Standard Setting in India: Competition Law and IP Issues

Ravikant Bhardwaj

Abstract

The importance of private standard setting is growing in Intellectual Property (IP) management. IP managers have to consider IP laws and antitrust laws as well to avoid the adverse implications in standard setting. The National Telecom Policy (2012) of India intends to increase standardization and intellectual property creation. Standardization has various concerns with respect to competition and IP law. This article analyses the private standard setting organisation's policy in the context of competition law and IP law. It also discusses the role of competition authorities in the standard setting process, IP, the emerging scenarios and suggests an approach for India.

Key Words : Anti-Competitive Agreement, Abuse of Dominant Position, FRAND,Interoperability, Standardization, Telecom sector, IP Policy, National Telecom Policy, GISFI, DOSTI

1. Introduction

Standards are the technical specifications for a new product or process (Hovenkamp, et al., 2003).[i] These are symbol of development and competitiveness in an economy. To analyse the pro-competitive and anticompetitive effects of standards, it is necessary to know the pros and cons of standards in relation to consumer interest and competition in the market. Standards create new markets for standardized products and services. Generally, standards are treated as pro-competitive. In high-tech industry such as telecom, semi-conductor and software etc., competitors sit together across the table to decide the technical specifications of new products, during the standardization process (EC Horizontal Agreement Co-operation Guidelines).[ii]Prima facie it seems an anti-competitive activity per se. However, the competition authorities have realized the pro-competitive effects of standard setting (Schellingerhout and Cavicchi, 2010).[iii] As the definition suggests standards are technical specifications so these are inherently associated with intellectual property rights (IPRs).

Standards help to overcome network effects and problem of patent thickets in network industries (Lemley 2002).[iv] Standards are essential to ensure interoperability. For instance, there are two types of technologies in the telecom industry: the Code Division Multiple Access (CDMA) and Global System for Mobile Communication (GSM) technology. For instance, these products are electronic chips, keypad, microphone, display and software etc. Similarly, several products are part of a laptop such as display, keyboard, mouse, camera, Bluetooth, USB port, motherboard, battery, operating system and other application software etc. Enterprises manufacturing telecom products have to develop inter-operable products so that finally all products can be assembled together. So standard setting ensures vertical and horizontal compatibility. Both technology owners and manufacturers are stakeholders in the standard setting process. A standard is formulated after clearing objection of major stakeholders. So it makes easier to commercialise a product applying a standard (Teece & Sherry, 2002-2003).[v] Working groups/technical committees examine the available state of technological knowledge in the area of technology related to the standard. It helps to identify gaps in research. So members of SSOs can develop the technology in those areas to develop products. Hence, standard setting increases innovation and research and development.

A standard setting process may have anti-competitive effects as well. Standards are created through a technology selection process which results in a selection of one out of many technologies in a standard. Sometimes there are instances of non-disclosure of essential IP by enterprises.[vi] It can give market power to firms by unfair means. Abuse of the standard setting process amounts to anti-competitive behaviour. Standards may lead to

collusion between enterprises in market by imposing price and quantity restrictions. Standardization may lead to the monopoly of a firm in the relevant market which otherwise would not be there in the absence of that particular standard (Anton & Yao, 1995).[vii] Standards may limit the choice of consumers. These may create entry barriers for the new firms. In certain situations there may be interface between competition law and IPRs in standards such as FRAND licensing, patent pools and cross licensing etc.

Members of Standard Setting Organizations (SSOs) discuss and select the technical specifications for a standard. However, all SSOs are not equal in its ownership, function and geography. Standard setting organizations (SSOs) could be governmental, quasi governmental or private. There are international, regional and national standard setting organizations on the basis of geography. International standard setting organizations develop global standards. They work in co-operation with regional and national standard setting organization. Three largest international standard setting organizations are International Telecommunication Union (ITU), the International Electro-technical Commission (IEC) and International Standard Setting Organization (ISO) were founded in 1865, 1906 1947 respectively. ITU is the oldest one.

Regional SSOs are the European Committee for Standardization (CEN),[viii] the European Committee for Electro-technical Standardization (CENELEC),[ix] the European Telecommunications Standards Institute (ETSI),[x] and the Institute for Reference Materials and Measurements (IRMM)[xi] are pan-European SSOs. European SSOs have a common goal to unify the whole European market. The Pacific Area Standards Congress (PASC),[xii] the Pan American Standards Commission (COPANT),[xiii] the African Organization for Standardization (ARSO)[xiv] and the Arabic Industrial Development and Mining Organization (AIDMO) are also regional SSOs.[xv] Most countries have national standard setting bodies also. These national standard setting bodies play a role in standardization at national level. There is comparatively less possibility of anti-competitive activity in public SSOs. Different countries have different models of standard setting. For instance, Germany has adopted the public standard model. US has adopted predominantly private standards model.

For instance in US, various private SSOs compete with each other to develop standards. The American National Standards Institute (ANSI) is the officially entrusted organization for regulating private SSOs in US.[xvi] The private standard setting has various advantages such as less formality and quick adoption of standards. There are several private SSOs in US such as Joint Electronic Devices Engineering Council (JEDEC), Global Standards for Microelectronics Industry. JEDEC works on solid state devices, integrated circuits, electronic modules, various manufacturing support functions. It has one member one vote system.[xvii] Video Electronic Standard Association (VESA) is a standard setting organization in the area of computer graphics.[xviii] Institute of Electrical and Electronic Engineers is the SSO in the area of electronics which has developed standards in varied areas such as power and energy, biomedical and healthcare, Information Technology (IT), telecommunications, transportation, nanotechnology, information assurance etc.

In India, the high level committee headed by S. Raghvan for Enacting Competition Legislation acknowledged the pro-competitive benefits of standards in its report.[xix] However no provision was enacted in the Competition Act (2002) with respect to formulation of standards. In India, current national policy seems to adopt both private and public standards model. The Government policy is to promote research and development (R&D) and standardization generally in all sectors. For instance, Indian National Telecom Policy 2012 proposes to make a national standard setting body for telecom sector. There are two main objectives behind this policy. The first one is to facilitate adaptation and penetration of foreign technology in India. The second objective is inclusion of Indian IPRs in global standards. There are two main private standard setting organizations in India in telecommunication sector: Global ICT Standards Forum of India and Development Organization of Standards for Telecommunication in India (DOSTI).

In order to conduct this study, potential competition law and IP issues were identifies by analysing the

National Telecom Policy 2012 and evolution of private standard setting organisations such as GISFI and DOSTI in India. An anlysis of analysis of the Competition Act 2002 was carried out. Due to lack of sufficientcases on standard setting in India, cases from EU and US jurisdiction were analysed. Various issues were identified by this analysis and tested for possibility of such issues in India. On the basis of this analysis, some policy suggestions were made.

The present study attempts to analyse 'best practice'with respectto competition policy and standardization in public and/or private standardization bodies in India. Second part of the paper deals with an overview of private standard setting organisations in India. Third part of paper deals with competition law and IP issues in private standardisation such as non-disclosure of essential IP in standard, refusal to FRAND licensing and anti-competitive selection of technology.

2. Private Standard Setting in India: GISFI and DOSTI

Indian information and communication technology (ICT) sector is a big market for multinational companies. Every country has its own peculiar technological requirements which can be fulfilled by specific innovation targeting such needs. Over a period it is felt that there was a disparity in Indian technological demand and supply by multinational companies. Due to this multi-national companies and organizations had problem entering into Indian technology markets. Indian high-tech industry wants to participate in the global standard making process for inclusion of Indian IPRs. So there was a need of standard setting bodies to convey Indian demands to the international SSOs. Indian technology could not be adopted in global standards in the absence of SSOs. Due to such reasons GISFI was established in 2010[xx]. It is a non-profit, non-government society[xxi] and consists of academics, policy makers, regulators and the industry. It aims to harmonize standardization in India to increase competitiveness of companies in India.[xxii] It intends to become TSDO conceived under NTP 2012.[xxiii]

There is no comprehensive legal framework and regulatory body to deal with private standard setting in India till now. GISFI is approved by Ministry of Communication and IT, Department of Telecommunications, Government of India on 7th July 2010. Every telecom standard has to be approved by the Ministry of Telecommunication and IT.[xxiv] Currently, GISFI is developing standards of security and privacy, future radio networks, the internet of things, service oriented network, green ICT and spectrum.

GISFI has collaborated with five SSOs: Telecommunication Technology Committee (TTC) Japan,[xxv] Telecommunications Industry Association (TIA),[xxvi] ITU-T,[xxvii] Association of Radio Industries and Business Japan[xxviii] and European Standards Telecommunication Institute (ETSI).

GISFI has five types of memberships: administration, administrative and other standardization bodies, network operators, manufacturers, users and service providers. These are described in its bylaws as corporate premium, corporate, institutional, individual and student members.[xxix] There are two corporate premium members, six are corporate members and seven institutional members. There are total fifteen members. Voting power is one such area which has antitrust implications. Differential voting rights may give discriminatory treatment to different types of companies. For instance in GISFI, each type of member has differential voting power. The governing body has 1000 votes. Corporate premium members have 700 votes, corporate members have 500, institutional members have 200 votes, individuals have two votes and students have half votes.

DOSTI is another private standard setting organization in India. It works on the basis of the public private partnership model. It aims to develop open, consensus based standards developed following due process.[xxx] Its main goals are to develop India specific standards and incorporating Indian standards in global standards.[xxxi]Unlike GISFI it has three types of memberships: primary members; associate members; guest and observer members.

3. Competition Law and IP Issues in Standard Setting

There are various stakeholders involved in the standard setting process such as technology owners, product

manufacturers or service providers. So there is a possibility of horizontal as well as vertical agreements in standard setting. An Agreement is void in the standard setting process, which causes an appreciable adverse effect on competition in India. The agreements relating to the restrictions on standardized product manufacturing, supply of technology to third parties, distribution of standardized products or services, storage, acquisition or control of product or services are void.[xxxii] Horizontal agreements are presumed to have an appreciable adverse effect on competition when directly or indirectly determines purchase or sale prices of technology or standardized product, controls the quantity of goods or services, sharing relevant geographic market and bid rigging. Price fixing between competitors is one of the most serious anti-competitive activities. Technology pools in standard setting may give rise to price fixing. If a patent pool is hampering the technological development, it will be horizontal anti-competitive agreement.

Standardization may affect competition in four probable markets. First, there is an anti-competitive effect on product or service market of standards. Second, the Standard can affect relevant technology markets. When there are many alternative technologies available, their selection of one out of many technologies reduces the scope of alternatives. Third, where there are competing SSOs, their market may get affected by a standard anti-competitively. Fourth testing and certification market may get affected. The relevant market is the central focus of antitrust analysis. Relevant market consists of the relevant product market or the relevant geographic market. Under the Indian competition law for identifying relevant geographic market, it is necessary to consider trade barriers through rules and regulations, local specification requirements, government procurement policies, adequacy of distribution facilities, transportation cost, language, consumer loyalty or necessity of products.[xxxiii] The relevant product market is identified applying the factors, final use of goods, consumer choice, exclusion of in-house production, existence of specialized producers or classification of industries.[xxxiv]

Standards may have unilateral anti-competitive effect as well if one or more of the participants hold dominant position. Holding a dominant position per se is not anti-competitive. When a dominant player imposes discriminatory conditions in sale of goods, price of goods, predatory pricing, limiting production of goods, technical development, monopoly leveraging, arbitrary contract terms and denial of market access then it will be anti-competitive. Proof of appreciable adverse effect on competition is not required for abuse of dominant position. Market power in standardized technology or IPRs is necessary for proving abuse of dominant position.

IPRs do not provide market power per se. If the IP owner discloses the rights only after a standard becomes a commercial success then it may confer market power. In another situation, where FRAND licensing commitment is provided by a member and later it refuses to grant licenses on FRAND basis than it may confer market power.

There is no pertinent case of competition and IP in private standard setting in India till now. However, there is a case in government standardization. Bureau of Indian Standards (BIS) faced allegation of abuse of dominance recently. It was alleged in this case of Shri Ravindra Badgaiyan vs M/s Bureau of Indian Standards that BIS developed a standard to favour a company. The CCI held that generally regulatory standardization body is not subject to competition law. However, if there is a gross violation of competition law then it can be anti-competitive.[xxxv] This case is very important for private standard setting organizations to avoid anti-competitive activities. If a private SSOs develops a standard to give unfair benefits to particular firms by misusing the standard selection process, it can be anti-competitive.

3.1 SSO's IP Policy

As earlier discussed, IP policy has a significant role in competitive treatment of the standard setting process.[xxxvi] Lemley's (2002) study on SSOs reveals that, all SSOs IP policies are not same. Some require disclosing IP and others does not. Generally, IP policy of standard setting organization is pro-competitive because it is designed to handle patent hold up and the problem of anti-

commons.[xxxvii] The IP policy of SSOs should be clear on the members' duties. IPR policy of SSOs is crucial for contractual and antitrust liability. There are several cases where courts have relied solely upon IPR policy of SSOs to ascertain the antitrust liability. In the USA, under Section 5 of the FTC Act and Section 1 of the Sherman Act, violation of rules of IP policy may amount to unfair competition and hence anti-competitive. Article 101 of The Framework for European Union (TFEU) and Section 3 of the Competition Act are the similar provision which can be violated. GISFI has formulated its IPR policy to ensure smooth availability of essential IPR relevant to a standard. There are three objectives of this policy. First, to minimize the risk of its members and those who adopt standards. Second, is to ensure fair royalty to IP owners. Third, is to increase the access of standards to users.

3.1.1 Disclosure of Intellectual Property in Standard Setting

Disclosure of IP in the standard setting process is a complex phenomenon. A standard is worthless if essential IP is not available for its implementation. So keeping in view this factor, IP policy includes the disclosure requirements. Every member has a duty to disclose essential IP to GISFI. Multinational telecom companies are aggressively filing patents in India. It is important to know who holds essential patents in India. According to Clairvolex Study from year 2005 to 2010, Qualcomm is the front runner in patent filing in India. It has filed 1951 patents during 2005 to 2009 followed by Ericson with 1232, Nokia with 1154, Samsung with 1103, Motorola with 626, Research in Motion (RIM) with 558, LG with 403 and Sony Ericson with 363 patents.[xxxviii] Qualcomm has largest patent filing in Electric Communication Techniques and Measurement. Nokia has largest filing in Acoustics and Musical Instruments segment and Ericsson has largest patent filing in Electronic Circuitry segment. Samsung is the largest in filing patent application in the computing segment. Some of these telecom sector multinational companies are members of GISFI also. All the above mentioned companies have an edge over others in some areas of technology. So they hold dominance in some or other technology area.

Members have to disclose the IP of other members also if they are aware that there is any. It does not impose a duty to do IPR searches. The requirement of disclosure under an IP policy is fulfilled if patent in one country is disclosed. There is no need to disclose whole patent family.[xxxix]It is not clear that whether it is one time disclosure or periodical disclosure? Whether it should be disclosed at the time of working group meetings or at some other occasion? Non-disclosure and excessive disclosures both are equally problematic. Whether a patent is relevant or essential to standard is matter of claim construction and interpretation. If more than one IP is relevant in standard in process, it is difficult to classify patents as essential, relevant and non-relevant. Moreover, if a member deceptively claims that its patent as the essential patent then how the issue will be solved. GSIFI IP policy is silent about this issue.

3.1.2 Non-Disclosure of IP by SSOs Members

Non-disclosure of essential IP is a predominant competition issue in standard setting process. IP policies of SSOs should have the strict provisions for non-disclosure of IP.

In the standard setting process, SSOs identify proprietary and non-proprietary technological knowledge available related to a standard. SSOs prefer to adopt non-proprietary technology. In case, only proprietary technology is available then SSOs ensure RAND/FRAND based licenses. Where there is no alternative technology available there is only one option either to adopt the standard with the IP owner technology or to relinquish the standard. Here SSOs can ask for RAND licensing only.[xl] Rules of SSOs are not a defence to avoid anti-trust liability.

Non-disclosure of essential IP may discourage motivation of standard setting and hamper the pro-competitive effects of standards. For instance, in Rambus Inc. v. FTC[xli], the court ruled that a refusal to deal with malice is not anti-competitive until there is a probability of monopolization. Price rise without harming competition is outside the ambit of competition law. Harm to competition is the test rather than deception itself. Only exclusionary deception amounts to anti-competitive activity[xlii]. Where there are perfect

substitutes of patented technology available then patent owner knows that adoption of other technology may hamper market of his technology. Selection of technology increases the demand and market power of IP.[xliii] So free licensing should also be carefully examined for effects on competition. A similar case was initiated against Rambus Inc. in European Union also. Rambus Inc. committed to offer IPRs at reasonable rates to the member of standard setting organization as well as non-members. Rambus Inc. committed that it will not charge any royalty for standards adopted during the Rambus Inc.'s membership of JEDEC. It agreed to charge 1.5% royalty for standards developed during Rambus Inc.'s non membership of JEDEC.

Another such instance is in case of Dell Computer Corp.,[xliv] in the year 1992, Dell became a member of VESA a non-profit standard setting organization. It started developing the process of VESA local bus (VL bus) which was meant for carrying information between a CPU and other computer devices. Dell approved the standard and certified in writing that this standard does not violate its intellectual property. However, when VL bus became a commercial success and it was used in 1.4 million computers, Dell informed the members of VESA about its patent infringement. Dell restrained competition in the market because manufacturers decided not to use VL bus design until the patent issue was resolved. Computer systems using VL system design were avoided due to Dell patent issue. It raised the cost of implementation. It discouraged future participation in the standard setting process. Federal trade commission (FTC) ordered in this case that Dell shall cease and desist all efforts to enforce the concerned patent with VL bus manufacturers. It indicates that where there is evidence of adoption of alternative technology in case of disclosure of proprietary technology by the members, enforcement action is appropriate to prevent harm to competition.

Furthermore, in the case of Union Oil Corp. of Cal. V. FTC[xlv], the California Air Resources Board developed a standard on 'low emissions of gasoline. Union Oil Company of California was the member of the California Air Resource Board. Union Oil Company participated in the standard setting process. Union Oil Company declared that it does not have an essential or relevant IP in the form of patents or patent applications for standard in question. This standard was adopted by California refiners with huge investments. Later, Union Oil Company claimed infringement of its patents and damages from infringers. Union Oil Company committed that it will not enforce its patents related to that standard.[xlvi] Otherwise it would have adversely affected the competition. Analysis of these cases reveals that deceptive non-disclosure of IP at the time of formation of standard and later claiming infringement of IP is an anti-competitive practice.

In India, Section 3 and 4 of the Competition Act 2002 apply to the enterprises and persons. It applies to all government and private standards. It excludes the sovereign function of government including atomic energy, currency, defence and space.[xlvii] Person includes every unit from an individual to artificial juridical persons.[xlviii] So the applicability of Indian competition legislation is very extensive which covers every participant in standard setting.

Non-disclosure of IP in standard setting is bound to affect and cause control of production, supply, markets and technical development. It is presumed to have presumed to have an appreciable adverse effect on competition in the relevant market. Therefore, it may violate Section 3 (3) (b) of the Competition Act. Analysis of violation of horizontal agreements under Section 3 (3) is a three step process. First step is to identify relevant market and establishing horizontal relationships. Next step is to establish liability under four grounds of Section 3(3) in the form of price, quantity, market allocation or bid rigging heads. Last step is to analyse the competitive effects under Section 19 (3) in the form of entry barriers, benefit to consumers and innovation in production, distribution, scientific or technical developments.

3.2 FRAND Licensing Commitments

FRAND policy is fair, reasonable, and non-discriminatory licensing mechanism. Abuse of market power is anti-competitive. Fairness and reasonableness of royalty rate is determined on the basis of probable royalty rate which a patentee could get in the absence of selection of technology in a standard in a competitive market. Reasonable royalty may be fixed on the basis

of competing technologies or expert opinion Shapiro &Varian (1999).[xlix]

Obtaining license is the important step after disclosure of IP. SSOs require the patentee to license its IP on fair, reasonable and non-discriminatory (FRAND) basis. GISFI policy is silent on the issue that who will determine the fairness of licensing terms. Whether it is patentee, court, an infringer or SSOs' administration that will determine reasonableness? The patient has to disclose the FRAND licensing arrangement to assignee or transferee about undertaking given to GISFI. Undertaking for a patent in one country applies to patent on the same invention in other countries as well.

In case of refusal to license essential IP[l], SSOs search for alternative technologies which are non-proprietary. If there is no such alternative technology and patentee is a member, IP owner is asked to review his position. In case of refusal, he is asked to give the written justification within three months. If the patentee is a non member, then members have to use their good offices to get a license if does not succeed, then Director General asks patentee to license the invention. If he does not succeed, DG directs the technical committee to modify the technical specification to avoid the essential IP. Copyright in Standards developed by GISFI remains with it. For other forms of IPRs, GISFI get ownership only when it is created by its employee's. Licensing of third party is very important to maintain competition in the market on a fair and reasonable basis. It has the provision to license its IP to third party on FRAND basis. GISFI's IP is free to its members. The violation of IP policy is the violation of the duty of member towards GISFI. It may take action against its members according to its bye laws.[li]

3.2.1 Refusal to FRAND/RAND Licensing

In case of Re Negotiated Data Solutions, in the year 1993, IEEE was developing fast Ethernet. Ethernet standard is used for LAN connection with a computer. It is one of the most widely implemented LAN standards.[lii]

In 1994, National Co. proposed that the 802.3 Working Group incorporate an auto negotiation technology developed by National Semiconductor, and referred to as "NWay," into the Fast Ethernet standard. National Semiconductor had filed a patent application for that technology. The Working Group considered several alternative technologies to National's "NWay" technology prior to the adoption of the Fast Ethernet standard. It also considered adopting a Fast Ethernet standard without an auto-negotiation feature but could not succeed.[liii] National Semiconductor agreed to FRAND licensing. Later, National Semiconductor transferred its patents to Negotiated Data Solutions. The Federal Trade Commission issued a complaint against Negotiated Data Solutions, under Section 5 of the FTC Act for refusing licensing in RAND terms. The FTC stated that Negotiated Data Solutions behaviour harmed consumers and businesses adversely.

Broadcam Corp. v. Qualcomm Co.[liv], the third Circuit Court held in this case that Qualcomm has acquired legally its intellectual property. Regarding the issue that Qualcomm IP has restricted the competition. The court observed that the inclusion of any technology in the standard would have restricted the competition. In a case where there is industry wide standard monopolization of technology is difficult. Court omitted to look at the issue that whether abuse of the standard setting process is violation of competition law or not?

Analysis of above cases suggests that transferee of IPRs owners is bound by the FRAND licensing commitment made by transferor of IP.

In Magill Case, the European Commission held thatan unjustified refusal to deal is anti-competitive, where the IP owner holds an essential facility in an industry. Similarly in case of standard setting if an IP owner possesses an essential facility it may be treated as anti-competitive. IP owner has a duty to deal otherwise his conduct could restrict a new product entry into the market.[lv] Some standards lose relevance in the absence of important intellectual property rights. When the key IP of a standard is held by one member, SSOs take measures to ensure the availability of that IP. This ensures adoption and application of the standard. Refusal to license can be anti-competitive conduct by the IP owner due to market power. There is a possibility of an unfair

licensing mandate by SSOs as a result of unfair IP policy also. This act itself has the potential of being anti-competitive by creating a barrier in level playing field to IP owners. It is important to analyse what the stance competition law should take in such situations. Overzealous application of competition laws could restrict standardization and innovation.

3.3 Anti-competitive Selection of Technology

Usually, when a standard is developed, alternative technologies compete for inclusion. Once a technology is chosen, if the standard is successful then it may become entry barriers to other technologies. Where there are alternative technologies available that it is likely that one will be adopted. Therefore, unfair and biased technology selection has the potential of being anti-competitive.[lvi] IP owners indulge in unfair competition to include their technology in standard. As in Allied Tube & Conduit Corp. v. Indian Head, Inc.,[lvii]Allied Tube and Conduit Corp. Manipulated the standard setting process by recruiting more than 200 people to vote in its favour during the standard setting process. So in this way Allied Tube and Conduit Corporation managed to pass steel pipes standard instead of plastic pipes. It is relevant for the fairness of the standard - setting process. There is no doubt that the members of SSOs' have economic benefit in restricting competition. Such selection of technology may have anti-competitive effect. Agreement on a product standard is, after all, implicitly an agreement not to manufacture, distribute, or purchase certain types of products. Accordingly, private standard-setting associations have been subject to antitrust law. In case of Radiant Burners Inc. v. Peoples Gas Light & Coke Co[lviii] US Supreme Court held that Standards which are objective, unbiased and un-biased, definitely pro-competitive. These types of decision by courts led to apply 'rule of reason' approach on standards.

Similarly in American Society of Mechanical Engineers v. Hyderolevel Corp., the American Society of Mechanical Engineers, Inc. (ASME) is a non-profit organization which builds standards. Its Boiler and Pressure Vessel Code standard was adopted by 46 states in the US. It dealt with low water fuel cutoff which blocked the flow of fuel to water boilers. The firm dominating the market was also dominating the standard setting process. The vice president of committee interpreted the code in such a way that it gave the impression that competitor's product was unsafe.[lix]

The important point here is that dominant players may abuse the process to include their technology. Selection of particular technologies in standard gives market power to that technology. Hence the technology owner acquires dominant position due to the selection of its technology in the standard. So competition authorities should look into the process of standard setting. It is advisable that selection of technology out of alternative technologies should be based on expert opinion.

4. Conclusion

Standardization is essential for economic development. There is need of standards based on consensus, openness, due process and transparency. India needs to develop a comprehensive strategy on standards by coordination with government, industry, SSOs, consortia, consumer groups and academia. International standards are must for international trade. The active involvement of government in central and state level is key to successful standards.

As we discussed, there can be anti-competitive activities in standard setting such as patent holdup, non-disclosure of essential IP, refusal to oblige RAND commitment subsequently and fraud in the standard setting process. The IP policy of SSOs is crucial in reducing anti-competitive activities. There is diversity in IP policies of SSOs. SSO's IP policy should be standardized incorporating the best practices. As NTP 2012 aims to develop standards and creation of IP, there is a need that competition authority should put the standard setting on the priority list like competition authorities in the US and EU. The present competition legislation is not enough, in order to develop pro-competitive standards competition authority should develop guidelines on anti-competitive agreement in standard setting. To deal with anti-competitive activities effectively,competition authority can become an institutional member of GISFI. It will ensure pro-competitive standard setting in India.

To develop pro-competitive standards, the following conditions should be considered.

1. No compulsion to apply standard on its members by SSOs.[lx]
2. Transparency in standard setting process.[lxi]
3. Equal opportunity of participation in standard setting to all competitors in relevant market.[lxii]
4. No discrimination in favour of dominant player in market.
5. IP policy to require disclosure of IP requiring patent, patent applications and amendment in the patent application.
6. Ex ante FRAND commitment from IP owners.(Microsoft Corp. v. Motorola, Inc., No. 10-1823, 2013 WL 2111217 (W.D. Wash. Apr. 25, 2013) (referring to Georgia-Pacific Corp.v. US Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y. 1970).
7. Fair and non-discriminatory licensing is construed according to valuation of patents.[lxiii]
8. Ex-ante disclosure of most restrictive rule to its members by SSOs.[lxiv]

The predominant issues in standard setting are non-disclosure of IP, FRAND licensing mechanism, manipulation of the standard setting process and fairness of IP policy. Non-disclosure of IP can be taken care of by a carefully drafted IP policy. FRAND model is the one of complex areas in the standard setting process because there is no uniform practice relating to it.

End Note

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References

i See also Hovenkamp, H. Et Al. (2003), IP and Antitrust: An Analysis of Antitrust Principles Applied to Intellectual Property Law, Aspen Publication Section 35.1a.

ii EC Horizontal Agreement Co-operation Guidelines. Accessed on 11 October 2011, http://www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62005TJ0432:EN:HTML, last accessed on 27th August 2012.

iii See also Ruben Schellingerhout and Piero Cavicchi (2010), Patent Ambush in Standard Setting: The Commission Accepts Commitments From Rambus to Lower Memory Chip Royalty Rates, available at ec.europa.eu/competition/publications/cpn/2010_1_11.pdf, last accessed on 27th August 2012

iv Lemley, M. (2002). Intellectual property rights and standard-setting organizations. *California Law Review, 90*(6), 1889-1973.

v Teece, D. J. & Sherry, E. F. (2002-2003). Standards setting and antitrust. *Minnesota Law Review,* 87, 1913-1994.

vi Farrell, J. Hayes, J., Shapiro, J. & Sullivan, T. (2002). Standard setting, patents, and hold-up. *Antitrust Law Journal.*

vii Anton, J. & Yao, J. (1995). Standard-setting consortia, antitrust, and high-technology industries. *Antitrust Law Journal.*

viii See http://www.cen.eu/cen/pages/default.aspx, last accessed on 27th August 2012, it is a nonprofit organization based Brussels. It is only organization approved under European Directive 98/34/EC for planning and adoption of European Standards.

ix See http://www.cenelec.eu/, it prepares voluntary standards, create new markets between countries in Europe.

x See http://www.etsi.org/, it develops standards in Information and Communications Technologies (ICT), including fixed, mobile, radio, converged, broadcast and internet technologies.

xi See http://irmm.jrc.ec.europa.eu/, this organization is a Directorate General of European Commission, last accessed on 27th August 2012.

xii See http://www.pascnet.org/, last accessed on 27th August 2012.

xiii See http://www.crosq.org/index.php?option=com_contact&view=contact&id=44&Itemid=68, last accessed on 27th August 2012.

xiv See http://www.arso-oran.org/, last accessed on 27th August 2012.

xv See http://www.aidmo.org/, last accessed on 27th August 2012.

xvi Available at http://www.ansi.org/, last accessed on 28 August 2012

xvii JEDC Activities, available at http://www.jedec.org/about-jedec/activities, last accessed on 28 August 2012.

xviii Available at http://www.vesa.org/, last accessed on 28 August 2012.

xix Paragraph 4.6 of Raghvan Committee Report, available at www.mca.gov.in.

xx Available at http://www.gisfi.org/background.php, accessed on 11 July 2012.

xxi Available at www.niksun.com/.../NIKSUN_WWSMC_July26_TR_Dua.pdf, last accessed on 27th August 2012.

xxii Scope of GISFI Focus available at http://www.gisfi.org/scope.php, last accessed on 27th August 2012.

xxiii See on www.gisfi.org/newsletter.php accessed on 3rd September 2012.

xxvi Available at http://www.gisfi.org/news_events_details.php?id=40, last accessed on 11 July 2012.

xxv See http://www.ttc.or.jp/en/docs/ru603.pdf, last accessed on 27th August 2012.

xxvi http://www.tiaonline.org/, last accessed on 27th August 2012.

xxvii http://www.itu.int/ITU-T/, last accessed on 27th August 2012.

xxviii http://www.arib.or.jp/english/, last accessed on 27th August 2012.

xxix Article 6 of Bye Laws of GISFI, available at http://gisfi.org/rules_regulations/Bye-Laws%20Rules%20Of%20Procedure%2021%20June%202010.pdf, last accessed on 27th August 2012.

xxx http://dosti.org.in/scope.php

xxxi http://dosti.org.in/goal.php

xxxii Section 3(1) of Competition Act 2002.

xxxiii Section 19 (6) of Competition Act 2002.

xxxiv Section 19 (6) of Competition Act 2002.

xxxv No. 71/2010, available at http://www.cci.gov.in/May2011/OrderOfCommission/OrderRavindra110511.pdf.

xxxvi Chiao, B., Lerner, J. & Tirole, J (2007), The rules of standard?setting organizations: an empirical analysis, The RAND Journal of Economics,.

xxxvii Patent hold-up is a situation where patent owner refuses to license its patent which essential patent in a standard. Anti-common is failure of objective due to too many right holders in a property.

xxxviii Clairvolex Study on Patenting in Telecom in India - A Landscape Study available at www.clairvolex.com/whitepaper/PatentingTelecom.pdf, last accessed on 27th August 2012.

xxxix Only one member of patent family disclosure is sufficient to satisfy the obligation under GISFI IP Policy. Para 4.3 of GISFI IP Policy.

xl Rambus Inc. v. FTC, 522 F.3d 456 (2008).

xli Ibid.

xlii Canwood Co. v. US Tobacco Co. 290 F. 3d 768.

xliii Ibid note 48.

xliv 121 FTC 616(1996).

xlv Docket No. 9305.

xlvi EC Horizontal Agreement Co-operation Guidelines. Part 7, Viewed 11 October 2011, http://www.eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:62005TJ0432:EN:HTML, last accessed on 27th August 2012.

xlvii Section 2 (h) of the Competition Act 2002, It defines enterprise. Enterprise include commercial activities of government but excludes sovereign function of government.

xlviii Section 2 (l) of the Competition Act 2002.

xlix Shapiro, C. & Varian H. (1999), Information rules: a strategic guide to the network economy, Cambridge, Harvard Business School Press, 1998; A Layne-Farrar, AJ Padilla, R Schmalensee, Pricing Patents for Licensing in Standard-Setting Organizations: Making Sense of FRAND Commitments Antitrust LJ, 2007.

l Essential IP is defined by GISFI IP Policy as "Essential" as applied to IPR means that it is not possible on technical grounds to develop a standard without using the particular IP.

li GISFI IPRs Policy, accessed on 11 October 2011, http://gisfi.org/ipr_policy/gisfi_intellectual_property_righ.htm last accessed on 27th August 2012.

lii Webopedia online encyclopedia defines Ethernet, http://www.webopedia.com/TERM/E/Ethernet.html., last accessed on 27th August 2012

liii Negotiated Data Solutions LLC. Docket No. C-4234, http://www.ftc.gov/os/caselist/0510094/080923ndsdo.pdf, last accessed on 27th August 2012

liv 501 F 3d. 297 (3d. Cir. 2007).

lv Radio Telefis Eireann (RTE) and Independent Television Publications Ltd (ITP) vs. Commission of the European Communities, C-241/91 P and C-242/91 P 1995.

lvi Ibid. EC Guidelines

lvii 486 U.S. 492, (1988).

lviii 364 U. S. 656 (1961) (per curiam).

lix 456 U. S. 556 (1982).

lx Epstein, R., Kieff, F., & Spulber, D. (2012). The FTC, IP, And SSOs: Government Hold-Up Replacing Private Coordination. *Journal Of Competition Law And Economics*, *8*(1), 1-46.

lxi Drahos, P. (2002). Developing Countries and International Intellectual Property Standard-Setting. *The Journal Of World Intellectual Property*, *5*(5), 765-789.

lxii Ibid.

lxiii Swanson, D.G. & Baumol, W., (2005).Reasonable and Nondiscriminatory(RAND) Royalties, Standards Selection, and Control of Market. *Antitrust Law Journal, 73(1), 1-58.*

lxiv Gilbert, R. J. (2011). Deal or No Deal? Licensing Negotiations in Standard-Setting Organizations. *Antitrust Law Journal,* 77, 855–859.

Ravikant Bhardwaj is an Assistant Professor of Competition Law at the School of Competition Law and Market Regulation, Indian Institute of Corporate Affairs (IICA). He has worked as an Assistant Professor of Law at National Law University Jodhpur. He is a member of Academic Society of Competition Law (ASCOLA). He holds a Ph.D. Degree in area of 'Relation between Competition Law and IPRs' from RGSOIPL, IIT Kharagpur. He has pursued LL.M. from NALSAR University of Law Hyderabad, BA, LL.B. His research and teaching interests include IPRs, competition law and corporate law.