key. Firstly, Article 52(2)(c) of the European Patent Convention ("EPC") considers "schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers" are not patentable inventions. Second, Article 52(3) of the EPC, states that patentability of computer programs is excluded only if patents relate to that subject matter "as such". Hence, invention

going
beyond a "computer program per se" can be granted a patent. Further, the EPO
Guidelines for Examination mentions (G-II, 3.6) that the exclusion from
patentability of "computer programs per-se" does not apply to computer
programs
"having a technical character". This means an invention involving a computer
program which exceeds the boundaries of software and provides a "further
technical effect", is eligible for patent protection[20]. Hence, the
technical effect
determines patent eligibility in Europe. This is reiterated in Pension
Benefit[21] and Hitachi cases[22], where it was stated that the claims
involving technical features will not be rejected, for simply relating to the
excluded
subject matter.
Software Patent – Drafting is the key
Few suggestions in handling Software
Patent inventions:
Due care must be exercised in drafting
claims and specifications at the application stage since the acceptance of
any
intended amendment in the future would rest on the discretion of the
controller
in lieu of section 59 of the Patent Act, 1970. In drafting the claims and
specifications, kindly ensure the following:

1. The claims and specifications should be
   coupled with the respective hardware or a software component.
   - Technical expressions shall be used to
     link the claims and specifications to technical effect or technical
     contribution. In this regard citing demonstrations highlighting the
     inventions'
     technical solution will enhance the chances. As cited in the Ferid Allani
     order, a few illustrations of technical effect are:
     Higher
     speed, reduced hard-disk access time, more economical use of memory, more
     efficient database search strategy, more effective data compression
     techniques,
     improved user interface, better control of the robotic arm, improved
     reception/transmission of a radio signal, etc;
   - Figures / Drawings must clearly relate
     to the claimed subject matter,
     In
     the event, there are objections raised in the examination report, decisions
     of
     the controller in previous similar cases where patents are granted shall be
     highlighted. Unlike IPAB and the Court orders/judgments which are binding on
     the controllers, decisions of the controller do not have a binding effect but
     can be used as one of the convincing tools.
     Conclusion
     The
     ruling of the Delhi High Court in Ferid Allani's case considerably leans to
     the

liberal approach in granting patents to the software. The order more or less reflects the IPO's first set of guidelines published for examining Computer Related Inventions. It would be interesting to note the approach to be adopted
by IPO in the pending/fresh patent applications pertaining to computer related
invesntions. Further, it would be interesting to note the approach to be adopted by the applicant in the instant case i.e., Ferid Allani, given that the
IPO had, once again refused the patent application. Until the matter is considered judicially or
revisited by Parliament, the law in this area remains uncertain.

[1] The term "software" is not defined in Indian statutes and
hence, for interpretation of this term, the general dictionary meaning is being
used in the Guidelines for the Examinations of the Computer Related Inventions
published by the Indian Patent Office in the year 2017. The Oxford Advanced Learners Dictionary defines "software" as "the programs, etc. used to operate a
computer"

[2] Per the Guidelines for the Examinations of the Computer
Related Inventions published by the Indian Patent Office in the year 2017, Computer Related Inventions (CRIs) comprises inventions which involve the use of computers, computer networks or other programmable apparatus and include such inventions having one or more features of which are realized wholly or partially by means of a computer programme or programmes.

[3] 2019 SCC OnLine Del 11867, decided on 12-12-2019

[4] IN/PCT/2002/705/DEL

[5] https://indiankanoon.org/doc/74163100/;

[6] Section 4.4.4 (Page No: 13 and 14 of the Guidelines for the
Examinations of the Computer Related Inventions published by the IPO in the year 2017)

[7] Section 4.5 (Page No: 15 of the Guidelines for the Examinations
of the Computer Related Inventions published by the IPO in the year 2017)

[8] Patent No: 277534 in 2016; Patent No: 295692 in 2018; Patent
No: 318123 in 2019

[9] Diamond v. Chakrabarty, 447
U.S. 303 (1980)

[10] 573 U.S. 208 (2014)

[11] https://www.arnold-siedsma.com/news/archief/2016/patenting-software-in-the-us-and-europe

[12] https://www.arnold-siedsma.com/news/archief/2016/patenting-software-in-the-us-and-europe

[13] Bilski v Kappas 561 U.S. 593 (2010).

[14] Mayo Collaborative Services v Prometheus Labs Inc 566 U.S._,
132 S. Ct 1289 (2012)

[15] Alice v CLS Bank: US Business Method and Software Patents Marching

towards Oblivion?, An article in European Intellectual Property Review, January 2014.

[16] 2 Mayo 132 S. Ct. 1289, 1294 (2012) (citing F/ook437 U.S. 584, 594 (1978)). The Court held the patent invalid because the limitations in its claims added "nothing specific to the laws of nature other than what is well-understood, routine, conventional activity, previously engaged in by those
in the field": Mayo 132 S. Ct. 1289, 1299 (2012).
[17] Association for Molecular Pathology v Myriad Genetics Inc 569 U.S._, 133 S. Ct. 2107 (2013).
[18] See Richard H. Stern, "Comment: Association for Molecular Pathology v Afyriad Genetics: Sieving the Gene Pool" [2013] E.I.P.R. 685, 689 (questioning the unexplained equation). But see fn.27 of that article (providing a rationalisation for the equation because of a similar underlying principle-"Once you learn that the BRCA DNA is located in such and such a place, it is no invention to isolate it by conventional means"). The Myriad Court did not stress, however, the Flook-Mayo requirement for an inventive application of the underlying principle-at least, it did not do so to the extent that Alice later did
[19] Digitech 2014 WL 3377201 at *4 (emphasis added).
[20] https://www.iam-media.com/securing-software-patents-through-epo
[21] T931/95
[22] T258/03

Contributed By - Prithiviraj Senthil
Designation - Partner
King Stubb & Kasiva,
Advocates & Attorneys
Click Here to Get in Touch
New Delhi | Mumbai | Bangalore | Chennai | Hyderabad | Kochi
Tel: +91 11 41032969 | Email: info@ksandk.com