

IP Management and Technology Transfer
Prof. Gouri Gargate
Rajiv Gandhi School of Intellectual Property Law
Indian Institute of Technology, Kharagpur

Lecture - 08
Types of IP- Industrial Design, SICLD, PPVFR

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A very warm welcome in the module 3 of week 2 of the course Intellectual Property Management and Technology Transfer titled Types of IP Industrial Design Protection of Plant Varieties and Farmers Right and Semiconductor Integrated Circuit Layout Design. So, in this week we are focusing on different types of IP. We know there are 8 types of IP and we have already covered patent, copyright and trademark.

So, three IPs we have got the idea about that we have taken a brief, we can say the review of all these three IPs and now in this module we will focus on three important IPs industrial design, protection of plant varieties farmers right and then the semiconductor integrated circuit layout design.

Now, here when we are talking about this particular industrial design what is about? Now you can just see here the movement of a cars and then you can just check the various car designs actually. So, this particular car design is a protection for that particular design how you can get the protection that is through industrial design.

So, what we will do now we will cover first industrial design, then we will go through protection of plant varieties farmers right and then in the third we can say the section we will focus on semiconductor integrated circuit layout design. So, when we talk about a industrial design as I have already told it is the with the naked eyes you are observing some articles and that articles it may be a small article as small as like a small pin actually or a screw or a wall whatever it may be.

And this design of a car you can just see here or any we can say the generator, fans, bulbs or any appliances or any you can say the atoms which you observe maybe you visit in the mall and you see different atoms actually or chair or maybe table. So, jewellery whatever it may be if this category is there whatever examples I have given the observation by naked eyes when you do of that particular object you have that impression about that particular object.

Many times, you know that for the when you choose the car probably you are looking towards the design of that particular car. For example, if I want to give you example, I can just say that if I say Rolls-Royce. So, immediately that car design comes in front of you, now if I say Toyota Innova.

So, immediately that car comes in front of you. So, this particular appearance which immediately you think about is the protection that particular creation it is a creation of a designer and that creation is protected by the industrial design actually.

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So, now we will move further and we will just try to understand that how exactly this protection for or what is that exactly that industrial design is, how the protection you can get for that particular creation, what is the registration procedure for that. In few minutes we will get idea about that particular details actually.

So, industrial design definition it is given in section two d of the act and according to it a features of that particular you can say the shape, then configuration any patterns if it is there. So, something which you can observe by the naked eyes that particular thing is protected by the industrial design.

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Now, let us move further and we will just try to understand that this article may be two dimensional or it may be a three dimensional actually and it may be produced by industrial process or it may be manually processed or it may be mechanical procedure or it may be a combination.

So, the important thing is like it may be a pattern, shape, lines, then the external appearance actually of that particular article it may be two dimensional or three dimensional or of both and the production may be manual or mechanical or may be combination of this both that is the anything is like allowed means production manual, mechanical or may be chemical may be both whatever combination may be there that is allowed actually.

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But the important thing about this industrial design is like that when we will when we will go into details of that it should be like a article of a article which can be stand alone have a property of a selling actually. So, if wall you take or a screw you take or a car you take or a parachute bottle you take what happen that particular article itself have the capability or it can be sold in the market. So, that is very important for that particular article ok and the other characteristics whatever we have just shared with you.

Now, the what are the kind of criteria or what are the concepts or the behind that industrial design are. So, you can just see here feature should be novel and novelty we have seen that it may be patent, it may be any other type of IP you take novelty we are giving a much more importance and; obviously, in industrial design novelty is very important.

And that you can say that just one addition I can just give you here and we have already seen when we have may be in the coming session, we will see the differences about jurisdiction and intellectual property that we call it as a industrial design registration. But if you see a USA, they call it as a industrial design they will not use industrial also they will say the design patent actually. So, as it is going into that design patent category the criteria of novelty is a very strict actually.

So, worldwide we can say the first time that design is created and all that criteria will apply for industrial design also. So, novel feature is very important. So, when we are talking about this industrial design novelty first aspect that we have seen then it should be visible to the eyes that I have already stressed on that you do not require anything for to see that particular article by naked eyes you should able to see that article.

Then that article should have a stand alone we can say that marketable characteristic should be there that is very important. Then the rights are limited to that particular outer feature only we are not talking any functionality of that particular article only to that the appearance the rights are limited. The features we can say that the features should be different from the basic unit whatever the article is there the features whatever we are talking.

So, for example, I just take again this bottle and if you see the shape of this bottle. So, the shape you can say that this is the creation of a designer actually. So, the basic unit whatever we are talking about the external appearance we are like protecting by industrial design we have to remember that particular thing we have already seen that if it is a cap and this cap if you can say there are we if we said already that there are more than 1000 patents for a cap.

So, that patent yes patent is there here then shape is there that yes so, industrial design protection. So, one article if you take for that patent may be there for that industrial design may be there and may be suppose this bottle is of Melton or something like that trademark will come into the picture.

And when I will say may be some special bottle is there probably you will get some brochure kind of a thing or a user manual kind of a thing and copyright will come. So, when we talk about any article you just check that any article generally these four IPs are there that is patent, copyright, trademark and design generally that observation is there.

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You can just follow the same thing with a mobile also. So, if you take a mobile lot many patents are there involved trademark, may be Apple, may be Samsung. So, trademark is involved. Then the you know that fight for this curve at the corner curves actually. So, this design aspect is coming into the picture actually and when I have bought this; obviously, I have received some information about this and that is the copyrightable material.

So, you take any object damn any object you take and you can just say that all these types of IPs are involved there. So, here you can say that different types of we can say the it is a

different that industrial design when we talk it is a different than basic unit ok and it should have a individual appearance we can say or individually it should be sellable in the market that is important ok.

So, I guess the clarity is there that all four types we have seen and we should understand you take any example you take camera, you take pressure cooker in home. So, you take a pain in your hand that also have a all these four types of IPs actually, ok. So, I guess the concept probably and maybe you have already knowing this, but if somebody is like new to this probably this is more clear that yes these four IPs are always involved generally that is the observation, ok.

Now, you just see the registration part actually the what exactly the form and all that thing is required.

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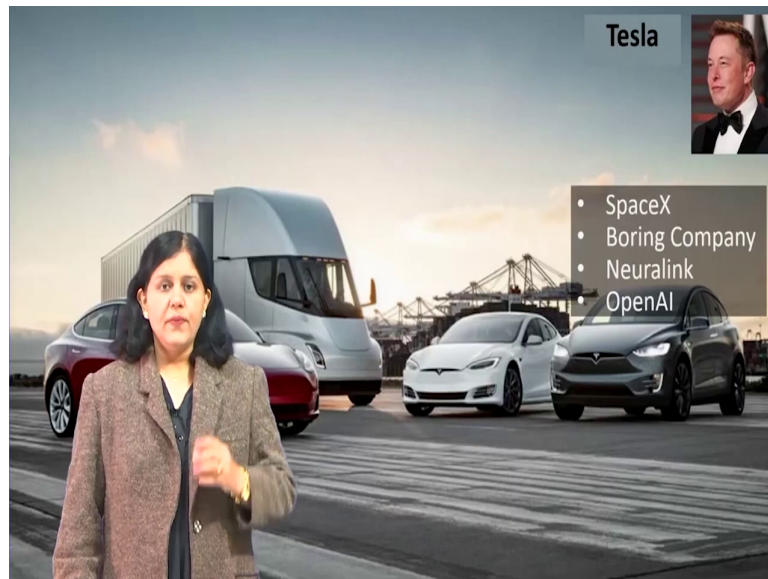


So, form 1 is important actually, then form 21 and form 20 21 and 24 are there additional thing we will not go into details of that. But form 1 when we talk about industrial design application the simple thing is in the form 1 you have to give the details, representations you have to do. So, for example, if that article is there generally what we do? All four sides either diagrammatic presentation or a photographs or we can say that tracings and all that thing.

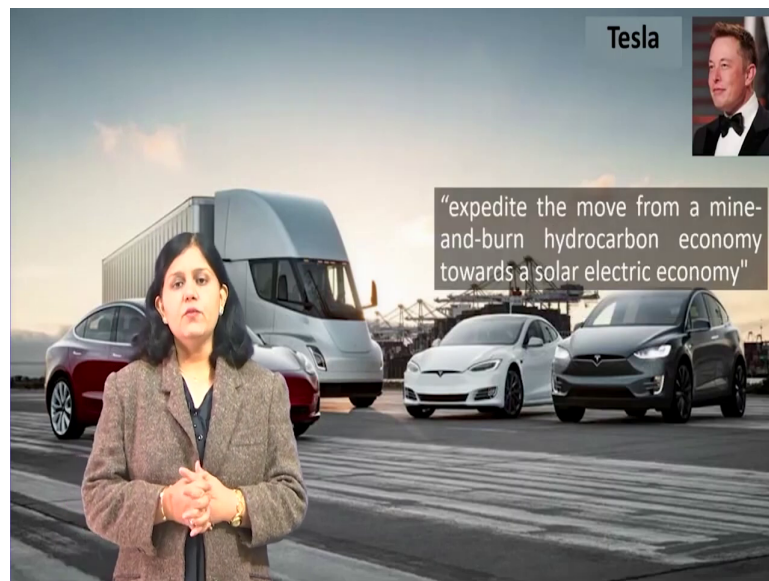
So, anyway you have to just make sure that this is the article these are the external features. So, all four sides and then top and bottom view also if you feel that is important you can give that. So, all that six photographs and then the details of you then the signature actually means applicant signature and then the form 1 you have to give and you can file the application.

Now let us move further and so, now, what we will do? We will just watch a video to get a more understanding about industrial design, we will just play for 1 or 2 minutes and then if you want you can watch this video later.

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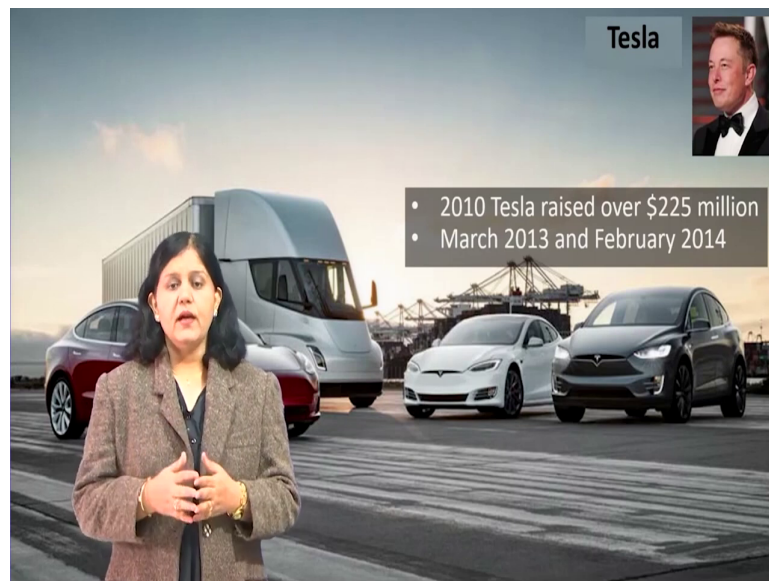
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Now, we will focus more on a Tesla motors. As discussed earlier Tesla motors incorporated in 2003 and if we see the offerings of a tesla motors the focus is on renewable energy resource usage for driving that car. In 2006 Elon said that I quote what he has said it is like a overarching purpose of Tesla motors is to help please listen carefully expedite the move from a mine and burn hydrocarbon economy.

So, he has clearly said like a mine and burn hydrocarbon economy towards a solar electric economy. It is like a vision of this organization they are moving in that direction very fast since 2006 and they have their whatever patent portfolio if we see, IP portfolio if we see it is mostly around that particular technology and this industrial design is also or rather it is a again most important IP when we see Tesla offerings.

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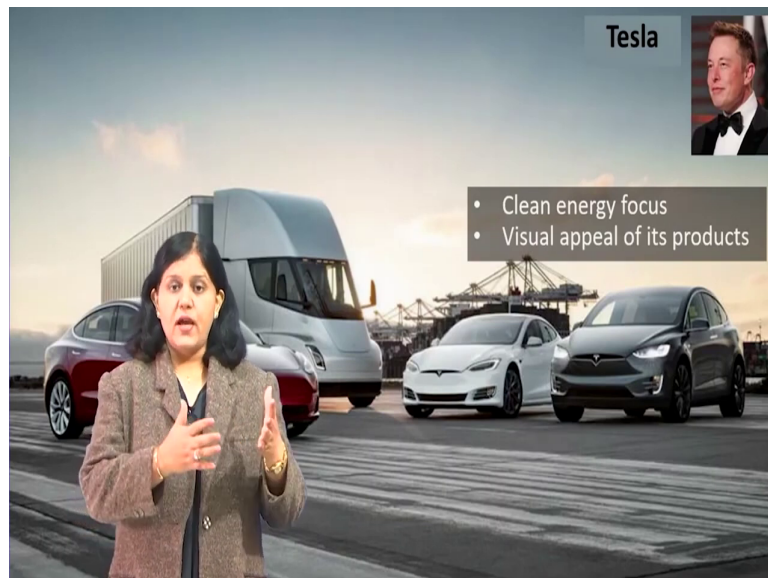
In 2010 Tesla raised over 225 million dollar in a public initial offering and this is like a first time in car manufacturing that is gone public after ford motors which gone in 1956. So, you can see that it is a unique thing to raise the fund and they have raised something around 225 million dollars.

In 2012 it began selling all electric vehicles 6 years from Elon said that he is moving from that or they are aiming to move from that hydrocarbon economy towards a solar electric economy and within that we can say he is they have started all electric car offerings from the from in their portfolio frequency that is the scenario.

Financially a very remarkable move for Tesla was that in March 2013 and February 2014 if we see during that period price of Tesla stock increased nearly 7 fold. So, we have seen the increase in such kind of a stock when we have seen the Biocon example.

Now, here also in a Tesla example you can see that in a short period less than we can say like a 1 year it is become a 7 fold I guess we have seen in Biocon it is like a 4 fold kind of a scenario was there. So, the now question is what exactly investors are looking into Tesla and they are investing into the that organization.

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So, the analysis shows that investors see in the clean energy focus that renewable energy source or a cellular energy source and I like the terminology whatever he has used like a

moving from hydrocarbon economy towards like a renewable kind of source or clean energy source or that kind of a economy.

So, here they are looking into the clean energy focus of the company which is reflected in a company's policies on use of IP rights. And we can see their patent or whatever technology related innovations and inventions are there they are around that particular core idea that is clean energy focus is there.

Then the strong brand that the company has developed in the part due to the visual appeal of the products and you can see that these are the two important things that are technology which is protected by IP patent and a visual appeal which is protected by industrial design and they are playing a very important role in the building of that kind of a brand image in the market.

And we can just compare it with the apple here that we know the offerings of a Apple they it is like a very customer focused customer, a premium class customer they are just focusing on and they have also means technology is a prime thing and then the appearance and that particular the way with which their products and services are the are not services, but the products are appearing; obviously, that is the very special appearance is there.

Similarly, here you can see the technology is definitely it is a strong which is protected by a patent and the other part that is the industrial design which is playing a very important role in the offerings of a Tesla, ok. So, let us move to the now next type of intellectual property that is the protection of plant varieties and farmers right.

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Now, as name suggest it is for a protection of plant varieties and it is giving rights to farmers also. So, now, you are saying here that why this act is enacted actually or why this protection is required and how what is the logic or what is the reasoning behind this particular we can say the act actually.

So, the first important thing is the food security that suppose the when we say that IP the rational is that there should be development of science and technology, social welfare actually this is the base for all type of we can say whenever we see that IP system is there we have already visited and we have seen the role play regarding this and we have also understood the rational why this IP and this why this IPM.

So, in that this protection of plant varieties farmers right when we are talking about why this protection of plant varieties and farmers right. So, this is specifically focusing on the

agricultural products actually and here the rational or a objective is like that when you give the in incentivization is there to breeders or the scientists who are working in that domain or a farmers probably you can see the more development in that particular year that is expected and what it will secure.

It will give a food security you can say then there will be agricultural productivity we can say the production will be like as per requirement that agricultural productivity because you see that how this new varieties are created that some additional property is there the or in short time you can get the more production. So, all these motives are there or it draft is drought is there then that in that area also the production can be done if that water scale cities there that production should be there.

So, seed is modified in that way or the fortification of the products is there like you can say that the you probably have seen the black rice. So, what happens that black rice is like a fortification with iron is there. So, it is like a some different varieties or a in small area maximum production now you can take.

So, the motive is like that ok we have to increase the agricultural productivity. So, that is the we can say the rational of we the reasoning behind developing this particular separate sui generis act actually it is a sui generis act according to Indian jurisdiction.

Then there is a reduced production of a cost all these like a benefits we are expecting reduced production cost, then improved quality you can say, then more efficient use of a inputs, then less dependence on a pesticides that ok the variety itself is like a strain having such a strain that it will not get affected by any paste actually and then the economic development.

So, these all are like a important factors are considered and based considering this particular you can say the points the act is enacted and definitely we are expecting of agricultural production we can say the sufficient agricultural production. So, that it can cater to the required popular that the current population of the country that is expected ok. So, that is the motive behind this we can say the protection of plant varieties.

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Industrial Design, PPVFR, SICLD			
Protection of Plant Varieties & Farmers' Right			
3155 Cereals	494 Fibre Crops	381 Vegetables	294 Oilseeds
254 Legumes	53 Sugar Crops	51 Fruits	41 Spices
27 Cucurbits	8 Trees	7 Flowers	6 Plantation crop

Now, you can just check here that yes there are vegetables protect vegetables are protected or there you can see the fibre crops are protected or there is a oil seeds which are protected. So, fruits spices you can say flowers then the crops plantation crops trees are there.

So, what is happening exactly that different varieties you can see here these different varieties are protected by using this particular act and; obviously, that will be the motivation for the creative, ok.

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So, these are the few examples now how this act is kind of if you go into details of that you can see here that there are one chapter, I mean chapter 1 to total 11 chapters are there and you can say that some 97 sections are there probably that is not aim to know more because we are more in IP management.

So, we will deal with like if protection of plant varieties is a part and if you are agricultural university probably this is very important for you and you might take care about this plant varieties protection in your university actually. So, if you are in that we can say the your main or you are in a bio biotechnologist you will create different varieties of plant and for you this is the very important act actually ok.

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Now, what we will do is like understand little bit more about the dust test actually which is a very commonly we call about that ok dust test dust test or end dust test is there. So, what is the long form of that DUS test. So, D stands for distinctiveness U stands for uniformity and S stands for the stability.

So, the expected thing is like this that if suppose seed is there then that seed when you soak the production should be the expectation is like that uniformity should be exhibited there should not be any difference in that seeds actually. Then the stability that the same thing or better we can say the production will be either same at that expected level or it must be better actually there should not be kind of the quality should not be reduced actually this should not be reduced.

So, stability is very important because when you are dealing with the seeds or microorganisms we keep in mind this particular thing it is like a natural we can say them the these are the nature created things are there. So, we have to make sure that stability is there when you are doing that in human intervention and you are creating something new uniformity stability and it should be distinct.

So, that is very important actually ok and when extent variety and all we go that end dust test come into the picture.

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So, what now we will do is like we can watch a video so to get a idea about what is that enders what is that protection of plant varieties the different sections are there and where you

can do the registration for that particular variety and we can see the few examples also of that the resin example or something like that you can see in this video.

So, if you are agricultural university, I will say that please watch this we will share the link of this video. So, that you can whenever you will get time and if you are interested you can watch that video and get a more understanding about this protection of plant varieties and farmers right.

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When we are talking about the this protection of plant varieties ministry is changing it is ministry of agriculture and offices in the Delhi. Now they are like the; obviously, the offices promoting this activity.

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And here you can just see the few awards like the patent office design the office they are also pushing of this IP and they are also have a system of a top patent file filing organizations individuals all these kind of a data; obviously, you might have seen that they are publishing.

Similarly, this protection of plant varieties if you see the plant genomes severe community recognition awards are there and you can just see the photographs whatever are there we of that ceremony here we have shown you.

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Now, let us move further and just check out that which are the different varieties which are protected. So, you can just check here that almost like 3000 plus cereals are like registered or a legumes is like a another good number, then you can see the vegetables also, then there is like a trees also. So, the different categories which are like protected under this protection of plant varieties and farmers right you can just check out this list.

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Now moving further, a few examples we can see that yes if you take a example of a cereal you can just check here the rice, wheat, maize, sorghum, millet these are like protected through this act then you can just check a example of a legume actually.

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So, chickpea, mung bean or the rajma, lentil all these like legumes the another major we can say the plant variety which is protected is a legume.

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Let us move further and just check a few examples of a fibre crops that cotton and jute these are the examples that these fibre crops are also protected.

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Now, just check here that then sugar cane, then ginger or turmeric these like the plant varieties of like these are also means are the few examples which are done the these registrations are there, ok.

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Now, let us move to the next there is a semiconductor integrated circuit layout design. Now you know that semiconductor it is not insulator, it is not conductor, it is semiconductor and you know that Silicon Valley means when we talk about semiconductor immediately that semi Silicon Valley comes into our mind actually.

So, this when we say about the semiconductor integrated circuit layout design it is against sui generis act enacted in India and it is like very dedicated to that integrated circuit layout and the we can say that still this act is not that much followed or used by industry, but probably we are hoping that with the growth in this industry maybe the more we can say creators will choose this act to do the protection of the their creation.

Because advantages like this, may be for patent means nowadays scenario is like that the industry or a creator prefer patent over this semiconductor integrated circuit layout design act.

Now, if advantage you want to check with this act is like that the registration is very simple actually.

So, if you give that form and the presentation of that semiconductor integrated circuit layout design and even you can mask the things the details if you have you if you certain things you if you do not wish to share you can mask that particular thing that facilities also there.

So, and probably many times we feel that no in semiconductor circuit layout design we have to give the complete circuit design and all that details you have to give at certain points if you feel that no you do not want to share that particular thing in a public domain and all that thing you can mask that particular thing, ok.

So, that arrangement is also there in this act actually and protection means just like if I compare patent and industrial design industrial design protection is very simple it is very simple means you yourself can do that registration. Similarly, the semiconductor integrated circuit layout design it is very simple to do registration means in maybe half a day if you go through the site probably you yourself can do the registration of that particular semiconductor integrated circuit layout design.

So, what we will do now? We will watch a detailed video about this and you will get the idea about the form and then the fees and how exactly the registration is done.

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So, let us watch this video let us see here that what is this semiconductor integrated circuit and layout design according to act now. Now, this as you can see here that it is a semiconductor integrated circuit means a product having transistors and other circuitry elements which are inseparably formed on a semiconductor material or insulating material or inside the semiconductor material and designed to perform an electronic circuitry function.

And you can say that there is a another word that is integrated circuit which probably if you want to go into details of that we can say that ok there are two parts like a microprocessor and memories. When we are talking about a microprocessor that is related to information that whatever processing functions are there that will be dealt or that will be taken care by that microprocessor and memories part which will help for that storing and retrieval of a data.

So, broadly when we are talking about a integrated circuit these are these two part that is microprocessor and memories we understood semiconductor right it is neither conductor not a insulator and hence it is semiconductor integrated circuit. So, the meaning is like that there are two parts and that is a microprocessor is there and a memory is there and if we want to go little bit detail about that this microprocessor typically perform information processing function, ok.

Because it has a logic circuits capable of electronically performing functioning information processing. And when we are talking about memory it will as we have just said that it is enabling the storing and retrieval of a data.

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Now, let us move further and we will check into this layout design. So, semiconductor integrated circuit these two words we have understood now we will try to understand layout

design. According to act layout design means a layout of transistors and other circuitry elements and includes lead wires connecting such elements and expressed in any manner in a semiconductor integrated circuit.

So, this is according to the law according to act the layout design is. So, we are very clear now what is semiconductor, what is integrated circuit and what is a layout design in legal aspect. So, in other words we can say that this layout design is the three dimensional layout of a integrated circuit that is the arrangement in a chip ok and these are like a active and passive electron electronic components ok.

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Now, let us move further and we will try to understand the details about the act. The act as we have just mentioned the Semiconductor Integrated Circuit Layout Design Act it is a enacted in 2000 and there are total 10 chapters are there and total 96 sections are there.

And when we are talking about the rules which are like formulated in 2001 again there are 10 chapters and there are 100 or 105 rules are there. Now, for the purposes of this act there shall be established a registrant. Who will take care at a national level about the registration? So, there is a dedicated separate registry and that is called as a semiconductor integrated circuit layout design registry.

Now you know that the patent office whenever we just generally use a terminology as a patent office, but in that office, we know that the patent office is there, trademark registry is there, geographical indication is taken care the by Chennai office, then industrial design is there and; obviously, this semiconductor integrated circuit layout design also is taken care in this office by this office only.

So, the CGP DTM he is also the he is the registrar for this registrant just like for trademark also CGP DTM is a registrar for this also registrar is a CGP DTM this is this is the authority.

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Now, let us move further and we will just try to understand the filing of the filing procedure and how we can go for the registration, but before that I would like to give that there are 2 examples of this registration and that is a 2 examples is like a ISRO and that is another is of a BEL that is Bharat Electronics.

Now, these are the 2 we can say the registrations happen in the past related to this semiconductor ISRO have done the registration you can see here in 2016 and Bharat Electronics it is done they have done the registration in 2015 that is the scenario. So, let us summarize we have seen that what is that industrial design we have tried to understand the basic details and you have got more details I hope that you have gone through the video you will go; obviously, that one minute video you have probably watched.

But in a leisure time you can go and watch that video. Then the second is like a protection of plant varieties farmers right and the third one is a semiconductor integrated circuit layout design ok. So, these are like a 3 important types of IPs we have covered in this session and now a quiz time.

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So, what I will request you to do is like that all these three protection of plant varieties farmers right for industrial design and semiconductor integrated circuit layout design. Can you please write down the form number and the fee ok and just check out and where you will get that information?

You just type in Google IP India and you will go to the you will get the idea about this this all these different types of IPs and you just visit that and just check the fees and form. For protection of plant varieties farmers right IP India site will not be useful, you have to visit the

you just type protection of plant varieties farmers right and you will be diverted or to that particular site actually, ok.

So, use these two sites and try to understand which is the form and what is the fee for the application right down in the comment box and let us see that whether you are able to find out that form number and we have also covered in the session. If you have watched the video you will know that particular details.

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So, with this we are coming to the end of this session see you in the next session.

Thank you.

