

Entrepreneurship and IP Strategy
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Lecture No 16
Patent - Introduction

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A very warm welcome in the first module of week four of the course, Entrepreneurship and IP Strategy titled Patent Introduction. Now this module is a little bit different from the previous one as well as upcoming models. Now, in this module, we are focusing on a very important type of IP that is Patent. Why we have position patent in a fourth way? If you see the course structure in the fourth week and eighth week, you will see there is a capsule video.

Now, what is this capsule video? Whenever you are asking questions on the forum, it is not, sometimes it is possible we are answering all the questions, but sometimes it is possible that we may not be able to give answer to your question on the forum. The reason may be like the answer may be elaborate or it may be not able to convey what we want to convey through writing that might be the reason or sometimes few questions require a deliberations or a discussion.

Now any of the reason is there if such type of questions are there, we select that question and we keep this for a capsule video. So, this is a capsule video. Now, here you if you have seen the course structure, you can see that there are case studies also, trademark, copyright and industrial

design. These are the again another important types of IP we have given what we can say that four or five lectures including a case study dedicated to that.

Now patent although it is a very elaborate what we have done, we have given you the reference of the course, which we have already what we can say recorded, so that you can get the details of patent through that course links okay. So, here what we are doing is like these 40 video lectures that link we will provide then we will that the course name is like a “roadmap for a patent creation”.

Now, it is completely dedicated to patent and we have tried to cover almost everything which individual or organization will require to know about patent in roadmap for patent creation. It was more for a inventor. So, the perspective when we have designed that course, it was a inventor perspective. So along with patent information, we have focused on Patent Lifecycle, Project Planning, Research planning, how to identify problem because many a times PhD student they struggle to identify a most important or relevant topic for their PhD.

So how to identify this problem by using patent analytics, then Technology Commercialization a little bit introduction about that Technology Commercialization, what is a Patent Lifecycle, then some tools for a Patent lifecycle. So, all these parts and a few more things we have covered in our “Roadmap for patent creation”. Now, as an entrepreneur, you may not require all this information, what you will require as an entrepreneur, you should know what is patent.

Then you should know whether my venture have any potential of generating patent that is a second question, you should know. How to identify the potential patent? Because many times what happen, when we do IP audit, we realized that organization is already having a very good what we can say potential IP. But as they are not aware about IP, they may not be able to identify that and protect that.

So, how to identify that potential IP is very important when you are running a business. Next is how to file a patent? That is again very important and in that context, you should also know who is the best patent expert I will not say attorney or Patent Agent, I am saying patent expert. So we have one dedicated module in “Roadmap for patent creation”. So you can maybe, you may like to go through that whenever you will deal with that patent filing.

Then who will be the best patent expert for your ventures. By going through that module you will come to know that who will be the best patent expert for you. Now, considering this, we have selected a few videos like eight videos and here what we are going to do in this session that next 20 or 25 minutes. We will give you some information and immediately we will give you or refer the video from “Roadmap from patent creation”, ”Roadmap for patent creation”.

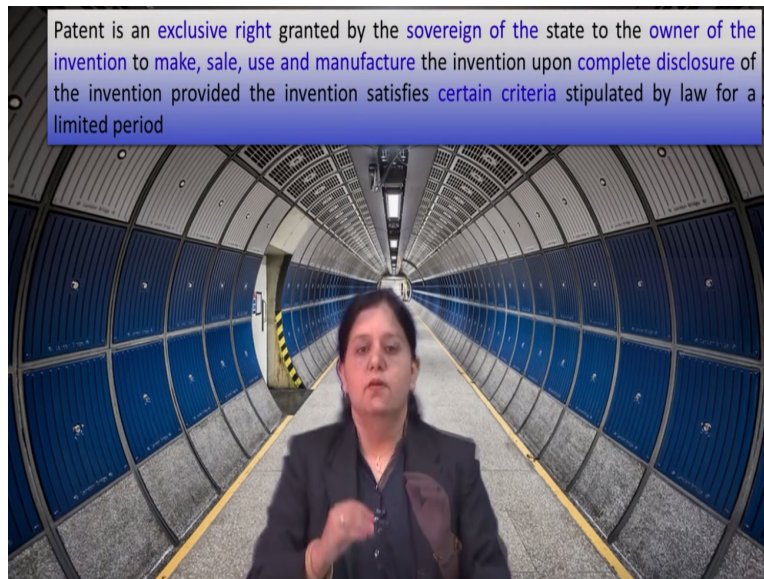
So, if you wish to go deeper, you can go through that video and get the relevant information related to that particular topic. So, here we can start. So, considering that we have focused on a very few lectures, almost eight video sessions are there, we will refer it in this session in this module. So, what we are going to do now, next 20 to 25 minutes, we will give you some information and immediately we will refer the video.

So, if you wish to go deeper, you can go through that video, we will host the links of these videos and the course structure in the reading material folder. So, anytime any query related to patents, if you face you can check course structure of the “Roadmap for patent creation” and visit the video to know the details all these videos are available on YouTube.

Now, we know that as a, this entrepreneurship is a full time activity and therefore, we try to give you the selective and very crisp information in this next 20 25 minutes. So, after giving this information, you can appreciate the logic and objective about the session in a little bit different way.

So, you hope you will not get distracted by frequent videos because you will come across now information and videos rather you will get the idea about which video you have to check if you stuck for any query related to patent. So, here we go. So, the first question is what is patent?

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Patent is an **exclusive right** granted by the **sovereign of the state** to the **owner of the invention** to **make, sale, use and manufacture** the invention upon **complete disclosure** of the invention provided the invention satisfies **certain criteria** stipulated by law for a **limited period**

So, as you can see, patent is an exclusive right granted by sovereign of the state to the owner of the invention, to make, sell, use and manufacture the invention, upon complete disclosure of the invention, provided the invention satisfies certain criteria stipulated by law for a limited period. So, if you see the definition of patent, it says exclusive right. Who is giving that right? Sovereign of the state is giving right. To whom? To owner.

Now, who is the owner of a patent, we have a separate module for that in “Roadmap for patent creation”. But owner is like a person who is applying applicant is owner, inventor is not the owner. So please remember the difference between applicant and inventor quickly I give you the example if you are working in the organization, generally organizational policies, organization will act as an applicant that is an owner of a patent and you as an employee will be inventor of a patent.

Now, what rights you will get after granting or whenever you will get that grant of a patent? You can make, sell, use and manufacture the invention. Now when sovereign is giving you that right? After complete disclosure of the invention that is a very important thing. And next important thing is you have to follow certain criteria, we will see what these criteria are. Now, what is a lifetime of patent? Trademark we have seen earlier what is the life period or a time period of a trademark? You remember?

It is infinite like you can renew it after every 10 years and you can have a infinite lifetime of a trademark. Is it the same way in a patent? No, patent is only for 20 years all over the world anywhere you go 20 years is a life of patent. Now, how to calculate that life as a 20 years you can refer to the videos related videos, there is no world patent somebody sometimes people say I have a world patent or something like that.

Please remember patent is a territorial right, it is not a, there is no concept like a world patent but whenever they are talking like international patent application, they are talking about PCT that is a Patent Cooperation Treaty that is a WIPO it is an organization which is taking care of all IP related activities in the world that is harmonization, you can say of IP laws is monitored by WIPO which is in Geneva it is a body of a UNO and that take care of that particular IP related matters internationally. So, here, you can just remember that there is a PCT route and there is a conventional route for patent filing.

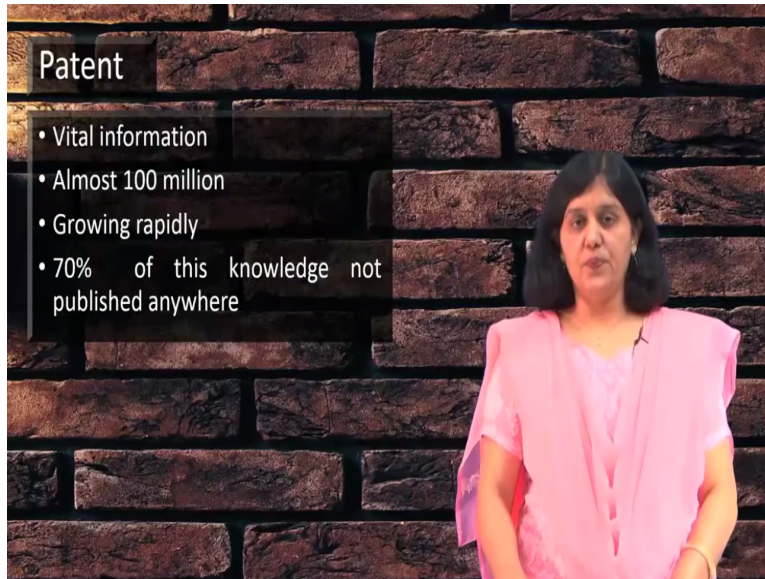
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So you just remember that there is no concept like a world patent. So, it is patent is a territorial right. And whenever a person, some person is referring to international patent application, it is a he or she is referring to a PCT that is a patent cooperation treaty. And this patent cooperation treaty, it is a, PCT is a one of the route then there is a conventional patent application then there are many other types of a patent application. So, you can refer one of the module in week five of roadmap for patent creation for the details.

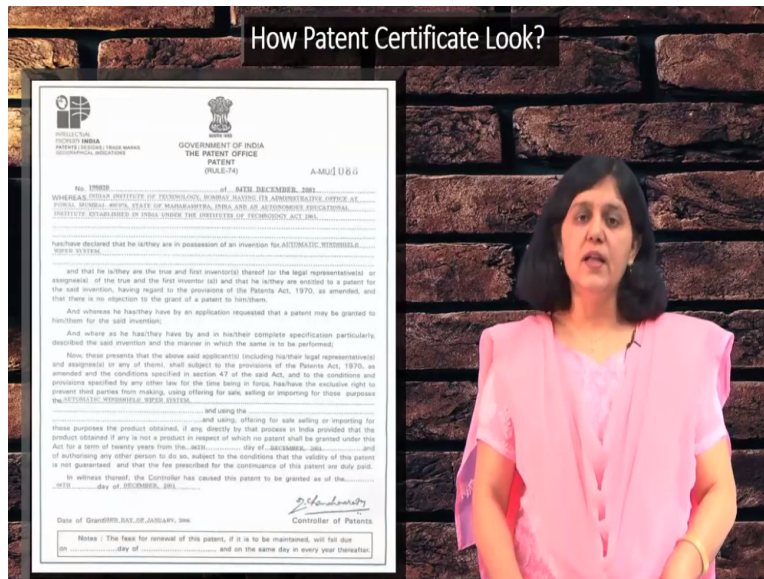
Now, I will suggest you to watch this video like on the patent definition, and you can get the idea about this what the definition of patent is and what the details, whatever we are talking in the definition you can get the details about that definition.

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You can appreciate the importance of the Patent. Do you know, when we say patent is granted what document you receive, to give you example, just check this certificate.

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Now, there are a few changes in this certificate, this is given by the Indian Patent Office, there are a few changes in the certificate now, whatever the latest certificate is there, and you can browse through the folder, in the folder we have we have kept one certificate that is granted by your Indian Patent Office.

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So, now, here moving further, after patent definition, you can see that the criteria for a patent are Novelty, Non obviousness and Industrial application. Now, when we are talking about a patent

definition, we have said that there are three criteria. So, these are the three criteria for patent you can just check what a Novelty is.

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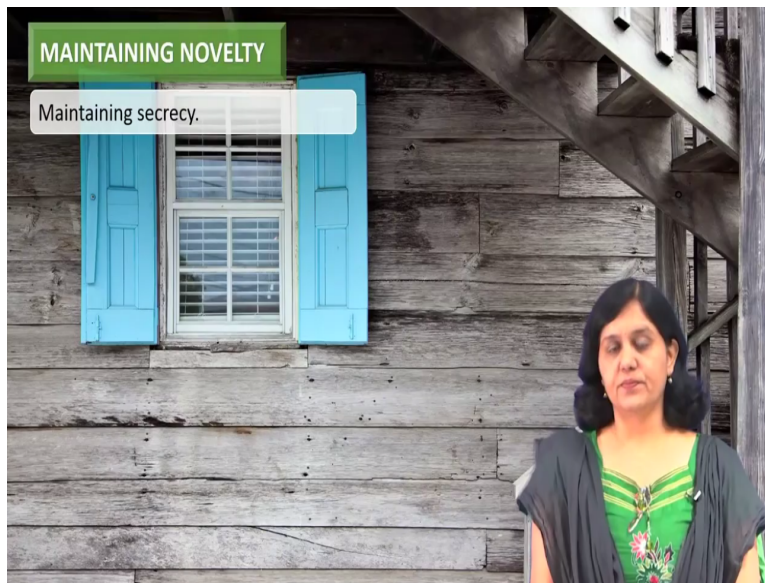
So, here novelty is like first time in the world. So, when we say criteria one for patent is novelty, the meaning is that your invention should be first time in the world. So, details of all about this novelty, you can check in the video and you will understand and appreciate that novelty is like a simple example or analogy I can give like a searching a needle in a haystack, you can just imagine how difficult that task is.

So, that much difficult is a task to check novelty aspect and for novelty aspect check that is a prior art search if you want to do and develop a search report definitely you will require expert because you have to search a very relevant patent near to your whatever invention is and then you have to find out whether it is not the prior art and it is really novel and it is really first time in the world.

To give example here if you are working in suppose a mechanical engineering area and if your any invention is related to mechanical engineering, what procedure you are following you are going through the database there are free databases and paid databases and free databases, Espacenet is a good example, you can refer Espacenet, about Espacenet in the course. Now here there are total 110 million patents available currently.

So 110 billion plus patents are available, you have to browse through all and check which is relevant to your domain. So that much difficult this task is and therefore you will like require experts. So you please check this video about Novelty that how that what is novelty and how what are the details considering the patent act what it is talking about a Novelty.

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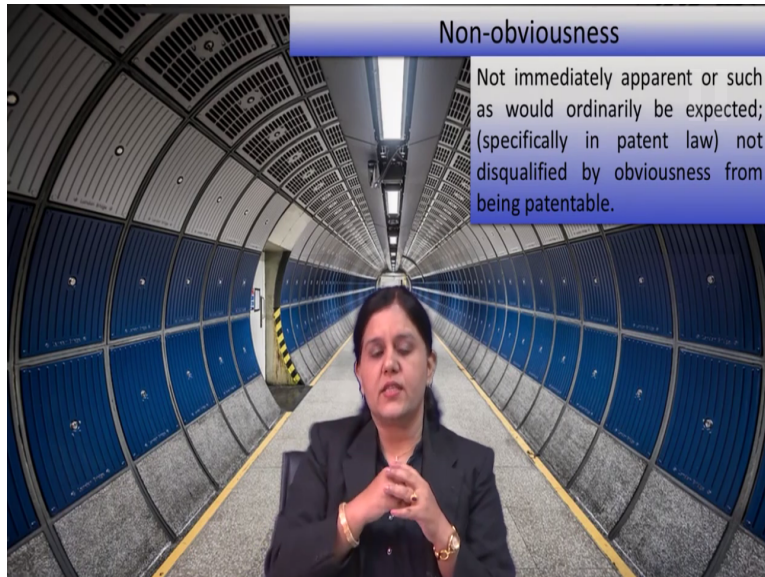
How we will check novelty aspect? As for a definition, the invention is a novel. Now in this case, we are, we will relate that definition. So as per definition the invention is novel if any invention or technology which has not been anticipated by publication in any document that is a first thing. And second, any invention or technology which has not been used in the country or elsewhere in the world before the date of filing of patent application.

Here in this case, if inventor Aakash a 16 year old boy, he want to patent this invention, he has to satisfy this to condition mentioned above. So before making his invention public, he should have filed a patent for this invention. That is a first thing and second, he should not have commercialized his product before filing the patent. So, no publication or no commercialization before filing the patent application. But definitely this is the invention which is related to medical field, so, he probably have taken some trials clinical trials, that is accepted thing okay.

So, then only we will say that invention or technology is not anticipated by publication and invention or technology has not been used in the country or elsewhere in the world. So, there are

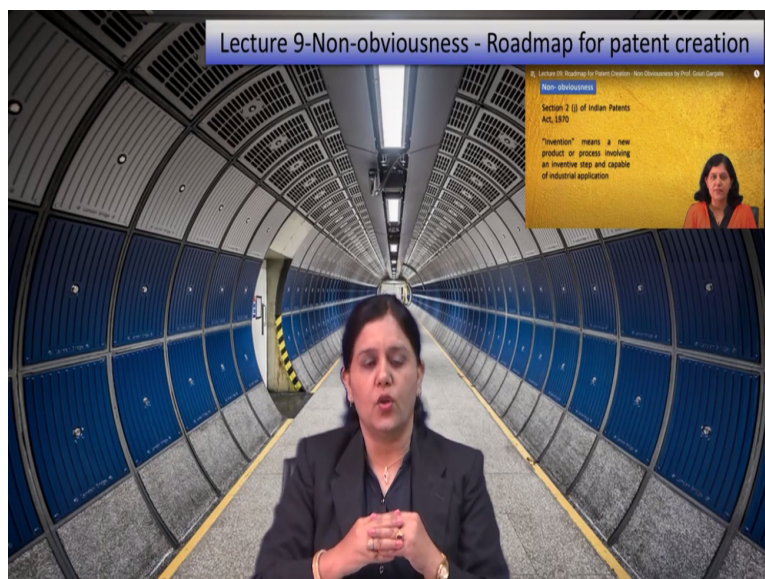
a few things we have to remember that before filing the patent inventor and applicant must ensure that they are maintaining secrecy.

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So, after knowing the novelty acts aspect, next is non obviousness. So, what is non-obvious as a name suggests not obvious. So, it is not immediately apparent or a such as would ordinarily be expected. So, what is the meaning of that particular non obviousness?

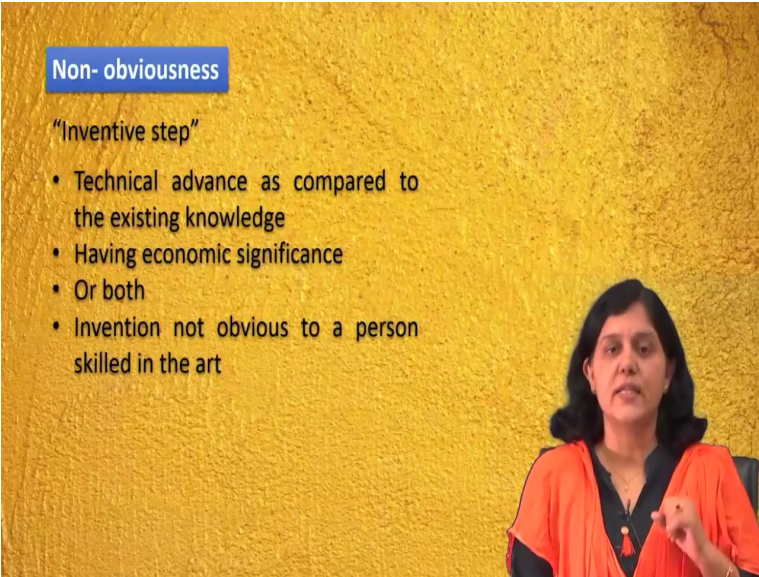
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Now, here you can see a lecture that is a Lecture 9 for a non-obviousness. I can give a simple example and then you can watch this video. Simple example of non-obviousness is, person who is skilled in the art we refer to it as a Phosita. So, in roadmap for patent creation, what we have done is like we have any one animated character called PHOSITA.

So, that you can remember the terminology Phosita and this Phosita is a person who is having ordinary skill in the art that is meaning of that is very simple, that is a person from if he is from a mechanical engineering domain, other person from the same domain should not feel that this invention, whatever you are trying to patent is like obvious. So, that feeling should not be there, you can check this video to check few examples and the concept and some case laws related to non-obviousness.

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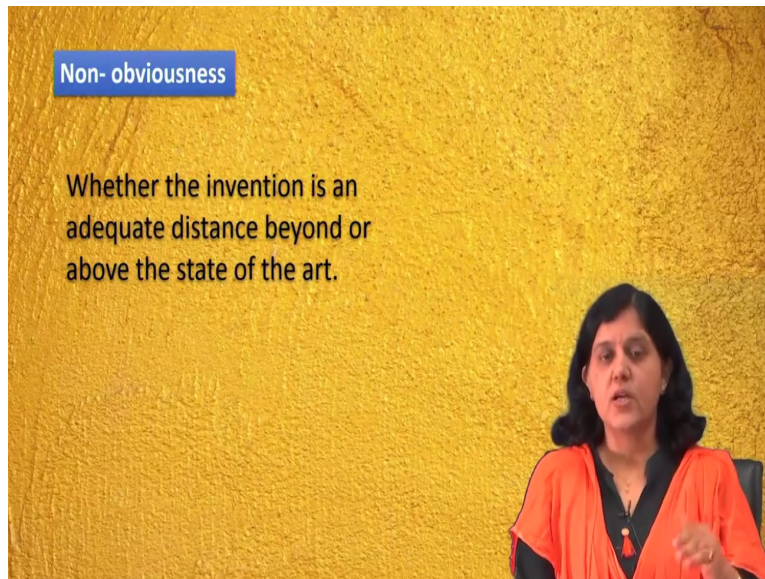
Non-obviousness

“Inventive step”

- Technical advance as compared to the existing knowledge
- Having economic significance
- Or both
- Invention not obvious to a person skilled in the art

So, there are these four points, first three points you can easily appreciate, which are this first point technical advance as compared to the existing knowledge, economic significance, and then both technical advance as compared to the existing knowledge and economic significance. So, these first three points you can easily appreciate, the fourth it says invention should not be obvious to a person having ordinary skill in the art. So, what is the meaning of this non-obviousness to a person having ordinary skill in the art?

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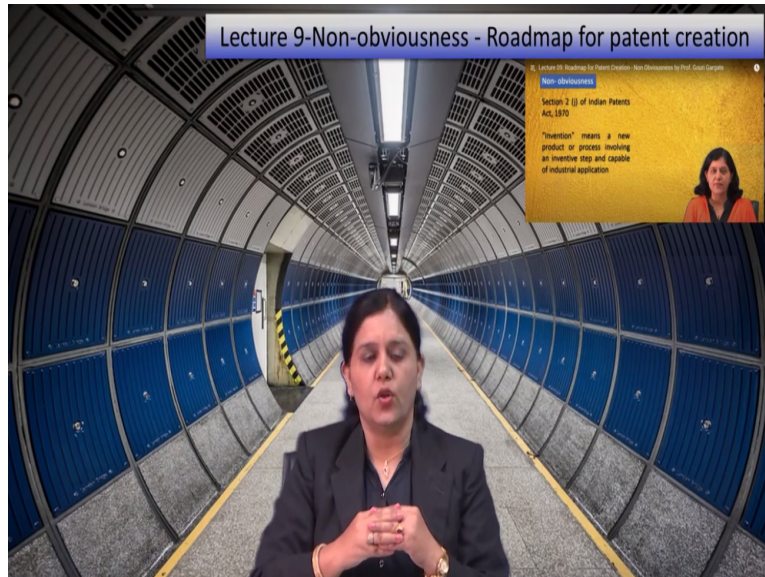
So, can be same, whether the invention is an adequate distance beyond or about the state of the art that is what is the meaning of a state of art, state of art and the invention under condition must have must be apart from each other, there should be some difference that can either technical or economical or both, we already know the meaning of a state of the art. Right? As said earlier, it should be non-obviousness, non-obvious to a person having ordinary skill in the art.

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Now just check this thing person having ordinary skill in the art, take the first letter from the every word. So, we have met him for in the first model in the first week.

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So, after watching this non-obviousness this video, we will move to next criterion that is industrial applicability.

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Now, what does industrial applicability is? You can see the Lecture 10 which talks about industrial applicability. So, as name suggests, any invention, it should have a practical

application. So, if you create something, which is novel, which is non-obviousness, having means, both the criteria are what we can say this particular invention is satisfying, but if it is not having any industrial application, then that particular invention cannot be patented.

So, practically it should solve some problem, it may be a process, it may be a product because process and product, both patents that is process patent or a product patent, both patents are what we can say in India you can get a patent for both process and patent. So, you just watch what that industrial applicability is.

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And we considered as an industrial applicable. So, the important is invention must possess utility for the grant of patent. No patent can be granted for an invention devoid of utility. Many times when invention is related to methods of testing, then in such case the industrial applicability will be judged as applicable to improvement or control of a product, apparatus or process. But then the important is to indicate the purpose of the test, let us try to understand this, methods of testing are generally regarded, regarded as a capable of industrial application.

In such cases, there will be improvement. So, it says method of testing and applicable to improvement. So, this improvement is in what it may be in a product, it may be in the apparatus or it may be a process which itself is capable of industrial application. So, something is already

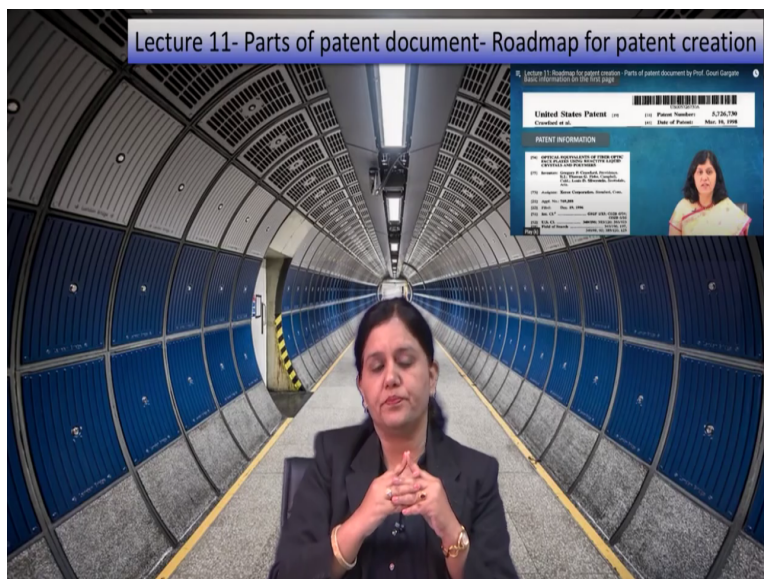
existing and it is improved in such cases it is suggested to indicate the purpose of the test in such cases the contribution by the effect.

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So, till now, you have seen what is the patent definition that particular characteristics of patent definition and three criteria of patent. now, we will move and see what are the parts of a patent document.

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So, if you come across any patent document, which different parts you will see in a patent document. Now, this parts are like a very sequential way patent is drafted and you take any patent that particular format is followed. So, you will say title, then there will be a field of

invention, then there will be a background or you can call it as a prior art, then in the background in the last there will be a problem to be solved that will be explained then there will be object of invention.

Then next is like a maybe a summary of invention or they will give you the general statement of invention, after giving this much information, there will be a detailed description of the invention, and the detailed description will cover that drawings, then any best method if it is there that will be covered, then if it is suitable examples of working of that invention are there that will be covered.

And in the last you will see claims, in the document in the last you will see the claims. And claims as we always say it is a heart of a patent, because legal rights are determined by that claims. So, claims is very important, there may be 10 claims there may be 2 claims there may be 1000 claims, that number is like it depends on a patent expert who is drafting that particular patent.

So, you have to check each and every claim to check the legal protection that particular patent document is looking for. And then based on that, you have to think of whether your invention is like related to it or it is different from it or you are like solving the problem that whatever problems are cited and whatever covered you are talking, about invention, which is much better than which is already solved. So you have to check it in that angle after going through that document.

Now, if you see here on the now what we can say, if you see that parts of a patent document and if you check the patent document on the first page, you will get a bibliographic information and it will cover a priority date, application date, patent number, inventor, title of a patent, everything. So, you just watch this video, you can get idea about parts of a patent document.

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Basic information on the first page

United States Patent [19]
Crawford et al.

[11] **Patent Number:** 5,726,730
[45] **Date of Patent:** Mar. 10, 1998

PATENT INFORMATION

[54] **OPTICAL EQUIVALENTS OF FIBER OPTIC FACE PLATES USING REACTIVE LIQUID CRYSTALS AND POLYMERS**

[75] **Inventors:** Gregory P. Crawford, Providence, R.I.; Thomas G. Fiske, Campbell, Calif.; Louis D. Silverstein, Scottsdale, Ariz.

[73] **Assignee:** Xerox Corporation, Stamford, Conn.

[21] **Appl. No.:** 769,388
[22] **Filed:** Dec. 19, 1996
[51] **Int. Cl.⁶** G02F 1/13; G02B 6/04; G02B 6/16
[52] **U.S. Cl.** 349/196; 385/120; 385/123
[58] **Field of Search** 349/88, 92; 385/120, 123

[56] **References**
U.S. PATENT
4,721,352 1/1988 3599615
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5,317,429 5/1994 359402
5,364,220 11/1994 383/143
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Primary Examiner
Assistant Examiner
Attorney Agent
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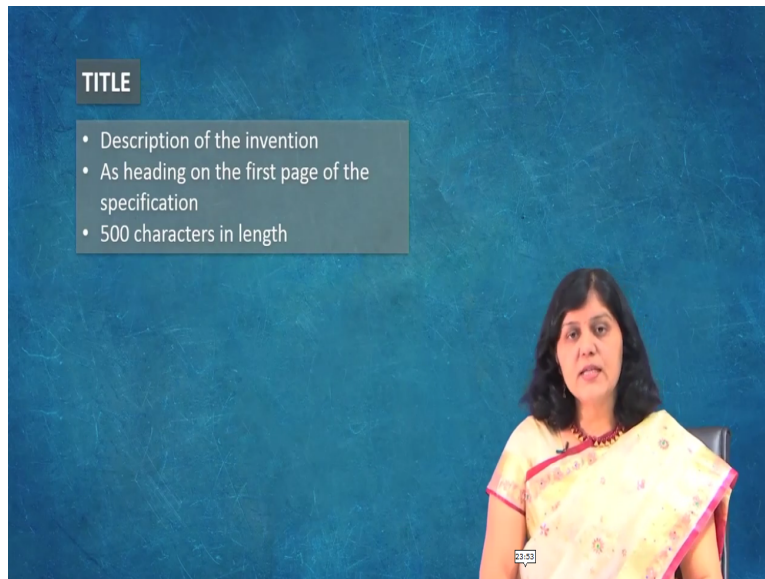
INVENTORS & OWNERSHIP

Patent document : Parts

Title
Field Of Invention
Background
Object Of The Invention
Summary Of Invention
Drawings
Detailed Description
Claims
Abstract

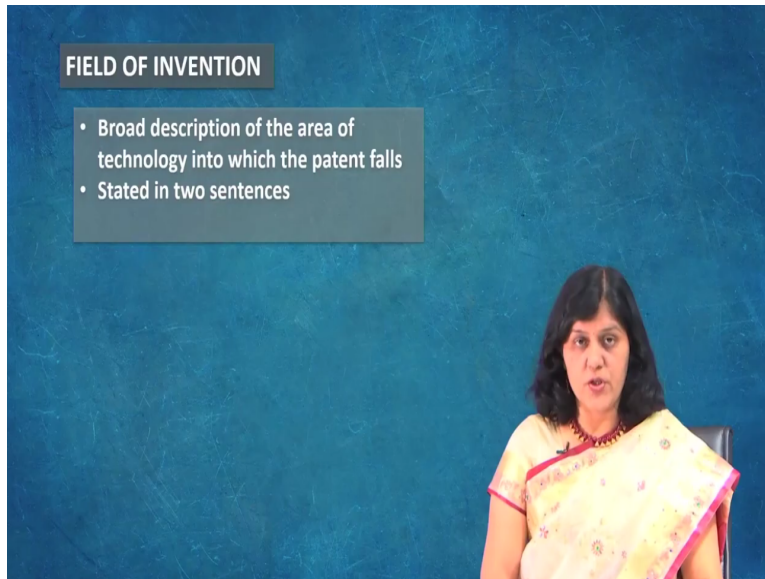
Document, it will contain parts as title, field of invention, background, object of invention, summary of invention, drawings, then you will see the detailed description, then claims and then the abstract. So, you will get all this information that is a parts in the patent document, there are certain rules to be remembered related to this document and the parts. So, what are these rules or guidelines please see.

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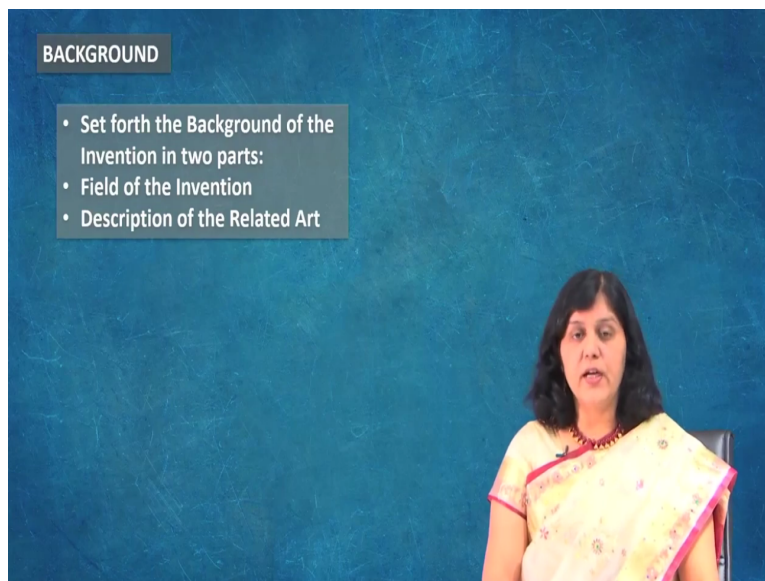
So, let us take example first start from the title. Now as for Section 10 of the Indian Patents Act 1970, it is expected that title give you broad idea about the invention. This is the heading of the first page of the document that is after the bibliographic information, you will see the that that that along with that you are seeing the title on the first page we have just seen the example. So this is the heading on the first page of the document, it must be short and specific and the length may be 500 characters. So that guidelines are given it is expected it is to be easily searchable by using a few keywords. So that is the expectation. So this is about the title.

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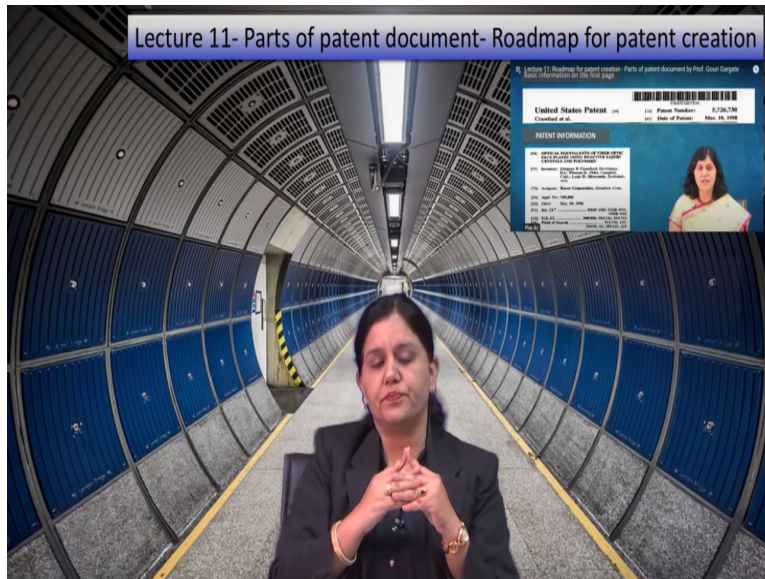
Then the next is field of invention. Now what is that field of invention, it is a brief information about the broad technology domain in which invention falls. So, this is giving you the idea about the technology domain.

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Then the next is a background here, it is expected to give the prior art of the invention, you know now, what is prior art. So, state the problem to be solved, then give the information about the earlier failures if any related.

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So, after knowing the structure of a patent, you would like to know that in Indian patent Act, there are certain inventions which are not patentable. So, you would like to know, which are that yeah, you can see that inventions which are not patentable.

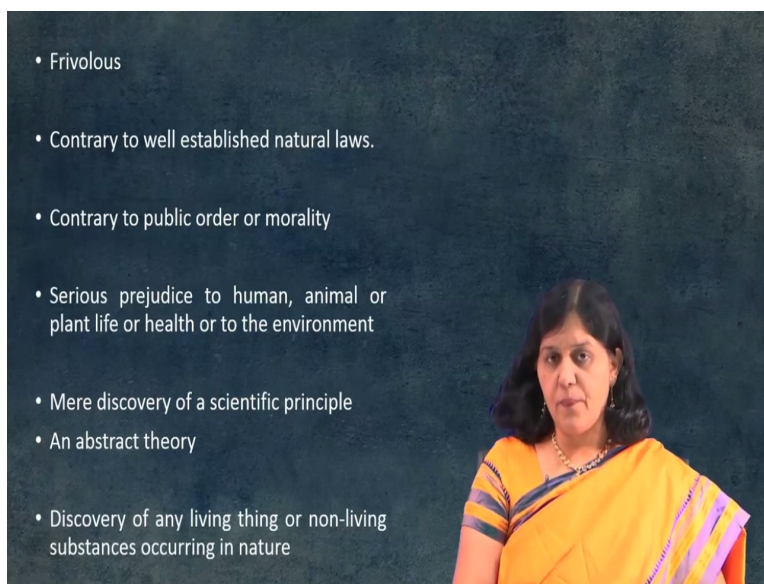
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So, this is a Lecture 24 which is talking about inventions not patentable. So, for example, frivolous or contrary to well established natural law or contrary to public order or morality, if there is any serious prejudice to human animal, such kind of inventions are not patentable, mere discovery of a scientific principle, abstract theory. So, a list is given that Section 3 and you can

you would like to know, which are that inventions which are not patentable in India. So, you can watch this video about Section 3 inventions which are not patentable in India.

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Or which claims anything of business contrary to well established natural laws, I repeat the inventions which are Frivolous or that is one thing or which claims anything obvious contrary to well established natural laws. So, what is the meaning of this? We will understand this with an example. We will take one example here, development of a perpetual motion machine if someone claims that he or she has invented a machine perpetual motion machine obviously, it is not possible it is against the natural law.

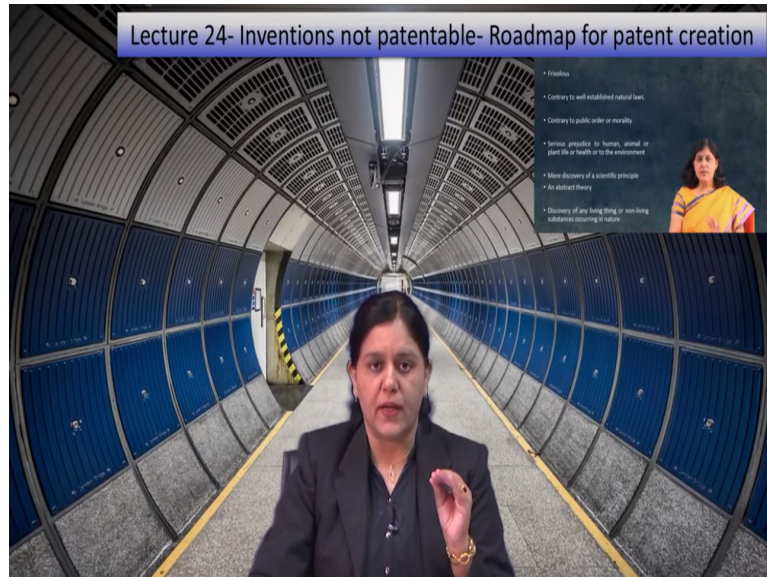
So, it will not be patentable or if someone claims that he or she has created a machine where if you put some vegetable in that machine, automatically it will convert into metal say gold or platinum. So, conversion of vegetable into gold or platinum if someone claims that kind of invention, definitely it is not possible, at least up to this time it is not possible from vegetable platinum, this is a Frivolous.

So, if someone claims such invention then that is not patentable or in the stories we listen about the stone which when touched to the iron it converts it that iron into the gold, at least till date no one have discovered if it is available somewhere in the world, it is not still discovered or nobody have invented this thing. But if someone claims then this is against the law.

However, if any chemistry scientist in success, he becomes successful converting this vegetable into gold or iron into the gold just by a simple process, then that may be very interesting

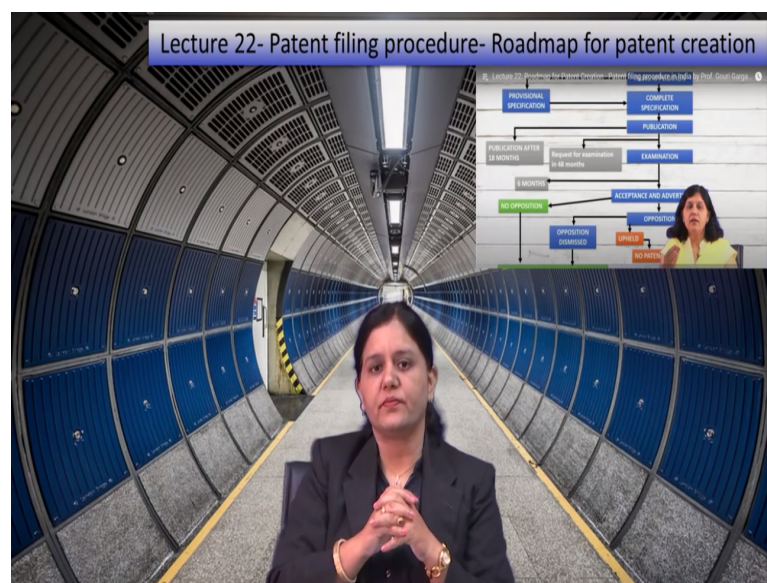
invention, yeah, but still this time all these things we cannot consider because it is a Frivolous against the natural law.

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So, after knowing this, once you get idea, okay, I have something which is patentable, you would like to know that what is the patent filing procedure?

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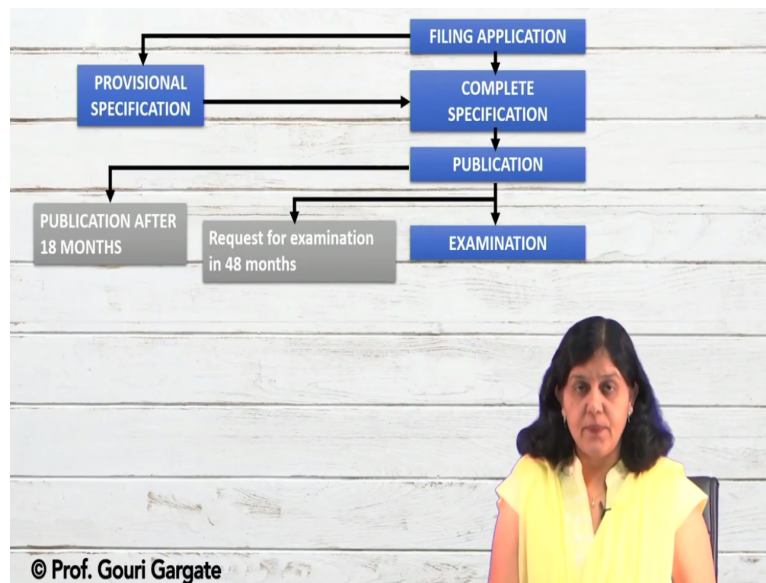


So, this patent filing procedure is covered in Lecture 22. So, here, you can get the sequential what we can say steps which are followed by whenever you are doing a patent application and

probably you have heard like it after 18 months publication will happen or sometimes you hear that okay my patent application have filed, but it took something like eight years or seven years for a granting. So, why this time is required, whether really patent, it is a issue of patent office or it is a some, what we can say you have not followed the procedure?

So, you just find out because in India general timeline for a patent grant is only three years to three and a half years. If it is more than that probably you are not following, your patent expert is not following certain what we can say steps according to timeline, and probably because of this, you are not getting grant of your patent in three and a half years or four years. So please watch this timeline. And you will get the idea that how that patent prosecution happen in a patent offices in India.

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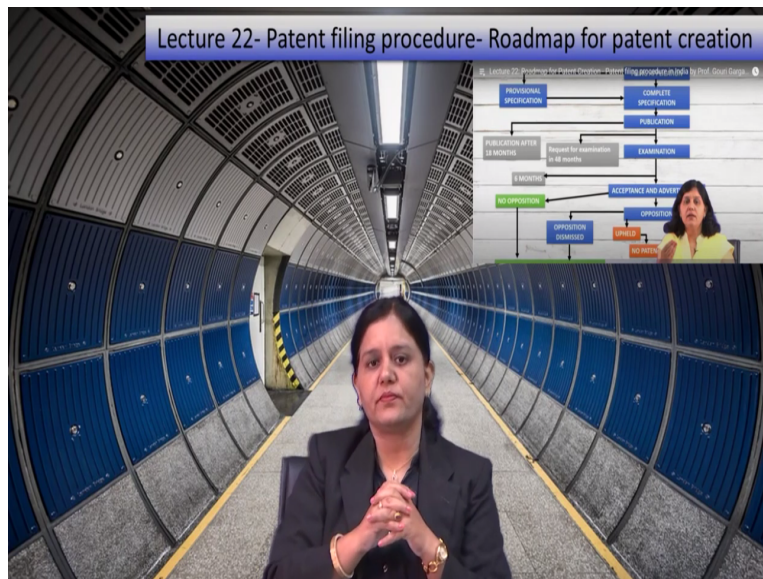
Again, either applicant himself or anyone on behalf of the applicant can file this request by giving the requisite forms fees to the officer in the patent office or any applicant can use an online mode provided digital signature is available. So this is what the publication step is, the second step. Now, the third step, next step, that is a examination, whether this is automatic, like a publication, are you required to give some fees for that?

Yes, you have to give fees for that it is not automatic, you have to file the request for examination. So, here the applicant have to give the request for examination along with the

requisite fees unless until this request is received by the patent office, the application cannot be considered for the patent examination. So, here please note publication that normal publication it is automatic, but examination is not automatic, applicant has to file the request.

Here again, same rules, the applicant should have file fill the requisite form, draw that cheque amount, that cheque with requisite whatever the statutory fees is there and then file the request for examination. On behalf of applicant, anybody can just visit the patent office, they can submit the form they can give the cheque and they will receive the receipt from the patent office. So, this mode also can be opted by the applicant. Also on behalf of applicant, anyone can deposit the forms and fees just like a Patent Attorney or Patent Agent that through that route also you can file the examination request. So, the next question is, is there any timeline for this filing this request? Yes, a timeline is a 48 months.

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So, after knowing the patent application process, here, one more module, I will suggest you to watch from “Roadmap for patent creation”.

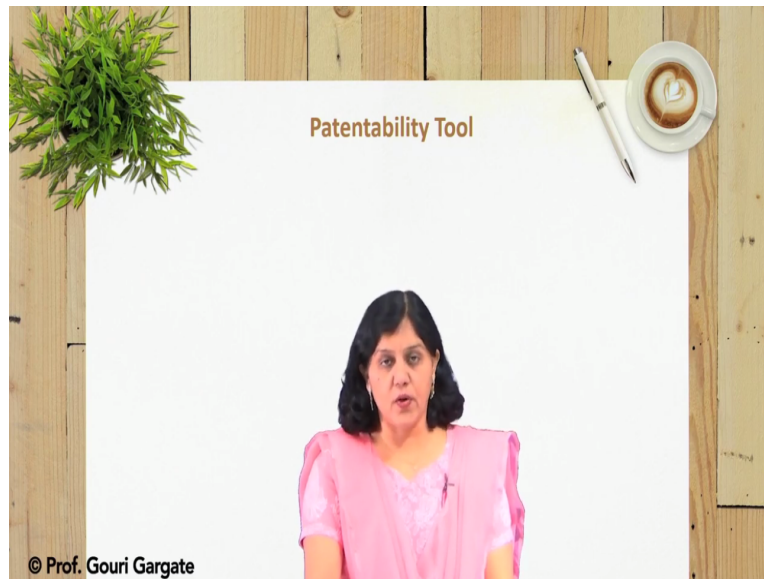
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It is like a Patentability tool. Now, what we have done, we have given you a simple tool here. It is like step wise just you can just follow this tool and it will be very helpful for you to check whether if, you may get confused and you will, confused in a sense when you are going through them your organizational IP audit or whenever you think of filing a patent, you will get confused in a sense like whether this invention will fall under criteria whatever is stipulated by patent and whether I will be able to file it as a patent and you will feel that okay I have to consult with a patent expert.

So, instead of that probably this tool will help you instead of consulting with any expert you can just follow this tool and check if your invention under consideration is following that particular according to tool if it is, you just follow that particular thing and accordingly you will get at the end that okay this particular invention can be considered for a patent filing or not. So, please watch this patentability tool that is a Lecture 17 of roadmap for Patent creation.

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In the last module, we have seen IP identification tool IP identification tool helps you to plan the research or project activity in such a way that there will be minimum chances of missing out of any potential patent. The tool helps you to identify that potential patent. Now, in this module, we will go through patentability tool, we will see in detail how exactly anyone can judge whether the invention under consideration fulfills or satisfies the criteria for the patent.

So, let us check what is this patentability tool is. The patentability tool will concentrate on a single invention disclosure or technology domain and it will help to check out whether the invention under consideration is patentable or not.

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So, I guess after going through these videos, probably you got pretty well idea about that what is patent? So, you can see on the slide that exclusive right you have seen the definition right. So, the definition, in the definition in earlier definition, you have seen that what is exclusive right. When you have watched that video, you understood what is exclusive right. Then we have in the definition it is said that it is granted by sovereign of the state, it is granted to whom, it is granted to owner of the inventor, invention and you are getting the right of make, sell, use, manufacture.

Then when you are getting that rights, when you give a complete disclosure of the invention, and then you have to follow certain criteria. So which are these criteria? Novelty, Non-obviousness and Industrial Applicability and for a limited period. So, what is that limited period 20 years and then there are two routes like a PCT route then convention, convention application is there. And then you have seen the timeline and 12 months timeline is a very, very important and you have to follow that deadlines critically, because if you miss that 12 months timeline, maybe for PCT or maybe for conventional application, you are missing a file means you are missing literally your patent will come into the public domain and even you may not able to get that protection.

So, by watching these videos, probably you got a pretty well idea. And with the tool, it will it will give you the confidence to go for a patent filing and I have already told you that I have not referred that video, but how to choose a correct patent expert related to your invention, you can watch that video also and you may go for filing of a patent. Now, here, what you can say that this information will be good enough for you as a entrepreneur.

Now, you would like to know patent infringement and patent strategies. So that is that two more important things are there. So in upcoming module, we will see what is patent infringement is and what are the different strategies we should follow for a patent lifecycle management that we will see in the upcoming modules. So see you in the next module. Thank you.

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