Intellectual Property Rights, and Competition Law
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Lecture - 01
Concepts of Intellectual Property Law Patents

Good morning all, I am Professor K. D. Raju, Professor of law, Rajiv Gandhi School of Intellectual Property Law, IIT Kharagpur. In this NPTEL course, Intellectual Property Rights and Competition Law; this week we are going to discuss the Concept of Intellectual Property Law and different categories of intellectual property rights.

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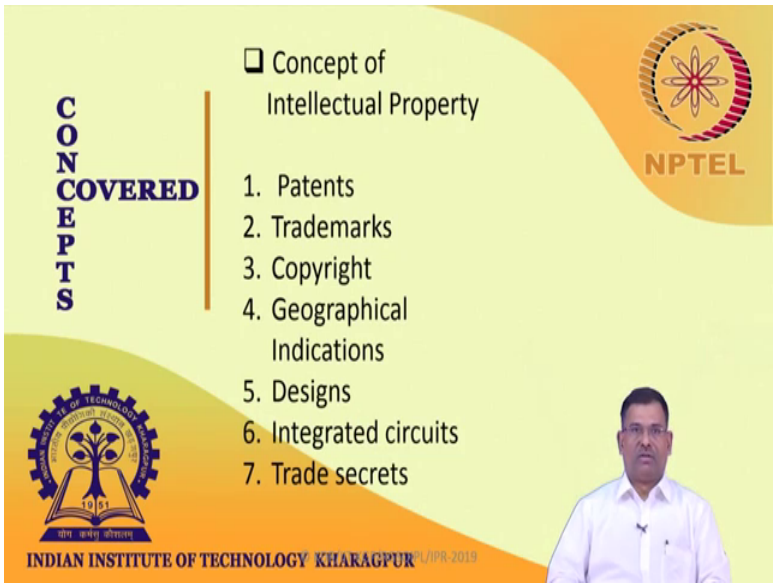

We know that the concept of intellectual property law is very simple.

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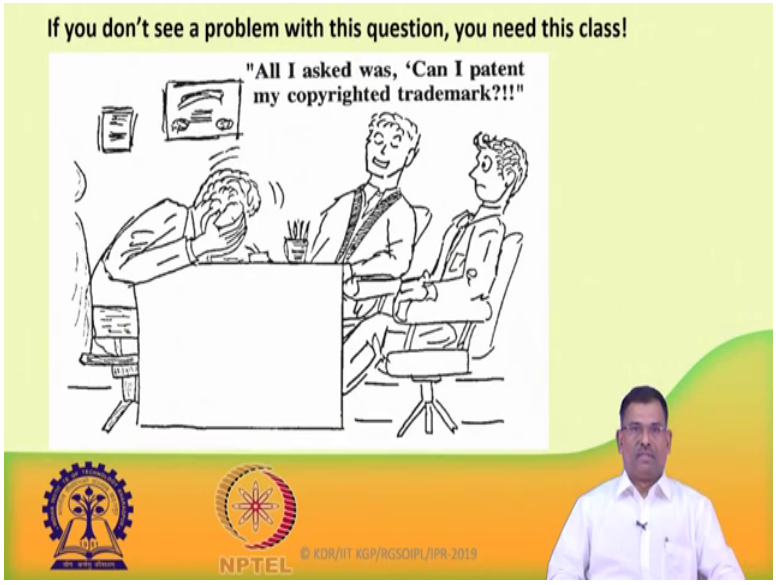

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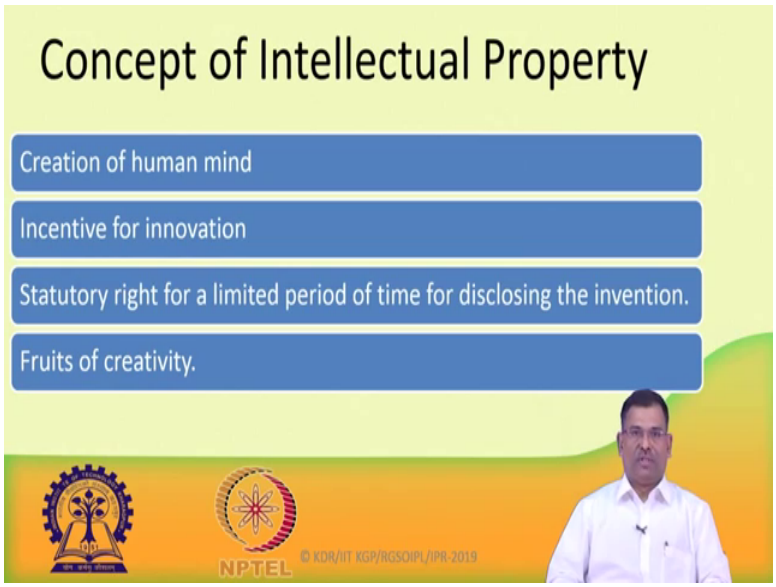

It actually says that it is a creation of human mind or an incentive for innovation or it is a statutory right given by the government to the innovator or the inventor. Or, we can say that it is the fruits of creativity or it is an incentive given to the inventor by the government for a limited period of time. At the same time, we can see the different categories of intellectual property law.

And in this particular week, we are going to deal with patents, trademarks, copyrights, geographical indications, designs, integrated circuits and trade secrets. These are the 7 categories of intellectual property rights described in one of the WTO agreement dealing with intellectual property law i.e. Trade Related Aspects of Intellectual Property Law. And you can see in this particular picture what they are saying, they say "All I ask was, Can I patent my copyrighted trademark?"

So, these fellows do not understand, what is a copyright? what is the trademark? what is a patent? So, in most of the cases, people have this misconception, what is the patent? what is the trademark? or they could not find any distinction between the different categories of intellectual property law. So, if you are not able to understand ,definitely you require this class. So, this week we will discuss the categories of intellectual property law.

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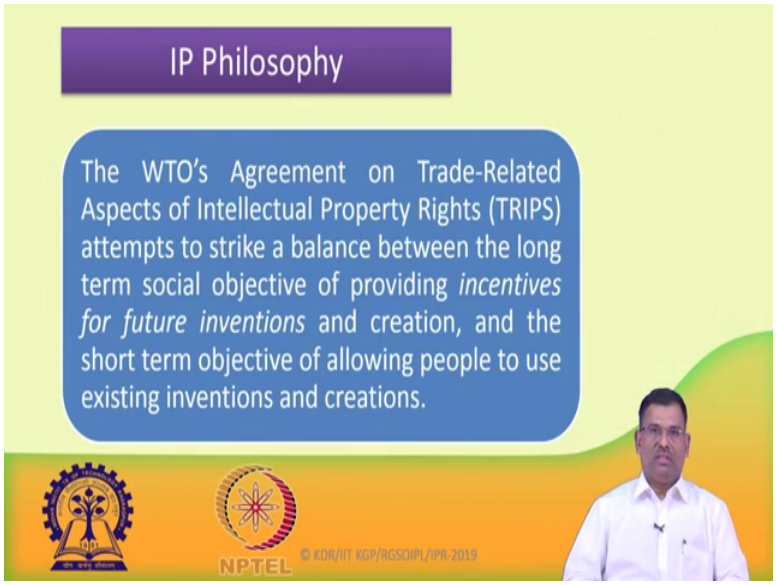

The IP philosophy, which we already talked about, is the incentive for innovations. The present entire regime of intellectual property law is in the TRIPS agreement, one of the WTO agreement which provides minimum standards of intellectual property, but not uniform. Each and every WTO members, presently 164 World Trade Organization members, have intellectual property laws in their domestic countries.

They have to follow the minimum standards prescribed by this WTO agreement which is known as the Trade Related Aspects of Intellectual Property Rights, popularly known as the TRIPS agreement.

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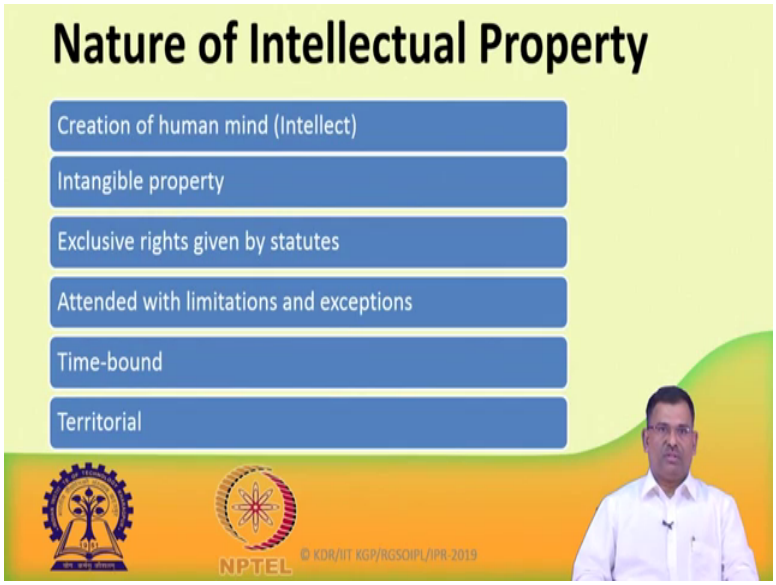

And, we already discussed that the nature of intellectual property is of human creation of intellect; it is an intangible property. Earlier, every company survived with tangible properties. But now, every knowledge base companies survive with intangible properties. It is an exclusive right given to the inventor or the innovator or the artist or the writer or the author for a limited period of time. Under the TRIPS agreement presently, uniform protection is given to patents for 20 years.

This is very simple because the objective of giving this limited period of protection is that after this particular period of time everybody i.e. the public would be able to use this particular technology or this innovation. So, the exclusive right is given to the inventor for a limited period of time, for it is an exclusionary use.

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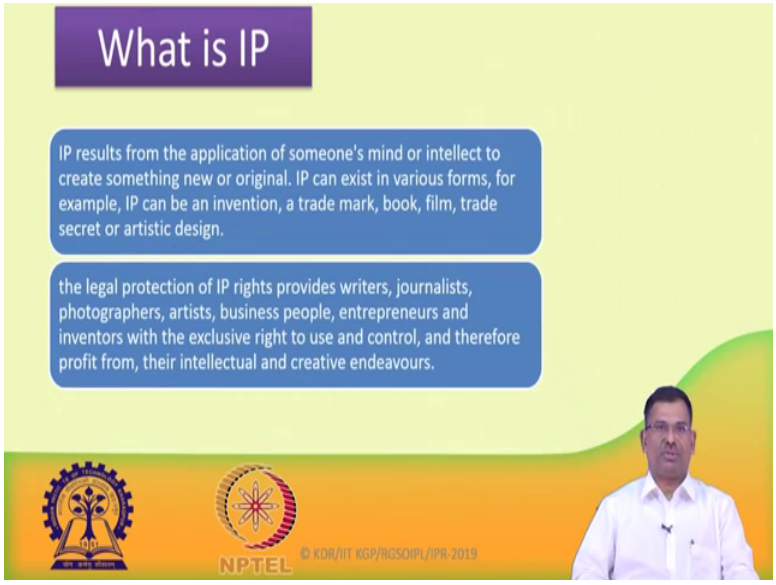

So, intellectual property is; there are lot of definitions for intellectual property, but it is clearly the application by someone using their mind or intellect to create something new. And we will see and later on discuss, what are the requirements of these criteria of intellectual property.

But it is very clear, it is the invention which is mostly appreciated under the intellectual property Law and it is under a legal protection. Now, it is obligation of every country to provide legal protection under the TRIPS agreement to this kind of innovations and inventions.

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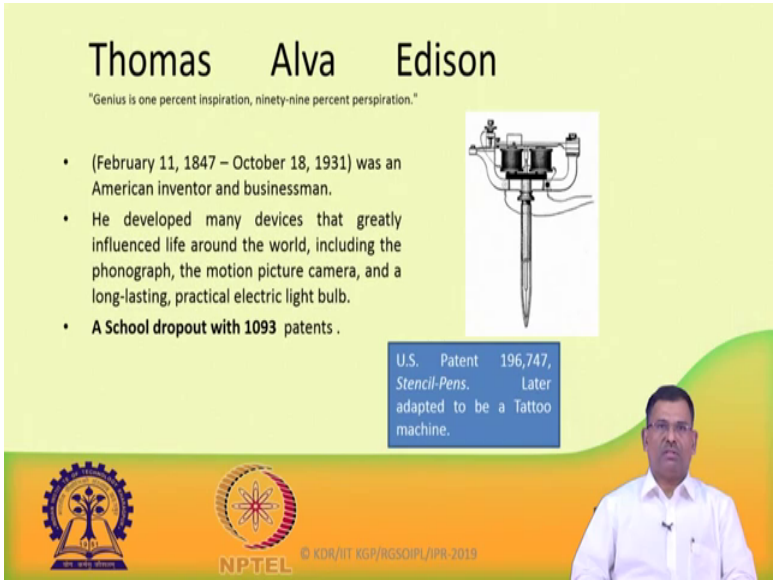

So, if we look into the history, we can see that the concept of intellectual property is not new at all. And, we can find prolific inventors in the past centuries and one of such bright mind is none other than the Thomas Alva Edison, who contributed thousands of inventions, thousands of patents to the knowledge. And, we can find his some of the inventions, which are still relevant especially in the case of lights and other machineries.

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The purpose is very simple of intellectual property law. It is actually a reward or an incentive to the author. It is an incentive to the sweat of the inventor to do more and more innovations in the future. It is a simulation to the artist; it is an incentive to the writer or the author.

So, it is a recognition of scientific creativity. So that is why we can find number of innovations in the market now. Now, the entire society is run on innovations. So, for each and every company, if you do not innovate; you perish that is the present situation of all the knowledge based companies.

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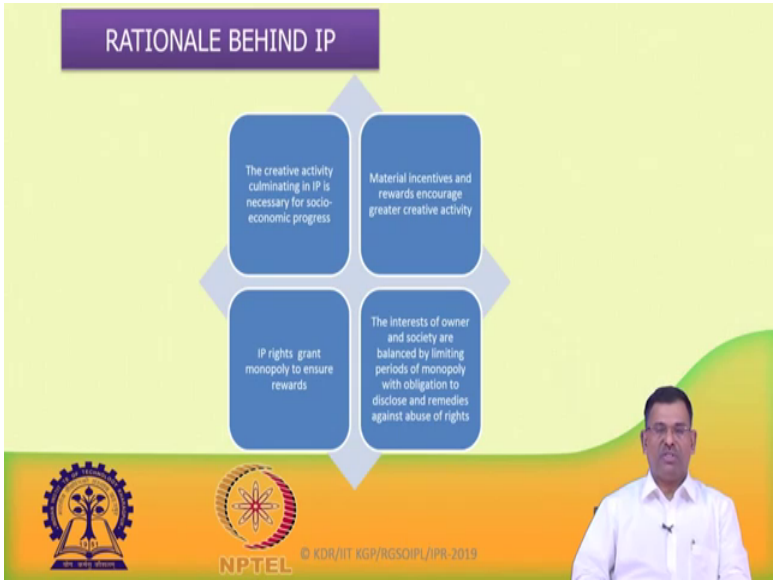

So, the rational is very simple, which we talked about, one is the incentive theory; incentive for creativity and the other one is the monopoly right; limited monopoly right granted to people those who innovate. This is an incentive for further innovation to the society and there are criticism also of the protection of intellectual property. They say that each and every knowledge belongs to the society.

So, nobody can make it monopoly rights, but protection of intellectual property is also contributing to the society because, this monopoly right is granted for a limited period of time. The society, what it gets out of it? The inventor discloses this particular innovation

to the society from the day one. So that when the limited period of protection is over, the society can use this particular knowledge for further innovation.

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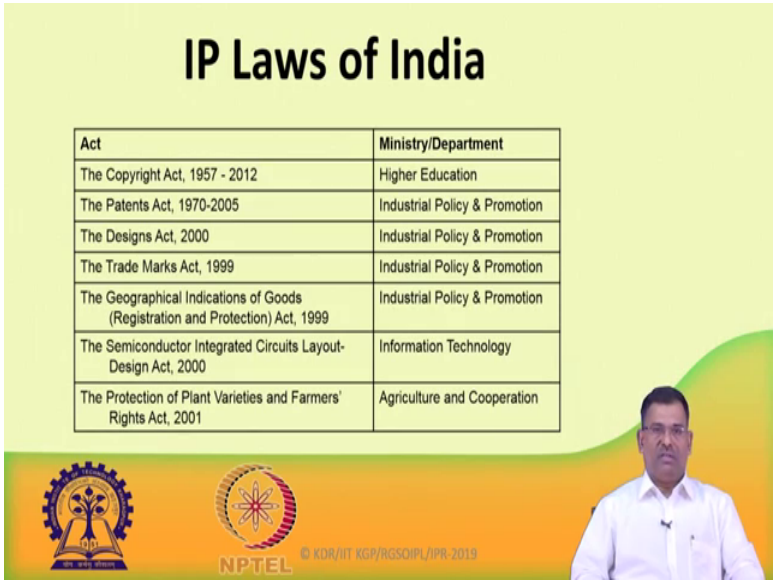

And, if you look into the Indian scenario; India has complied with the TRIPS agreement and enacted or amended its laws in accordance with the obligations under the TRIPS agreement. So, we have Patent Act, we have Copyright Act, we have Designs Act, we have Trademarks Act.

We have Geographical Indications of Goods Registration and Protection Act, 1999; Semi conductor Integrated Circuits Layout Designs Act, 2000; the Protection of Plant Varieties and Farmers Rights Act, 2001. So, most of these acts came after the TRIPS agreement, i.e., came to existence after 1995. We amended our laws in accordance with it.

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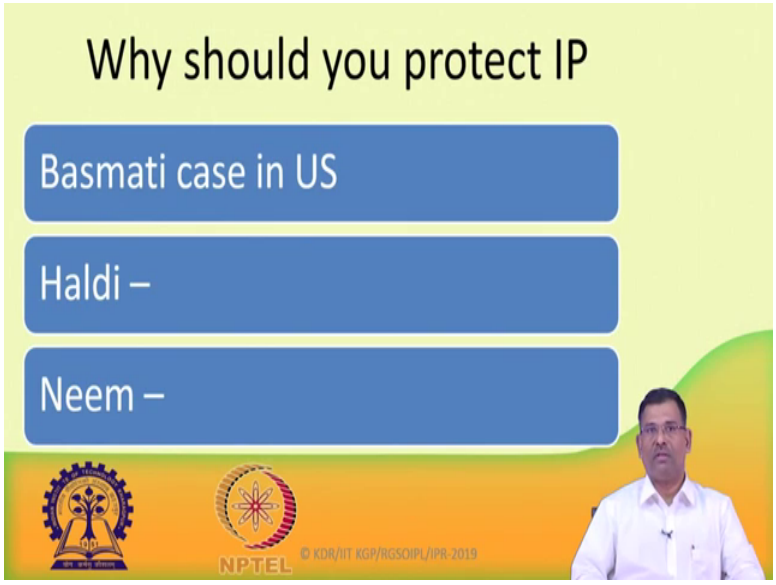

So, the pertinent question is that why should you protect the intellectual property? I will give you some of the examples: I won't say bio piracy, it has toughen our intellectual property and one is the Basmati case and other one is Haldi and the third case is Neem case.

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So, the basmati case is simple and basmati is rice which is grown in many parts of India especially, some of the northern states of India. And, it has huge export market all over

the world and Pakistan is also claiming that the basmati rice belongs to them as well. So, apart from the conflict of interest between India and Pakistan. One of the American company Rice Duck in 1997, they filled a number of patents with the US Patent Office based on the bio genes taken from the original Indian basmati rice.

And, they want to patent it in many names and sum of them were Kasmati, Texmati etcetera. So, it is nothing, but the theft of Indian knowledge, India's intellectual property, which will come under one of the categories of intellectual property i.e. the geographical indication.

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And this company was trying to patent it in the US and the Government of India had to fight the case in the United States and finally, the US Patent Office revoked it and the second case is on haldi. And, haldi everybody knows that it has medicinal qualities and it has wound healing qualities.

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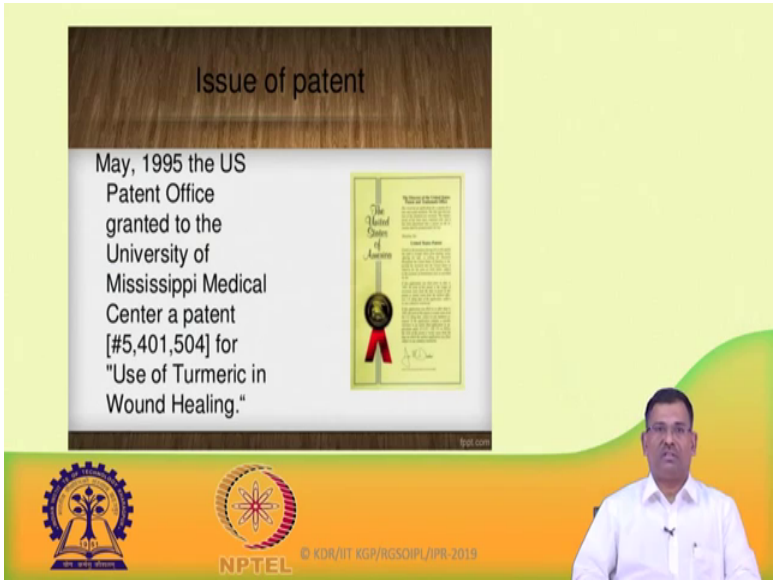

In 1995, another US Patent Office has granted a patent for "The Use of Turmeric in Wound Healing". So, again we see this Indian traditional knowledge being stolen by these US companies. Then, again India fought this case in the US courts and finally, this patent also was revoked.

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And the 3rd case is on Neem and we know that the neem is used by Indians for many medicinal purposes for time immemorial period.

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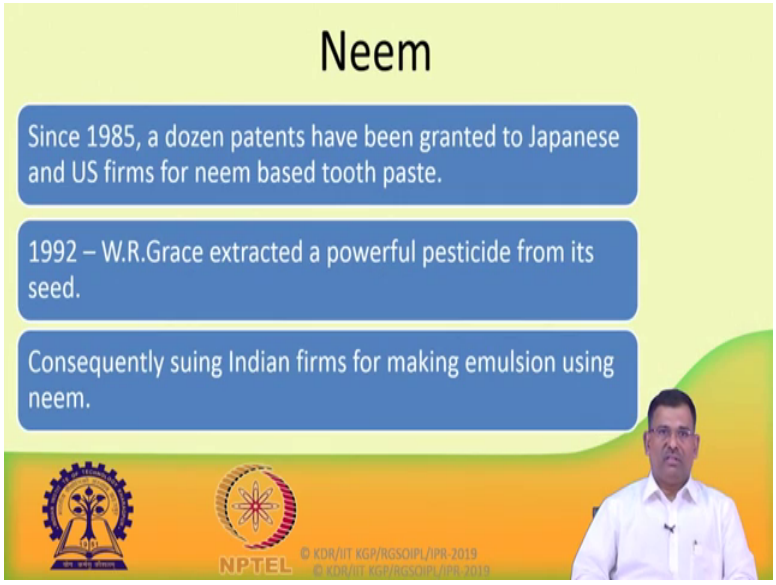

And here, also we can see another US Company, W. R. Grace. They want to actually patent different products of neem, involving neem and get monopoly for them. In 1985, onwards you can find a number of patents. Patents that are neem based products like tooth paste and other products. And the patents were filed in the USPTO as well as the Japanese Patent Office.

In 1992, W. R. Grace, this particular company came out with pesticide emulsion based on the neem products. And, once they made this, they patented this particular product and started suing the Indian firms those who were making this emulsion using the neem seeds, specifically the neem seeds. So, because everybody knows that the bio pesticides can be made from neem and this particular knowledge is in India for time immemorial period. So, India had to fight this case as well.

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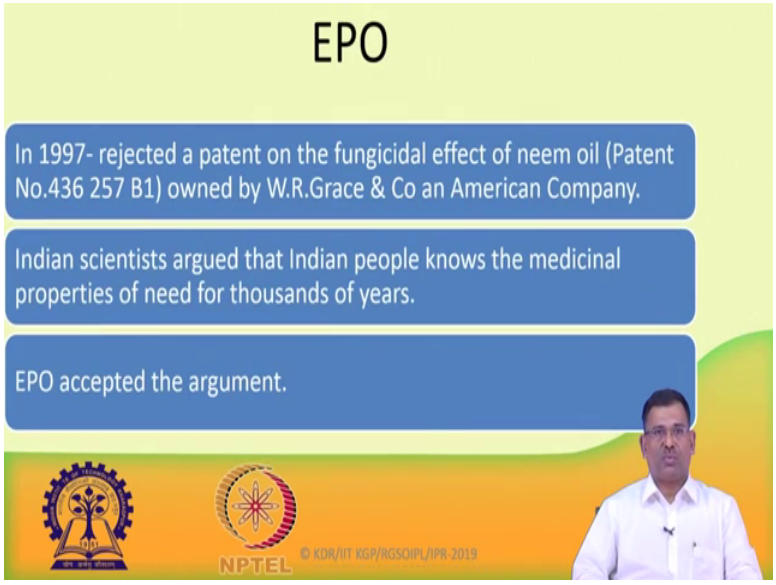

Not only in US, but in other jurisdiction as well. In 1997 this patent was rejected and also in others jurisdiction like Germany, the European Patent Office has accepted the arguments of Indian scientist that this particular knowledge exist for time immemorial period and in India and Indian knows this particular knowledge.

So, what does it mean by all these cases? What is specifically meant by fighting all these cases?

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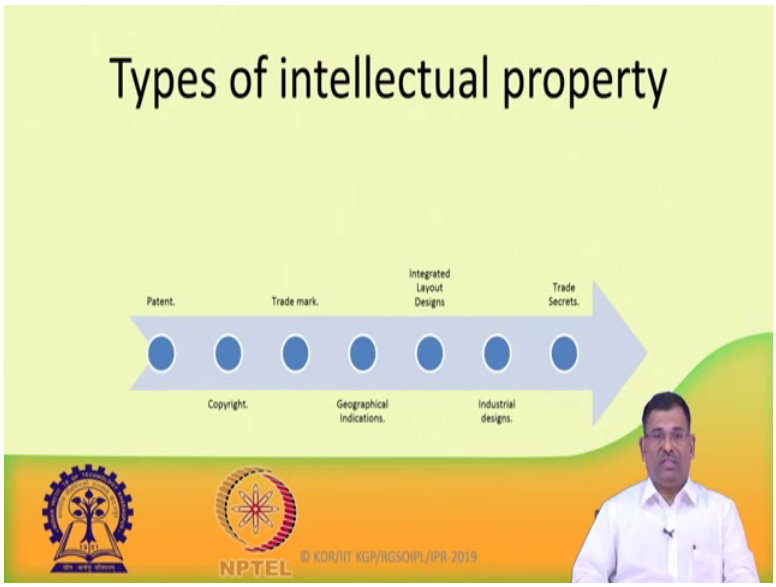

If you do not protect your intellectual property locally, somebody is going to take away your intellectual property and are going to make it their own and make money out of this. And, due to the patent protection they are going to have a monopoly right over your intellectual property. So, it is now your duty to protect your intellectual property and for you to look into different types of intellectual property, which I have already explained to you.

So, under the TRIPS agreement, there are 7 categories of intellectual property which is mentioned in the TRIPS agreement. I am starting with patents, then you can find copyright, then trademark, geographic indications, then integrated layout designs, industrial designs and then finally, the trade secrets or undisclosed information. And in today's class, we are going to discuss about the patents.

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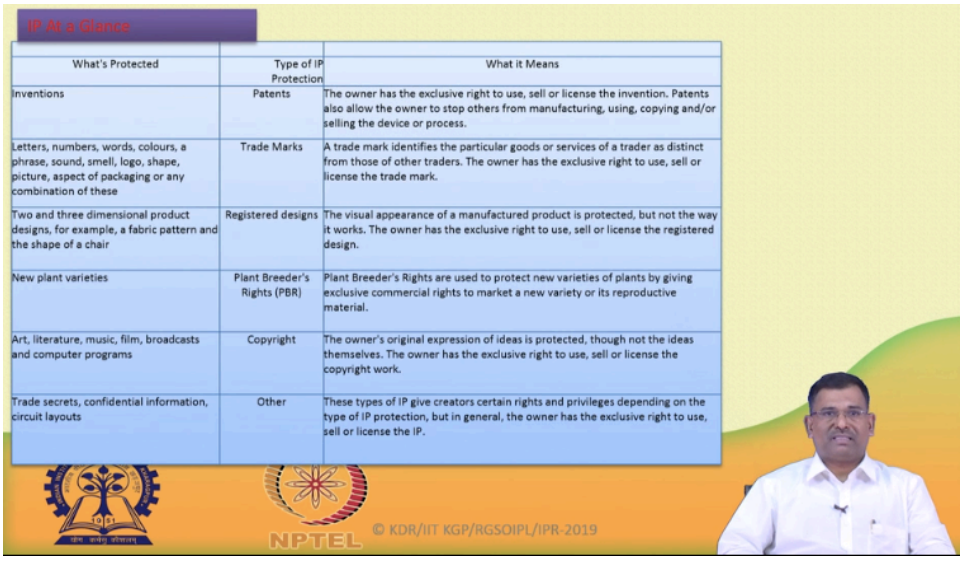

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Everybody has heard about patents. But actually most of them are not aware of what constitute the patent, what are the requirements of a patent? Why you should take patents ? why you should protect your inventions through patents?

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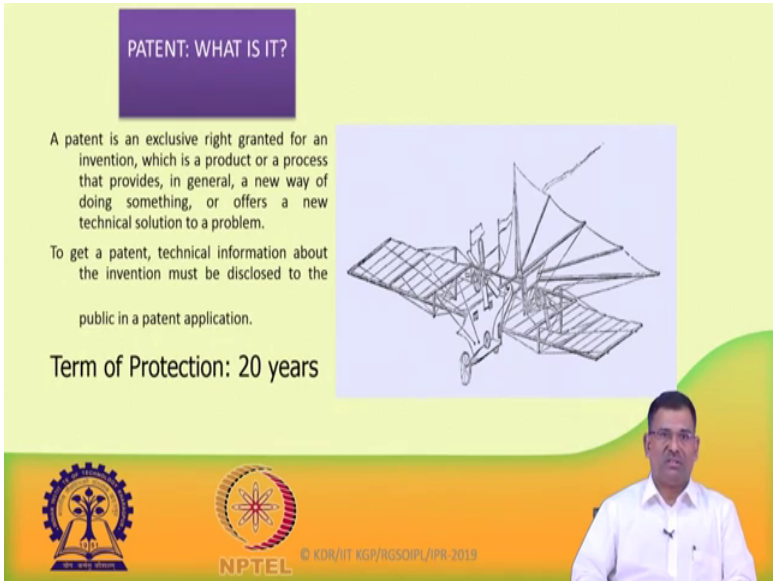

So, if you look into some of the old technologies. We know that the flying technology or the first flying machine is invented by the Wright brothers. So, the Wright Brothers, you

can find the patent protection for their machine. They have patented some of these machines and you can also find some of the very old patents.

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So, the first ever old patent was granted to John of Utynam by King Henry VI and that was in 1449. So, remember the first patent was granted in 1449 that is centuries back; so, the concept of intellectual property or patent protection, is not new at all. It is a centuries old concept of protecting intellectual property. So you can find the coincidence that the first patent also was granted for a period of 20 years.

And, after many centuries TRIPS agreement also limited the protection to 20 years of monopoly rights. And here you can find the first case the incentive theory. So for giving a monopoly rights he had written, he has to teach his process to the English man that was the condition put by the kind on the first incentive. So, in the first invention itself he got the incentive and then the first patent system, the India patent system started from that onwards.

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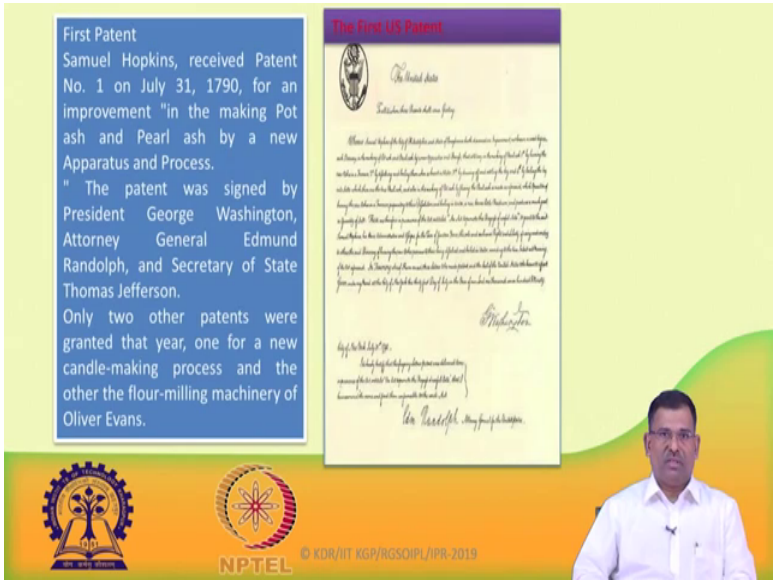

So, you can see that the first US patent also was granted for Pot ash that was in 1790 to this patent number 1, which was signed by the President of the United States at that point of time for making Pot ash and Pearl ash by new apparatus and process. You can see the certificate granted by the United States of President at that point of time.

So what I want to say is that the concept of intellectual property is not new at all. It is not the invention of the 21st century it is centuries old, the concept at all.

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So, we use a very simple clip, the gem clip which is patented in the year 1899. So, the patented clip, it was invented by a Norwegian person, Johan Vaaler in Germany in 1899. So, you can see that even a small thing, a simple thing can get a monopoly right only for limited period of time. But the inventions; the innovations are spread over many centuries and we still use the same gem clip, after centuries. So, it means that even a small invention can go for centuries and centuries.

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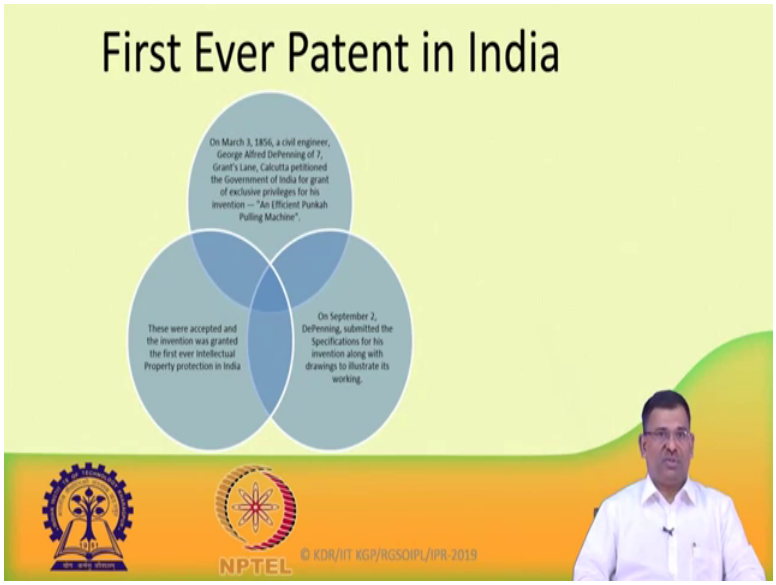

And, if you look into the first ever patent granted in India it is in 1856; in 1856 the Britisher who was serving in Kolkata, whose name is George Alfred De Penning. So, who belongs to Kolkata at that point of time has invented a machine, a mechanised system for moving a manual *punkha*.

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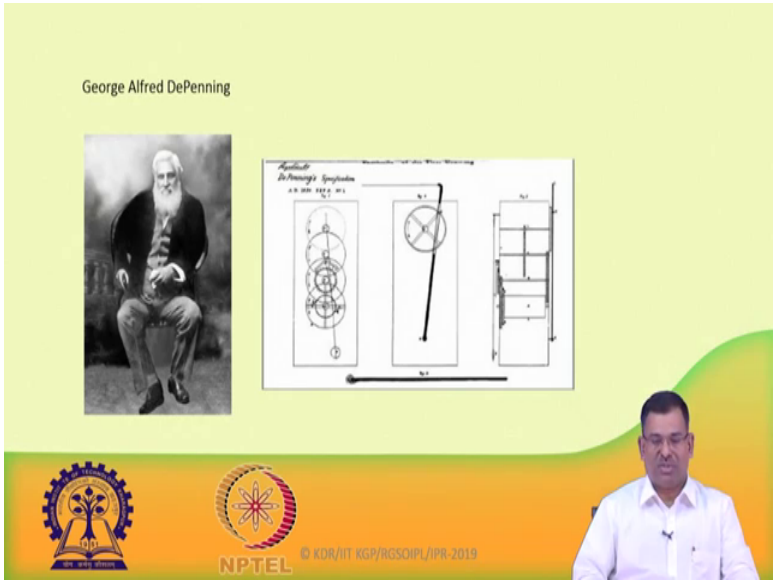

So, he is with his invention i.e. George Alfred De Penning. Earlier, before the fans which we use in the present state, there were manual *punkhas*.

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So, this is how you know, you can see the manual *punkha* on the roof and some people have to manually operate this. So, he made an invention to operate this particular *punkha* that was the first invention.

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So, you can see the transformation of the present fan from the *punkha*, which is the manual *punkha* to the innovation; different innovations and which reach to the present level of the fans which you see nowadays.

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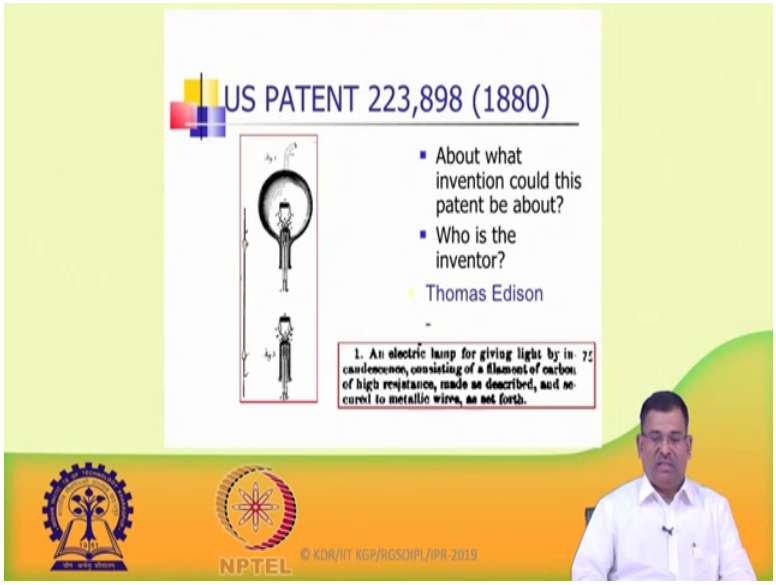

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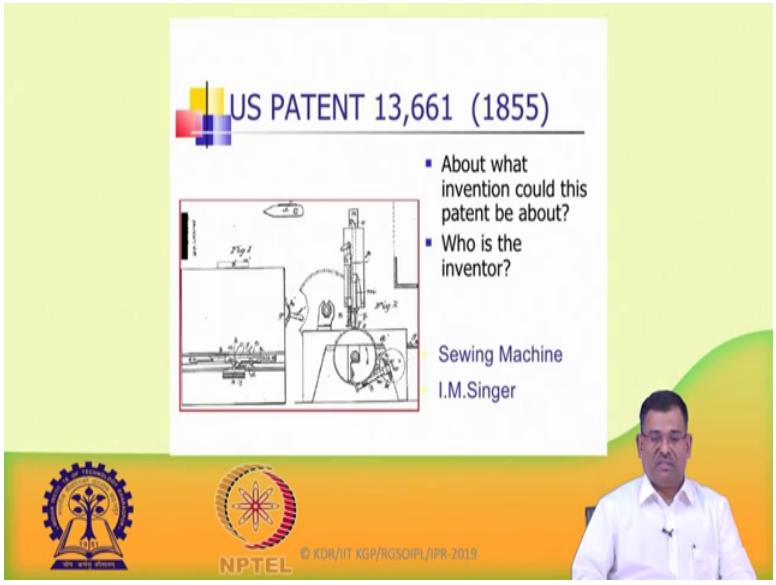

I can explain a number of patents. Let us skip through all these inventions. You can find "n" number of inventions for example the sewing machine. The sewing machine, everybody gives the present day, which was invented at that point of time in 1855 onwards. It is a patented machine at that point of time. Now, you can find new innovations to the sewing machines.

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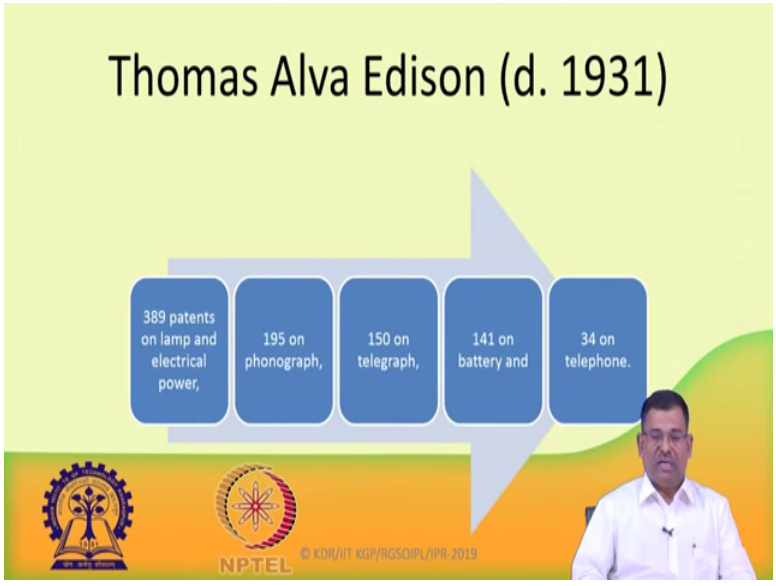

Earlier also I talked about this Thomas Alva Edison, who had thousands of patents on different innovations. So, if you innovate, a prolific innovator, who was a class drop out.

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Will come to the prerequisites of the patentee.

So, as I told you, in many of the jurisdictions inventions are patentable and in India discoveries are not patentable. But, the criteria, as I already told you, is that the TRIPS agreement only put minimum standards; not the maximum standards. So, some of the countries are very liberal in the inventions and incremental innovations are also permitted in some of the countries.

And so, the first criteria is patentable subject matter; and also has to prove the basic three minimum criteria i.e. novelty, then non-obviousness or inventive step and third is the industrial application.

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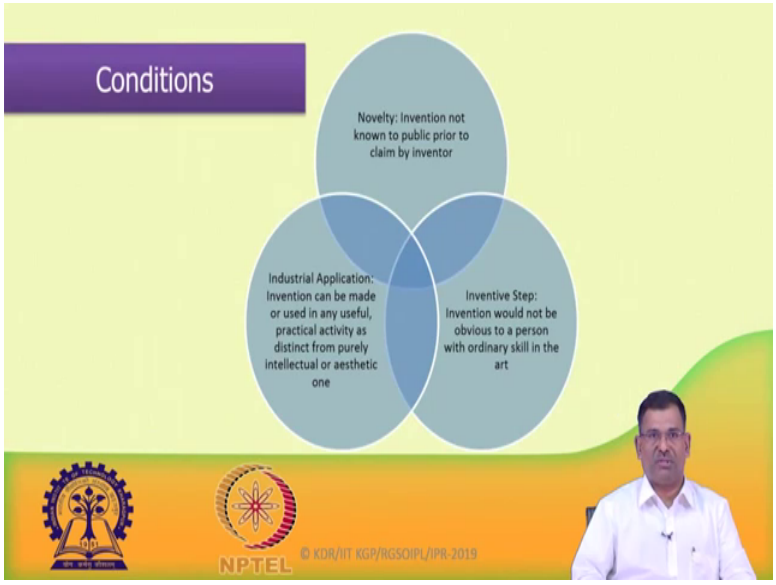

So, if you look into these three criteria, the novelty criteria is very simple criteria. In layman's language if I say that it should not be known to the public prior to the claim by the inventor; that is a very simple criteria of novelty. And the second criteria is the inventive step; that means, the invention would not be obvious to a person who is ordinarily skilled in the art.

So, if the mechanic; if it is a mechanical invention a mechanical engineer or a person, who is conversant with the technology should not have heard about it before, that is the simple language, that is the inventive step, or non-obvious to a person.

And, the third criteria is the industrial application i.e. the invention cannot be abstract. Invention must be useful or it must be practical activity or there must be an intellectual industrial application. So, the intellectual creativity must have an industrial application. These are the three conditions which is put forward.

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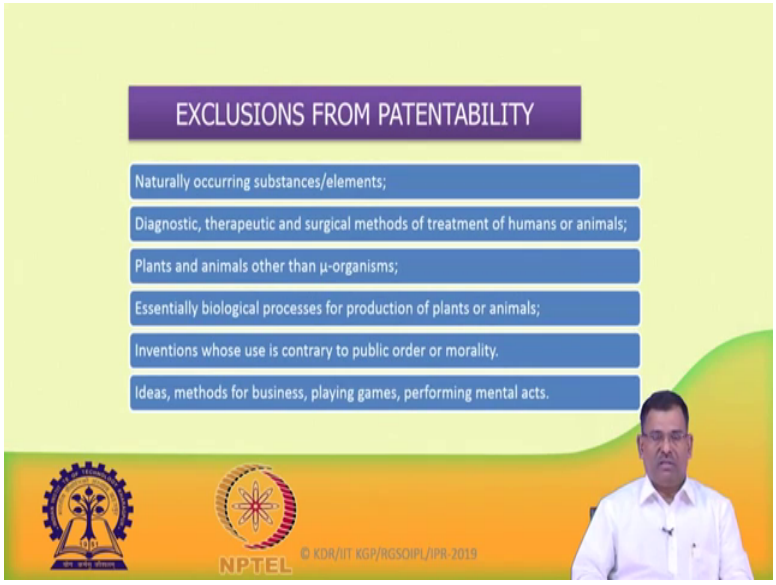

And, under article 27 of the TRIPS agreement, there are many things which are excluded from patentability, i.e., patentability criteria is mentioned. For example, the naturally occurring substance or elements are excluded, then, secondly the diagnostic, therapeutic and surgical methods for treatment of humans or animals are also excluded. Then, plants and animals and other than micro organisms. But there are controversies with regard to the plants and animals produced with the help of biotechnology.

So, genetically modified organisms, in some of the countries it is patentable and in some of the countries these are non-patentable. Then fourthly, the essentially biological processes for production of plants or animals are also excluded. Then, again most importantly the inventions, which are contrary to the public order, *public ordre* or morality is excluded from patentability. And lastly, the mere ideas or methods for business, playing games, performing mental acts are not patentable in most of the countries, but you can find business method patents are available in the countries like the United States.

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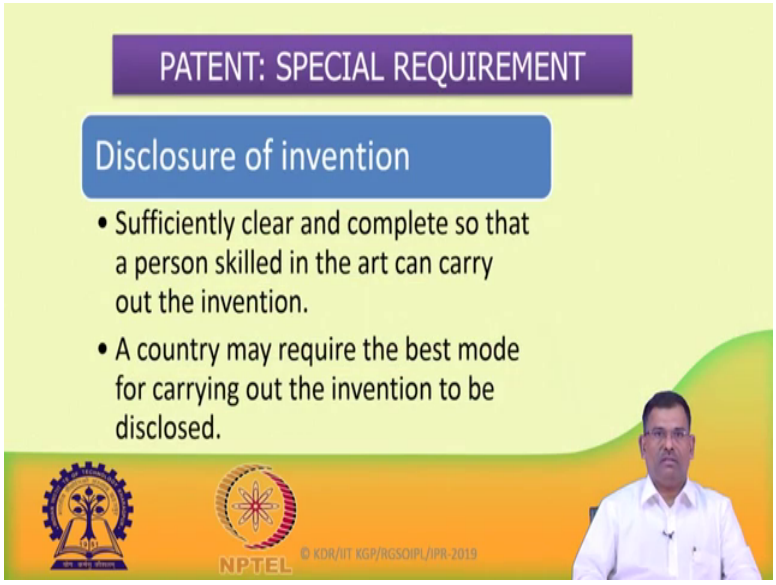

And the most important requirement of the invention is the disclosure of the invention to the public. As I already told you the inventor gets an incentive for a limited period of time for disclosing his invention to the public at large.

So, the disclosure must be sufficiently complete. So that a person skilled in that particular art can duplicate that particular invention once the protection period is over; he should be able to practice. So, we can see that these inventions disclosure should be complete; so, that we can make this.

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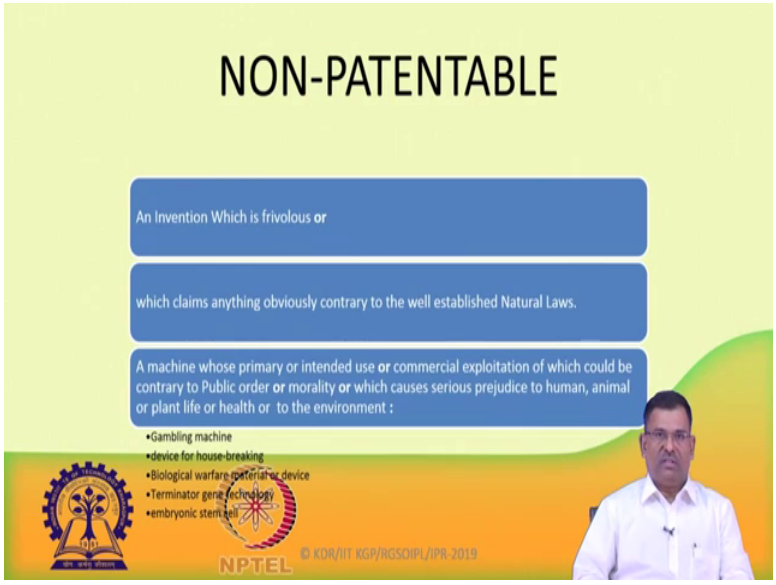

And, you can also find the non-patentable subject matter and so, frivolous matter are not inventible; so it is not patentable. And also the established laws. A machine which is made for opening of locks. So, contrary to established natural laws are also non-patentable. Also other than commercial exploitation. So, a machine which you invent contrary to public order and morality or which causes serious prejudice to the human or animal or plant life or health or to the environment is excluded from patentability.

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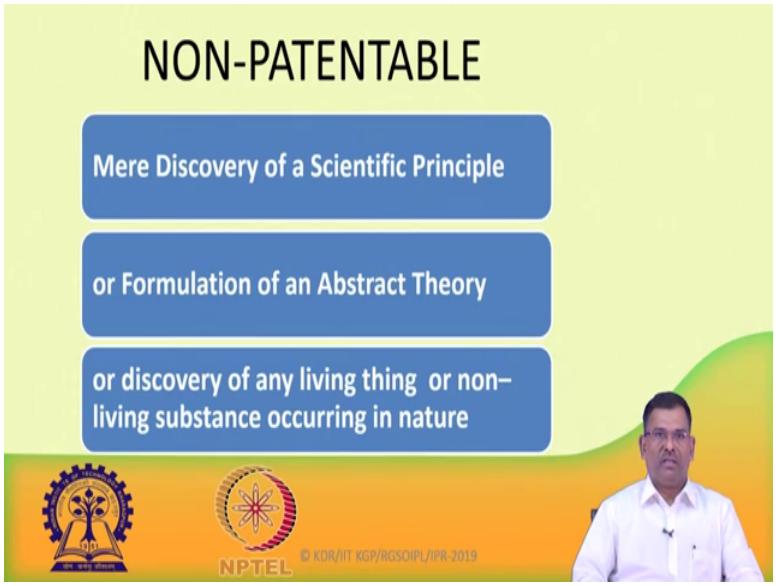

Then, again as I already told you that the mere discovery of scientific principle is non-patentable in most of the jurisdictions and abstract theory again is non-patentable. Then, the discovery of any living things or non-living substance occurring in the nature is non-patentable.

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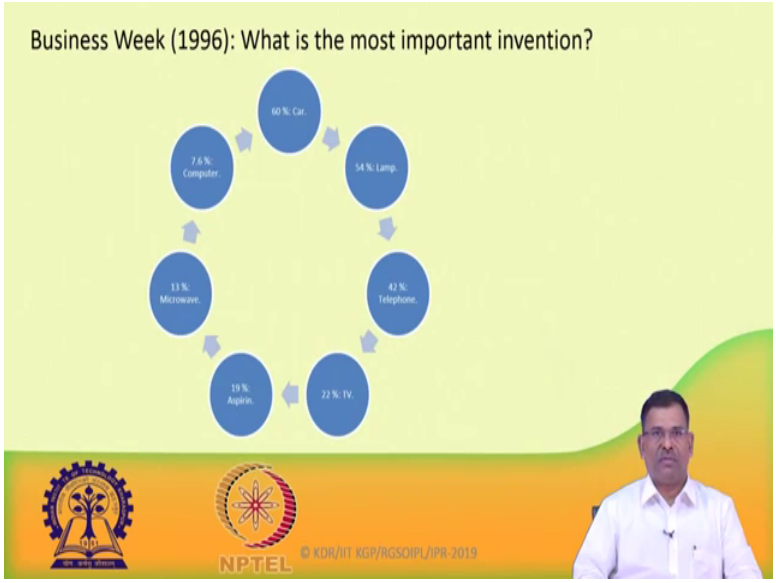

But in some of the countries, which you can find there is a distinction between non-living substance and living substances in some of the jurisdiction.

If you look into this particular picture you can find that the most important inventions are in, which are the areas where the most important invention are. Whether it is in the automobile sector; whether it is in the lamps; whether it is in other areas like telephone or it is in areas like microwave or in the computer.

So, you can find some very specific areas where, there is lot of innovations happening especially, 60 percent innovations happening in the automobile sector, in car. So, this concentration of innovation can be found in some of the specific sectors.

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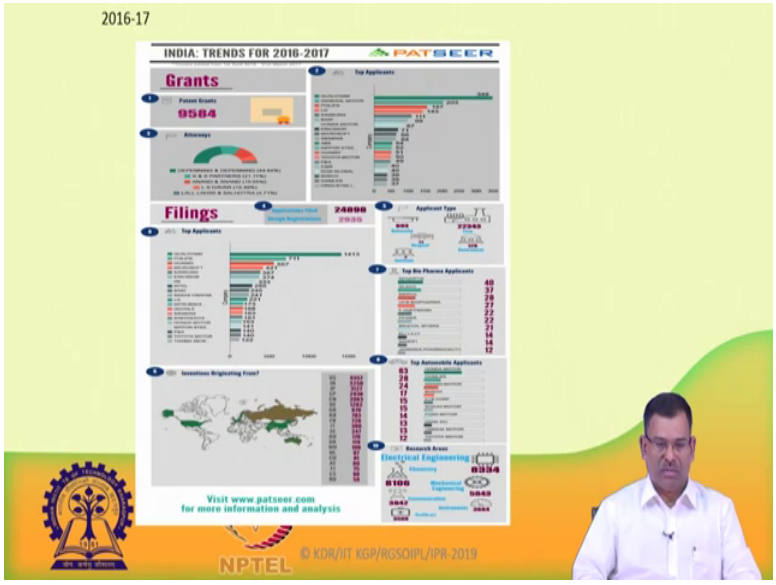

I think this is a panoramic view of trends of the patents, which you can find it in all over the world and which are the areas where, it is happening, where the filing are happening and the grant is, the grant of the total number of patents in different jurisdictions which you can find.

So, these are the data, which is created by specific people who clearly say that the innovations are happening in the developed world not in developing countries. I think the developing countries also have to now look upon the innovations more and more.

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And If you look into the data some of the companies are prolific innovators like the famous companies like Qualcomm, who is the major in the telecommunication sector and General Motors. And, these numbers are representative numbers which may change, but clearly it shows that other than CSIR, which is the Government of India organization, you could not find even a single Indian company in this long list.

So, it means that the countries like India or the developing countries should more and more concentrate on innovation and innovation, not only innovations but filing patents. So, all these companies are foreign companies; why the foreign companies? So, the Indian companies also should come up and innovate and they should file the patents.

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If you look into some of the institutions, they are also majors in filing patents; definitely, Indian Institute of Technology: IITs are the majors in filing number of patents. And most importantly, you can find some of the private institutions are also in this particular figure and these private institutions are also actively now coming up with patent filings and they want to become the majors in this particular field. I hope that these institutions specifically the industry and institutional partnerships can make the number of filing in India very high.

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And these patent trends, which specifically shows that the number of patent filings in India are going up; definitely it is going up if you take into account from 1995 onwards. And now, the filing procedure are also very simplified by the Indian Patent office. So, these patent trends, when we compare it with the other countries, number of obligations in other countries are very small.

So, we have to innovate. We not only have to innovate, but the number of patent filings also has to go up. And then only we can say that we are an innovative country.

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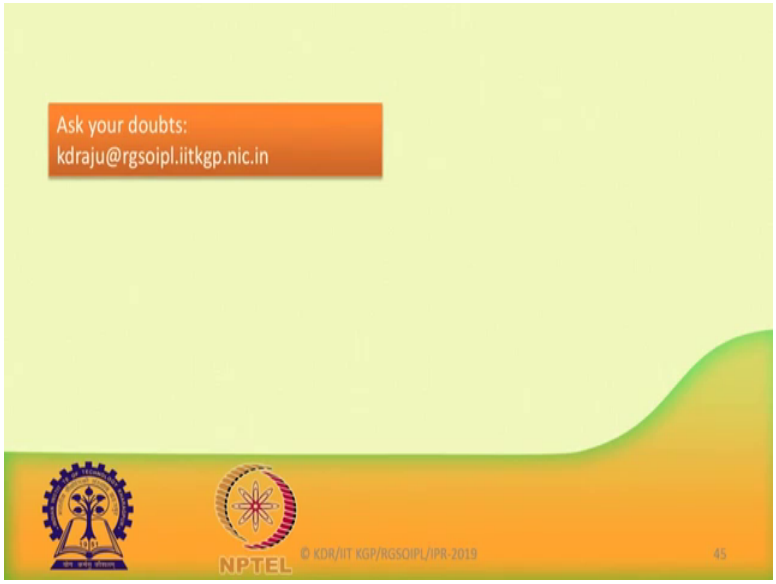

And we will stop this particular class here, this is about the patents and we will go to the other categories next.

Thank you.