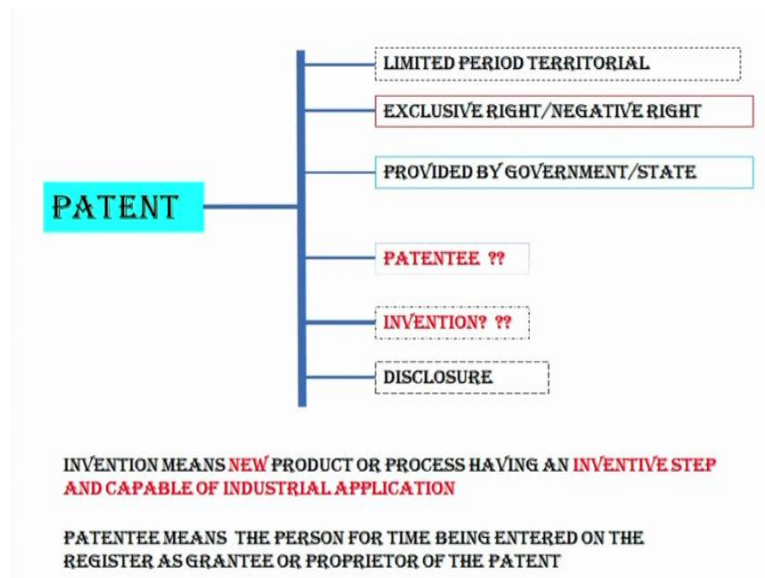


Introduction on Intellectual Property to Engineers and Technologists
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Lecture – 06
Patent Basic

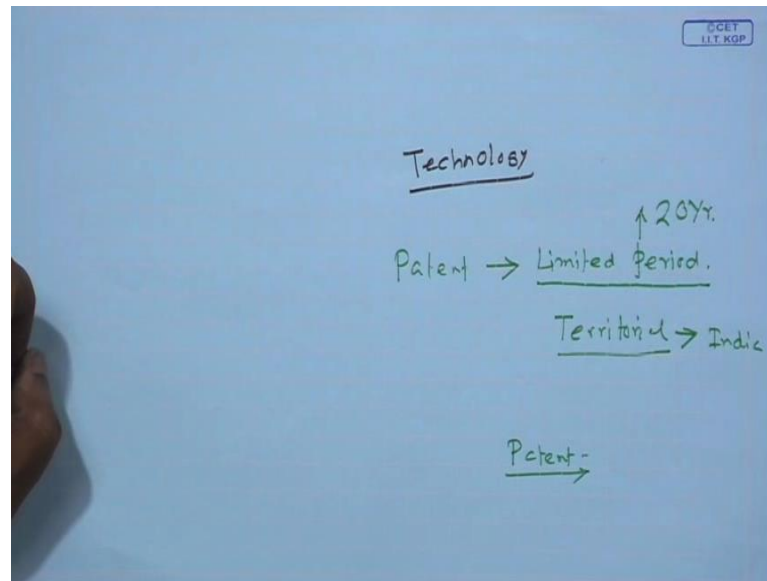
Good Morning, everybody; first week we have discussed about intellectual property, different forms, why intellectual property it is importance, nature of intellectual property, all those things.

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So now, as the course have been designed for engineers and technologists so patent is one of the forms of intellectual property those are essentials for say technologist and engineers, because the technological features can only be protected by means of patent.

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Just like say if I ask you what do you mean by technology. Just like say, I try to just analyze technology in the form of a product or process just like say consider communications technology, it includes communication device which I can consider as a product. Also it includes communication process or systems. So that way that you just consider technology in the purview of product or process.

So, on that regards considering on the desperate and we will consider technology is an application of science. So, we apply science this from that we design some product the product or also we apply science to ultimately design or create or invents some process. On that premises let us see how we can fit patent within the purview of intellectual property. Just like say layman understanding or considering your knowledge on first week plus on intellectual property rights I will first try to give you an impression of patent in present day context then I will also give an overview how it has developed over the years.

So, let us see patent. If I ask patent, what are the features remains in patent considering present knowledge. So, patent you can consider the limited period territorial; so limited period territorial exclusive right or negative right provided by government or state to patentee for his invention on consideration of the disclosure of his invention. So, considering that say let us say what are the features we are getting in a patent so it is limited period. So, what do you mean by limited period? Just like say limited periods.

In last class we discussed intellectual property rights are exclusive right and to make a balance between private and public the features in co operated in the intellectual property rights are in the form of a limited rights. That I last class discussed remember that we considered public good. And public good is non-trivial non excludable. And, so limited period exclusive right are the features of intellectual property life rights within that period it will be created as not public good it will be considered as a within the purview of the private rights.

So patent, what features we are getting limited period. And again I could limit period territorial. So, just like I will try to explain that part territorial, what do you mean by territorial. Just like say if you have some patent in India, so your right is restricted only in India, you do not have any rights beyond India because who has just next column next point if you remember provided by government slash state. So, who has given the right if Indian government has given right? So, your territory is restricted to India.

If say Japan government, if you have Japanese patent, Japan government give you the rights then the right will be restricted to Japan. So if you have a Japan, Japan is patent. So, your territory is Japan. If you have an Indian patent your territory is India. If you have an US patent your territory is Japan. Now if you have a Japan patent US patent and Indian patent, so with reference to US patent your right is US with reference to Japan patent, your right it is Japan your reference to Indian patent your right is restricted to India. So, this is the concept of territorial.

Now, limited period territorial; so I referred that intellectual property rights are exclusive right and to make it private public balance we have given the features of limited period. So, so for to the it has been right will be provided to the patentee for limited period after that it will be created as public good, means it will be non trivial non excludable anybody can use it. Why limited period? Limited period is to give some incentive for to the patentee or say if inventor is the patentee to the inventor or his invention so that he will be more interested, more encouraged to create further invention.

So, for that reason it is limited period. So, limited period for the present context limited period is 20 years. In Indian patents, then from the date of filing your patent your right will be restricted for 20 years. Beyond 20 years it will be considered as public good. So, this is limited period.

If you ask me why 20 years, is that economical justification or economy total, economy matrix analysis regarding there or say there is no clear cut formula with reference to 20 years they considered that 20 years is the time for the patentee to get some return on investment. So, considering that they have decided let give 20 years period right to the patentee for his invention.

So now, limited period territorial that part you got some idea. So, I referred earlier also that exclusive right again I have made at exclusive slash negative rights. Just like. So, if considered that I want to exclude somebody, so it can be designed on a negative way that I do not allow others to use that thing. Exclusive right can be design in such a way that I will prevent or not allow other to use my invention.

So, that way patent right has been casted in the form of negative rights. Just like say consider patentee can prevent to use his invention without his permission, either in the form of an article or device. If it patent is in the form of process, so what was the process? Generally we will generalize some tangible product or use a tangible product. So, we will prevent other to use the product using that process which is his invention or the limited period means 20 years where he has a valid patent.

Now we got the idea of the three for limited period territorial, exclusive right slash negative right; negative means to prevent others, so they are intellectual right have been casted in the form of negative rights. Means, the patentee will prevent other to use his invention without his permissions. So now rights, you may ask me the questions how you will get the rights, who will give the rights. So, for the regime I referred here provided by the government.

So regulation who regulated the patents by government regulation or private regulation I will say that government or I refer as a state that they will give this right, to whom, to the patentee. I will explain subsequently; how, what do you mean by patentee? Or what patentee will get the right for his invention? Why government will give the right as he will keep not keep the invention in the form of a secret will disclose the invention or to the public in consideration of that government will give him some limited period negative rights for this territory. So, you now got the idea what is mean by the patent. Let us take an example to explain in detail.

So, let us say you know Thomas Edison invented bulb. So, Thomas Edison invented bulb in the form of a tungsten filament. Now if Thomas Edison file a patent application in USA so the USA government will give him a limited period means considering present day context 20 years rights in the form of a negative rights in USA for his invention. And what will happen? The procedural aspects created a window that after filing of the pretend applications, after specific duration of time that pretend application or specification of the application will be made available to the public.

So, what will happen? The public will be gets the knowledge about the invention in the form of a written specification that will be published in the patent office website. Further people will invent new baby bulb with instead of tungsten they may think about some others high melting point or some other types of filament. So, that advantage for the disclosure, that people who are now trying to chalk out their R and D investment in filament they will stop researching on tungsten in the form of which Mr. Edison has filed the patent applications and that has been made available to the public in the form of a disclosure made by patent office.

So they will stop that will ultimately say, they will be prudent because now the company will now decide not to invest in that area or invest further beyond tungsten for the things. So, that will not say wasteful or prevent wasteful utilization of investment or resources. So, that is the advantage of disclosure.

Now I will explain you that what do you mean by invention and what do you mean by patentee. So present day context invention means, new product or process having an inventive step and capable of industrial applications, I have already mentioned you that for me I analyzed technology in the formula product or process. Further then I told you that patent you should learn the patent very well to ultimately get fruits of intellectual rights.

Now see that patent means new product or process having an inventive step and capable of industrial applications. So, see the product or process is coming in the form of an invention. So, let us see that Thomas Edison's bulb. Now if you want to do invent something in the form of a bulb you know that we have CFL; carbon filament lamp, so the improved over the tungsten filament lamp. Now other improvement LED. So, see

that how the improvement is have been happening and generating new product. So, the product as is coming up by means of some invention.

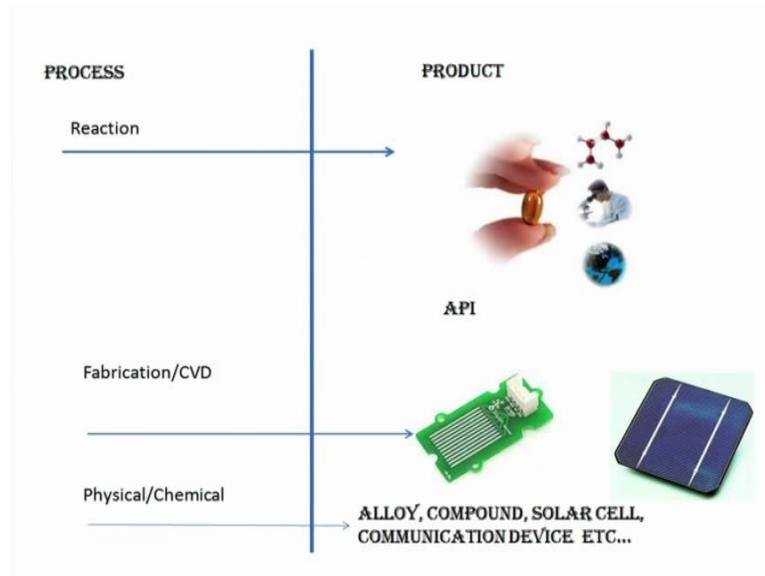
So, I will subsequently explain you how the invention to be considered and to qualify the in to be patentable what are the characteristics it required although the invention definition if you clearly analyze the characteristics of a patentable invention has mentioned here.

Now, another part I already referred the patentee. The right will be provided to whom that to patentee. So, what do you mean by patentee? Patentee means the person for the time being entered on the register as guarantee or proprietor of the patent. So, just like say considered if you go to the land revenue, land registers then somebody is against the somebodies name particular land that remained registered. So, for why that registers what is the implication of the register? Register is the evidence to somebody one can extract of the registers and if some litigation or something arises that will be the proof of his ownership or proprietorship.

For that regime similarly patent office keeps a registers of patents given the name of the proprietor against whom that patent has been registered. So, that will give the proof that the patent who is the owner of that patent of the patent; means if you considered that CFL with specific property a specific process of synthesis or making a CFL been patented by Mr. Thom I referred in the first class. So, the name of the Mr. Thom will be reflected in the register with reference to that patent. And also the date of patents means from which date the patent has been filed everything will be reflected in the registers.

So now, you got the idea about the patent in the present day context, means present day what peoples are thinking about the patents.

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So now, better to understand how it has been originated and also I am just explaining you with reference to the invention that product process how both can be a can come up within the purview of invention. Just like say considered a product I referred as anti pharmaceutical ingredient. Presently we know that Watson pharmaceutical company is investing a huge amount of money for generating an API.

So, if API is the product which you are generating API for particular type of cancers, so the product is your invention you know that. There be product that may be particular product is already available your product is efficient compared to the available product then your product will be considered to be pure invention.

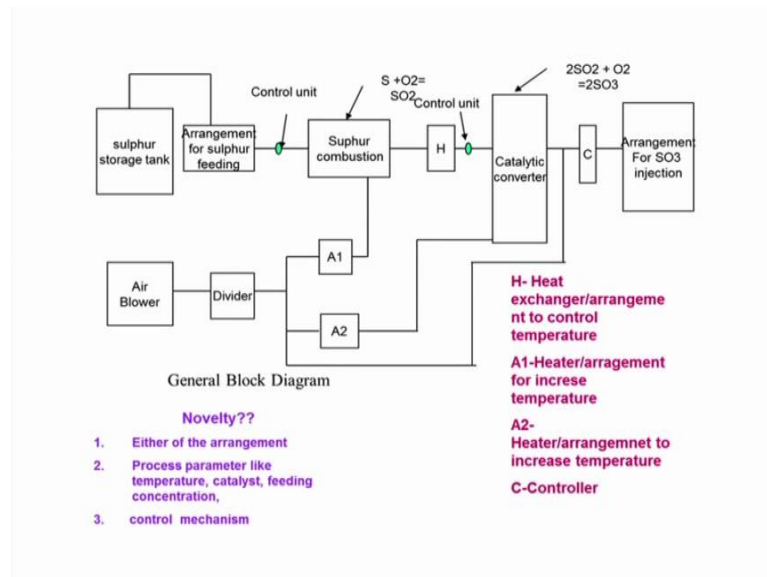
Now, if you have made the product using some process, let us say some reaction involved in the reaction we have particular conditions, temperature, pressures, catalyst, particular chambers used. So, the process and product may be your invention. Somebody will now do a value addition by improvement of the process without improving the product then that improved process will be his invention.

Similarly I have given a cheap. So, fabrication of the chips using some sensography or (Refer Time: 20:18) that the process and product may be somebody's invention somebody further improve the process, with the same products the process will be his invention. Similarly physical chemical reaction involved in the synthesis of alloy compound solar cell communication device etcetera. So, all those things are considered

to be invention as I referred in the first referred earlier that invention means new product or process. So, how can you club an invention in the form of a process or process and product or product or process? Just like say if do not have a one to invest the product simply invest. How can you improve the product improve the product or how can you improve the process for the same product.

So, same API can be manufactured or synthesized using a number of processes, you can generate a cost effective process. You will get some rights over that process if it is improved process and qualified to be an invention. So, these are all the features I referred within the purview of patents.

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Now, let us say I given nice example here, just like say you will get a small device used in a power plant or fluid gas conditioning purposes, because you guess what will happen the fluid gas having some sulphur. Now sulphur will get oxidized to sulphur dioxide then sulphur trioxide then it will react with moisture to generate sulphur sulphurous or sulphuric acid it and it will ultimately damage component because of the acid due point corrosion. So, they have designed some assistance.

In that system if you see that the n numbers of components are involved in that system. So, each components can be qualified to be n invention like sulphur storage tank, there are process for arrangement of feeding, control unit sulphur combustion process, analytic

converter, how the process to feed injection can be done, different heat exchanger how will you able to design, how they air block can be happen.

So, this is that it is simple block diagram I am explaining how can you generate hundred number of invention in the form of a product or process. I will explain that thinking further going on discuss the invention.



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PATENT ORIGINATES FROM THE LATIN WORD *PATERE*,.....MEANS "TO LAY OPEN" (I.E., TO MAKE AVAILABLE FOR PUBLIC INSPECTION).IT IS A SHORTENED VERSION OF THE TERM LETTERS PATENT,

LETTERS PATENTA TYPE OF LEGAL INSTRUMENT
..... IN THE FORM OF A PUBLISHED WRITTEN ORDER
..... ISSUED BY A MONARCH, PRESIDENT, OR OTHER
HEAD OF STATE,
.....GENERALLY GRANTING AN OFFICE, RIGHT,
MONOPOLY, TITLE, OR STATUS
.....TO A PERSON OR CORPORATION.

FOR.....1. NEW DEVICE
2. IMPROVEMENT OF EXISTING MACHINE
3. NEW MANUFACTURE
4. MANNER OF MANUFACTURE

PRESENTLY....NEW PRODUCT OR PROCESS



SOURCE <https://en.wikipedia.org>

So now, you got an idea, so what is patent in present day contest? So, definitely you are curious, so with that whether it is an originated from sky how it has been originated. If I considered just say legal part some time we try to define a particular word in the two contexts. One is by means of dictionary meaning or one by means of statutory meaning. So, I referred that that patent I already explains to you what is we consider patent in the present day situation.

Now, if I try to investigate on the word patent then we have to ultimately understand how it has the word has originated. So, if you see that patent originates from the Latin word: p a t e r e means to who make available for public inspection. So, sometime that originated.

So, Latin word *pater* is the origin for the patents, if shortened time some people referred this as letters patents or some time referred as open letters. So, letters patents. So, the present patent system originated from the o letters patents or of a letter. There is the story

that in England queen wants to give some reward to his chef for making sweet dishes. So he has given reward in the form of open letters whatever he had considered letters patent.

So that the tools they used to give some reward to somebody. Now what are the features was associated with letters patents? Letter patents a type of legal instrument. What do you mean by legal instrument? Just like say not it is a legal instrument legal tool which is a document or a certificate or resource it is legal instrument, in the form of a published written order, written order it should by monarch recipient or rather or head of the state granting some rights to a person or corporation.

So, this was the same that it this tools was used by that time queen to give some right to for the chef's. So it was originated, even story suggested that it has even originated to in European country to train his countrymen by foreigner so by means of some reward in the form of rights have been provided to them.

Subsequently, the invention that different ways for what that legal instrument was used for different purposes. If you consider that it was used for new device for improvement of existing machines, new manufactures, manner of manufactures, so what I want to mention that the present day what we are considering as invention in the form of a new product or process it has been originated long back in the form of a letters patents or some reward in the form of an open letters provided by whom; an authority just like a monarch, president, or other head of the state. Just like say England I referred as a queen. He has she has issued some open letters.

So initially for new device, then new manufactures, then manner of manufactures, then if you consider James Watt's when he invents a steam engine so it was considered improvement of existing machines. This way that the concepts of invention have been changing, but now present day we are considering invention in the form of new product or process. So, let us say if I summaries my plus now; so I have given you an idea what do you mean by patent, and how it has been has involved over the years.

So, patent is limited period exclusive right provided by state to the patentee. So, for his invention for in order so that he has disclosed his invention and get some limited period right sometime we consider as patent this as quid pro quo. What do you mean by quid pro quo? Means state is providing you some rights on return you are disclosing your invention for the public, benefit for the state. Benefit for the state means that other

people will now design their RND based on your disclosure we will not invest on the same area.

So, duplication of research will not happen, duplication of investment will not happen. Benefit for the patentee will get exclusive right in the form of a negative rights for 20 years from the date of filing. Now he can use his invention in the form of start up or licensing or he can create something else. So, like this he will get benefit out of his patents. So, you got some idea regarding patent.

Thank you.