

IP Management and Technology Transfer
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Lecture - 39
Capsule version II

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Yeah, Sharin I was here for some work actually and then I remember that there is a museum I never visited before one or two times, but I was just quickly gone through. So, I got today chance to go through thoroughly through this museum. What brought you here actually?

Maam, I also met with a friend here and then we went to the museum.

Ok.

Certain enriching experience.

Exactly.

So, we went there and we went to the computer. The evolution of computers are kept there.

Hm True true true true.

From 1970s to now. So, it was very interesting. So, now I can associate it with our course also and I have certain doubts if you have the time.

Ok, ok, ok, have some doubts, ok, ok. Because ok, ok, you can ask actually, but I just had before that came. A probably you can also share this with your friend that this is the place that IIT started in India from this place actually. The classes used to take place here and this is the first IIT we know that.

So, we call it as old building also and the this museum, we the recently it is like developed and I guess you enjoyed that. And you can see here that a lot of things they have like that from Param computer till the latest computer, we have seen the typewriter also then the development of railway and all and we are like in the Kharagpur. Railway research is like workshops and all things are like prominently that work goes here. So, we also have a separate building here for a railway research actually.

So, technology wise we can say that we are in a right place very rich place and lot of technology related work is going on. And when we talk about our course actually IP Management and Technology Transfer, I can say that yes, ok, we are developing technology, but I guess somewhere we are like lacking behind IP management and transfer. And probably we can take it further. With some efforts we can I guess we can take it further and we can have a good technology transfer, yes.

Ma'am in just this is the very basic question that I have. What is the difference between invention and innovation?

Ok, ok, invention and innovation. Now, if you want to if I want to just relate it with what you have seen inside actually that when we are talking about the computers or when we are

talking about the railway ok and then there are some science principle based some games are there, right.

So, generally what happen when we are talking about invention the scientific principles are used applied, right. And that application developed some new thing and then we say that this like technologies evolved and all that thing that is the one flow is there.

Now, when we talk about invention and innovation, if I want to differentiate because law wise patent act define invention new invention, right. And as a the scientist actually when he looks towards the invention a little bit different perspective is there, but now considering the IP part, what I will say that invention when we talk we want it to be novel, first time in the world.

So, invention we are expecting it in that way, that it is the first time in world. Innovation when we are talking something is already there and then you are doing the changes a few changes to make to like give the outcome in a different way different in a way maybe time efficient, maybe economic. So, 6 drivers are there and we have covered that in one of the sessions in IP and entrepreneurship course, we have dedicated one section on that innovation and what are the different types of innovation and all.

So, there that 6 drivers and all everything we have covered. So, innovation is like a already something is there and you are like working on that for further improvements actually. And invention we are expecting it is something very new novel that is like a invention. And then in the definition inventive step is another concept is there, right. So, inventive step is necessary in that.

Hm.

So, that is one important point is there when we are talking about invention, but one more thing I should clarify here. Because this may create a confusion when we are talking about IP

filing, whether invention and innovation both qualify for IP filing or patent filing if I want to be very specific in IP.

The answer is that if they qualify the criteria that three criteria non-obviousness, industrial applicability and the novelty aspect that yes, invention innovation both can qualify for IP filing. So, there is a difference definitely that something is there and we are like working on it to improve it. And one thing we are talking like invention that is something very novel new and it is first time like a develop that is a kind of a scenario is there.

That is a interesting there is a demarcation however.

Yes, there is a demarcation. So, when you use in and when we are talking about IP filing and all we generally use a word invention only, because our patent act always say invention, inventive step new invention that words are like very common in our patent act, right. That is the scenario.

Maam talking about IP filings.

Hm hm.

What is the role of management in IP filings or even when there is a loss of IP, where does IP management come?

Ok, means or you have like done some blunders in short actually right, maybe you have not filed IP in time, maybe you have not given the maintenance fee in the time, ok.

Yes.

So, if something like that is blankless speaking it is a like very bad IP management I will say. Because when we are talking about IP management you have to be very you should actually know the timelines perfectly because this is the law where timelines are very important

actually. And therefore, provisional filing then complete filing this provision is high because you are like securing the priority that is very important.

So, when we are talking about the IP filing if you miss the filing you are losing on your IP. So, that is not at all expected and that is mostly means in the academic institute when we are talking or see the scenario this is mostly happening. And therefore, lot of activities and I have just said that we have this research related activities are going on, but IP filing is not like we cannot appreciate the IP filing whatever going on. And why what is the reason?

That is the reason what you have just said, that we miss on the filing of the IP maybe ignorance, maybe that we are not knowing the timeline the details and all, maybe we are not sure whether it will qualify that our doubts are there, maybe because we feel that oh its very clumsy we should not enter into that, maybe because we feel that oh publication is giving me enough recognition why should I go for patent filing, maybe because you feel that after patent filing I am not gaining anything except that efforts I have to put.

Because technology transfer is not going on not so efficiently going on here in academic institute so, that whatever may be the reason because of that faculty or a student they are not moving towards the IP filing. That is the reason that is a fact, that is our duty now to create that awareness and help them, hand hold for that first. Because observation is like that if you help them for the first patent filing and commercialization it is like addiction.

So, once they become successful, they will keep on filing IP, but we have to show the success. That first success is very important and that is possible, means if we do that plan activity properly it is absolutely possible. So, that is the case actually. So, IP filing in time is very very important.

Maintenance again if you not do that maintenance in time there is a like obviously, in the act the provision is there that if you miss for a that arrangement is there. That sometimes we miss that deadline, act is considering that the little bit kind of a we can say the time extension and all that kind of arrangement is there.

Hm.

But if that also we miss then there is no option that our patent is now in the public domain anybody can practice that thing. So, that is a very risky scenario, means if we are not careful about our property who will be careful. So, that is our duty.

So, even if there is a lot of IP generation happening.

Happening yes, but.

But IP commercialization.

Is the protection in commercial and both issues are there.

Yes.

Means somewhere we are going for protection.

Yes.

But commercialization. So, it is like a no, no kind of scenario is there. So, so it is like a not happy or not a good scenario, but yeah, this is the this is the fact we have to accept.

So, Ma'am there is talk of technology transfer offices the role of helping.

Ah ah ah.

Helping.

True.

Especially for universities it really helps them to boost their IP even commercialization protection and all. So, what is the role of technology transfer in the current scenario?

Actually, see if technology transfer offices we will say, I will say that only few academic institutes in the country. They have a technology transfer offices working I will say pretty well ok, but other academic institutes I will say like means I can just count the number 2, 3, 4, 5 not more than that.

That only are working very well working actually, but other institutes if we take and how many institutes are there, how many academic institutes are there 55000 plus academic institutes are in the country and only 5, I will say technology transfer offices are there. Or maybe technology transfer offices are there, but efficiency of working is not like expected.

If that is the scenario it is like a dire need, I will say to have a and probably we are like a first IIT, still we have a technology transfer office I should clearly say that thing I mean very responsibly I am making statement. But yeah, we have a lot of lot of scope to develop further and do the technology transfer activities. And whether it is possible? Definitely it is possible, at any at given point of time also if we do that activity probably in 1 or 2 years, we can have we can be at a place that is expected place we will reach definitely that is the scenario.

Now, what will be the that in the country also IPR chair and that projects are there 16 IPR chairs are more than that IPR chairs are there, if I correctly remember it is a 16 currently. So, the point is like that although that arrangement is there, but I am I will also know I will also say that that is also not helping for the that IP management frankly speaking. No, why? Because they are also still working on that awareness and all that thing [FL] means awareness is there are so many now courses are available online.

Let the learner easily want to do learn it they should go through that courses at their own time and all that. Now we have to move further for the tech transfer actually. And therefore,

instead of IPR chairs, I will say that technology transfer officer is a need now for the technology transfer, commercialization and then that will help in that obviously, in the start up India moment because, this is the place where it should like a boost that start up India moment and all.

So, I guess we have to focus on that more now than the than that IPR chairs and all because the activities if you take up the if you see the data the performance of IPR chairs still this time. And the outcome if we say I will say that we need to change the model now. So, that there will be like a commercialization also and means IP commercialization also and IP filing automatically it will come actually.

So, that is it I guess that if we do then that will be like a good enough for us to do the technology transform. And there are lot many things if we go actually means into the details if we do one implementation probably other academic institutes can be able to do replica of that means, if we try to do that thing then others can do the replica of that. There are already established technology transfer officers are there we can just learn from also that is the same.

And in national IP policies also encouraging for technology transfer also but.

Yeah, yeah and in National IP policies there are other objectives also, maybe we can if we want to discuss we can sit somewhere there. So, that instead of standing and.

Yes.

We just came from the museum and we are just discussing, we will just go there and we can just do the discussion, if you have some queries, we can discuss that, ok.

Ok.

[FL] Sharin [FL] now we are little relaxed. So, now, now we can continue the discussion.

Yes, we were talking about the objectives of IP policy.

IP policy, right, right. So, there are several objectives of IP policy right, but if we focus on IP management and the technology transfer, important I feel like a generation we have done like IP generation was one of the objective. I said that we are very good in that means, awareness I just know we have just discussed a lot of awareness related activities are already done.

So, I do not think now we should focus on that awareness and generation. The other objectives of IP policy if you consider like protection, administration then there is a like commercialization enforcement these are like very important now. Now, if we want to focus on this, this is like if we see the IP management lifecycle in that also in the IP the model which we have seen in that also we have said there is a protection and there is administration and there is a enforcement, right.

So, if we want to focus on that, then we have to little bit revamp the current scenario in the country. Because we are like now if we see the universities and the structure and the processes which are going on probably now we should bang on now the compulsory protection activity.

So, maybe some policy change in the institute level, I will say because government cannot interfere in the institutional IP policy and all that thing, they can just give you the guidelines, just like tips is giving the guidelines and then we have our legislation's countries are having the legislation.

Similarly, now IP policy National IP policy has given us a guidelines, very nice guidelines are there. We have just focused on two very nicely we have like achieved, I will say achieved because lot of that much awareness is created now, I guess. So, we have to now move towards the protection and the commercialization, that the benefits now we have to leave the benefits of that that awareness actually.

So, if we go for a like in the institute only in one of the I guess in earlier capsule session only we have discussed that there should be a compulsory that PhD student should not get a degree if applied the research is there without patent.

So, something like that we thought think at a institute level, especially at least the Institute of Imminence and the NITs and then the all IITs, if we start from there that he has common policy that without the patent if it is applied research, again that is very important.

Because like ISER and all we cannot expect patent from them because most of the research is basically, I will not say there is a zero percent possibility, but the percentage will be very low there, but institutes like IITs the percentage must be very high actually. Because we are applying the scientific principles, we are expecting to develop the technology and we are expected to have something like a very applicable, right.

And so, therefore, we can say that is a one thing means policy level National IP Policy and then the Institute IP Policy that changes if we do I guess that will be much like efficient process I will say. To imbibe in the system that culture of a IP protection actually. And then once we do that IP protection then we can say that we can think of a commercialization. Because now we have a good number and then we can think of a commercialization.

Now, for the commercialization just now we have said that IPR chairs are there, but again if we see the past 5 years outcome of IPR chairs, again we have to think about the system which will be a productive then, ok. So, we can say that we will we can have a little bit different system like a corporate kind of a scenario that officers who know definitely what is IP the intricacies of IP and they should know the market also.

And little bit part of a valuation I appreciate that valuation and I accept that valuation and all that thing is not possible at this level. Because it itself is a very very we can say evolving area, but still we can get a rough idea like the number based on the traditional methods and then the hybrid model we have to apply. And yes, I can say that some institutes are applying that model and they are valuing and they are doing commercialization very effectively.

The PIE institutes with the 5 number, I have just talked because there may be technology transfer offices in the universities and all that thing, but I have just said that 5 number because this 5 are really working well and there is a successful like a technology transfer going on, that is a that is a fact actually.

So, if we have something like that means, the officers the compulsory that one position if it is created in the institute maybe and we should give time to them. We cannot say that today here the person is appointment is done and tomorrow he should show the result it is not possible.

Some timeline of 2 minimum 3 years timeline and maximum 5 lines 5 years timeline is necessary to show the result actually. And if that kind of a scenario is there probably that will create a vibrant environment and then we can say that it will like a boost to the startup activity also. Because we have seen that in technology transfer startup is one of the way by which we can commercialize IPM.

So, this also will help in that startup activity. So, win win situation will be where IP will be protected, created and that technology transfer we can say the efficient technology transfer will it possible and then the startup activity also will get the boost because of such activity. So, policy draft is wonderful, implementation is issue and then I will say that this is a time we have to think over that implementation related issues actually. Ma'am you were mentioning about that universities have to take charge regarding their IP.

Yes yes yes.

So, what are the negotiations that happened during drafting of an IP policy.

Oh oh, ok. So, when we talk about a drafting of IP policy, we have given the template ok, now this template is based on the IIT Bombay the whatever the activity of that revising the

policy you can say. Now, and there are means what is happening actually, I can just tell you frankly.

When the universities are drafting IP policy I have observed, means when I visit the institute they give me the booklet, oh this is our IP policy I have drafted it. So, some one person is drafting that IP policy and mostly without discussion actually. So, this is not expected actually, you are drafting the policy for the stakeholders of that institute and you are not consulted with them actually.

So, the point is like this ok, ok this template is there then the pointers are given in that IP policy paper also we have given that pointers, we have shared 3 sessions on that IP policy actually in our session. So, that will definitely help you to bring up the broad framework. Now when you have to customize that thing definitely you have to talk with your students, the faculty, then the different activities.

So, for example, I can just share the experience that I will say that this is like my I am privileged to have that opportunity to sit with the professors of IIT Bombay. I was a student at that time and then the discussion related to this IP policy revision was happened. And that was such a reach discussion that suppose CEP activities there. Now CEP activities that continue is continuing engineering program you can say or continuous education program because different claims are used actually.

So, when we say that particular activity of a CEP only, in that lot of IP is created like a for example, this courses which are NPTEL courses are there, outcome of CEP is there or short term courses are there, lot of workshops are conducted. Then previously I guess there were like a book related activities were also done through CEP.

So, then conferences and seminars whenever we do that activities are mostly, they are through the CEP only. So, you can just imagine that if I have given just a few examples, if these activities are going through this particular thing, then it is our duty to talk with the CEP

office. And then what is the process and who are the beneficiaries and who are getting affected and what IP is created.

So, if we know that how exactly it is going on, then only we can say that ok this copyright is created, this is owned by this or this related to this activity because of this particular collaboration is created conferences networking happen collaborations are there further like processes of that and also and then IP whatever will be created.

So, whether we are thinking deep down in that particular one department, I have just given you the example of a CEP here. And then similarly if you see that only the student activity you check here in IIT, forget about the academic activity. If I take the extracurricular activities also lot of extracurricular activities are going on here. That they have a cultural societies are there, then the coding societies are there, then if societies also if we take there are 70 to 80 or I guess say plus means 100, I guess that societies are there different.

So, if that kind of activities are going on, lot of IP is created in that also, but probably we are not capturing that thing, we are thinking that yes, we are in a learning, learning, learning mode. So, always we are like doing the knowledge sharing and all that activity probably there are also IP is created, right.

So, when we are talking about IP policy each and every activity which is going on in the institute, you have to capture that activity, deep down we have to discuss with the stakeholders of that particular. Now for example, here only you feel it Indian knowledge society we have a very special department now.

Now, they are working on that the our Yoga and then the Vedas and that Patanjali then Panini whatever all that like a the history historical or mythological and then the all that the we can say the treasury of India we can say. So, when such activities going on there out from will be totally different considering IP actually, means Vedas and all that things we can say it is now in the public domain copyright is not there, associated now with that because that 60 years that line is like gone.

But whatever they will create again. So, what type of IP will be there? And then how you are going to protect that thing whether we have thought about that thing. So, that should be there in the IP policy only [FL] this these are the probability and how you are going to protect it.

So, simple examples also, if we take these examples lot of IP we are creating, engineering departments. So, they are doing that activity, but these other like architectural department, we have this I case is very special department extracurricular activities.

So, when we talk about IP policy, we have to take into consideration all these activities and then we have to discuss what exactly is going on there. And then the probably you have to involve students also. Because they will ask you the right questions because they are involved, they are involved and they probably are more concerned about their in that inputs. And then that will help you to create the built up that IP policy further actually.

So, I guess it is a long activity, means we cannot say that I have given the template and then in 2 months you are going to develop and customize that thing, ok. In the first draft you can develop that way and then probably you have to revise and refine by considering the inputs of all the stakeholders of the institutes and it is a time taking activity, but if you do that and then I say always say it is like a IP policy is always a dynamic every 3 months it should change.

If you are really active then it should change every 3 months minimum, but if you are academic institute I will say at least once in a year it should evolve, it should change the and it is not a whole change actually the case to case studies case to case based because new cases will come, then IRCC or your strict will feel that oh this point we have to include, update that thing.

So, that way it will be like a dynamic and it will keep on evolving actually. So, it is a wonderful job actually when we work on IP policy or any policy you take its IP policy is ok, but you take any policy of the institute it should be always evolving in nature. Once you prepare it, but keep on evolving on it based on case to case basis. Somewhere it will mature,

but yeah, somewhere like IP policy it will require little bit time to mature yeah, that is essential.

Ma'am you mentioned a foreseen IP like you should foresee what all can come up. So, Ma'am we were talking about patent analytics.

Hm hm.

What is the importance of.

Hm.

Patent analytics in present times?

Patent analytics is a wonderful thing. Projections what will happen that foresee and all its very easy by IP analytics actually it is like a it is a wonderful tool if we know how to use it you can like a plan also, if somebody told given me responsibility, you have to have that like 100 patents in 1 year, is it possible? Absolutely possible.

How? IP analytics is the best tool for that thing. And then you should know how to do that thing implementation and all that thing, in 1 year you can change the picture actually, that is absolutely possible actually.

Now, analytics have a lot of we can say the uses we have already covered it in the session actually. So, in the policy also I will say that if your aim is very clear you can use effectively IP analytics, I do not know what is the aim of that particularly. Suppose I say that you have to like technology in particular area you want to be number 1 in the country if institute decides that way.

Then focus on IP analytics in that area, think about that possible outcomes in next 2 years, define the policy accordingly and then absolutely it is possible, it is not a great thing, means it

is a very proven thing actually. In industry we follow all these activities very easily it is a routine actually.

We have to just implement it here in academic institute, but if we do that thing then I guess it is like a like we will be like a it will be a wonderful scenario that, because intellectual capital is a very important here in academic institute it is a very we can say higher and then we can capture that if we plane such kind of activity and there is it is possible actually.

Alright, ma'am there is a question from the discussion forum that is related to this. So, I am asking here.

Ah ah.

That if we are publishing a paper in some journal and we have now published it in a journal. So, how are we using that in the IPR score of our organization?

[FL], ok, ok.

So, where is the copyright and ah?

Very good, ok. So, what is happening here the person who have asked his he is he has thought thoroughly on this actually. That if we see the IPR IP audit framework the basic framework we have shared in that, we have given in the copyright that ok, this is the list of that copyright and then we said that it is customizable, but the question is like very valid question, that if I am transferring the copyright to the publisher then how I can count it in my IP audit framework? Ok.

So, there are two points we have to remember authorship and ownership thing is there. So, when we are talking about the authorship. So, here in the institute the stakeholder that is maybe faculty student they have that published the paper know. So, during that obviously, they have to transfer the copyright with the publisher no doubt about it.

But author is like a faculty or a student, ownership is a transfer that is absolutely the fact actually. Now, when we are talking about IPR score for this institute, we are like saying that ok, we have published 3000 papers publications or the research papers are published by this institute.

So, definitely here when we are talking about IP audit framework, we although transferred the publishing that writes to the copyright is transferred to the publisher. So, author is a first owner actually, right. So, in the framework we are expecting that you should consider this as a your creation because you are the author.

Publisher has not created it, publisher you have transferred the ownership that the copyright that copyright is transferred actually, but you are the author. So, we will just we are in the that IP audit framework we are considering that yes, how many like a papers are like a authored created by you.

So, I just repeat again author and owner these are the two different concepts actually. Authorship is like whosoever as that we have seen that photographer for photography, then composer for a music, then for literary work the who have written that particular. So, here also paper who has like a written research paper is the author.

Author is a owner that is the important thing. And then what is happening that owner is like owner that author is transferring the right, that is a copyright is transferred like in film industry producer gets all the rights from the performance right from the actors, music right from that composers, then the that lyric rights from that whosoever has created that written that again author. So, that right he takes that all authorship is like oh that the rights are like a transfer copyright is transferred by these all like the who those who are involved that they transfer it to producer.

Similarly, here you are transferring your right to the publisher. Definitely, but when we are considering that the creation, you are the first like you are the author, you have created it and therefore, we are expecting you to be use this number that yes, you are the creator. So, in the

academic institute when we are doing the framework, we are expecting you to consider it in your name, that yes this is the like copyright created by this institute creator is from here, ok.

So, that way we are expecting you to take that number, ok. So, that is the scenario. Otherwise, publisher elsewhere have lot many number. So, that is like copyright is transferred it is elsewhere is not writing any paper actually it means nobody in the elsewhere is like they are like a taking the rights for the publishing actually. So, that is the scenario.

Yeah ma'am one more question from the forum and the rest we will cover it.

Yeah, yeah we will cover it in the that live session.

But this question is about a patentability of GMO.

Genetically Modified Organisms.

Organisms.

Genetically modified, ok ok.

After the monsanthogies like.

Ok ok. See now 2, 3 things are very important considering Indian scenario Section 3 very important. Now, Section 3 clearly says microorganisms with human intervention patentable and therefore, we have a NCCS and then we have a M.Tech Chandigarh. So, these are the 2 institutes where you are like depositing the modified like genetically modified organisms.

So, for microorganisms there should not be any confusion. Discovery of microorganisms not patentable. With human intervention you have developed. So, for example, Isarsha Kolei we know that the insulin related thing, ok. So, that is like a GMO genetically modified or

Siderumuna's Pithidavino. So, these are the genetically modified organisms are there. So, definitely that is possible.

Now, the next question is a Monsanto's coming to the seed actually. Section 3 clearly says that seeds any parts of a patent not at all patentable. It is a very clear in the section 3 actually. So, if we follow that then obviously, we will learn. Because we have a separate act for a that there is protection of plant varieties and Farmers Right Act is there. So, GMO we have to just remember in India microorganisms are patentable only when there is a human intervention.

Discovery of microorganism is not patentable, that is very very very clear. There is no any confusion at all actually. All other things like seeds, plants, separate act is there accordingly we have to go for that. Mathematical expressions and computer and all that thing there is another provision is there, ok.

So, considering this (Refer Time: 36:27) I guess this much information is good enough actually so, done with the, yes. So, I guess we have like covered that IP management, IP lifecycle, technology transfer and whatever questions we think like you have like ask and on the forum and we feel that know we cannot write answer in detail. So, we thought that we should discuss it here and we can give you the answer in that way, right.

Yeah.

So, she has like taken all the questions from the discussion forum and we have tried to convey the answers to that particular. Again, we have given our personal opinions. So, for example, when we are talking about the implementation of IP policy or this technology transfer offices this is our personal opinion.

You may agree, we you may not agree with that again. Even patent pooling we have shared the that case study. So, that is our personal opinions. If you have any suggestions, comments definitely you are that we are most welcome. So, that we can also reflect on that angle and we

can develop further our understanding also about the subject in that based on your inputs actually. So, I guess we should conclude the session.

Yeah.

And I guess we are like this is a second last session of the this course and then we are concluding in the next session. So, hope we are able to convey the queries whatever you have asked we are able to convey the answers. But still if you we are if you feel that no we are like you are not satisfied with the answers I know. Live session is there. I guess the first live session is in this week only and we can discuss about the queries more in that live session also or you can also write to the right in the forum we will take that also, ok.

So, thank you so much.

Thank you.