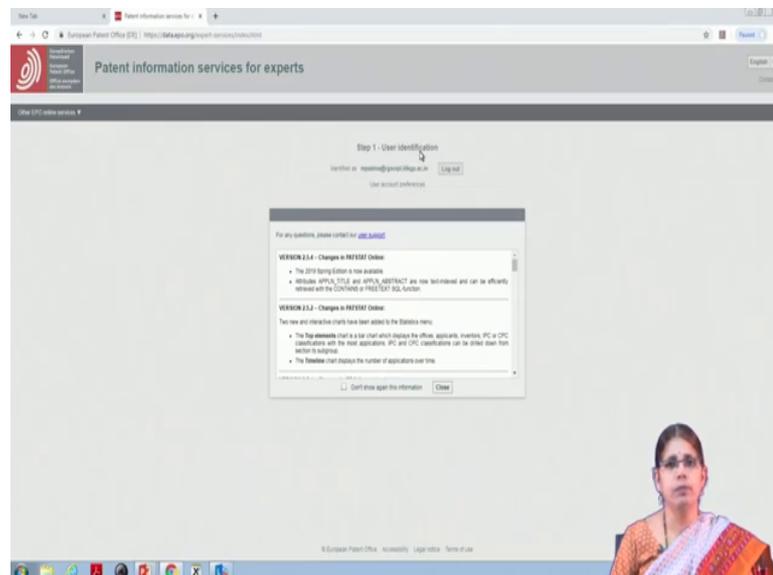


**Patent Search For Engineers And Lawyers**  
**Prof. M. Padmavati**  
**Rajiv Gandhi School of Intellectual Property Law**  
**Indian Institute of Technology, Kharagpur**

**Lecture – 33**  
**Analytical tools for Patent search and analysis**  
**(Contd.)**

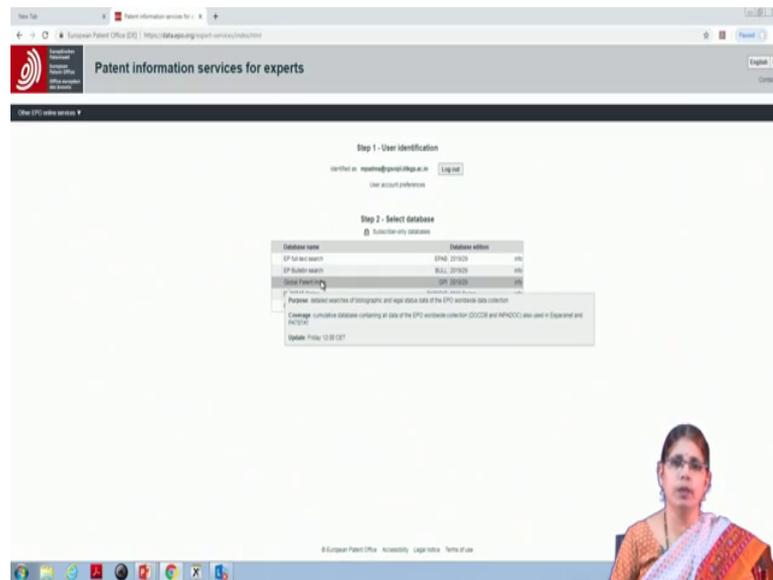
Welcome to the demo on the GPI database this is available at the space net, where one can click on the global patent index link to come to this specific window under the EPO.

(Refer Slide Time: 00:36)



The first step is the user identification. So, as a first time user you will need to register with the information that need to be provided for access to the GPI to a specific time period will be given for the use of this tool which is on a test mode. So, once the user identification process is over, the authentication is over, then we move into the next step which is selecting the database for the search and the analysis.

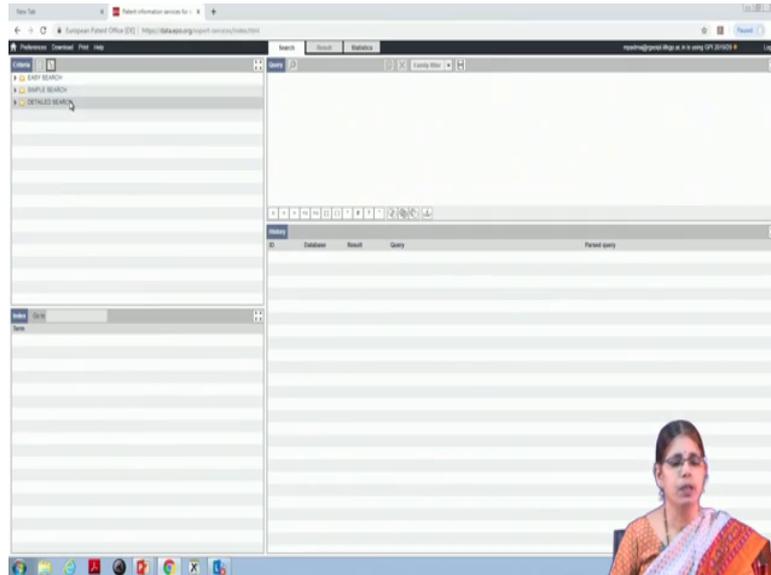
(Refer Slide Time: 01:06)



Under the GPI there is a free test service available, there is also a subscribed database service available under GPI. So, once you select GPI and do a mouse over you find the information in relation to what can be done utilizing the GPI tool. So, one can search for bibliographic and the legal status of the data in relation to the EPO worldwide data collection.

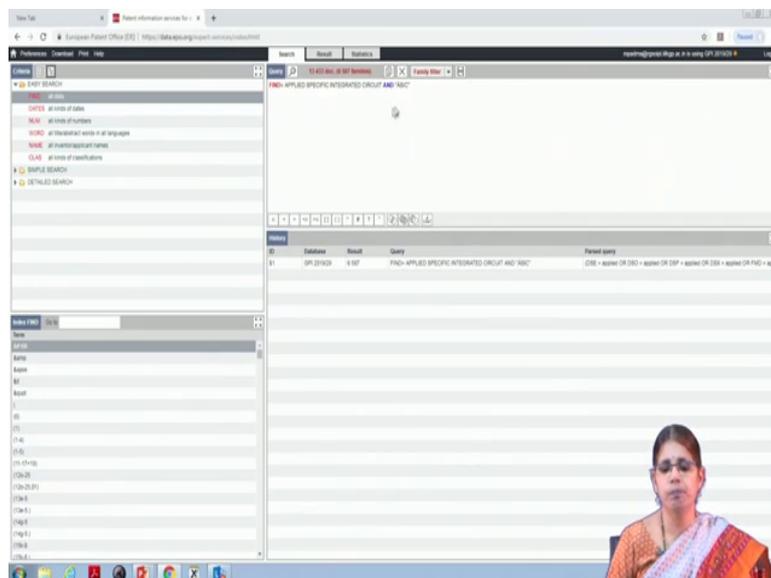
It also provides you their information on the coverage where the data is available on the DOC DOCDB which is the basic EPO database and the in per DOC information. GPI is updated every Fridays so, it gives you the date stamp of the database as well. So, once you click on this link for the global patent index it takes you to the specific tool.

(Refer Slide Time: 02:17)



As we had discussed in the lecture on the basic window in relation to the GPI tool here you have the 4 boxes. The criteria, the query box, the index and the history. We discussed in the lecture that there are different modes of searching, easy search, simple search and the detail search.

(Refer Slide Time: 02:53)



So, if you click on easy search you can have the various options of searching utilizing these different options. So, the index is utilized to select a particular term where you can double click on the term and drag and drop it in the query window. This is the basic query window which provides the search the results link and the statistics link.

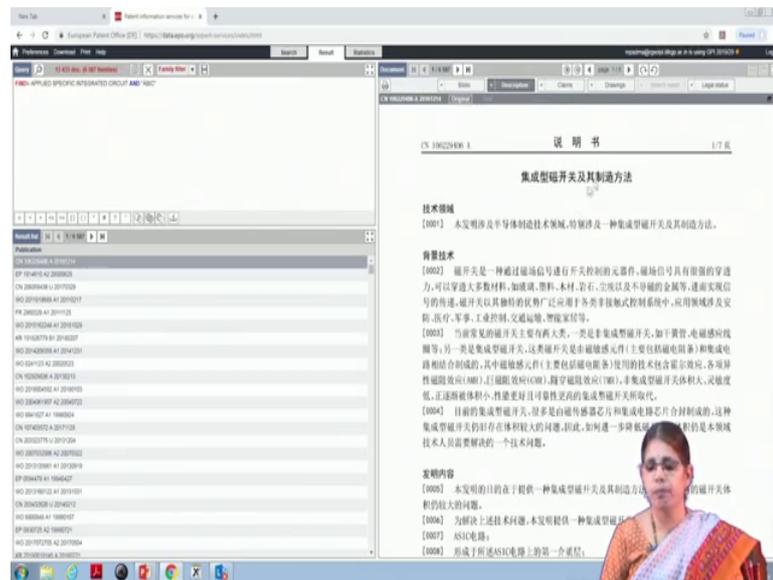
There are different options available in the query window, what you see here as the lens is where you run the search this is the results hit one can filter by the family and also this information can be saved into the particular saving option. There is also this history window which provides you the search history which is listed in this particular box, let us today run the option of the easy search.

So, let us pick up find. So, under find we are picking up specific terms which we want to search in the database. So, find what is it that we want to find let us say we want to give the area of the Applied Specific Integrated Circuits or which is in short called ASIC. So, let us give ASIC the full term applied specific applied specifically in integrated circuit and we want this to be coming up with this particular abbreviated term which is often used in that particular area of technology yes. Now so, one can add several other options of classification and other things if you want to have an extended query.

Now, let us say we run this particular simple query. So, here the search is in progress and soon one could get the results listed. So, here the search is being done with the background database which is the DOCDB and the info doc information. So, as you can see on this screen there are 13433 documents now listed in so many different families and as soon as the search is done it immediately gets listed in the history so, this is the very first search id. Now let us say we add other terms that becomes the second query and so on and so forth. So, this query window you can actually logically add different aspects along with this particular search term.

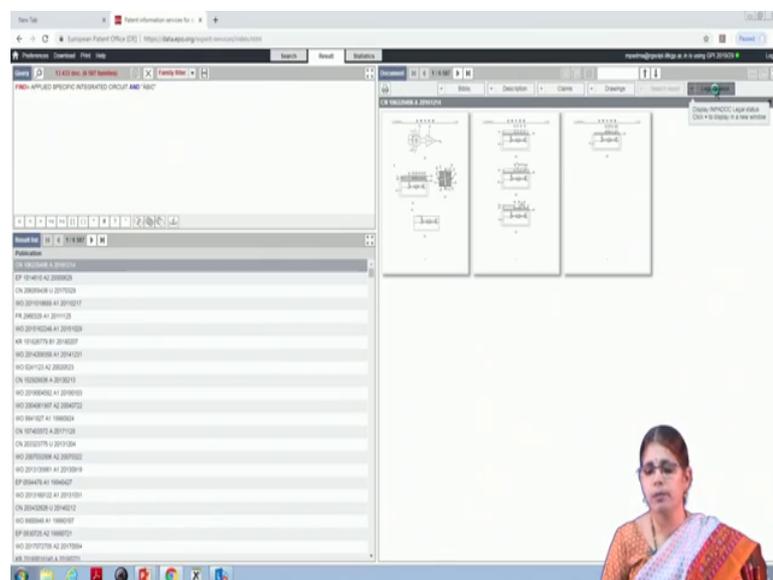


(Refer Slide Time: 09:13)



Now, other than the patent bibliographic information one can go to the link for description where you get the description of the patent itself and here you have the in Chinese language claims and the drawings of the patent as well.

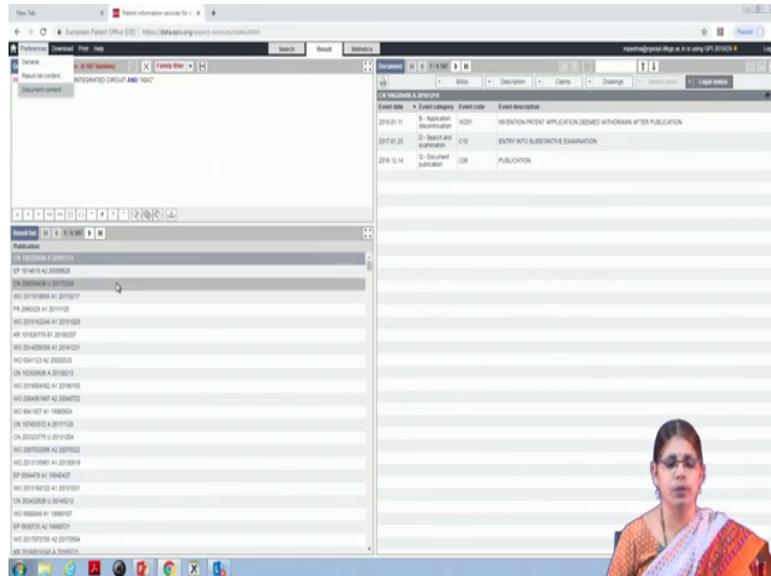
(Refer Slide Time: 09:22)



And so, this is how you can see the information, if you click on the legal status here you can find the file wrapper information that is the different events in relation to the patent application from the time of it is publication into the different modes. So, that is how one

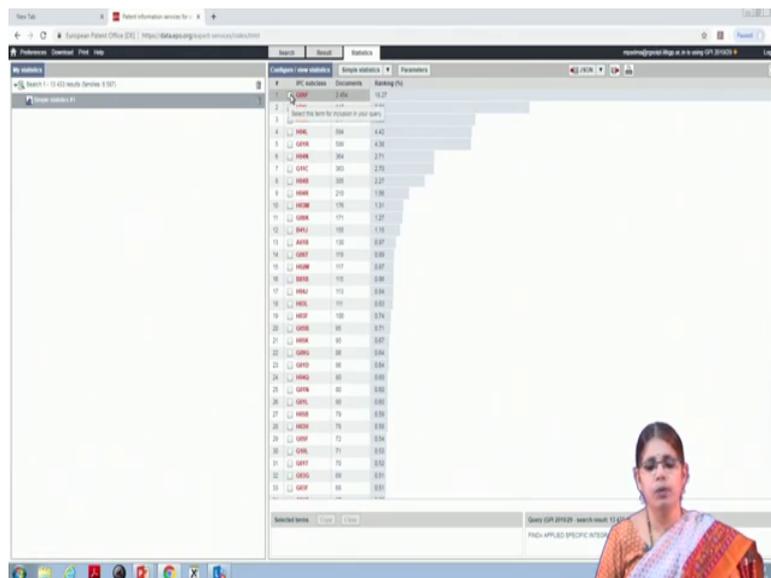
can see the data in relation to the document itself. The link for the statistics is available in the basic menu.

(Refer Slide Time: 09:30)



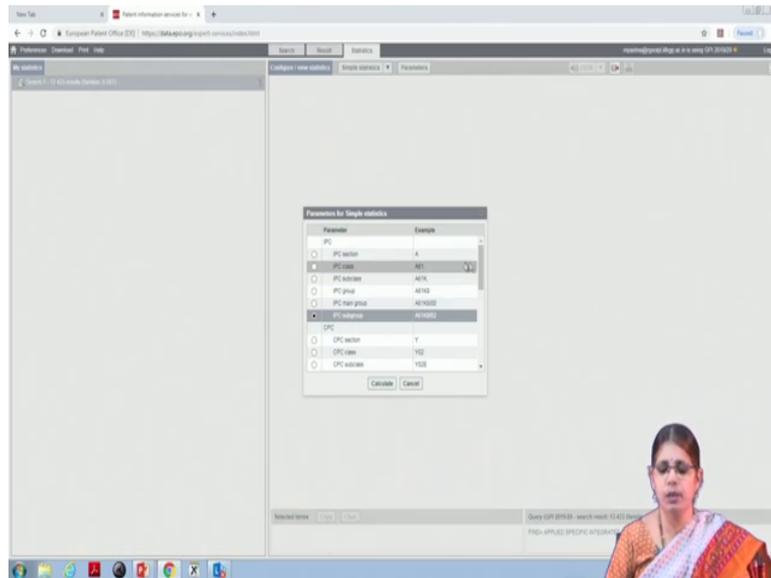
Here you have different preferences that can be set download options that are available, print options that are available in relation to the search. So, one can list any of these preferences in order to be looking at the type of information in that particular manner.

(Refer Slide Time: 10:27)



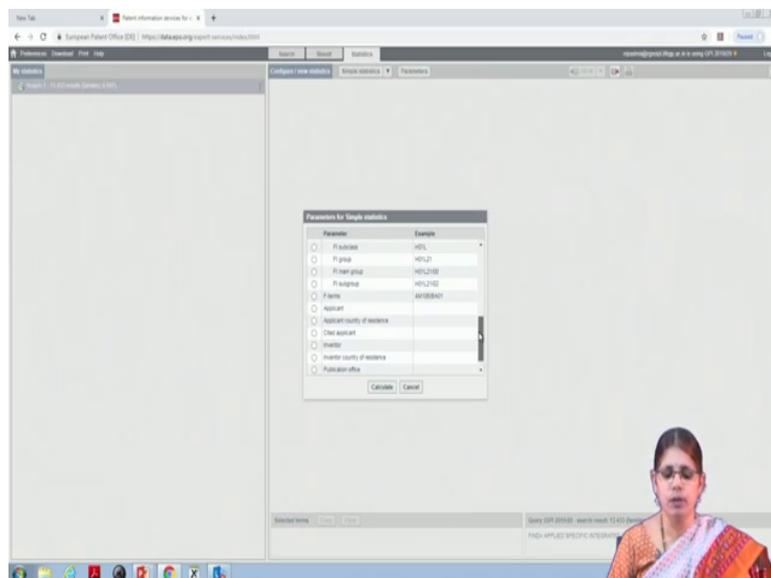
Now, one looks at the statistics link.

(Refer Slide Time: 10:32)



And this is how we move into the aspect of where we are looking at the analytical options that are available. So, here you have once you click on the statistics we need to select the parameter.

(Refer Slide Time: 10:55)

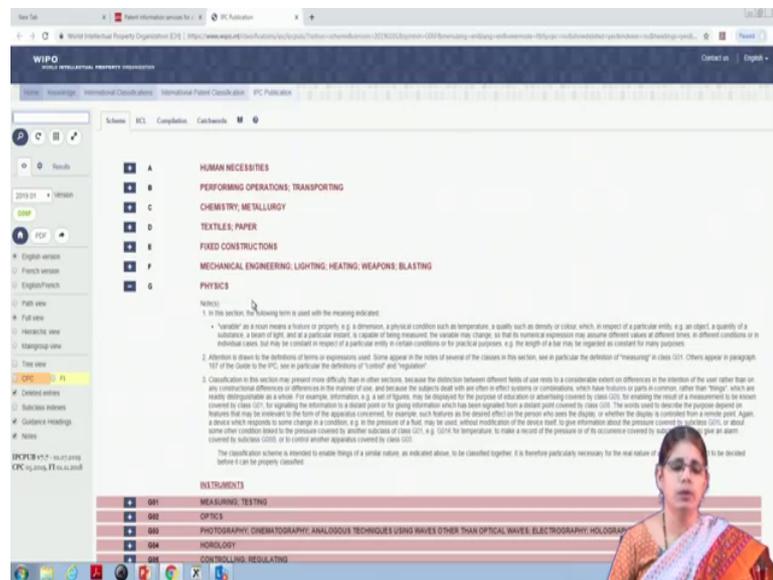


So, there are different parameters that one can select either by the IPC or by the CPC by the F 1, F- terms, applicant, country of residence, cited applicant, inventor, inventor country of residence, publication office and priority country. So, under the IPC itself one can select for different subgroups and generate the data in relation to that particular IPC.

So, for instance, if you select the particular subclass of IPC and say calculate. So, in the background the statistics are being organized so, that the data can be represented in the form of the graphs.

So, here you have based on the IPC subclass the entire set of documents are being listed in relation to the IPC subclass and you see the ranking where you find the ranking which is in relation to each of these different subclasses. So, one can click on this and find further information in relation to the so.

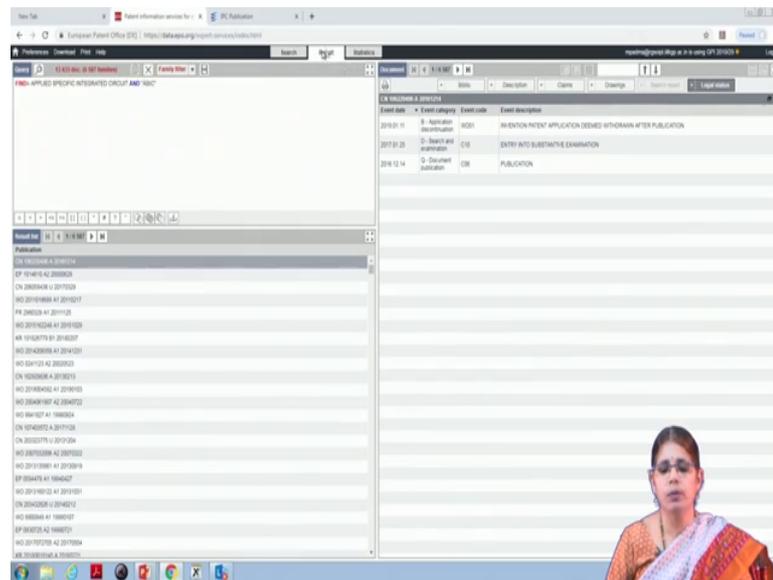
(Refer Slide Time: 12:18)



It takes you to an understanding about the relevance of that particular IPC in the entire scheme. So, here you have if you click on that particular IPC code it takes you to that particular IPC and you have the information on what is the scheme. So, that is how you can go to the basic IPC classification itself. So, simple statistics is what is the option, that we have been looking at.

Now, one can go back to the search and then look at the other statistics that can be taken up in relation to the results.

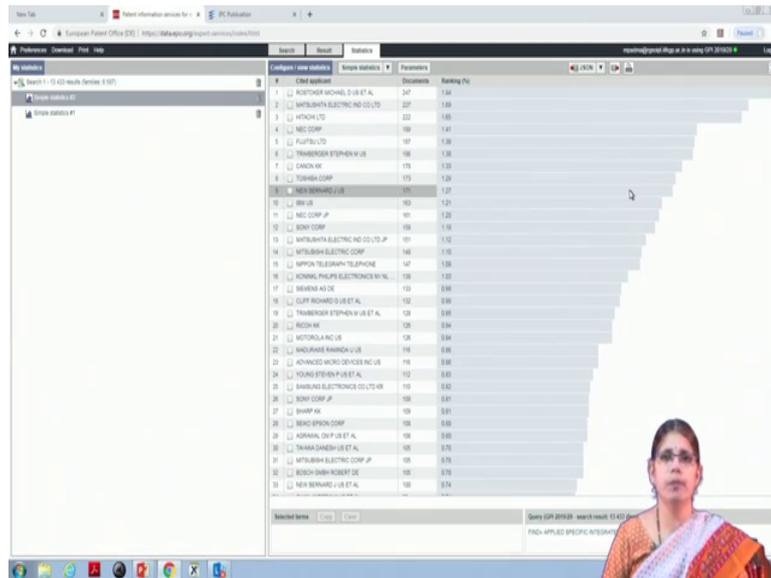
(Refer Slide Time: 13:09)



So, if you go to the statistics option again the other thing that you can notice is that there is a background folder where it opens up my statistics that is all the information that you are analyzing goes into a specific category. Now if you go back to the parameters and then look for other options, for instance we want to know by sighted applicant then you can invoke the calculate option and that is how you can get the information in relation to the sighted application applicant in relation to the patent data.

So, one can use several parameters in order to conduct the analytics in relation to the patent data, it is at this stage it is also important to keep in mind the query.

(Refer Slide Time: 14:19)



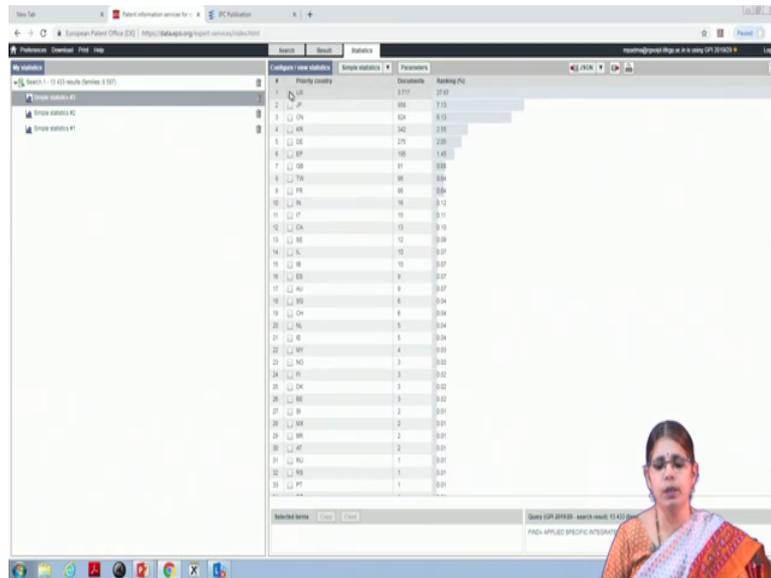
The screenshot displays a search results interface with a table of applicants and their ranking percentages. The table is as follows:

| Rank | Applicant                        | Documents | Ranking (%) |
|------|----------------------------------|-----------|-------------|
| 1    | ROTHSCHILD MICHAEL S US ET AL    | 227       | 1.94        |
| 2    | WPTUBISHA ELECTRIC IND CO LTD    | 227       | 1.94        |
| 3    | HTACHI LTD                       | 222       | 1.89        |
| 4    | NEC CORP                         | 199       | 1.71        |
| 5    | FAIRCHILD                        | 157       | 1.35        |
| 6    | THOMSON STEPHEN V US ET AL       | 146       | 1.26        |
| 7    | CANON KK                         | 175       | 1.53        |
| 8    | YOSHIDA CORP                     | 173       | 1.50        |
| 9    | NEC BERNARD J US ET AL           | 156       | 1.37        |
| 10   | IBM US                           | 163       | 1.41        |
| 11   | NEC CORP JP                      | 161       | 1.38        |
| 12   | SONY CORP                        | 159       | 1.36        |
| 13   | WPTUBISHA ELECTRIC IND CO LTD JP | 161       | 1.37        |
| 14   | WPTUBISHA ELECTRIC CORP          | 146       | 1.26        |
| 15   | IPPON TELEGRAPH TELEPHONE        | 147       | 1.26        |
| 16   | AGNUNG PHILIP ELECTRONICS INC    | 139       | 1.20        |
| 17   | SAMSUNG AU US                    | 119       | 0.99        |
| 18   | DAI RICHARD S US ET AL           | 132       | 1.09        |
| 19   | THOMSON STEPHEN V US ET AL       | 128       | 0.99        |
| 20   | RODAS KK                         | 128       | 0.99        |
| 21   | MOTOROLA INC US                  | 128       | 0.99        |
| 22   | INDUSTRAL ELECTRONICS US         | 116       | 0.96        |
| 23   | ADVANCED MICRO DEVICES INC US    | 116       | 0.96        |
| 24   | YOUNG STEPHEN P US ET AL         | 112       | 0.93        |
| 25   | SAMSUNG ELECTRONICS CO LTD KR    | 110       | 0.92        |
| 26   | SONY CORP JP                     | 106       | 0.87        |
| 27   | SHARP KK                         | 109       | 0.91        |
| 28   | BERND IPPON CORP                 | 108       | 0.90        |
| 29   | AGNUNG PHILIP ELECTRONICS INC    | 108       | 0.90        |
| 30   | THOMSON STEPHEN V US ET AL       | 106       | 0.89        |
| 31   | WPTUBISHA ELECTRIC CORP JP       | 105       | 0.87        |
| 32   | RODAS ROBERT DE                  | 105       | 0.87        |
| 33   | NEC BERNARD J US ET AL           | 100       | 0.79        |

If you are doing a simple analysis it is you are trying out the database, but if you are looking at specific information then one needs to review the query itself. So, that the query is strong from the point of view of the looking at that specific information then you come to the results and then look at the analytical options. So, here you have the cited applicants vis a vis the documents and the ranking as per the cited applicants.

So, you get different information in relation to this particular data, one can also go by the information in relation to priority country in which case you have the document listing as per the priority country.

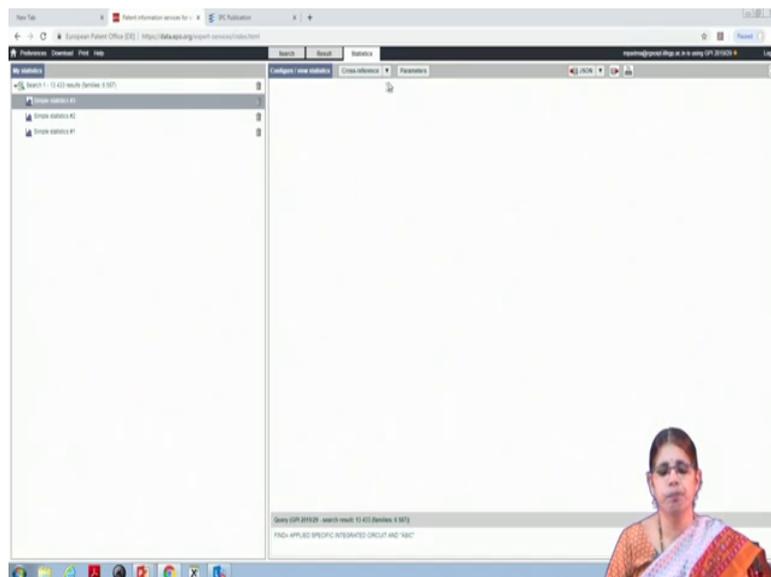
(Refer Slide Time: 15:13)



| Priority Country | Documents | Ranking (%) |
|------------------|-----------|-------------|
| 1. JP            | 3177      | 27.47       |
| 2. US            | 896       | 7.75        |
| 3. CN            | 824       | 8.13        |
| 4. KR            | 342       | 2.98        |
| 5. GB            | 278       | 2.42        |
| 6. EP            | 196       | 1.72        |
| 7. DE            | 91        | 0.80        |
| 8. TW            | 86        | 0.75        |
| 9. FR            | 88        | 0.77        |
| 10. IN           | 76        | 0.67        |
| 11. IT           | 75        | 0.66        |
| 12. CA           | 73        | 0.64        |
| 13. BR           | 72        | 0.63        |
| 14. AU           | 70        | 0.61        |
| 15. SE           | 70        | 0.61        |
| 16. ES           | 9         | 0.08        |
| 17. NL           | 9         | 0.08        |
| 18. SG           | 8         | 0.07        |
| 19. CH           | 8         | 0.07        |
| 20. HK           | 5         | 0.04        |
| 21. K            | 5         | 0.04        |
| 22. MX           | 4         | 0.04        |
| 23. NO           | 3         | 0.03        |
| 24. FI           | 3         | 0.03        |
| 25. DK           | 3         | 0.03        |
| 26. NZ           | 3         | 0.03        |
| 27. S            | 2         | 0.02        |
| 28. HK           | 2         | 0.02        |
| 29. JP           | 2         | 0.02        |
| 30. AU           | 1         | 0.01        |
| 31. NL           | 1         | 0.01        |
| 32. BR           | 1         | 0.01        |
| 33. PT           | 1         | 0.01        |

So, here you have priority country listed based on the number of documents in relation to that particular country, you have a whole lot of countries represented here and one can actually look at specific information to see how much of patents are there in relation to that particular country. So, this is how one can use the simple statistics information that is the basic information either in relation to the IPC or the applicant or the country information.

(Refer Slide Time: 15:58)

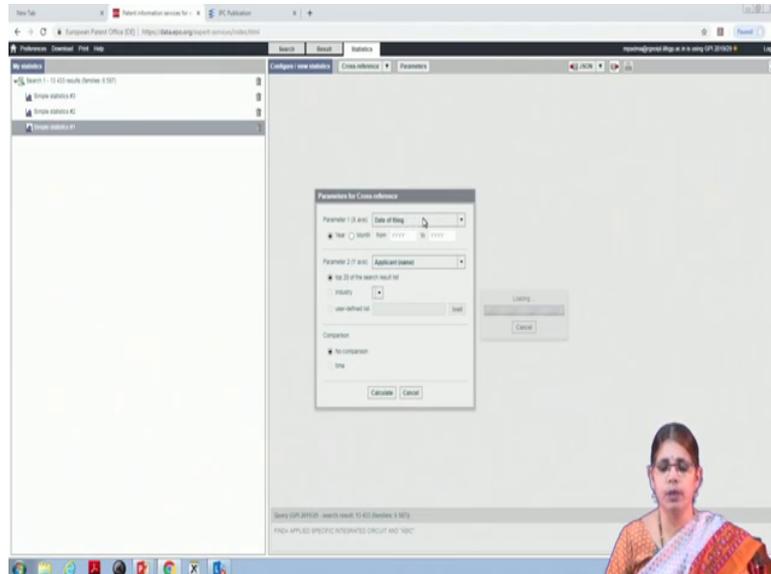


Query: IPC: 261020 - search result: 11 433 (Ranking: 4.867)

FOUND: APPLIED SPECIFIC INTEGRATED CIRCUIT AND ASIC

There is another option available what we call the cross reference information which is where you are looking at more than one as the option for analysis.

(Refer Slide Time: 16:15)



So, if you go to the results category and go to the option of statistics and go to cross reference one can actually ask for different parameters. So, it is here where you are adding the second parameter in the cross reference. So, there is parameter 1 and parameter 2, either you want a simple comparison or you want a comparison in relation to time that can be any of these can be selected.

So, let us say parameter 1 is as per the year and date of filing, then parameter 2 is as per applicant name in which case immediately the option of how many you want as this as the number of applicants comes up. The default here is top 20 in the search list so, this comes up, one can have a user defined list in which case you have to load the list in the proper syntax. The industry option is available. So, let us say we are looking at the comparison between the parameter 1 which is data filing vis a vis parameter 2 which is applicant name.

(Refer Slide Time: 17:51)



When you hit on the calculate button it gives you the graph in relation to both these parameters. And that is how the cross reference link can be used to derive better information in relation to the patent data in relation to the options that are available. Now, as you see the information is being organized you see a graph which is loaded with a lot of representation of the data.

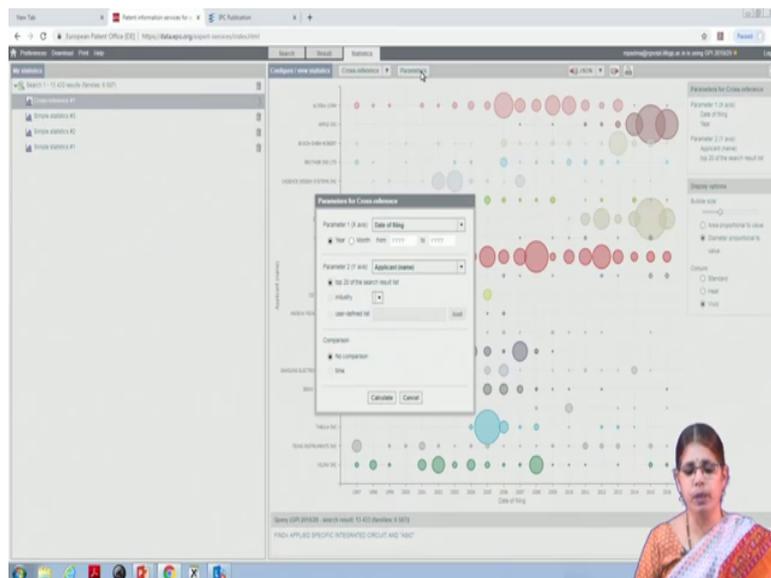
So, here we have on the X axis the date of filing vis a vis the applicant information on the Y axis. Now this is a very crowded map. So, also here we are unable to make out the data representation in relation to each point of the axis vis a vis the other axis. So, X vis a vis Y. So, the nice thing would be is to change it as per the area under the bubble. So, one can actually ask for a diameter proportional to the value. So, here you have I am just cancelling the loading just to now work with the display options.

So, there are several display options available with the mouse over you can actually see the interface as it is organized. So, this would be a better way to look at the data. So, as we move into the bubble size you can make out the correlative information in relation to the date of filing vis a vis the applicant. So, based on the area of the proportional to the size of the information so, that is how. So, if you click on the diameter proportional to the value this is how you can see the organization of the data, this is the standard view of the database.

Now for better visualization you can actually go for the vivid link. So, what is the enhanced information we are getting here? In relation to a particular assignee for instance you are looking at this particular company represented by the red bubbles, one can actually see the spread of the data in relation to the date of filing. If you mouse over on each of these bubbles you will get the strength of the patent data at that data point. For instance here for the year 1998 IBM has 10 documents in that particular area.

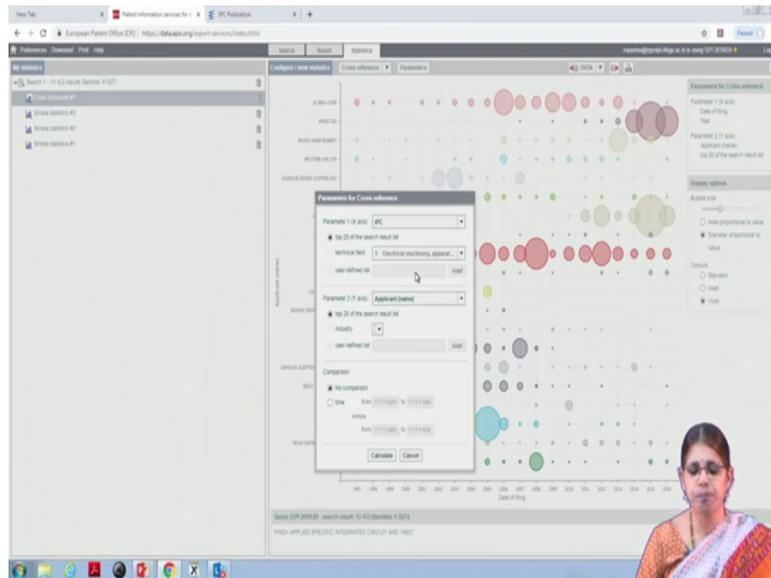
Now here you have again a big overlap so, one needs to resolve this to understand the exact number of documents. So, relatively with respect to the applicants we are getting to know what is the data represented in this kind of a organization of the information and that is how one can look at the data with respect to. This can be further refined utilizing specific applicant information by loading applicant information one can have a time series with respect to.

(Refer Slide Time: 22:11)



So, there are different parameters one can so, if you go back to the parameter window and look at as per IPC.

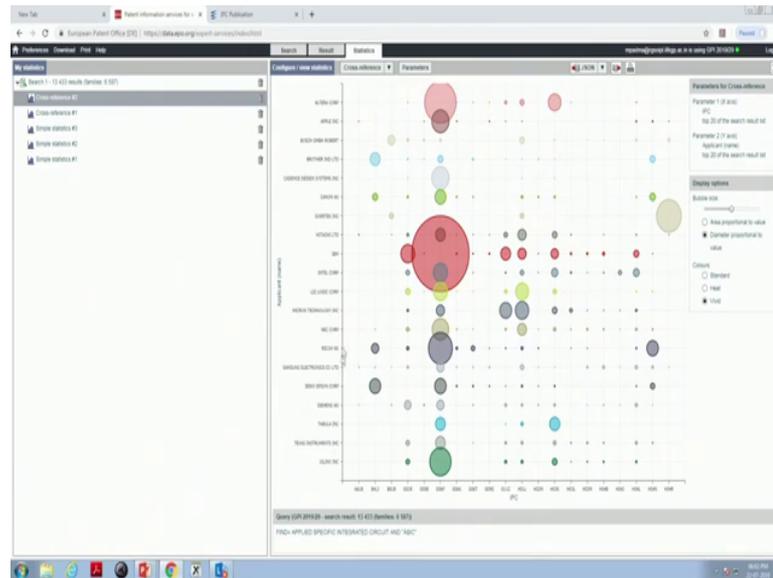
(Refer Slide Time: 22:19)



So, here the top 20 in the search list will be represented, again one can give a user defined list where you can list the specific IPC that is not possible in the test part of the software on subscription possibly that is where you will have this option available. Now with respect to IPC one can also choose the time comparison so, from a particular year to another particular aspect of it. So, one can give 2019 January to let us say back in time then what happens is from one particular year to another particular year one can ask for the calculation of the data.

So, that is how one can set the ranges with respect to each parameter. So, let us look at the other aspect of the cross reference, where we are looking at IPC vis a vis applicant name. So, this is now running and we will have a different map shown up and based on that one can understand the relationship between IPC vis a vis applicant.

(Refer Slide Time: 23:52)



So, here you have the different IPCs from the A class, the B class, the G class, the H class and so on and on the Y axis you have the names of different companies in the area. Here you can see a different map compared to the earlier one which we saw in relation to the year and the applicant. So, one can draw these different maps save them and then look at how the data is spread and how one can make out meaningful correlations out of the patent analysis.

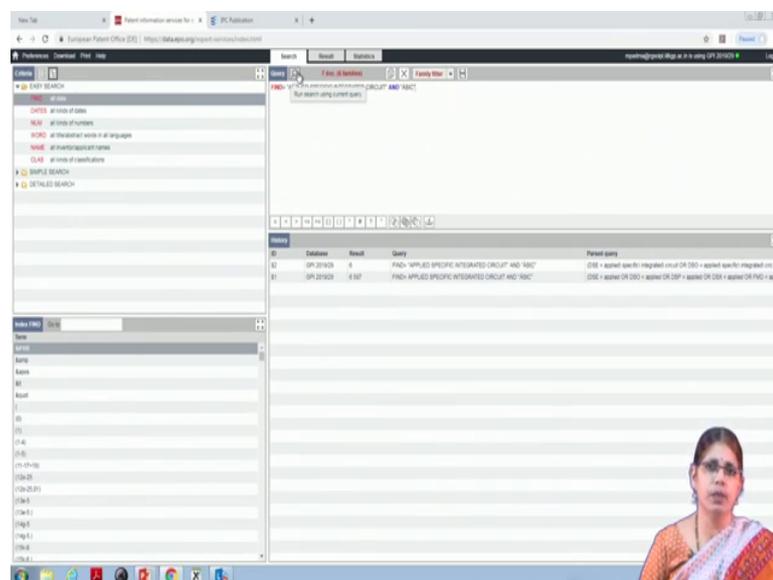
Many a time it is not the first instance that one would work on to accept the analysis done in relation to a given query, often since patent search is iterative based on the refining of the search one would arrive at the most logical way of searching a particular data set. Similarly even in the analytical options one should also look at the most logical way of representation of the patent data set and this is pretty much dependent on the purpose with which the report is to be organized.

So, if the organization is about simple statistics that is the basic qualitative data and the quantitative data that is one way of organizing the report, but if the report requires extended information in relation to correlative values then the option of looking at analytical data where tools for advanced analysis would be preferable where one can draw information based on correlative data. So, this tool can assist one in looking at some of the analytical options that are available. So, here you see in my statistics the

entire search as well as the statistics information is getting stored what happens is at a later time point if you come back to the database.

And look at one, what are the queries that you have run? What are the results that you have obtained? And what are the, what is the analysis that you have done? It helps in understanding how the one the search has been done effectively and the second part is that search will the results will vary with respect to time, often since patent documents are added on a routine basis some changes in the data are expected.

(Refer Slide Time: 27:26)



So, one can keep modifying the data in order to look at the n number of queries that we can conduct. So, in that sense the information that we derive out of the different queries goes into the history box. So, this provides an advantage of looking at an entire monthly review of results or even period wise review of results. For a patent searcher you will often be using some database or the other and the option of saving data is very important because review is an essential part of patent search and analysis.

So, this review option is provided by if you have the ability to look at the history of the queries that were used as well as the analysis options that are available. So, and that is how the GPI is organized. You can run many different queries and ultimately home into the appropriate query for search. We have provided several model examples in the patent search workbook which has been developed in this course which will be a good guide for the users who you who will be embarking on the GPI tool for search and analysis.

Thank you.