

INTELLECTUAL PROPERTY AND TECHNOLOGY LAW UPDATES

S&A IP-Tech

September 2018

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Implementing artificial intelligence at the Patent Office

- By Shrimant Singh

Intelligence – undoubtedly the biggest virtue of humans over all other species - has evolved in true sense in last one decade where we have seen not only accumulation or growth of intelligence but also conferring of the intelligence to Machines by humans. Such is the power of "artificial intelligence" that in certain protocol related decisions based on Gigabytes of data evaluation, the machines possessing "artificial intelligence" is out performing humans by great margins. The performance is even better if we consider bulk data evaluations, which leads us to think about implementing artificial intelligence for issues relating to factbased decisions or tasks but to be performed in very large numbers. This thought resulted in Governments also now considering effective mainstream use of blockchain, artificial intelligence (AI) and machine learning (ML) in their public processes that are otherwise manual or part-automated.

India's policy think tank organization, National Institution for Transforming India (NITI) Aayog recently issued a discussion paper¹ on National Strategy for Artificial Intelligence. The paper explores use of blockchain and Artificial Intelligence (AI) in the governance of different departments of the Government of India and also for enabling several socialist reforms. Once implemented, this will be the world's largest blockchain implementation program in public governance.

The present article is limited the implementation of the said Strategy by the Controller General in the patent administration. A recent tender² was posted on the official website of the Indian Patent Office (IPO) giving Notice Inviting Expression of Interest (EOI) for making use of Artificial Intelligence (AI), Blockchain, Internet of Things (IoT) and other latest technologies in Patent Processing system of IPO. The said tender shows the clear intent of the Controller General to not only consider the expeditious implementation of the procedures but also to adopt the latest technology in order to achieve efficiency and high standards of implementation.

The proposed changes in the tender will dramatically improve user experience of IPO services, for instance, the Patent Office hopes to be able to forecast timelines for the applicants / agents during prosecution of the application for patent or trademark registration at different offices. The quality of the examination reports will also improve by use of AI and the examination reports can be more objective and direct. Formal requisites can be automatically checked under AI and the said process would greatly reduce the intervention of man-hours in formality checks at IPO. Similarly, a logically implemented work allocation protocol using the data and AI would greatly help in optimal use of human resources available with the IPO at different offices.

AI is also intended to bring in standardization in the issuance of letters, office actions, reports, and other official data. The same may include adoption of standard formats, tables, spreadsheet layout of information, timelines, etc. which will certainly raise the quality and at

http://www.ipindia.nic.in/writereaddata/Portal/Tender/ 175 1/1 Expression of Interest-Al-02-08-2018.pdf

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 $http://www.niti.gov.in/writereaddata/files/document_p\\ublication/NationalStrategy-for-Al-Discussion-Paper.pdf$

the same time speeding up the process considerably. Reduced manual intervention will also result in greater transparency and accountability in the processes in a positive way.

Some of the points where the IPO sees new technology being used in the patents process, stage-wise, has been included by the Controller General in the said tender:

- 1. Filing: Potential use of block chain for streamlining registration through encouraging information sharing by rights holders, and assisting users in filing processes.
- 2. Electronic Data Processing: Digitization and automation of application filing; improved OCR proofreading; tagging information in drawings; increasing the speed of information retrieval.
- 3. Classification: Using natural language processing to understand patent documents and to automatically classify them; Software/machine learning capability to build sophisticated hierarchy of classification models to analyze the contents of each patent specification in unstructured PDF documents.
- 4. Screening stage: Screening for specific types of subject matter, e.g., atomic energy; defence related subject matter.
- 5. Publication: Automated formal checks and clearing the application for publication.
- 6. Allotment: Allotting patent applications to examiners on the basis of technology, the workload of examiners, and so on; Rectifying disparities, such as, allowing processing on the basis of first to file rule as far as possible, keeping in view the

- different nodes functioning independently of each other.
- 7. Prior art search: using AI and machine learning to formulate search queries; as human-assisted or semantic-based prior art searches; deep machine learning for Image searchability; single search interface for patent and non-patent literature
- 8. Examination stage: Automatically checking formal requirements as per the Act and Rules; and a substantive examination based on inputs retrieved through the use of AI
- 9. Pre-grant and Post-grant Opposition stage: Evaluating the inputs received
- 10. Hearings stage: Capability to automatically evaluate amendments
- 11. Others: Having an interactive response system for stakeholders; Automated user feedback; Using machine learning to answer IP policy and issues faced by policy makers; Data analysis; ensuring quality control; Determine sufficient evidentiary value to determine the rights of first filer in a First-to-File regime; Machine translation for English into other Indian languages and vice versa; Timeline predictions, and so on.

The tenders would have been submitted by the competing vendors and with the thrust of Government in modernizing or adopting new technologies, the IPO surely would take up the the implementation of above proposals seriously. Only time will tell how these AI and blockchain technologies are used for much required improvement in the examination quality of the patent applications. Nevertheless, one must applaud the brave step taken by the IPO towards becoming a more transparent and efficient patent system.

What steps should the Trademark Owners take in order to avoid any future litigation?

By- Samridh Ahuja

The owner of a trademark can do so much at the preliminary stage itself to avoid future litigation and/or conflicts. The following steps are advisable in order to safeguard the trademark:

STEP 1: Do your Research and Search!

The selection of trademark is one of the most crucial steps for creating an interesting corporate identity or a brand. One should try to have a "storyboard" with objective reasoning for selecting a particular trademark. Often such storyboards along with reason for creation or selection of a particular trademark / logo are helpful while establishing proprietary over the mark. While application of mind is important in creation or selection of a trademark, at the same time, one should be very careful of not (even accidently) infringing existing trademarks in the relevant service or product fields. Before choosing a trademark, one must first check whether the mark already exists in the market or not. An official trademark search should be "ipindiaonline.gov.in" conducted the website. Putting the class description and the mark in the given space, one can get to know about preliminary objections based on visual and phonetic similarities. This information can prove to be help in streamlining the decision to use a particular mark, logo and/or word as a trademark.

Grey Area: There can be a situation where the above website does not display any similar marks, but there still exists a mark that is being used by a proprietor who did not get the mark registered. This is the grey area that needs some additional research and investigation since the

ownership of a mark or trademark is decided based on prior use.

STEP 2: Avoid the use of Descriptive/Common words as Marks

A well-known practice in Trademark Law is to not use descriptive words/ common words as trademarks. When one is well aware that the word "BAG" is a very common word in the public domain, using it as a Trademark is an act of 'self-sabotage' and must not be adopted. "BAG" is an example of descriptive mark as it describes the goods produced under a particular trademark.

Exception: The exception to above practice can be scenarios where the mark has acquired distinctiveness by way of long and extensive use in the market.

Further, as a matter of practice in Indian legal fraternity, a trademark owner has the choice of using "CONDITIONS AND LIMITATIONS" on the use of a particular Trademark at the time of filing an application in support of the registration of a trademark. Such a practice is common in the United States of America as well, where they use "DISCLAIMERS" to waive off any rights in relation to the descriptive part of the mark.

In India, this technique can help minimize frivolous future litigation.

Example: This is an extract from a trademark registered in the Indian Trademark Journal:

"REGISTRATION OF THIS TRADE MARK SHALL GIVE NO RIGHT TO THE EXCLUSIVE USE OF THE WORD <u>PRIME</u> EXCEPT AS DEPICTED".

STEP 3: Follow up and the Renewal of a Trademark

A Trademark owner, through its Attorney, must conduct a thorough follow up routine during the pre-registration stage and check the status page on the Trade Mark Registry website on a constant basis as an ideal process. There could be situations where an 'Objection' could be raised in the Examination Report by the Registrar, and accordingly a reply needs to be filed in response to the same; or there could be a situation where the mark gets published in the Official Trademark Journal and is later 'Opposed' by a third party, and then, a counterstatement would be needed to be filed in response to the Notice of Opposition. A routine follow-up would help the trademark owner meet deadlines and may eventually help in the registration of the trademark.

However, a trademark owner's vigilance does not stop with obtaining the trademark. Once the trademark is registered, the protection is not granted for an infinite period. The Indian Trademark Registry grants protection for a particular trademark for a period of up to 10 years. Trademark owners must therefore, be aware of the deadlines and must file renewal applications on a timely basis. The trademarks must be renewed well in time to avoid any abandonment claims.

Under the New Trademark Rules, 2017, a trademark owner can file an application for the renewal of the trademark as early as <u>one year</u> before its expiration date.

CONCLUSION

In conclusion, the importance of Intellectual Property Rights, especially w.r.t trademarks has evolved over the past few years in India. Hence, awareness in this field is of utmost priority. The steps as listed above give a description of the basics of filing and tracking of trademark in India in easy language. A trademark owner must be aware of these basics in order to have a smooth trademark filing process.

Why is it important for Startups to protect their innovative assets through patents, copyrights & trademarks?

By -Aayush Sharma

Propelled by special packages and exemptions announced by the Government of India, a swarm of Startups, claiming to provide innovative solutions and products to the customer, are being incorporated. According to the Start IP India initiative by Department of Industrial Policy & Promotion (DIPP), 6096 entities have been recognized as Startups. In a recent DIPP notification, the period for claiming the "Startup" status has been increased from 5 years to 7 years and for a Startup in the field of Biotechnology, the said period is up to 10 years. Further, the DIPP has removed the requirement of a recommendation letter from an incubator or industry association for registration as a Startup.

Nineteen State Governments in India have implemented Startup policies with the objective to promote ease-of-business environment amongst new entrepreneurs in the country. Incubation centres are being set up under Atal Innovation Mission wherein necessary infrastructure, training and guidance would be provided to Startups. The Government is also setting up Research Parks, Bio-Clusters, Bio-Incubators, Technology Transfer Centres and Startup-Assist Centre encourage entrepreneurs to venture into Startup space.

As in case of any business, Startups are governed by sales, marketing initiatives, revenue cycles, business development, funding, logistics and HR management. However, one of the key differentiators for a Startup is "innovation" as it needs to compete with established or bigger businesses in its respective field. A market-disrupting solution makes a Startup stand out from the crowd. The initial

days for any Startup organization are critical in terms of modulating their products or services as per client needs and to make an effort of continued innovation. Equally important is to maintain their exclusivity over the said innovative approach or product by way of protecting their IP rights.

One of the main reasons for a Startup to protect its IP is because attaining IP rights over a product or service to the exclusion of others is well recognized in financial lifecycle of the company, which extraordinarily increases the credibility of the startup; hence, attracting investments.

The present article does not educate about what is IP and what does different IP mean, rather, we have focussed on why it is important for a startup to protect their IP. Based on our interactions with entrepreneurs, we have listed issues / challenges often faced by startups.

- How aggressively to identify IP: It is undisputable that IP is important but as the saying goes "excess of anything is bad", one should be careful while considering several IPs for registrations. The decision to define the important or prime IP should be made in terms of startup's identity and branding, i.e., trademark of company and prime products/processes, innovation, the layouts and designs created by the company.
- ➤ Best time to protect IP: By the rule of thumb, IP must be protected right from its birth. Therefore, the prime IP should be protected as soon as possible. Further, in case of patents and designs, the IP should be applied for protections right at the time of inception of the invention or the company i.e. the best time is at the time of creation. Other IPs can be planned in a systematic manner and protected in phases.

- ➤ Best IP to protect: For a startup the IPs of prime importance are trademarks, patents and designs. The choice of IP protection and extent can sometimes be difficult. For example, a product can have various IP protections, for example, unique shape of a product. A design or a shape of a product can be a subject matter of trademark, copyright or design. There are provisions under the respective statutes to define when a particular shape would be considered as which kind of IP. Therefore, while all IP types are important, the entrepreneur needs to consult before prioritizing IP protections.
- ➤ Search for existing IP before filing: IP rights are exclusionary monopolistic rights to an entity/individual and hence a search or lookout for previously residing right or existence of IP in public domain must be considered. It may prove to be highly detrimental if the startup does not search before establishing a business and more importantly identifying existing IP in the field. There are umpteen ways to search for already protected IP through the patent archives, trademark and company registers, designs register and the like.
- ➤ Not to disclose before launch: In India, 'first to file' system is applicable for patent protection. Therefore, before launching or even discussing with prospective investors, it is highly advisable to file a patent application claiming protection over the innovative product or process.

In addition to the above, the Government of India has given several exemptions in the fees for IP protections for qualifying startups under the Startup India scheme of DIPP. For patent protection the fees for start-ups is brought down by 80%, for trademarks the fee reduction is by 50%. Further, a startup can avail expedited

examination facility at the Patent Office wherein the patent application can get disposed-off within 12-18 months from the date of filing. Hence, for a startup, IP protection is not as costly as it would be for non-startup companies. What is most important for Indian Startups is that they should continuously work on creating and identifying IP and at the same time consciously work towards *'innovating and protecting'* for excelling in their respective businesses.

Artificial Intelligence: Facets & Its Tussle with IPR

By – Monika Shailesh

A machine, in simple terms, was conceived and devised by man as a contraption to help ease his burden by doing a strenuous job repeatedly at a faster pace. But recall the Hollywood blockbuster, TERMINATOR – the filmmakers had shown machines as intelligent beings that could act on their own, take decisions, create things etc. Back in 1984, when the movie had released, the general perception was that intelligence in machines was just wild imaginations of dreamy filmmakers. But only three decades later, intelligent machines are very much a part of our reality now.

Technological advancements in the field of machine learning have made certain types of machines capable of learning, and performing some tasks on their own. Artificial intelligence is no longer an alien concept. The division of Science which deals with making machines equipped with human-like intelligence to act in human-like fashion and the exhibit human capabilities is known as Artificial Intelligence (AI). Multiple disciplines like Computer Science, Psychology, Philosophy, Sociology, Mathematics, Biology and Neuron Science contribute to the development of AI.

Ever since the concept of artificial intelligence has come into existence, the world's opinion is divided in two. One group believes that AI can bring about a paradigm shift and will lead to enhanced quality of human life. While the other group believes that AI will surpass all human intellect in all domains and such machines will start re-writing their own software and codes to re-programme themselves to become the

strongest entities on earth, and this will mark the end of Homo Sapiens.

AI MARKET LANDSCAPE

AI is experiencing exponential growth, with Google filing one of the first patents on AI back in 2015 and ending that first year by filing 5 more on same subject. Likewise, many other establishments like Fujitsu, IBM, NEC, Microsoft and Siemens have several patents on AI related technologies and the numbers continue to grow with each passing day.³

Not only has AI gained attention of inventors, it has been quite enticing for the investors too. Investments in ΑI technology show skyrocketing trends. Venture capital firm Accel has announced a 500 million USD pool for various focus areas and AI was on the top of the list. Similarly, New Enterprise Associates and Nervana Associates (which was recently acquired by Intel), have invested billions of dollars in AI. Many believe that the wave of investment and energy being poured into AI is making it mankind's greatest endeavours.

India is also emerging in this sector, with companies like Apple and Salesforce acquiring Indian companies Tuplejump and MetaMind respectively. According to sources, Apple was particularly interested in Tuplejump's 'FiloDB' project, which was capable of quickly analysing bulk amount of complex data. Recently, Salesforce, an American cloud computing company acquired MetaMind, a company that sells natural language processing, computer vision, and database prediction tools and this acquisition is said to bring in millions into the

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https://clairvolex.com/PDFs/October-2016-Mailer-1.pdf

current business space for Salesforce. Interestingly, increasing amounts of funds are being invested in AI start-ups. One such start-up in AI space, Sentient received 143 Million USD at the beginning of this year. Since 2010, almost 967 Million USD have been invested in numerous other AI start-ups. With time this technology is set to develop more, with companies like Facebook opening dedicated AI research labs in different parts of the world.⁴

EXPLAINING AI

The World Intellectual Property Organization (WIPO) identified the existence of AI and propounded three categories of AI ,example expert systems, perception systems, and natural-language systems.

- Expert systems are associated with the fields that require in-depth knowledge and are positive systems such as medical diagnosis, recommendations on treatment, determining geological conditions etc. Expert systems are also used to produce artistic and creative works.
- Perception Systems are the systems that allow a computer to perceive the world with the sense of sight and hearing. This is used by topologists, word-context experts, etc.
- Natural language program is meant to understand the meanings of words, requiring a dictionary database; the noteworthy aspect being that the system takes into consideration different

⁴ https://clairvolex.com/PDFs/October-2016-Mailer-1.pdf grammatical and textual contexts, to provide a semantic analysis.

AI V/S IPR

Many believe that AI will become so capable in few years that it will be able to develop, file and grant patents, and that will be the real problem and a threat towards the very basic principle of IPR. There have been many discussions and scholarly publications towards the AI's effects on IPR regime. For instance, in the wake of a court decision involving a selfie-taking monkey, the United States Copyright Office updated its interpretation of "authorship" in 2016 to clarify that it will not register works produced by a machine or a mere mechanical process that operates randomly or automatically. It stressed that copyright law only protects "the fruits of intellectual labour" that are "founded in the creative powers of the mind".5

As per the European Union draft report of the European Parliament to the Commission on Civil Law Rules on Robotics" humanity may be at risk of "AI [surpassing] human intellectual capacity". To avoid this danger, the draft report stresses the importance of humanity maintaining the capacity to control its own creations." ⁶. There have been numerous high degree computational creative innovations until now and this has sparked debates all over the world for the re-examination of copyright standards for AIs.

A ruling from the San Francisco court denying copyright request for a selfie taking macaque monkey represents the stand towards AI also.

⁵ Julia Dickenson, Alex Morgan and Birgit Clark, "Creative machines: ownership of copyright in content created by artificial intelligence applications", European Intellect. Prop. R. 39(8), 457 (2017)

http://www.europarl.europa.eu/RegData/etudes/STUD/2016/571379/IPOL_STU(2016)571379_EN.pdf

Various copyright offices across the world have already mentioned that they won't register machine produced work. On similar lines confusion may arise when novel inventions are created by AI enabled machines. Without any human intervention, who will own the patents on novel inventions filed by AI machines? Will the machine/robot be the owner of future inventions? When ownership rights are distributed amongst different entities, which entity will be able to enforce such rights. And if an AI plagiarizes a creation or reproduces an invention, how will damages be determined? These are a few basic but puzzling questions which Patent laws now face.

Under U.S Patent Law, an 'inventor' is defined as an individual or a set of individuals who invent or discover the subject matter of the invention. ⁷ This definition eliminates patent grant to inventions to anything else besides the ever-increasing humans. However. involvement of AI in developing new technology has led the world to revisit the patent laws. Such perusal can be observed indistinctly in the attempt by the European Union to inspire nations to expand their national laws generally, to accommodate copyrightable works produced by computer and other devices, under the category of own intellectual creation. Though this is a liberal step in the direction of acknowledging creativity exhibited by these systems, while producing poetry, artwork etc., due regard must also be paid to include inventions and application of patents by AI systems and robotics.

CONCLUSION

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In context of patent grants to inventions by machines and AI we first need to understand the basic idea of the patent system. Patents are believed to be a tool that safe guards the rights of the inventor so that he or she can enjoy financial benefits out of it. This is a sort of motivation that the state provides to inventors to produce new and improved works. Some have contended that granting patent rights to AIgenerated inventions would fast-track innovation, even enabling advances that would not have been possible through human ingenuity alone. Others have argued that patent rights do not promote innovation, irrespective of whether inventions are generated by people or AI. Under this view, more patents, resulting from AI-generated inventions, will increase social costs and monopolies, and stifle the entry of new ventures, thereby hampering innovation. The present situation of AI under IPR is challenging, wherein, acknowledgement of work created by AI is a step towards the future, but its implementation is the real problem.

⁷ Consolidated Patent Laws, § 100 (f), U.S.C 35, https://www.uspto.gov/web/offices/pac/mpep/consolidated_laws.pdf

Revocation of Patents- Patents Act 1970

By – Dr. Heena Lamba

'Revocation of Patent' is cancellation of patent rendering a patentee devoid of rights given to him for his patent. Patents can be revoked by:

- Intellectual Property Appellate Board (IPAB) considering a petition applied by any person interested based on the grounds given under section 64(1), this decision can be further challenged in High Court
- High Court, where counter-claim for legality of the patent is questioned in the case of infringement,
- High Court, on appeal by the Central Government, being satisfied that the applicant is not complying with the needs of the Central Government to use the patented product or process under section 64(4),
- Controller, on the directions of Central Government, can revoke patents if it is related to atomic energy or against public interest as given under section 65 and 66, respectively,
- Controller, considering application filed by any interested person or Central Government u/s 85, may revoke a patent after two years of the grant of the first compulsory license based on the nonfulfillment of the basic requirements like workability in the territory of India, satisfaction of public requirements and availability at affordable price.

Judgement in the case of F. Hoffmann-LA Roche Ltd. and Ors. Vs. Cipla Ltd. Clarifies the fact that the mere grant of a patent does not guarantee its resistance to subsequent challenges, which can still be faced in the form of a counter claim in a suit or a petition applied on the grounds mentioned in Section 64. A patent, u/s 64(1) of the Patents Act 1970, can be revoked by High Court or IPAB on a number of matters within one year of grant of the patent, briefly stated as under:

- Subject do not constitute invention based on non-compliance of basic requirements of novelty, nonobviousness, usefulness and sufficient disclosure
- Any of the claims is also claimed in the complete specifications of another patent with earlier priority date
- Person is not entitled to be an applicant of the application under the provisions of the act
- Patent was obtained wrongfully from petitioner or other concerned person
- Subject covered in the application is publicly known or used or anticipated from any work published before the priority or filing date of the application
- Subject matter is not patentable under the scope of the act
- Claim(s) are non-descriptive or doesn't disclose the best method of performing the process

⁸ F. Hoffmann-LA Roche Ltd. and Ors. vs. Cipla Ltd. (24.04.2009 - DELHC) : MANU/DE/0381/2009

⁹ www.iiprd.com/wp-content/uploads/2015/11/revocation.ppt

- Scope of claim(s) not clearly defined
- Secretly used in India before the priority date of the respective claim
- Failure of disclosure of information as required under section 8
- Non-compliance of the secrecy directions provided under section 35 and/or applying for grant outside India without prior permission as directed under section 39
- Non-disclosure or false intimation of geographical origin of the biological material used in the application
- Knowledge involved in application is previously known to any local community in India or elsewhere

Revocation, as the term is used in the Patents Act 1970, is mainly a post-grant operation. But apart from the reasons stated above and the provision stated under section 65, 66 and 85, a patent is also said to be revoked under below stated conditions¹⁰:

- Cancellation of patent application and rights of a granted patent following a successful trial of pre-grant and postgrant opposition, respectively
- If not contested for post-grant opposition within a period of two months from the date of receipt of notice given by the Controller
- Patent shall also be revoked when the offer of surrender by applicant is accepted by the Controller

Although the grounds mentioned for revocation under section 64(1) are quite similar to the grounds on which pre or post-grant opposition is made (as mentioned under section 25(1) and

http://www.ipindia.nic.in/writereaddata/Portal/I POGuidelinesManuals/1_28_1_manual-of-patent-office-practice_and-procedure.pdf

25(2), respectively), the same cannot be quoted for making a post grant opposition. This act of an opponent was also criticized and corrected by the opposition board in the hearing (2017) of a post-grant opposition filed by P. Sunil against G.R. Kaliaperumal having patent application number 224/CHE/2010. P. Sunil choses section 64 to be the ground for post-grant opposition, which although was not objected by the patentee but corrected by the opposition board in the course of proceedings with the corresponding clauses of section 25(2).

Many a times such sections are used in disguise by the petitioners to revoke the patent especially to get monetary benefits or to end a linked contract. Monsanto Technology LLC and Ors. vs. Nuziveedu Seeds Limited and Ors is a case¹¹ where petition under various subsections of section 64 was filed by Nuziveedu Seeds Limited against the Monsanto Technology LLC in order to get away with the contractual license and in turn the high trait fee asked by the company. This petition was granted by the IPAB and the patent owned by Monsanto Technology LLC was revoked. But later when the decision was challenged in High Court, the decision was reversed stating that Nuziveedu Seeds Limited and Ors. did not seem to be interested in renewed arrangement with Monsanto Technology LLC and thus took the position that the grant of patent itself is bad in law and thus, asserting their right to continued use of the technology with liberty. It was ordered that the contract will be on toll as before between both the parties but with the revised rates of trait fee as decided by the Government of India.

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¹¹ Monsanto Technology LLC and Ors. vs. Nuziveedu Seeds Limited and Ors. (28.03.2017

⁻ DELHC) : MANU/DE/0838/2017