

Patent Search For Engineers And Lawyers
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Lecture - 21
Types of Patent Search FTO

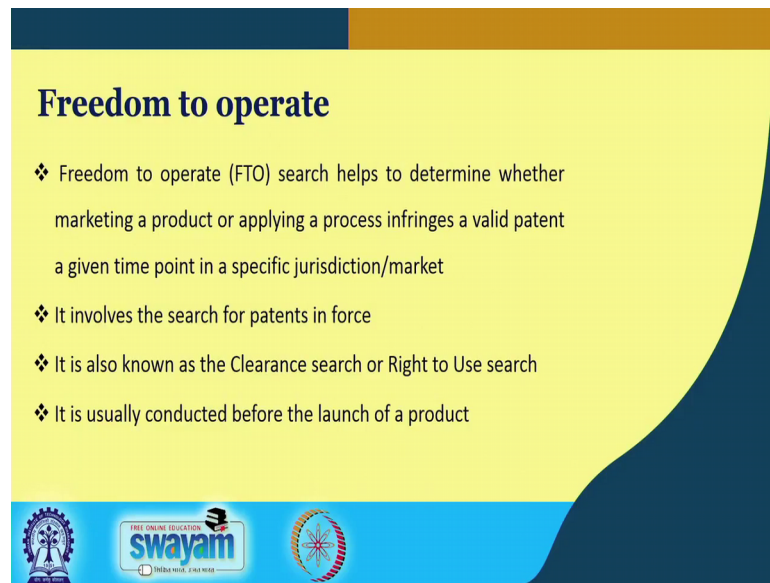
Welcome to the lecture on FTO Search, this is one type of patent search among the patent search systems which are used worldwide.

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In this lecture we will cover the basics and basis of FTO, how to conduct an FTO search? What are the challenges in FTO search? What is the difference of FTO search with respect to other types of patent search?

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Freedom to operate

- ❖ Freedom to operate (FTO) search helps to determine whether marketing a product or applying a process infringes a valid patent a given time point in a specific jurisdiction/market
- ❖ It involves the search for patents in force
- ❖ It is also known as the Clearance search or Right to Use search
- ❖ It is usually conducted before the launch of a product

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Let us understand the basis and the basics of FTO or the Freedom To Operate search. A freedom to operate search is typically carried out before the launch of a product into the market. So, why is that important? It is important to ensure that one is not infringing on an existing patent. So, since there could be patent rights covered with respect to products or processes it is imperative that a company which is manufacturing or trying to bring in a product into the market do a FTO search.

So, this typically involves the search for patents which are granted and because of the reason that this provides clearance for entry into the market. It is also called a clearance search or a right to use search. So, usually the FTO search is conducted before bringing in the product into the relevant market.

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Why do we need FTO?

Early stages

Avoid infringement by modifying your invention to “design around” existing patents during the R&D process

Late stages

Protect your market entry plan to prevent any IP infringement

• It is a key step in risk evaluation

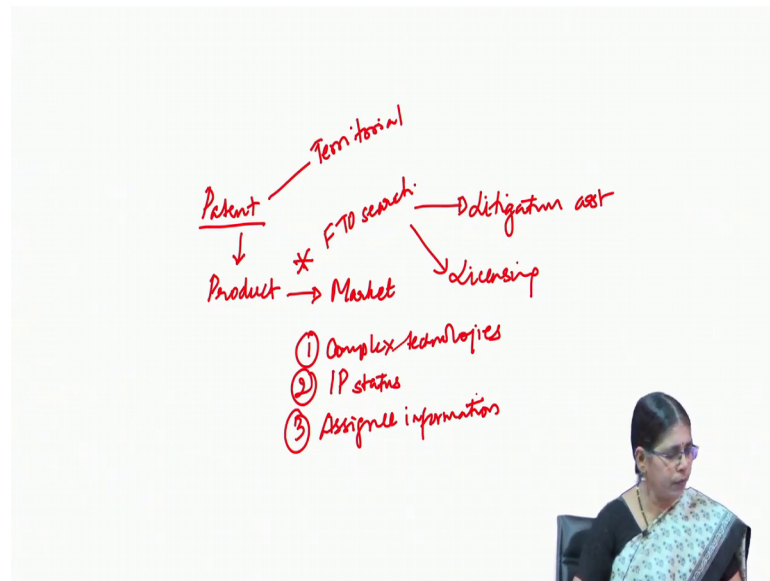
The slide features a yellow background with a dark blue header and footer. A blue speech bubble contains the text '• It is a key step in risk evaluation'. The footer includes logos for 'swayam' and 'INDIA WIDE, 100% FREE'.

So, why do we need an FTO? FTO is needed for two purposes at 2 stages that is , typically it is done before the entry into the market to prevent any issue with respect to infringement of IP, it is also at times done in relation to starting R and D. So, if a company is looking at manufacturing a particular product or is in bringing in a process for the production for a better improvement in such a case it is also important to know whether there is already existing IP and. So, therefore, at an early stage also the requirement of an FTO may arise.

So, that the company can avoid the IP infringement and the design around; so, that you know the new IP can be created and thereby the company can actually operate in that particular segment. So, an FTO search is a key step in risk evaluation therefore, an FTO is search is also a very important search among the different types of patent searches. Today the area of FTO search has really enlarged into several domains and depending on the complexity of the technology the FTO search can be quite varied.

Let us get back to understanding today, what is the scenario you know where FTO requirements are becoming very important. Let us understand certain fundamental aspects of the requirements of y and FTO search is done.

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So, if a company has a patent it does not necessarily mean that it can actually practice in the market patents are exclusive rights the negative rights, but they do not give the right to entry into the market. Now, if this patent covers a particular product and the company is planning to bring this product into the market. There are several considerations which the company needs to keep in mind, one is that patents are territorial in nature. So, let us imagine that the patent is in the United States and the market is in the European Union.

So, before the entry of the product into the European Union, it is important for the company to take up a search to look for whether there are European patents and many a time it is possible that that particular technology which is covered under the product has several patterns. This particular product manufacturer may not be owning all the patents in relation to that particular product which means the manufacturer will not have the freedom to operate in the market without infringing the rights of the IP in relation to another entity.

So, therefore, before the product is launched into the market this is the critical step when the FTO search becomes necessary. So, there are several considerations in relation to the FTO search which the company should keep in mind before the entry of the product into the market. So, that you can avoid a lot of litigation cost which can arise due to infringement of IP also; it provides an opportunity for an early licensing. So, it provides opportunity for licensing. FTO searches often have different considerations to keep in

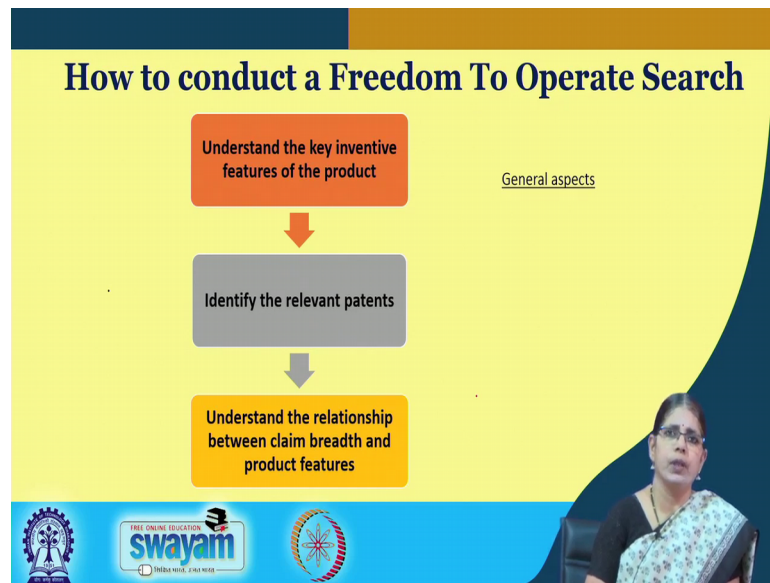
mind because of the complexity of the entire technology today we have products which have multiple technologies involved. So, that is one consideration so, where we are talking about complex technologies.

The IP status is the other consideration, the jurisdictions vary with respect to publication requirements also there are other overlapping aspects of IP which many a time companies actually keep. For instance for a long period of time it would be a trade secret later on it would be developed further and then you can have a patent right. A non publication request could be filed in relation to an IP so, that would mean that there is a delayed publication of a particular IP. So, there is a lot of complexity in also in relation to the IP status of different products and processes. So, keeping in mind the considerations in relation to IP are also important.

The third important thing is the assignee information, today it is not about big players in the market it is also about startups coming up with very high technology. So, therefore, keeping track of who are the people who are actually in the competitive space is very important in relation to keeping the FTO boundaries in relation to that particular search. So, some of these considerations become important. So, many a time companies do not want to file IP they actually go and what we for what we call a technical disclosure. So, today FTO search is not a very simple search, it can be quite elaborate.

So, there are many considerations even beyond just looking at the IP. So, keeping this in mind let us go further into the aspects of understanding the details in relation to the FTO search.

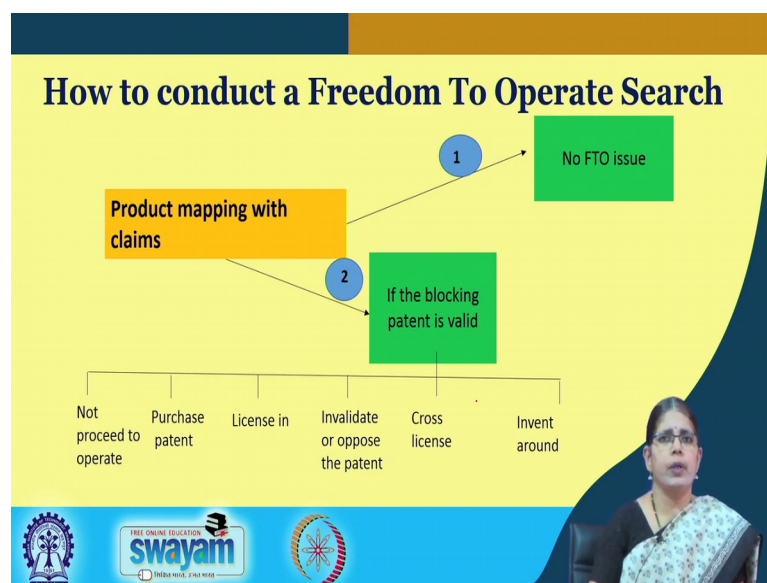
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So, how to conduct a freedom to operate search? So, there are general aspects of the freedom to operate search. The first thing is to understand in relation to a product for which or a process for which we are looking at seeking the FTO. So, understanding key features is the first step.

The second step would be to look at the relevant patents. So, we are looking at mapping the product to the patent. So, that is what is the relation with respect to identifying the relevant patents. In the third stage we understand actually the relationship between the claimed scope in a patent with respect to the product for which we are seeking the FTO.

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So, product mapping with respect to claims is an elaborate process and it can lead to different outcomes, one straight outcome may be that there is no FTO issue in which case the product can be brought into the market safely without infringing of the IP of another. The second stage is where you find patents which are blocking patents which will prevent you to get into the market in which case you will not have the freedom to operate with respect to your product without infringing the rights of the IP of another company.

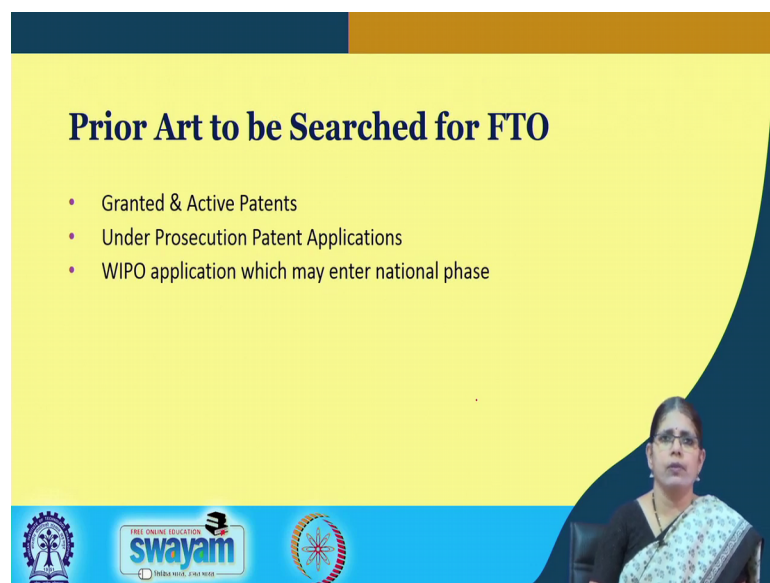
So, what are the options available in such a case? One is not to proceed to operate that is not bring the product into the market potentially a case of infringement (Refer Time: 10:04). What is the second option there, you can actually purchase the patent, the third option is a option of where licensing in option can be available. So, a component may be licensed in and then you can that could be a part of a overall product and then you can bring that product into the market. Another option that is available is you can plan to invalidate the patent. So, therefore, invalidation opposition of a patent is the other scenario which could be planned.

So, another option that is available is to cross license the IP, now in many areas such as electronics and software the implementation of the of the invention is across the different applications. There are different applications that could be and also the implementation is across several platforms. And patents usually are represented by patent sets here in which case there is there may be a need to cross license that opportunity is also created. To

avoid potential IP infringement one can actually also look at design around or invent around. So, that is the other option that is available.

So, the product mapping with the claims will provide us an early opportunity of what we call the risk assessment in relation to the IP and these are the various options which are available before we actually embark on the process of looking at whether to bring in the product into the market. Now, a company may decide on one or more of these options. So, this provides an early assessment in the scenario of FTO.

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Prior Art to be Searched for FTO

- Granted & Active Patents
- Under Prosecution Patent Applications
- WIPO application which may enter national phase

swayam
THINKING, LEARNING, GROWING

What is the kind of search that is done in relation to FTO? So, what is the prior art in this case, typically the prior art is granted patents. Sometimes it is also necessary to look at the published patent applications and the prosecution information in relation to those. Since the entry of the product in could be a matter of different geographies in which case it may be also important to look at published PCT applications and keep a sight of whether national entry phase has begun or not.

So, what is this all about? So, in a PCT system the PCT application is published so, that is only a worldwide publication. So, if you want grant in a particular country one needs to look at the national entry of those applications. So, while there are several designated countries available during the PCT application phase it is possible that a company may bring in the patent in only some jurisdictions depending on where the market value is.

So, depending on the availability of a market only certain countries are chosen for the entry into the national phase.

So, tracking the application status in the individual country becomes important because the question of the IP status of that particular application arises. And so, therefore, once there is a grant in that particular jurisdiction then you can understand that when you are trying to bring the product into that jurisdiction there is a potential case of an IP infringement that can arise. So, tracking the IP status becomes imperative in a case of a FTO search even into the PCT application mode.

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FTO search for product entry

- **Step 1:** Identify the country/countries where the invention/product is intend to be launched or used
 - Since patents are territorial in nature FTO analysis is country specific
 - Search report will be separate for each country if multiple countries are considered

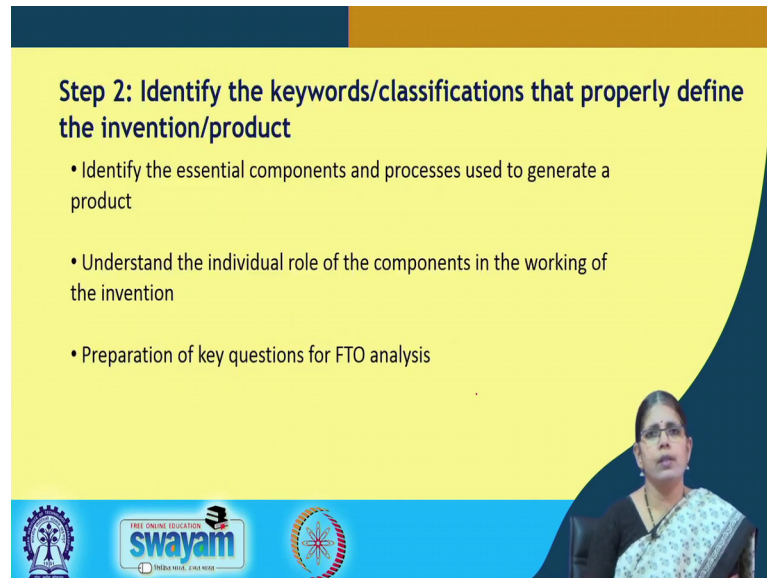
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So, when we look at the FTO search at a late phase that is when we are looking at the product entry into the market there are several steps that are involved in doing the FTO search. Now let us examine each of these steps and understand the nuances of each of these in relation to the search. The first step is to identify the country or the countries where the product is intended to be launched or used. So, that is you are looking at select geographies where you want to bring the product into the market.

What are the considerations here? FTO is a country based search, in this case if you are looking at multiple countries you will need to have separate reports made for each country. In an earlier instance in this lecture we discussed about what are the considerations in relation to different jurisdictions, the IP status can vary, the process can vary. So, therefore, for each of these countries you will have to have a separate FTO

search report and then assess the potential value with respect to the entry of the product into such a particular market.

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Step 2: Identify the keywords/classifications that properly define the invention/product

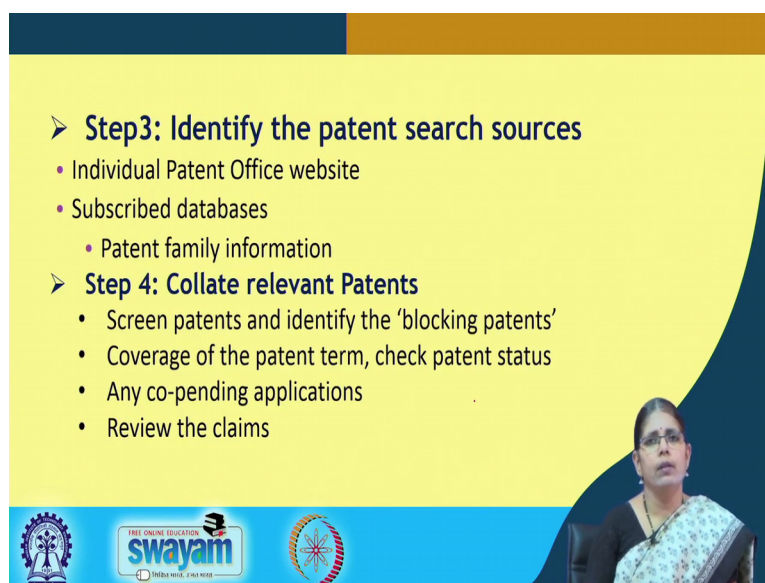
- Identify the essential components and processes used to generate a product
- Understand the individual role of the components in the working of the invention
- Preparation of key questions for FTO analysis

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The second step is to identify the keywords and classifications based on the feature of the product. So, these are what you will take as the keywords and then look at searching for the patents. So, here we are looking at the essential features of an invention or that particular product in this case when we are looking at product entry and those features are actually looked for from the point of view of the assembling of patents. Hence, the working of the invention is also important in this case because the question of use of a product also arises.

After assembling these aspects one actually poses several questions in relation to the FTO analysis, for instance what are the key components of this product? That is one question to ask. What are the operable features of the particular product? What are the different ways in which the product can be used? What are the different interventions that you are looking at? What are the different alternatives that could exist from the point of view of use of that particular product? So, there are several questions one can actually come up with in relation to the FTO analysis, these will guide you in taking up the next steps in relation to the FTO search.

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➤ **Step3: Identify the patent search sources**

- Individual Patent Office website
- Subscribed databases
 - Patent family information

➤ **Step 4: Collate relevant Patents**

- Screen patents and identify the 'blocking patents'
- Coverage of the patent term, check patent status
- Any co-pending applications
- Review the claims

The third step is the identification of the patent search sources. So, again depending on the geography where you are looking at the relevant markets those countries you will take up for the patent search. So, it could be a different set of patent office's that you are looking for sometimes patent searchers you subscribed databases where all the different it is a collection of different patent you know data databases of different countries. So, therefore, at one go you can actually get the entire information you can filter by country information, you can also filter by assignee information. So, therefore, that eases provided with a subscribed patent databases.

One consideration is that is important when you undertake the search for relevant patents is to also look at the patent equivalents, which means you are also looking at the patent family information. At this stage one must also keep in mind that different inventions have value with respect to different geographies in a different way, which means the same products are not launched or the same patents are not taken across geographies depending on the use of those particular inventions in those geographies. So, therefore, looking at the equivalents for patents is again very important from the point of view FTO search.

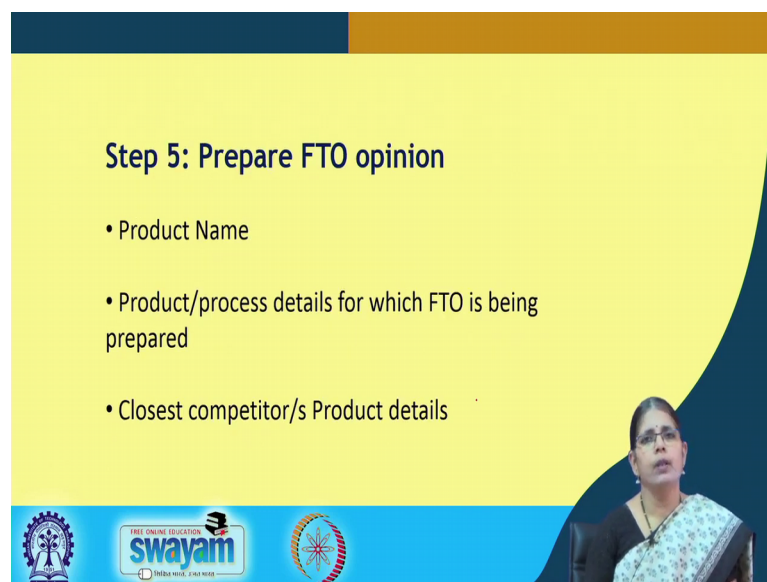
The step 4 is the collation of the relevant patents into one set, from that what is this important thing that we do here. We are looking at the set of patents which are collected and then looking at which is the patent which are which is the one which covers all the

features of the product those would be what we call the blocking patents. If you identify that there are patents which are of such nature, then the next step starts in terms of looking at is that patent valid still, is it near expiry, is it still being maintained, is there patent term extension for that patent. So, these are important.

Now, besides since there are a lot of follow on patents which are filed it is also important to understand are there any other child patents in relation to the main application. So, there they could be co-pending applications which are there with respect to this particular application. So, this gives you an overall idea about one is that that, what is the strength of that particular patent in relation to it is equivalence and the existence of that particular invention in it is different form.

After doing this one would go into what we call review of the claims. So, to what extent there is a complete overlap between the product that is the product mapping with respect to the claims with respect to the scope of the claims. So, therefore, review of claims is the important step.

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Step 5: Prepare FTO opinion

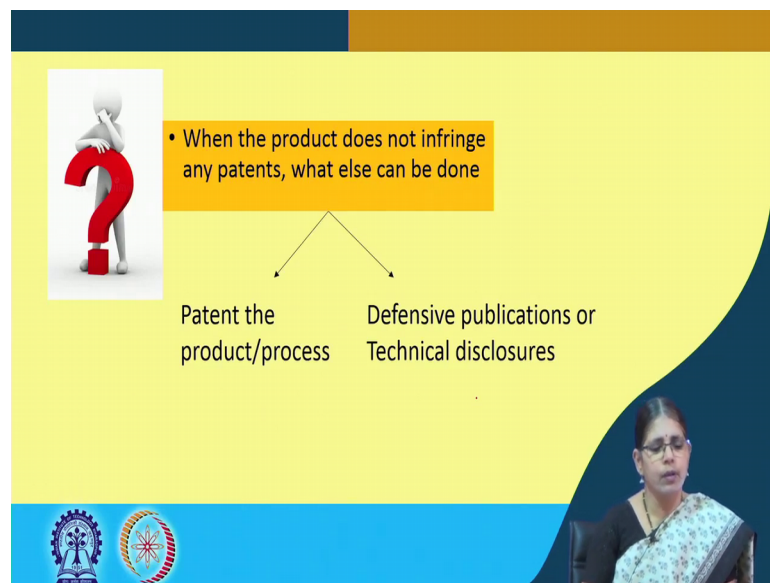
- Product Name
- Product/process details for which FTO is being prepared
- Closest competitor/s Product details

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After doing the review of the claims you prepare what we call the FTO opinion, in which there are some basic ingredients which are laid out one is what we call the product name. So, listing the product name, its features are important and the FTO is being conducted for what aspects that needs to be laid out.

And so, the details of the entire FTO report are laid out from the point of view of search the databases that are searched. What are the patents collected? What is the relevant patent data set? Which are the patents which are the ones which are blocking? So, the blocking patents are enlisted, based on that we also look at the details of the closest product or rather the closest competitor information. So, that we assess now the value with respect to the FTO.

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Suppose you find out that the product does not infringe any patents what are these steps that you would take. That is a good position that there is no infringing IP, what are the options available. At this stage it is possible that you one can file for an IP one can plan for an IP filing again looking at the strength of the technology. So, one can actually plan for a patent in relation to that the patent filing can be initiated.

The other thing is if you if you find that the novelty value is not that high and the patent application that you would file would actually provide you only a narrow scope, one good way of looking at an alternative would be to go for what we call a defensive publication or a technical disclosure. So, a company can actually provide that as a technical disclosure report on its website can reveal that to the public as a document.

How does this how does that help the company, it prevents others to file IP in relation to. So, you are effectively if you are not able to take the IP you are blocking others to take

the IP. So, this is how the 2 options appear whenever you find the scenario where the product is not infringing on the patent. So, these options are available.

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Protecting technology

- If the FTO search indicates that there are no patents blocking access to market, check if the new technology is likely to meet the patentability criteria.
- A possible patent protection for the new technology can be planned

Defensive publishing or technical disclosures

- Companies may not seek IP protection due to costs involved or that an invention may not meet the patentability criteria
- A defensive publication or a technical disclosure is an alternate option

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So, how do you actually go about with the strategizing, this aspect of looking at both the options. So, when you are looking at a possible patent protection for a new technology there is a whole process involved in relation to that. We have to also take into consideration that the company is actually manufacturing or preparing for manufacturing. So, therefore, an FTO search would be an iterative search here where once again you need to review the FTO search to now go into which will be the relevant geographies for filing of IP applications.

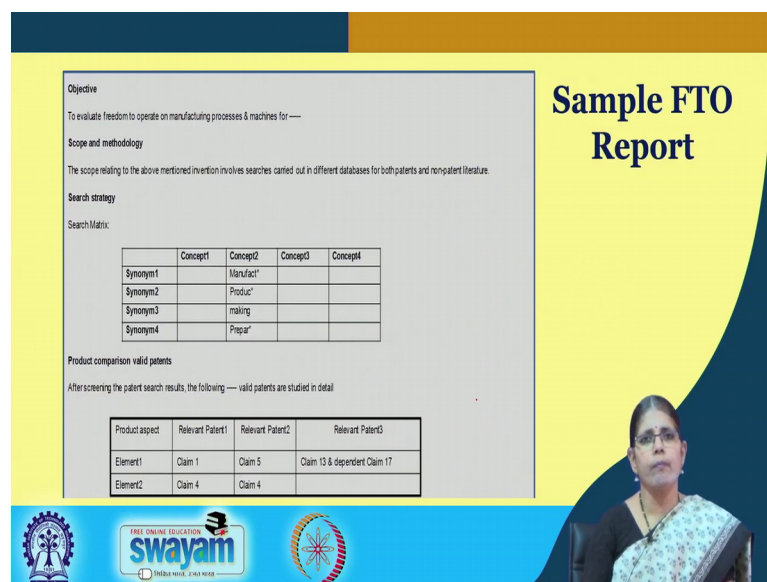
So, therefore, an FTO search can actually lead to a more elaborate search for looking for where the potential filing of IP can happen and these needs to be based again on a survey done, the relevant products which are already available in relation to the company, competitors portfolio in relation to the relevant segment. So, all these considerations will help in an understanding whether an IP filing would be a successful one or not.

So, while patent rights are negative rights in relation to inventions they exclude others to practice this does not necessarily mean that the patent take can practice the invention there are several hurdles in the process. So, keeping these factors in mind is important to look at a protection of a particular technology. The company may even choose to keep it

as a trade secret for a long period of time and only then later on decide post improvement to file for IP. So, it is a very strategic decision whether or not to file for IP.

Another option that is available is the, we talked about is the defensive publication or the technical disclosures when do you go ahead with this potentially you would like to block others in relation to IP in which case yes a defensive publication would be helpful. This is also applicable in a scenario where the company does not have much to lose on the IP, because the company is operating in a particular segment has the market captured in that particular segment and so, therefore, here it helps the company to look at it from the point of view of disclosing as a very good alternative option.

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The slide displays a 'Sample FTO Report' template. It includes sections for Objective, Scope and methodology, Search strategy, Search Matrix, and Product comparison - valid patents. A presenter is visible in the bottom right corner.

Sample FTO Report

Objective
To evaluate freedom to operate on manufacturing processes & machines for —

Scope and methodology
The scope relating to the above mentioned invention involves searches carried out in different databases for both patents and non-patent literature.

Search strategy
Search Matrix:

	Concept1	Concept2	Concept3	Concept4
Synonym1		Manufact*		
Synonym2		Product*		
Synonym3		making		
Synonym4		Prepar*		

Product comparison - valid patents
After screening the patent search results, the following — valid patents are studied in detail

Product aspect	Relevant Patent1	Relevant Patent2	Relevant Patent3
Element1	Claim 1	Claim 5	Claim 13 & dependent Claim 17
Element2	Claim 4	Claim 4	

This is a sample FTO report displayed here identifying the objective of their FTO searches first very important, because here there are two scenarios that can arise. One is you are working for a company and your company has asked you to prepare an FTO search report in relation to it is product, sometimes a client has provided you that information to search for the FTO.

So, taking into consideration the milieu or the environment of the product from the point of view of the company, from the point of view of the client is important. So, understanding the objective of the FTO search is first fundamental and in the methodology we are looking for the entire scope in relation to identifying patent databases. Typically the FTO reports do not take into consideration non patent literature

typically, but if the FTO is done at a early stage where you are looking at manufacturing a product and want to know whether there is an FTO or not, in which case non patent literature is also important, because you are looking at the technology space itself and trying to understand who are the people or what are the technologies already in space.

Outlining the clear strategy in relation to the FTO search is important. So, that the client or the person who has given you to do the FTO search in the company can have a clear idea about what is the search strategy that you have followed with respect to each of the concepts that is each of the features in relation to the product.

The product comparison with valid patents is the next section of this particular report where you are looking at mapping the claim scope to the product and here you are listing only the relevant patents. It means a clear mapping of the product with respect to the individual claims of that particular patent. So, you would be referring them to a specific claim number.

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The slide displays a patent comparison grid with the following structure:

Product aspect	Relevant Patent 1	Relevant Patent 2		Relevant Patent 3
	Claim 1/Claim 4/Claim 5	Claim 4	Claim 12 and dependent Claim 17	
Element 1	✓	✓	✓	✓
Element 2	✓	✓	✓	✓
Element 3				✓
Element 4				
Element 5	✓			✓

Below the grid, the slide contains sections for:

- Assumptions:** We assumed that a product of ———.
- Observations:** With respect to manufacture of product ———, our observations are as follows:
Prior art discloses different methods for manufacturing different types of ———. Around a patent applications disclose ——— manufacturing equipment, y patent applications disclose ——— manufacturing processes in which Chexxxx discloses method for preparing ——— and Chexxxx discloses a ——— and preparation method.
- Recommendations:** Based on the prior art information, we believe ———.
- Conclusions:** Based on the present study and considering the above assumptions we believe that ——— has freedom to practice / no freedom to operate.

The slide footer includes logos for 'swayam' and 'INDIA RISE, I NEED RISE'.

Once you prepare the grid on that which are the features which are overlapping with certain claims you get an idea about with respect to each patent and the product, how is the overlap available. So, in this way you can actually rank the patents in terms of the strength and this provides a very clear information in terms of which are the blocking patents. We come up with certain assumptions in the FTO report based on certain information that is available in relation to those patents which could be material, because

remember there are several options that come out based on an FTO search. So, it is good to capture that information into this particular report.

There are certain observations which we make in relation to the product. For instance you are looking at other information in relation to the competitor portfolio the status of the technology in the market; these things can provide some kind of insight in relation to the issue with respect to infringement.

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Strategies based on FTO search

- Buy the patent or licensing in
- Cross-licensing opportunity
- Design around to avoid infringement
- Patent pools
- Wait for patent expiry
- Choose a territory where no patent rights are enforced
- Argue non-infringement or potential invalidity
- Invalidate the patent

The slide footer contains three logos: the Indian National Emblem, the SWAYAM logo with the text 'FREE ONLINE EDUCATION' and 'SWAYAM', and the logo of the Ministry of Education, Government of India.

And so, therefore, all those are listed under what we call observations in relation to the and based on the entire information recommendation is given in relation to the clear and search. So, whether the company has the freedom to operate or not to operate is the clear information that can be provided in a FTO report. One thing that needs to be kept in mind is that no FTO report is 100 percent valid, because the question of certain patents not being published was always there. So, no FTO search is 100 percent proof in that sense.