Introduction on Intellectual Property to Engineers and Technologists

Prof. T. K Bandyopadhyay
Department of Metallurgical and Materials Engineering
And
Rajiv Gandhi School of Intellectual Property Law
Indian Institute of Technology, Kharagpur

Lecture – 40
Case – Study on IP Management

So, we have the remaining portions from the earlier class that IP valuations that are also important for reference to job, perspective and others just like that I will keep the basics of those kinds of things then I will show you some case studies with reference to the IP.

So, now a valuations, if I consider valuate a land how can you give a value of a land in a specific area, just like a land value us also defers same land that differs from one area to others area, but somehow you will avail to measures the land, but is difficult for an intellectual or intangible asset because is difficult to measures that IP is specific means how you measures the patents. You can measures the land this one [FL] or one decimals, but how it measures the IP. So, that makes the valuations of your intellectual property more difficult. So, definitely it will depends upon the different parameters although the I told you that here also that different parameter means rural or urban are there but still it is easier by means of comparison you able to get a value or get an idea of a value but how will you consider value of the Google brand or let us say value of WIPRO brand or value of a particular technology or patents of an WIPRO.

So, there lies the valuation why it is important, it is important respect of transactions, with important with reference to later on we will come up taxation, it may be important with reference to the insurance, it is also important with respect of claiming damages. So, valuation is an important parameter in respect of getting money from your Intellectual Property.

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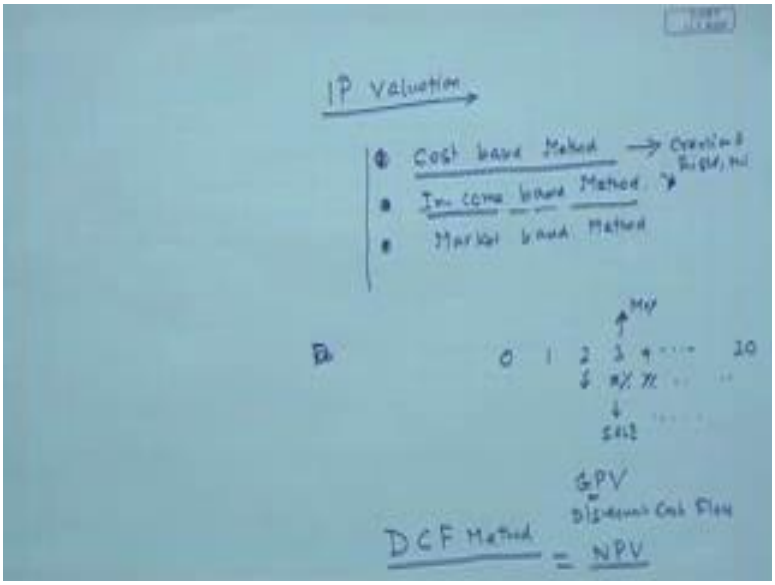

So, what are the different methods variable for valuation for generally, their told referred is Cost based Method, Income based Method and Market based Methods. There are other methods are also evolving just like say fuzzy tools, just like a fuzzy based fuzzy, just like a computer software based method, fuzzy neural network based methods, can be applicable because here also lots of parameters are there.

Similarly, sometimes people try to develop the method based on off some try sing methods just like say and also dis-entry analysis, based tools, can be applicable for the valuation of the patent now Cost based Method: simplified part just part sometimes for what cost incurred in respect of creation or some respect of others let us say cost is potential threat and cost although cost involved sometimes I referred cost with reference to the creation of right then in maintenance cost and opportunity cost mean some opportunity cost or sometime we call in respect of tangible thing we call depreciation's, that is that as some expect it will loss here also some opportunity cost you make it in that. So, that way you are thinking about what will be the potential value of that IP in respect of today.

In Cost based Method also we have other parts sometime we call reproduction cost based method or replacement cost method just like, a replacement cost method means let us a

particular brand is there in the market now, without effecting market you want to just like say create another brand without effecting market. So, you are replacing one brand by others without impacting the market. So, let us say consider I sometimes give the example Apollo. Let, us say Apollo suddenly closed now another brand have been trying to replace that in without effecting the markets means understood that part. So, what cost they have to incurred with reference to that business that that is advertisement promotions and all sorts of thing that cost may be consider the replacement cost. So, replacement cost may consider the value of the brand called Apollo. So, that way replacement cost based method is also applicable for valuation of patents are also I P may be trade mark or brand valuations.

Similarly, Income based Method: means let us say income how you have a potential patents now you may consider that ultimately generate a potential income out of that. So, now, you may consider first years you will now consider patents you are classifying you do not want to 1, 2, 3, 4, like this way 20 years. Now, let us say you got the patent of second year, third years you able to capture market segment expression, fourth year let us say 5 percent like this way you able to capture you will able first assume that you will able to capture market segment on that way and based on that sale also changing each year. So, and you need price also your considering.

So, in considering the year 3 may month evaluate your IP patents consider your 20 years you do not need your protection then you are thinking about what are the potential income you may consider with reference to the patents now from that based on the market perdition of your product now, what will be the approximate sale of your product and all those things you are considering them you are means that way you are valuate that considering the today's context then you have to consider that inflation or say interest rate generated out for that you have to deduct that gross. So, you will get gross present value based on that then put up a discount, cash flow discount, minus discount, cash flow discount, discount cash flow, this considering the interest part and inflation part and others your are just deducting from the gross present value then you may get it a net present value of that patents or that IP sometimes it is referred as DCF Discount Cash Flow Method, DCF Method this is the most appropriate method for valuation of the patents.

Similarly, others are also Market based Method: that the market part how, the market is determining the value based on that just sometimes people will product just like what is the similar or equivalent type of technology is say somebody is selling just like you consider a company is acquiring a, another company What is the transaction beat? Ranbaxy consider that Ranbaxy or say other company and why their acquiring with reference to potential IP now what the acquisition value now considering your part, your market entry, is also similarity or similarities of the patents with reference to that acquisition then you may considering that a Comparison based Method and you may thought about what can be the value of my patent may be.

So, that way Market based Method is also available so these are the different things for the valuation of patents that how can you evaluate your IP, how can you evaluate your brand, this also important parameters with respect to IP management why I already referred I am not going in details of each of the Methods, but you should study at least Cost based Method or Income based Method valuation of patents and say Cost based Method or valuation of brand. And if you able to evolve appropriate evaluation model using the software tool then you can you can get lot of credit for that. So, that is the valuation a components then others aspects IP health check if you do not operate IP intelligence mapping those are the different software tools are available for that kinds of things and the technical tools are there are also available similarly.

Now, in respect to software's also in the form of IP, software IP audit how can you do that open source or property resource things are there poverty software open source software's there, that are also applicable. So, now, say IP management are the things you should learn means let us say IP audit, IP (Refer Time: 11:52) IP assessment, IP strategy, how can strategize your IP with reference to the business goal of the organization, with reference to the goal or missals of the institutes then IP assessment, then IP landscape analysis, for a business entity it most essential component that IP landscape analysis, then IP health check, then another component within the purview of the landscape is called freedom to operate search then IP intelligence mapping all those elements are there in purview of the management. So, you should read all those things.

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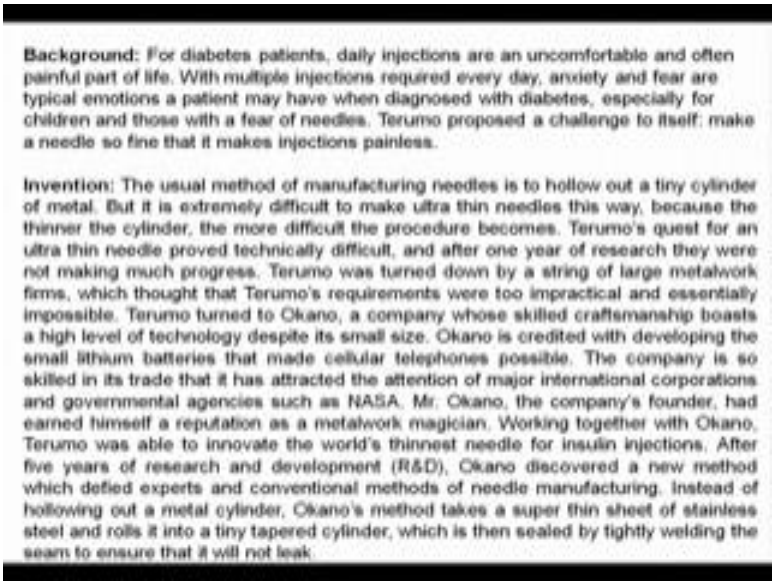

Now, I will just give you some show you some case studies with reference to the IP and also I will visit some sites specifically, to call hypo sites. From those sites I will show you the benefits of the IP based on the case study specific just like say a case study with reference to the draws in patents I have chosen here just like say consider for a diabetic patient daily injection are in uncomfortable and often painful part of life you know that for diabetic patient you have go for injection. So, instead of oral you have gone for injection.

Now, with multiple injections required everyday anxiety and fears are typical emotions a patient may have diagnosed with diabetics specially, for children and those with fear of needles see. So, that background is the needle just like say needle painful needle or painless needle so just like say consider we refer in respect to patent that problem solution approach here the problem is that the painful part of a needle.

So, now how can you solve that problem? So, that part has been done by Terumo. Terumo propose a challenge to it and make needle so fine that it makes the injection painless see that, that means, the simple invasion that needle how can you design a produce a needle, which will be fearless, painless and so not much investment is required. So, when you propose the challenge you thought about how can you solve that

problem and develop the needle and for painless injection, And Now, useful method for manufacturing needles is to how what is his invention is that how will you develop that needle is that method of manufacturing needles is to hollow out a tiny cylinder of metal follow out a tiny cylinders of metals it is extremely difficult to make ultra thin needle this way because the thinner, the cylinder, more difficult the procedure become you understood that the pressure not.

So, thin a cylinder, you are making the cylinder understood, tiny cylinder then it is difficulty you have to face Terumo quest for ultra thin needle proof technically difficult and after 1 year of research they were not making much progress. Terumo was stands down by a stream of large metal works form which thought that almost requirement over too impractical essentially impossible that thing will not practically feasible. So, it will be difficult to make that ultra thin needle. Terumo turned into 'Okano' a company who skilled craftsmanship, who skilled craftsmanship boost a high level of technology despite a small size. So, then he another company 'Okano' is credited with developing the small lithium battery that made cellular telephone possible the company is so skilled in the state that it has attached the attentions of major international corporation and government agencies such as NASA mister 'Okano' the company founder head and himself reputation as metal work magician.

So, see that 'Terumo' to 'Okano' now mister 'Okano' the company's founder head and himself reputation in the company heads and himself reputation in metal work in magicians metal work magician working together with 'Okano' 'Terumo' was able to inaugurate worlds thinnest needle for insulin injection now, say Terumo was say behind that that thinnest needle insulin injection. So, say several years he tried and then he made 'Okano' then with working together with 'Okano', 'Okano', 'Terumo' was able to inaugurate the worlds thinnest needle of the insulin injection after 5 years of research and development 'Okano' discovered a new method which defined expert conventional method of needle manufacturing. So, how further they can improve the method of manufacturing for the cost portion of others they have done that instead of hollowing out a metal cylinder 'Okano' Method takes a super thin sheet of stainless steel and roll it into a tiny taper cylinder which is then sealed by tightly welding the sheet to ensure that it is

not leak understood in (Refer Time: 18:16) leakage of the that purpose has gone. So, it has to be leak proof also.

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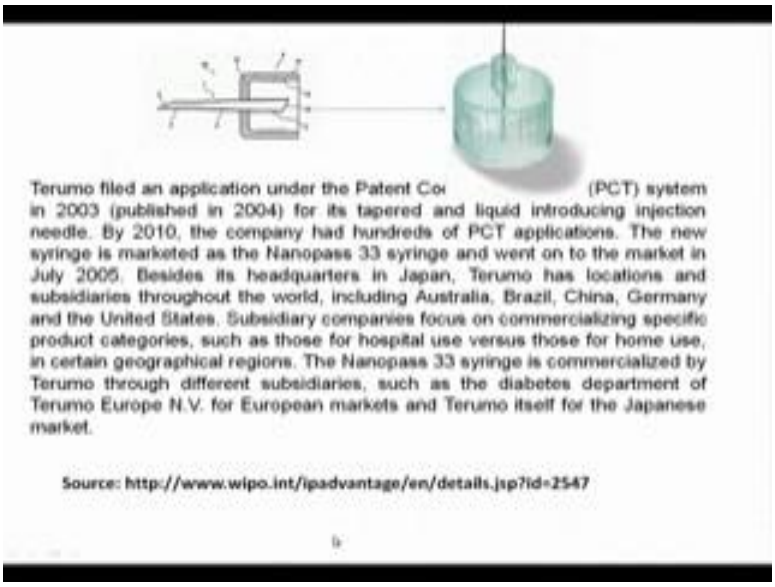

So, now there are ultimately invented the methods which is the things drawing of his patent. So, Terumo file a patent and a patent under pct peril copper entity in 2013, publication flourished taper, liquid, introducing injection needle. So, patent title was taper liquid injection introducing injection needle by 2010 the company had 100 of PCT, application the new string siring is marketed as N A N O pass 33 siring and went on to the market in July 2005.

So, see that 2005, resides its head quarter in Japan Terumo has location and subsidiary throughout the world including Australia, Brazil, China, Germany, and United States subsidiary company focused on commercializing the specific product categories such as those for hospital use versus those for home us so hospital purpose use, hospital use in certain geographical area the N A N O phones started syringes in communicated by trade commercialize by Terumo to every diver-sent difference subsidiary such as diabetic department of Terumo Europe and we for European market, Terumo itself for Japanese market like this way if define subsidiary has been created. So, see that the simple idea

turned to how many say patents, and how many how he will able to captures the different markets out of the (Refer Time: 20:00) idea.

So, this is one of the case studies I have taken from hypo I ready referred that source from where I have taken that case study.

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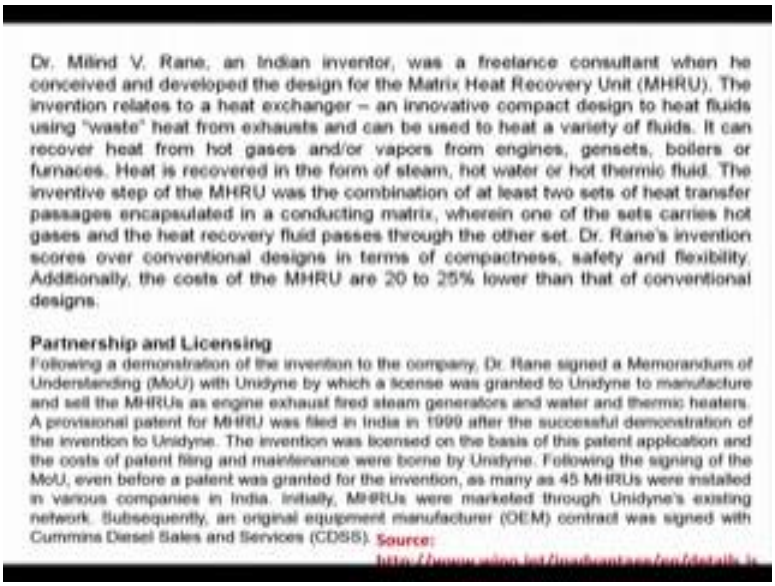

Similarly, another case study I have taken that side also I also referred in that as a source part this say only for the educational purposes and using those things do not copy it and put it in a multiple copy and put in a site for commercial purposes. So, that may lead to cooperate valuations also, just simply referred those things educational purposes. So, now, similarly mister Milind V. Rane an Indian inventor say I am taken an Indian case studies also was a freelance consultant when he conceived and develop the design and for the matrix heat recovery unit M H R U the invention related to a heat ex-changers and. So, heat ex-changer heat ex-changer and innovative compact design to heat fluid using waste heat from exhaust an. So, he that what I referred lots of heat exhausted and if you go for a waste heat recovery we are using some of the heat ex-changers that will be somehow save the energy.

So, considering the problem was that how can you recover heat from waste heat? So, he has designed some matrix sheet a heat recovery unit mean heat ex-changers for that. So, can be used to heat variety of fluid it can receiver heat from hot gases or vaporous from engine and gen-sets boilers furnaces. So, that heat ex-changer is ultimately recovering or able to say minimize the heat somehow utilizing the heat laws exhaust heat and able to give some potential out of that or it is recovered in the form of the steam or hot water or thermic fluid the inventive stop.

So, now he is trying to create these by means of some hot water or thermic fluid. So, hot water or fluid what types of steams or that part industrial investment of work the combination of at least two sets of heat transfer passages encapsulated in a conducting matrix. So, how what is the heat exchange here design has made it to make it more efficient and to use it for wastage recovery unit specifically, how he has designed that what why in one of the set carries one of the set carries hot gases and heat recovery fluid passes through the other sets. So, from one the hot gasses and heat recovery fluid passes to through the other set when is inventions scores over conventional design in terms of compactness safety, flexibility.

So, how this invention is considering that to be patent-able invention understood what is the inventive steps of his invention that part is referred in reference to the cost part and technical advancement part already referred what technical advancement he has done and also flexibility and cost reduction is another component that by virtue of that also his invention can qualifying the criteria of inventive steps. So, definitely it is also considered a potential invasion to be patent-able. So, then what he has done subsequently. So, what is an following the demonstration of invention to the company run a science and memorandum understanding with unidyne by which a which a license was granted to the unidyne to manufacture and sell the immature as an engine exhaust fire steam generator and water and thermic heaters ok.

So, say that is the may be that non disclosure agreement (Refer Time: 24:10) with non disclosure agreement, along with non-disclosure agreement, everything was there. So, may within the purview of idea or proof of concept part now a provisional patent application for image was filed in India, in 1999 after successful demonstration of the

invention to the unidyne. So, inventors is Rana mister Rane then he has shared that part component by means of some M O U with that unidyne then who has filed that application unidyne filed the professional patent applications India, in 1999, after successful demonstration of the invention to unidyne. So, demonstration of the invention all may happen based on non-disclosure agreement, because if we disclose that thing in those things then that may lead to the destruction of novelty of his invention.

So, see that how say even that idea then demonstration everything is done in confidence that part is not referred, but to think that was licensed on the basis of this patent application. So, that invention was licensed even after filing that has done based on equitable right this applications and cost of patent filing (Refer Time: 25:25) was borne by Unidyne. So, Unidyne the ultimately compare the cost of filing all the thing following the signing of that of the M O U even before the patent was granted for the invention as many as 45 immature was is stoned in various companies in India. So, then before the patent granted everything done you have to see that initially, we should was marketed through unidyne existing network subsequently in original equipment manufacturer O E M, contract was signed with Cummins diesel, sales and services. So, how further they are taking care of the marketing part. So, they have not capabilities when say they are going for Cummins diesel sales and services for marketing part.

So, this is another case one case study just like a for simple problem that was heat recovery, then how to design exchange, simplified exchange out of that then how you are getting returns means from an idea to an invention, to a patent-able invention, to a commercial product, see that a commercial product has installed in 45 as 45 major installed in major companies in India, even before the grand and subsequently find out that this is marketed by famous diesels services.

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So, this the one part and you will subsequent things lot of others case study specific relation says consider Copyrights and let us say commercialization from this side this is the case studies of Intellectual Property Management you will get you should visit this side as I showing you how to do this cooperate reader drive and let us the commercialization.

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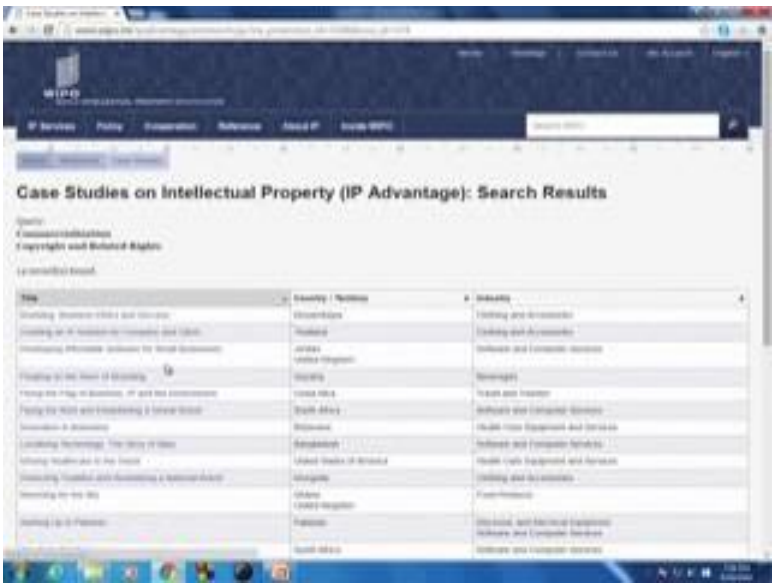

Now, do search. So, see that you will getting the different say 40 times 45 records fine that how say developing affordable software for small business that is country territories Jordan united Qumino software and computer services see that see the case study with reference to that how that connect or wall in way of if you go that these are the one of the thing with reference to the software part how do you research and development part happen this successful commercialization that thing is happen. So, then similar way if you go back see that geographical indication, geographic indication and commercialization has see that geographical indication and commercialization also you may get tee lover guide for climbing high peak mountain dream cluster like this way series of case study with reference to the geographic indication.

Then let us take an Industry Design and commercialization you will get strong name half century in the making this way different Design as clear as clear as water let us see how many syringe this is of hand way let us say respect of patent, I already referred few you will get series o f case studies for that also commercialization patent that I have given hear that number of cases for case study for IP patent commercialization part see these are the different part commercialization related patent cases in different jurisdiction you should read those things. Similarly, Integrated Circuit related things also you will get commercialization part and you may get different things also yeah literature circuit commercialization take it that part also you get it from let us say containing the food of whatever features that way think. So, that way from this side search the rate let us say utility model commercialization you may choose things and see that part in that case related things success stories with the reference to those things give an idea the importance of this subject.

So, definitely visit this sites for your further understanding with reference to that value and with get an idea with reference to the IP management perspective also. So, this overall with reference to the court with reference to the IP for engineers and technologist the important parameters is that how to know and identify the potential IP and subsequent stage is that how to get return out of your IP then how will you consider that as an important assess if you are individual, how will you commercialize that by means of a creating the startup or simply licensing or further how can you develop for enlarge the scope within your IP based on say patent of additions or another importance of

patents or further subsequently how can you diversify your patent portfolio that is also an important era for our engineers people specifically you have learned that components also from this subject.

So, take home lessons from this subject is specifically say that to create an IP or how to identify an IP, how create an IP and how to identify the IP, then transaction of the IP then management of the IP say commercialization of IP although, IP enforcement is of is not your job, but how can you avoid the enforcement that part you can do based on freedom to operate search then how can you strategize the IP, how can do an IP audit, how can you do an IP, health check; the other important areas for your engineers and technologist. So, that is also taking home lessons from this course specifically.

Thank you.