

IP Management and Technology Transfer
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Lecture - 17
Application of IPM Model to Develop/Improve Your IPM System

A very warm welcome in the course, IP Management and Technology Transfer, titled How to use IPM audit model for IP system development.

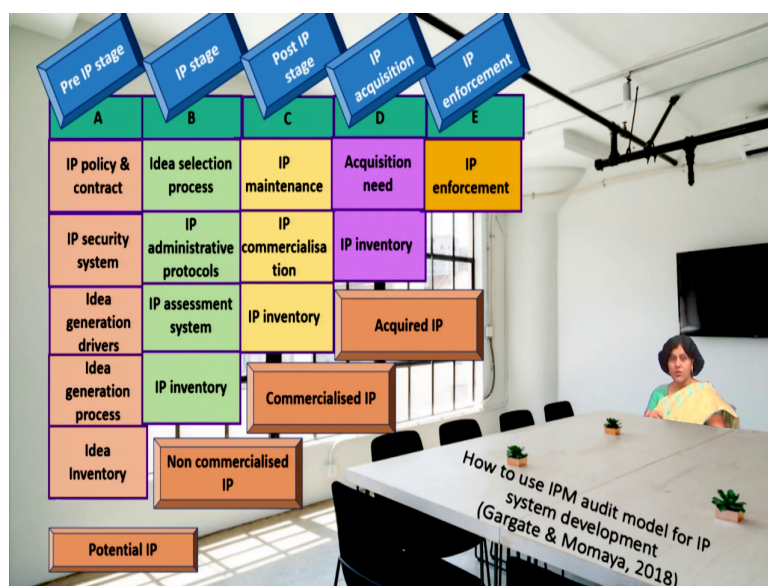
So, in the last module, in this week, we have focused on IP Audit Framework. Now, in that framework what exactly we have done is that, we try to understand what is the status of IP creation or IP generation and we just try to understand what is the IPR score of the organization or individual or startup or a industrial organization whatever it may be. And probably, that has given us idea where exactly we stand and what progress we have to do related to IP management.

Now, how we should go for that particular thing, how we can develop our IP system and improve our IP system, so that the current IPR score whatever we have achieved can be improved? So, that is the question. So, how we can do that thing? So, we remember that we have seen 3 models actually the first which is the giving us the idea where exactly IP management system is present in the whole organization.

In the second module, what we have seen, the IPMs system which is suggested by Sullivan. And in the third module, we have seen, one more IP management model where there were 5 stages and 15 IPM processes. So, there were 5 stages and 15 major IP processes, ok. This much we know now.

Now, we have to apply it, so that we can get benefit for IP creation and commercialisation. So, let us today focus on how that IPM model; we have just seen that.

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So, now, what exactly we have seen in the IPM model. So, as you can see here, there are 5 IP stages actually and 15 IPM processes. So, you can see here that there is a IP policy and contract, then there is IP security system, then there are idea generation drivers, then there are idea generation process, then there is a inventory IP inventories idea inventory is created.

Then, in the next stage, what exactly happened? That there is a idea selection process, IP administrative protocols, then there is a IP assessment system, and then again next there is a creation of a IP inventory.

Then, in the third stage what exactly happened? That there is a IP maintenance is there, then there is a IP commercialization, then there is a IP inventory. In the fourth stage, you can see

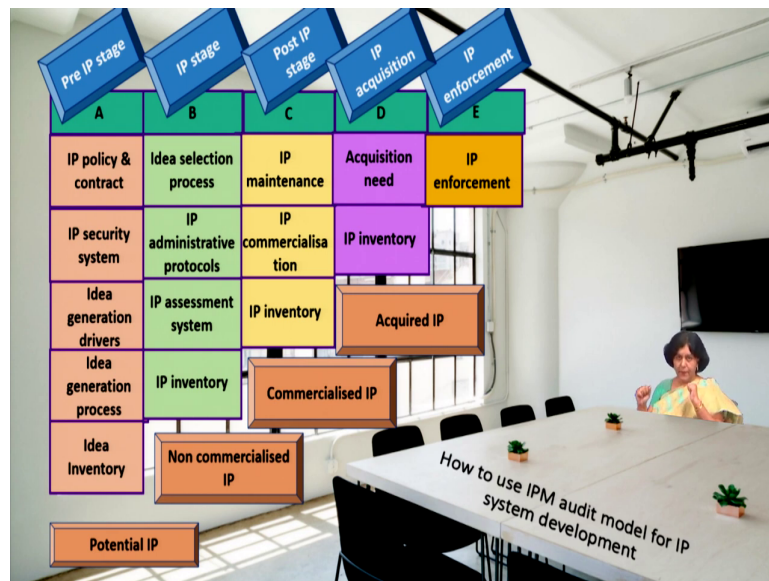
here, there is a acquisition. So, that there is a acquisition need and there is a inventory related to that. And in the last you can see here, enforcement, that is a IP enforcement.

So, these are the 15 major processes we have understood it very detailed information about that in the module 3 of week 2. Now, we also know that there are 5 stages. Which are that 5 stages? You can just check here that there is a pre-IP stage, then there is a IP stage, then there is a post IP stage, IP acquisition is there and there is a IP enforcement is there, fine.

So, these are the 5 stages. Then, 15 major IP management related processes. And which type of inventories are created? There are total 4 inventories. Which are that 4 inventories? There is a potential IP, non-commercialised IP, commercialised IP, and acquired IP. So, we have total 4 inventories in our hand. So, this is the model which we have understood.

Now, we have to apply it to our organization. So, now, you may be startup, you may be academic organization, you may be industrial organization, you may be individual, you may be a scientist or inventor and you have your own lab you may be MSME. Whosoever is trying to apply this model definitely you are able to apply that model and you can develop your IP system, we IP management system using this. So, let us check how we can go for that thing.

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So, let us focus on, that first 5stage, 5 processes under pre-IP stage. And this is the background actually this is a kind of a processes which are necessary for a IP generation.

Now, which are these processes? IP policy, mandatory, because without policy probably you may not able to handle the problems or a issues or a cases which may arise in the latter stage. At this stage probably you will feel what is that, why I will require IP policy. No, we have to create our IP policy to avoid any confusion, any conflict in latter stages. So, that IP policy and contract that is the first one.

Next is a that is a IP security system, how you are going to protect the trade secret actually. So, we have to take care about that particular thing. Then, there is a idea generation drivers, what are the different processes you are following for idea generation.

And at last, you have to note down whatever ideas are generated whether there is a system to make a database or to make a noting or to make any physical order that a digital system which can take care of that idea inventory. And this is what you can say that there is a potential IP actually.

So, whatever you are creating that is a probability; obviously, that you are creating the potential IP. So, you just try to understand anything out of this 5 processes you are following or not. Policy, then there is a security system; especially, if it is a trade secret or a confidential information, what kind of a precautions or a processes you have developed to protect that thing, how you are capturing ideas.

Because suppose you are MSME, 100 employees are working in your in the MSME or maybe 50 staff members are there whether there is a system to capture the suggestions capture the ideas which are related to your process, processes, may be product development, may be service whatever it may be, ok.

So, just make sure that this systems are or the processes are in a place. Actually, if we go into details of this these are the 15 major processes, there are almost 150 plus small or you can say sub processes are there ah. So, we are not able to cover it here. But I am just giving you the idea about the major processes, ok.

Let us move further. And just check that there is a next that is a idea selection process, very critical which ideas you will consider for further development, which are the processes for that, whether there is any system for that. Just think over.

Next is the IP administration protocol, means what is the procedure that if I create some IP. I am suppose a employee in the academic institute, what are the processes, where I should go for filing for my IP, how I can disclose my invention disclosure form, who is there to help me to draft the patent, who is there to help me for a trademark filing if I am creating so.

So, whether we have that kind of a system in place, ok whether there is a single contact point who will take care of that particular thing. Just think over whether you have all this thing in place. Then, next is the IP assessment administration actually, means assessment and then administration related to that.

So, how exactly you are doing the assessment of that IP which is created. So that means, novelty check is there, prior art searches there, how exactly you are selecting that particular because so many invention disclosures will be there. Generally, this happens in the industry that many invention disclosures are received by the IP department. So, they there they have to keep a strict guidelines for the selection of the inventions which they will consider for filing actually.

So, when we are talking about this particular assessment, this assessment is very critical if there is a more IP generation and you have a that limited cap if it is there that, ok we want to file only 100 patents in this month. If something like that is there, you have to keep some parameters which help you to do the correct or a justified selection of the invention escalator.

So, we will not go much details about that, but probably you have got the glimpses of this particular thing how IP assessment works ah. Just imagine, so that you will just you will get the idea about that.

3 lakh employees are there, global presence is there. You can just imagine; every inventor is working. Everyone is passionate about their work. Everyone will especially I am talking about R and D, they are filing so many invention disclosures actually in the automated system. Then, this task is very critical actually. So, this is what the IP assessment is. And what you are getting at the end is like a non-commercialised IPM.

So, we are getting the second you can say the inventory, the first one is a potential IP second one is a non-commercialised IP. Now, the next one. The next thing is like a related to the IP maintenance related decision. Now, again the process is like which patent you will hold or

which patent for which patent you will give the maintenance fee, whether there is a renewal of trademark, whether you are doing that trademark renewal or not.

So, whatever that IP portfolio is there, if it is a small generally you not you will not bother about it because you want to maintain that thing, but if that portfolio is big probably you have to take a decisions related to maintenance, and then next is like a commercialised IP.

Obviously, if the organization is big organization, IP commercialisation also is again the big task. So, obviously, there are so many patents either in-house developed. They are used in the product or service or they are license or they there might be a cross licensing, whatever it may be. So, some commercialisation aspect is there.

I will come down to startup now. If you are a startup definitely you have built up your startup on some or the other technological development. Probably, you have protected it by patent and you have to check where, obviously, the meaning of this that if that patent you are working on and based on that your startup is you have already commercialised your IP.

And definitely you are developing around that IP. So, some incremental changes are going on. And probably, I hope that you are taking decisions related to IP fighting at that time also, so that your core IP will be protected. This is again the part of IP strategy.

So, let us not enter into that. Just focus on the current IP which is under consideration. Check that whether you have protected it. And whatever the further developments you are doing check that you are taking care wherever necessary that IP instrument is used effectively. It may be trademark, it may be industrial design, it may be patent, whatever it may be, ok. And at the end what you will get? You will get the commercialised IP.

Suppose, you are a academic institute, and you are at the point of IP commercialization. There are so many enthusiastic faculty members are there who have filed patents. I have seen that there are faculty members with 150 plus patents also, probably that may be due to that

association with industrial organization or maybe they have developed through the project, whenever they are doing the project, they have developed that thing.

But that scenario is there 150 plus patents. And say probably, out of that 150, 100 are commercialised that is a possibility definitely, it is possibility. And now, that when we talk about a commercialised IP out of 150, 100 are commercialised and 50 are non-commercialised IP ah. Probably, have got the idea.

Suppose, I am taking 1 inventor only, 1 faculty member in academic institute who have filed 150 plus patents, I will take exact number as a 150. So, what will happen? Suppose, he has filed that 150 and out of that 100 are commercialised. Now, commercialisation may be due to licensing, it may be like in-house development, some entrepreneurial activities going on, the startup is created by the faculty member.

And definitely, that will be like a in the because of that entrepreneurial activity you can say that IP is a commercialized. That is one of the way of IP commercialisation. So, that is the case or maybe some sale of patent or IP might have happened in the past. So, that also come under the IP commercialised.

So, I have I have taken only 3 examples here. Say, in-house development in the form of a spin-off or a startup further. And the next is, like there is a difference in spin-off and startup again. We will not go into details of that.

Just remember that entrepreneurial activity is developed around that IP and some IP is license. And out of 150, say 100 are commercialised and 50 are non-commercialised. And probably in that lab probably still the ideas are coming up, so maybe 1000 or 2000 may be potential IP, fine. This is the scenario.

Now, let us move further and check the acquisition related thing. Now, when we are talking about the acquisition actually. So, this is something maybe mostly with the industrial

organization. We have seen that particular thing. But you just think about the acquisition need in maybe MSME setup or maybe industrial organization.

Academic organization that scenario is probably 0 or very less, that expectation is very less. And because of that what will be there? There is a acquired IP, and that will be the inventory created will be of acquired IP. And the last one you can see is the IP enforcement.

So, again IP enforcement, now what is academic institutes are becoming also very active, and they are taking the steps for IP enforcement. The way probably will not that much aggressive like a industrial organizations, but definitely the awareness is there.

So, what is the enforcement? We have already seen that thing that what are the processes which are decided that when you will go for enforcement, because it is not possible even I can just tell you that industry also will not go for every they know that, ok this this infringement has occurred. But still every time, every infringement case whatever it may be, that industry may not go for the enforcement of right.

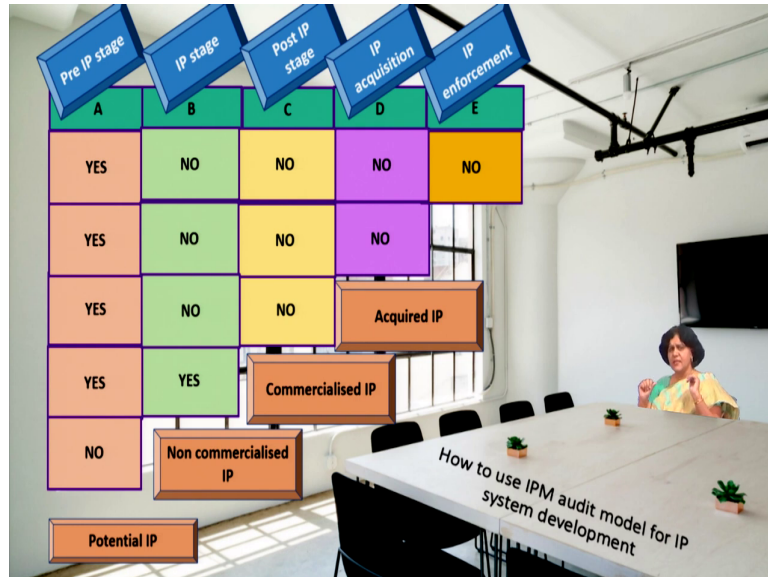
So, suppose, and generally, in industrial scenario what happens? The local vendors, then local players they generally imitate the invention. So, at that time industry may not go for enforcement decisions related to that. So, there are certain processes which are set in the organization.

So, you just check that whether you have something like that, if you are a startup because that is very much important for a startup that if there is a infringement, probably you have to be very alert because your whole entrepreneurial activity is dependent on that. So, as a startup, we have to be very very we have to keep an eye on that enforce that infringement and take a decisions related to enforcement

But in academic institute probably, that scenario is not that aggressive enforcement you cannot, it is not generally observed. But we can think of if there is a the infringement, we have a full proof claim draft. I should not go into details of that probably, but just focus on claims. Check the evidence of use. Do the proper infringement analysis. So, all these

processes are there. We will not go details of that. But just check such processes are there or not, ok. So, that is the that is the 15 major processes whatever are there, we are talking about.

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Now, let us move further and check that yes that yes, I have a IP policy, just mark there in the framework. So, you can just take a pen and paper, you just draw 15 boxes like this and now you know what exactly that point is.

So, what exactly you do? Ok, IP policy whether it is initiated or whether it is already in place or it is not there. So, I take example like, we will just go through this example as a for understanding we are considering this example, ok. So, suppose you have that IP policy.

Now, the next scenario that yes for related to this particular point, yes, I have that security system in place actually. Then, idea generation drivers, ok I have idea generation drivers

suppose; if it is idea translation process just check whether you have that idea generation processes and you feel that yes, we have processes in place.

Now, you just check whether idea inventory proper documentation is there, and I feel that no that thing is not there with me. So, I have put there no, ok. So, what just we have done? We just analyzed our current scenario of IP management system that, ok I have IP policy, I have security system, I have the drivers and processes, but no I have not documented anything. So, that point is like a coming as a no, ok.

Now, let us move further. So, they say for example, IP selection processes whether there is any guidelines for IP selection process, and I am just considering academic organization as a example only, because this is the most of the academic organization are this stage now. That, they have policies most of the academic organizations now they have developed their policies.

More or less, they are aware about the security system or the confidential information, how they are going to protect that thing the, that particular idea is definitely there. Then, related to idea generation drivers and processes, and generally, that idea campaigns and all that things are going on in the academic organization. But documentation is issue. So, I just put there a no.

Now, let us move further whether IP selection processes are there. Definitely not, because that much awareness is not there that so many IP is filed or so many invention disclosures are filed. IP administration processes, I will say no. At some academic organizations you can say there are a very well digitalized system is there. So, in this week only we will go through the IP management system of IIT, Kharagpur actually.

So, we have a very well digitalized system. In IIT, Bombay also there is a very well digitalized system. So, we will go through that how exactly the system is. So, that if your academic organization, you can try to develop your system based on these two case studies actually, ok. So, this is the; this is the scenario actually.

And next one like that assessment related processes. No, we do not have say IP assessment related processes. Then, the inventory; obviously, if we are not doing all this, we probably may not have that inventory properly made, but we may have that non-commercialised IP.

Ok, we have filed some IP, say 10 patents we have filed and we have noted, ok these 10 patents because for NAAC we require that, for NIRF ranking we require that, so we have made a database out database out of that particular thing. So, that way this probably might be the scenario.

Now, the next related to maintenance, again probably there is no processes. Then, the related to IP commercialisation very rare, so I have taken it as a no and probably commercialisation is so weak, so I have taken it as a no. But if you have initiated something you have done suppose out of 10, suppose two IPs are commercialized, then you can say that yes or you can say that initiated, ok.

Next is the acquisition and then the inventory related to acquisition. There is a probability is a very less, and for related to enforcement again I will say no. So, suppose the academic organization is exhibiting this kind of a scenario, ok. So, what happened? The only 5 years I have received.

So, the meaning is that out of 15 processes which are required for a IP management, ok I have only 5 processes in place, probably at a different levels of development. Again, I will not say that they are of the level which is expected, but here still it is there. So, we can say at this point that, yes, I have that system in place. But I do not have that remaining pain processes probably. I do not have.

So, if you say, if you analyze, so now, with the previous session you now the score, you know the score, and now this session you know that where we are lacking exactly that. Ok, these are the 10, 10 processes I am lacking in.

So, now, we have to focus on to develop this particular. So, we received score, it is like a, I have given the examination, I have see given my the question paper according to that I have written the answers. I have received say out of 100 say 35 marks, but I have the remaining marks like where exactly the problem is. So, this model will give you idea, ok. This is the reason because of that probably your IPR score is less.

So, how you do how you have to improve that thing? So, we have to focus on this 10 processes here and probably that will help you to improve now without considering this is a just starting of IP management. So, we do not want to burden you.

But if you see that this 15 processes major processes, if I am as I have already said, if I bring all the sub processes together these are around 166 processes are there. And if we follow all that 166 processes properly, probably you have a full proof IP management system and probably your IPR score will be very high, if you have that kind of a system.

But at this point as we are in a starting phase, this much is good enough, ok. So, this way you can understand where exactly we are lacking, ok. So, here, I guess this is good enough for us to understand IP management system and for development, we require that processes.

Now, again we will just go into details and just check here that which are these no actually. So, you can just see here, ok these are the 10 processes I am lacking in. You just say check here. These are the 10 processes we are lacking in.

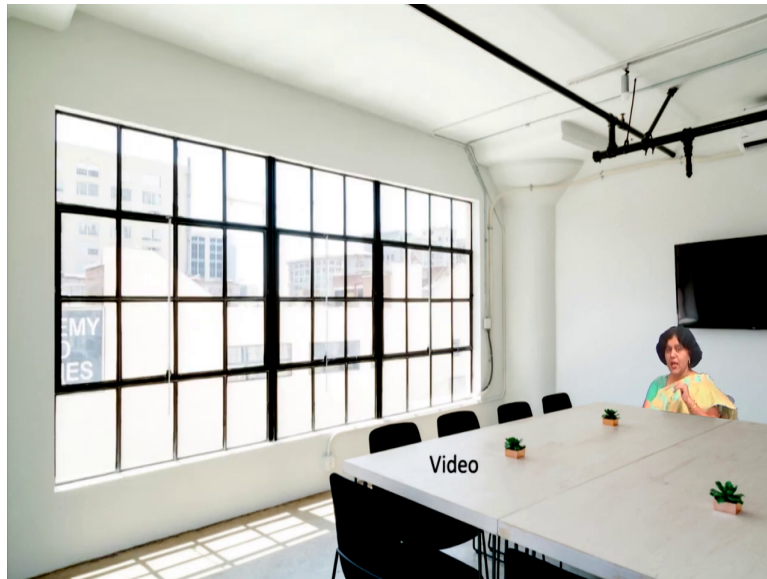
Now, we have to focus on that we have to develop that IP administration related processes, we have to develop the maintenance related processes, we have to develop the commercialization, how we can do the commercialisation of IP, which processes, how we should plan for that. So, that particular the focus should be, ok.

And which are the yes like, which are the processes we have? So, you can just see here that, yes these are the processes I have in place. So, if you want to improve on that probably you can focus on that improvement. And this no where it is, you have to have to focus on that.

Again, I can suggest you, you need not to go on working on all the 10 processes simultaneously. Just now; if this is the scenario, I will say that first we have to focus on IP administration because that is very important. Database of that idea inventory. Again, that is another important thing you can focus on. And then, slowly you can work on the other points actually.

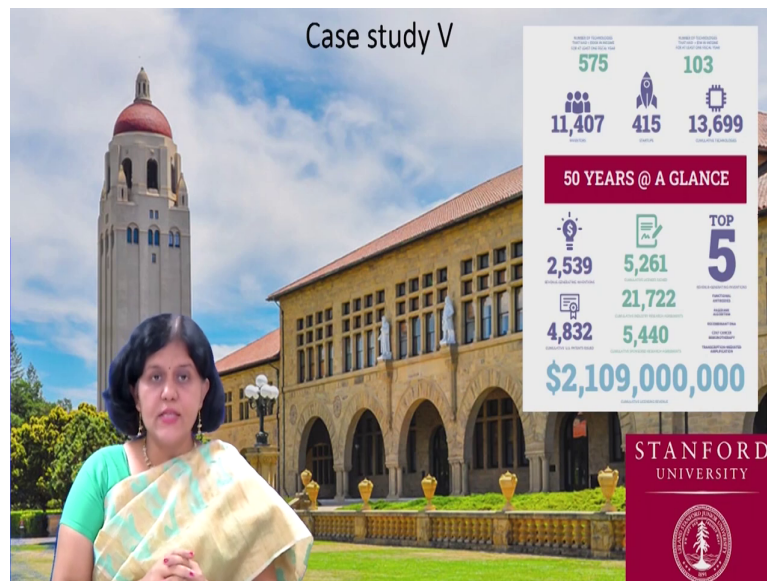
So, that instead of working on simultaneously on all the 10 points, probably, you can focus on each process, develop it at a certain level and then move on to the next process. Probably, that will be helpful to build up IP management system in a maybe a time of 1 year or something. And it depends again, how that is imbibed or how that is a utilized by all stakeholders effectively, ok. So, this is the; this is the scenario.

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Now, let us take a break now and we will watch a video here. Enjoy the video.

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So, if we see now the outcome in the form of inventions and the revenue, in this one example, in this one presentation you can see the outcome. So, the outcome is like this, if we have to give a 5 top inventions, this 5 top inventions of this university are functional antibodies, page ranking algorithm, recombinant DNA technology, then cd-47 cancer immunotherapy and the transcription mediated amplification, ok. So, these are the 5 top inventions of this university.

Cumulative licensing revenue if you can see there, it is a 2 billion dollars. So, more than that, that is a revenue, cumulative revenue, licensing revenue, generated by the university. Huge amount, right. Then, number of technologies which are kind of creating or generating 100,000 dollar, ok and as a income for at least 1 fiscal year that number is around 575.

Then, if you see the number of technologies that had more than 1 million dollar income for at least 1 fiscal year, total 11.407 inventors, 415 startups, 13,699 cumulative technologies. 2539

revenue generating inventions, then you can see here that 4872 patents, US patents which are issued granted.

Then, 5267 61 licenses are issued or these are signed. Then, if you see the agreements which are cumulative agreements which are signed, it this number is approximately 21,722. Then, the sponsored research agreements if we see, it is around 5440. And as we have seen that the revenue is approximately 2 billion dollar plus. So, cumulative revenue is around that particular number, that is a 2 billion dollar.

So, if we see the overall outcome of this university, definitely it is a outstanding and probably we have to keep the benchmark of this Stanford University. And if we see or compare it with the Indian scenario; now, if we see the current kind of output of patents in India, that is approximately goes in 100s or 1000s something like that Stanford University 4000 plus patents. And definitely the giants whatever entrepreneurial activity we have seen, definitely it is outstanding.

Silicon Valley again, it is the outcome of Stanford University only. So, it is a great contribution by academic institute by creating that invention, protected that inventions by using an intellectual property and then developing the startup ecosystem, and that startups are now becoming the giants. So, that is a kind of a scenario we can see and this is a classic example of that.

Now, next example if we see that about the this office of technology transform means everything is happening, we can see that these many patents and then they are like how they are like developed that commercialisation of that patent because that is something very challenging.

So, if we see the story of this office of technology transfer especially, in 1975 when Cohen and Boyer, they have that restriction endonuclease. From that if we see the Neil's contribution, he is a technology officer in the technology transfer office, and his efforts that help to do the patenting of that restriction endonuclease.

If Neil's, if he would not have contributed of he, if he would not have taken efforts probably, this restriction endonuclease will not have received this much revenue whatever we have seen. Because this restriction endonuclease, it has created a developed that different kinds of hormones and many procedures you know especially the medicine become very easy because of that restriction endonuclease.

And that contribution was patented. And thanks to the rule at that time in the USA that is the invention, that 1 year timeline is given after the publication means if that patent goes into the public domain. There is first to file is a rule, that was a rule, first to invent that is a another kind of a rule.

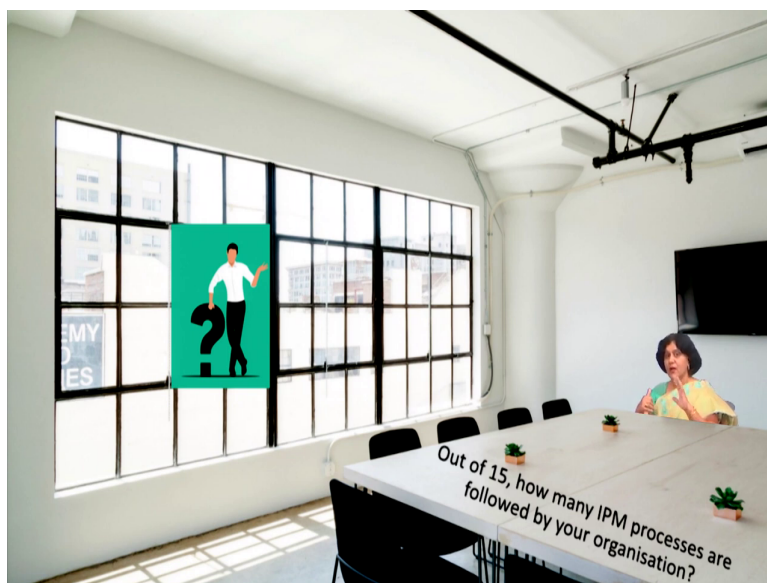
So, that first to invent rule if we follow, that doctrine if it is followed, then that was in USA, and because of that in 1 year after that invention which is published in a conference actually, Neil's put it efforts.

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And that Neil's has developed the technology transfer office. It was a starting point actually. And he developed that technology transfer office.

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So, now we have understood how to use that model, right. That, 15 processes, 5 stages are there, and how I am going to apply that processes to develop my IP management system.

So, today's quiz time now. So, what we want you to do today is like just check that out of that 15 processes, how many IP management processes are in place in your organization. Just yes or no you have to write down in the boxes. Just do that thing and just check out of 15, in the example we have just seen only 5 processes are there.

So, you just apply to your academic institute if your academic institute, if it is a startup apply to that, if you are individual you can apply to your laboratory whatever you are working on. What how the how you are develop your IP system for your laboratory?

If you are research organization, try to apply for your either that department or a whole research organization. Or you can do the simple activity that you can give a one assignment kind of a thing or create a competitive scenario in the research organization or academic institute by just asking them that whether we are they are following it particular at a departmental level or a that unit level.

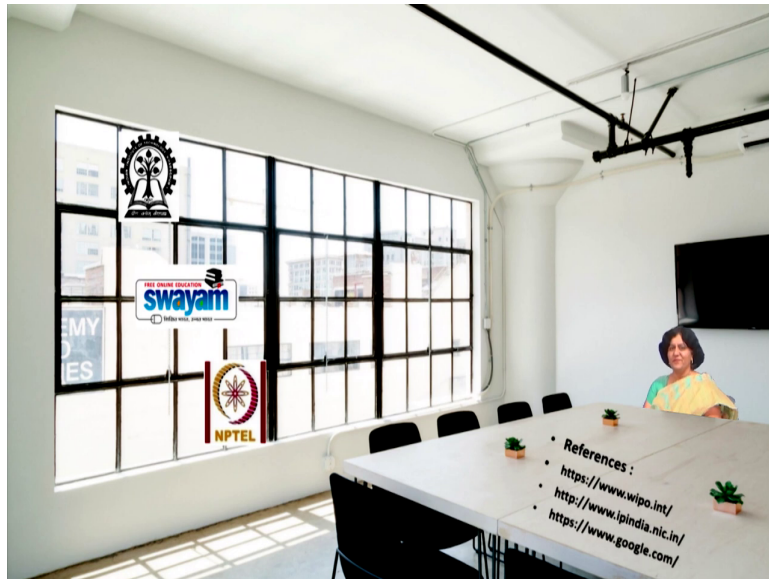
Probability, it is let us generally these things should be followed at a organizational level. But check that there is there may be somebody some inventor who might be very active in IP creation. Probably, he is following already this particular processes. So, you just check out that out of 15, how many are followed in whatever setup you are.

Write it in the comment box. And if you have any queries related to this IP development, if you want some suggestion, guidance, you can just write down into the discussion forum. We can discuss this there. And maybe if we feel that as I have already told you in the first session, that some points, probably, we will not able to if you are we will not able to answer you on discussion forum, just be part participate in a live session and there we will discuss it in the details, ok.

So, I hope you have understood the application of the model, because only understanding the model is not important, application of that model for the benefit of IP management system development is very important. And I hope you will use it effectively.

So, let us stop here. See you in the next session.

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Thank you.