

Hello everyone and welcome to this webinar on the business use of patent information.

My name is Alex Riechel, and I am joined today by my colleagues in the TISC team.

## Patent information in business

- Identify competitors and potential partners
- Examine research and development activities
- Explore technology and market trends
- Uncover research collaborations

→ Business intelligence

As you may already be aware, patent information is not just a valuable resource for identifying research opportunities, determining the patentability of an invention, or avoiding infringing others' patent rights.

It can also be a valuable source of business intelligence for entrepreneurs and businesses.

It can help identify competitors or partners in a specific field of technology, give an indication of their research and development activities or broader market trends and opportunities, uncover research collaborations, and much else too.

Today we're going to focus on the analysis of sets of patent documents rather than in-depth evaluation of individual patent documents, which can equally be an important way to learn about a competitor's research and development activities.

## Scenario

- A sewing machine manufacturer would like to learn more about its competitors and has asked you to help answer the following questions...



Photo source: BERNINA International AG, Steckborn

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To help illustrate how patent information can be used to gather business intelligence and which challenges you may face in doing so, let's look at an example scenario. In this scenario you've been contacted by a sewing machine manufacturer who would like to learn more about its competitors.

In particular, the sewing machine manufacturer would like you to help it answer the following questions...

## Questions

- Who are main innovators in our field of work?
- In which other areas of technology are these innovators active?
- In which markets are these innovators particularly active?
- How has their innovative activity evolved over time?

1. Who are main innovators in our field of work?
2. In which other areas of technology are these innovators active?
3. In which markets are these innovators particularly active?
4. How has their innovative activity evolved over time?

## Tasks

- Retrieve a set of patent documents in a specific area of technology (sewing)
- Analyze the set of documents by applicant name
- Analyze documents associated with a specific applicant by
  - technology
  - patent office
  - publication date

We can reformulate these questions as tasks for you to carry out.

The tasks will be as follows:

1. Retrieve a set of patent documents in a specific area of technology, namely sewing.
2. Analyze the set of documents by applicant name
3. Analyze documents associated with a specific applicant by technology, patent office at which the documents were filed, by publication date, and by publication date.

## Tasks

- **Retrieve a set of patent documents in a specific area of technology (sewing)**
- Analyze the set of documents by applicant name
- Analyze documents associated with a specific applicant by
  - technology
  - patent office
  - publication date

So our first task will be to retrieve a set of patent documents related to sewing.

## Terms

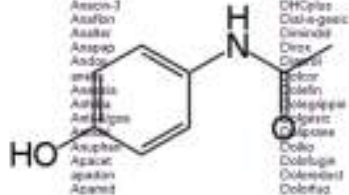
- Concepts can be expressed in many different ways.
  - Keywords
  - Classifications or codes
  - Formulas (chemical)
  - Structures (chemical)
  - Sequences (biological)
  - Images
  - ...

You will recall that many different ways exist to express concepts related to a specific field of technology, including using keywords, classifications or codes, formulas, structures, sequences, and images.

As a result, you may be able, and indeed may be obliged, to use different ways in order to retrieve documents related to a field of technology in which you are interested.

## Terms

An organic compound with the molecular weight 151.1626



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For example, everything you see here is a way of representing paracetamol, a common cure for headaches.



## Advantages of classification vs. keywords

- Terminology and jargon independent (including changes in terms used over time)
  - Language independent
- A more complete and precise search

For this scenario, let's use patent classification to retrieve a set of patent documents related to sewing.

You will remember that patent classification has a number of advantages over using keywords. These advantages include the fact that patent classification is independent from terminology and jargon, and changes in terms used over time, as well as independent of language.

So it doesn't matter whether an inventor chose to use one or another term to describe his invention in the field of sewing or was writing in Arabic, Chinese, or English. If the document was classified by a patent examiner, it will be retrieved if you use an appropriate patent classification symbol in your search.

# IPC: Official publication

WIPO IP SERVICES International Patent Classification (IPC) Official Publication

WORLD INTELLECTUAL PROPERTY ORGANIZATION

IPC Home Page - Help

Version: 2014.01

Current symbol:

Go to:

Language:  English  French  English/French

View mode:  path  full  Hierarchic

Scheme	ICL	Complete	Catchwords
<input checked="" type="radio"/> A	A		
<input checked="" type="radio"/> B	B		
<input checked="" type="radio"/> C	C		
<input checked="" type="radio"/> D	D		
<input checked="" type="radio"/> E	E		
<input checked="" type="radio"/> F	F		
<input checked="" type="radio"/> G	G		
<input checked="" type="radio"/> H	H		

SECTION A — HUMAN NECESSITIES  
SECTION B — PERFORMING OPERATIONS; TRANSPORTING  
SECTION C — CHEMISTRY; METALLURGY  
SECTION D — TEXTILES; PAPER  
SECTION E — FIXED CONSTRUCTIONS  
SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING  
SECTION G — PHYSICS  
SECTION H — ELECTRICITY

<http://www.wipo.int/ipcpub>

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But how will we find an appropriate patent classification symbol?

The official publication of the International Patent Classification, or IPC, is the authoritative source for the IPC and provides a multitude of useful tools and features to help you find appropriate IPC symbols.



# IPC: Catchwords



IP SERVICES International Patent Classification (IPC) Official Publication

WORLD INTELLECTUAL PROPERTY ORGANIZATION

IPC Home Page - Help

Version: 2014.01

Current word: [input field] [Go]

Language: English (selected), French

Previous, Next, Index

Search: Terms, Cross references

Last modified: 2013.12.09

Scheme	RCL	Comparison	Catchwords
DESORILLING	-	DESICCATORS	SULLING - SUTTERING
DESIGNS	-	DIAZOLE	SABOTS - SAWING
DAZOMETHANE	-	DISCHARGING	SAWTOOTH - SCULLS
DISCONNECTION	-	DOMESTIC	SCULPTURING - SENSITISING
DOMINOES	-	DRY-SCREWS	SENSITIVE - SHEEP
DRIVING	-	DYSPROSIUM	SHEET(S) - SEVES
EARS	-	ELECTROMETERS	SIFTERS - SORTING
ELECTROMOTIVE (force)	-	ENEMAS	SPORTS (-wearing apparel)
ENERGY	-	ETUIS	SHUFFLES - SPARK(S)
EUROPIUM	-	EYEPICES	SPARKING-PLUGS - SPORTS
FABRICS	-	FERROUS (metallurgy)	SPOT - STARCH
FERRULES	-	FLAMEPROOFING MATERIALS	STARTING - STORING
FLANGES	-	FOAMING	STOLES - STRIPPING
			STROBING - SULFATES
			SULFURIC - SWASH-PLATE

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Once we have opened the catchword index, we will have to find the right section of the index.

# IPC: Catchwords

WIPO IP SERVICES International Patent Classification (IPC) Official Publication

WORLD INTELLECTUAL PROPERTY ORGANIZATION

IPC Home Page - Help

Version: 2014.01

Current word:

Language: English (selected), French

Previous, Next, Index

Search: Terms, Cross references

Last modified: 2013.12.09

Scheme	RCL	Comparison	Catchwords
DESPORILLING	-	DESCCATORS	SABOTS
DESIGNS	-	DIAZOLE	SAWFOOTH
DAZOMETHANE	-	DISCHARGING	SCULPTURING
DISCONNECTION	-	DOMESTIC	SENSITISING
DOMMICE(S)	-	DRIVE-SCREWS	SENSITIZING
DRIVING	-	DYSPROSIUM	<b>SENSITIVE</b>
			SHEET(S)
EAR(S)	-	ELECTROMETERS	SIFTERS
ELECTROMOTIVE	-	ENEMAS	SHORTS (-wearing apparel)
(force)			SHUFFLES
ENERGY	-	ETUIS	SPARKING-PLUGS
EUROPIUM	-	EYEPICES	SPARK(S)
			SPORTS
FABRICS	-	FERROUS	SPOT
(metallurgy)			STARTING
FERRULES	-	FLAMEPROOFING	STARTING
MATERIALS			STOLES
FLANGES	-	FOAMING	STRIPPING
			STROBING
			SULFATES
			SULFURIC
			SWASH-PLATE

WIPO WORLD INTELLECTUAL PROPERTY ORGANIZATION

“Sewing” will be found in the section starting with “Sensitive”, highlighted here in red, and before the next section starting with “Sheep”.

So we will select “Sensitive” from the different options.

# IPC: Catchwords

**WIPO** IP SERVICES International Patent Classification (IPC) Official Publication  
WORLD INTELLECTUAL PROPERTY ORGANIZATION

IPC Home Page - Help

Version: 2014.01

Current word: SENSITIVE

Language:  English  French

Search:

Scheme: RCL: **Catchwords**

**SEWAGE**

- apparatus for treating SEWAGE C02F
- drying or dewatering SEWAGE sludge C02F 11/12
- purifying SEWAGE biologically C02F 3/00
- separating oily substances from SEWAGE C02F 1/48
- separating or screening SEWAGE C02F
- treatment of SEWAGE C02F

**SEWERS E03F 3/00-E03F 8/00**

**SEWING D05B**

- SEWING in bookbinding B42B 2/00
- SEWING machines modified for milling D04D 26/03
- tables for SEWING A47B 29/00, D05B 75/08
- travelling SEWING jigs A45F 3/48

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Once we've selected "Sensitive", we will have to scroll down to the appropriate catchword.

Among these catchwords is “Sewing”, which conveniently matches with the field of technology in which we are interested.

It is possible that you will not find a catchword that exactly matches the term you came up with for your field of technology. In this case, you may want to think of other terms that could also be related to the field of technology.

But in this case, we can simply select the IPC symbol “D05B”, matching the catchword “Sewing”.

# IPC: D05B (Sewing)

WIPO IP SERVICES International Patent Classification (IPC) Official Publication

WIPO International Patent Classification (IPC) Official Publication

IPC Home Page Help

Version: 2014.01

Current symbol: D05B

Go to:

Language: English, French, English/French

View mode: path, flat, hierarchical

Deleted entries, Subclass indexes, Quasi-class headings, Notes

Symbol	Description
D05B	Sewing apparatus for the tailoring trade (A11H) sewing tables (A11H 29/00); sewing in bookbinding (D42) 29/00; sewing machines, modified for tailoring (D42 39/00)
D05B 1/00	General types of sewing apparatus or machines without mechanism for lateral movement of the needle or the work or both
D05B 1/02	-- for making single-thread seams
D05B 1/04	-- Running-stitch seams
D05B 1/06	-- Single chain-stitch seams
D05B 1/08	-- for making multi-thread seams
D05B 1/10	-- Double chain-stitch seams
D05B 1/12	-- Lock-stitch seams
D05B 1/14	-- Combined or alternative chain-stitch and lock-stitch seams
D05B 1/16	-- Pile-stitch seams in which the thread loops do not positively interlock (pique or welt sewing machines) (D06B 15/00)
D05B 1/18	-- Seams for protecting or securing edges (zig-zag sewing machines, D05D 3/02, D05D 3/04)
D05B 1/20	-- Deteredge seams
D05B 1/22	--- combined with joining or securing seams

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Clicking the IPC symbol “D05B” will take us to the symbol in the IPC scheme, which broadly contains many types of devices, machines, and elements used in sewing.



## IPC: D05B (Sewing)

	<b>D05</b>	<b>SEWING; EMBROIDERING; TUFTING</b>
	<b>D05B</b>	<b>SEWING</b> (appliances for the tailoring trade / <b>B42B 2/00</b> ; sewing machines modified for kn

If we look closely, we can see an arrow, highlighted here in red, next to the IPC symbol. This arrow links us to another important feature of the official publication of the IPC, namely the IPC Bridge.



The IPC Bridge is a portal to a number of tools through which we can find out more about a specific IPC symbol, including titles, or descriptions of what a given symbol means, in different languages and corresponding symbols in other patent classification system.

It also allows us to use the symbol from which we are “bridging” to carry out searches in a number of different patent database systems, including PATENTSCOPE, the free patent database service provided by the World Intellectual Property Organization.



For this scenario, let's use PATENTSCOPE to do our search using the IPC symbol "D05B", since it has a broad coverage of patent collections and an important feature that we will use to carry out the tasks assigned to us by the sewing machine manufacturer.

Clicking on "PATENTSCOPE" will take us directly to PATENTSCOPE to carry out a search using the IPC symbol "D05B".

# PATENTSCOPE: Results

The screenshot displays the WIPO PATENTSCOPE search results interface. At the top, the WIPO logo and 'PATENTSCOPE' are visible, along with the text 'World Intellectual and National Patent Collections'. Below this, there are navigation tabs for 'Results', 'Database', 'Available', 'Options', 'Home', 'Login', and 'Help'. The search criteria are shown as 'Results 1-90 of 37,876 for Criteria KC="8669" Offset 1 All Language EN Display: tree'. A pagination bar shows 'Page 1 of 418' and '1/378'.

The results table is sorted by 'Pub Date Desc' and shows the following entries:

No.	Cl.	Pub Date	Desc	Title	Pub No.	Int. Class.	App. No.	App. No.	App. No.	Inventor
1	WO	2010/110880	A	METHODS AND APPARATUS FOR SEWING A SLEEVE FOR INDIVIDUAL DEVICES	20.04.2010	F16L 1/04	PCT/US2010/04221	USL, BORN & ASSOCIATES, PC		BRANDON, KENNETH S.
The present disclosure describes methods and apparatus for preparing a sleeve used to surround and assist in delivering an expandable implant to the vasculature of a human patient. The sleeve is formed by curving a sheet (20) of material, longitudinally folding the material, and securing the longitudinally folded material with an integrated member, such as wire or thread, to form a sleeve. This is done by clamping and advancing the sleeve between rotating opposed bevels of two opposing gears (104, 126), thereby forming a plurality of folds along the edge of the sleeve and pinching the plurality of folds along the edge of the sleeve with an end of a rotator pinching member (44) aligned with grooves extending circumferentially within the gears. The resulting sleeve can then receive an inflatable device.										
2	WO	2002/010890	A	METHOD AND APPARATUS FOR LOADING AND TRANSPORTING TUBULAR TEXTILE PRODUCTS	20.04.2004	D06B 3/00	PCT/US2002/04227	SAATCHI S.P.A.		LOGGIO, TIZIANO

At the bottom right of the page, the WIPO logo and 'WORLD INTELLECTUAL PROPERTY ORGANIZATION' are displayed.

As we can see here, we have retrieved a significant number of results, sorted here by publication date.

So now we've completed the first task assigned to us, retrieving a set of patent documents related to sewing.

## Tasks

- Retrieve a set of patent documents in a specific area of technology (sewing)
- **Analyze the set of documents by applicant name**
- Analyze documents associated with a specific applicant by
  - technology
  - patent office
  - publication date

Our next task is to analyze the set of documents by applicant name to identify top innovators with whom our sewing machine manufacturer may be competing.

# PATENTSCOPE: Results

WIPO PATENTSCOPE  
Search International and National Patent Collections

Results 1-10 of 21,876 for Criteria KC="8669" Criteria L="All" Language EN [Advanced] [Free]

Refine Search Criteria

Analysis

No.	Cl.	Pub. Date	Desc.	View	All	IP	IPC Class.	App. No.	App. Cat.	App. No.	App. Cat.	App. No.	App. Cat.
1	WO	2010/110890	DEVICES AND SYSTEMS FOR SECURING A SLEEVE FOR BIODEGRADABLE DEVICES				A61B 1/04	PCT/US2010/04221	US	2010/110890	US	2010/110890	US
The present disclosure describes methods and apparatus for preparing a sleeve used for securing and assuring in delivering an expandable implant to the vasculature of a human patient. The sleeve is formed by curving a sheet (20) of material, longitudinally folding the material, and securing the longitudinally folded material with an elongated member, such as wire or thread, to form a sleeve. This is done by curving and advancing the sleeve between rotating opposed bevels of two opposing gears (104, 126), thereby forming a plurality of folds along the edge of the sleeve and securing the plurality of folds along the edge of the sleeve with an end of a tubular securing member (44) aligned with grooves extending circumferentially within the gears. The resulting sleeve can then receive an inflatable device.													
2	WO	2002/030909	LA BOTTING AND APPARATUS FOR LOADING AND TRANSPORTING TUBULAR TESTER PRODUCTS				B21D 23/00	PCT/US2002/04227	US	2002/030909	US	2002/030909	US

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Coming back to our search results in PATENTSCOPE, we can select the “Analysis” feature highlighted here in red.

## Results: Analysis

Country	Name	No.	Date
United States	JUKI CORP	37076	1999 062
Japan	SANSHU INFO CO	3098	2000 041
China	BROTHER INTL LTD	824	2001 081
Spain	兄弟工業株式会社	810	2002 1849
European Patent Office	UNITED SHOC MACHINERY CORP	638	2002 021
Republic of Korea	UNION SPECIAL MACHINE CO	480	2004 088
HCT	兄弟工業株式会社	382	2005 088
Canada	兄弟工業株式会社	347	2006 084
Brazil	The Singer Company	333	2007 047
Mexico	SANSEWA CO LTD	283	2008 1800
Russian Federation	Juki Corp.	280	2009 1845
Argentina	SANSHU CO	258	2010 028
Tanzania	JUKI CORPORATION	238	2011 088

Selecting the analysis feature will show us a frequency analysis of a number of different fields, laid out by default in table format.

The most frequent contents of a given field appear at the top, so these tables show us the top 10s (or more, according to our settings) for each field.

## Results: Analysis



The screenshot shows a table with columns for 'Country', 'Main Applicant', 'Applicant', 'Date', and 'No.'. The 'Main Applicant' column is highlighted with a red box. The table contains the following data:

Country	Main Applicant	Applicant	Date	No.
United States	JUKO CORP	JUKO CORP	1999	062
Japan	SANSHIHO CO	SANSHIHO CO	2000	041
China	BROTHER INTL LTD	BROTHER INTL LTD	2001	081
Spain	STAY - 王明(王明)	STAY - 王明(王明)	2002	1040
European Patent Office	UNITED SHOC MACHINERY CORP	UNITED SHOC MACHINERY CORP	2002	021
Republic of Korea	UNION SPECIAL MACHINE CO	UNION SPECIAL MACHINE CO	2004	000
ECT	Brother Kogyo Kabushiki Kaisha	Brother Kogyo Kabushiki Kaisha	2005	000
Canada	CLAU - 李耀宗(李)	CLAU - 李耀宗(李)	2006	084
Brazil	The Singer Company	The Singer Company	2007	047
Mexico	SARJEWA CO LTD	SARJEWA CO LTD	2008	1000
Russian Federation	Juki Corp	Juki Corp	2009	1045
Argentina	SANSHIHO CO	SANSHIHO CO	2010	020
Swiss Alice	JUKO CORPORATION	JUKO CORPORATION	2011	000

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As you can see, one of the fields is the “main applicant” field, which represents the first-named applicant on the patent documents in our search results.

The first-named applicant is often the company for an invention claimed in a patent document was made. However, it is possible that multiple companies were involved in the development of an invention and thus named as applicants, where the second and subsequent would not be designed a “main applicant”.



## Top applicants

- JUKI CORP
- SINGER MFG CO
- BROTHER IND LTD
- ブラザー工業株式会社
- UNITED SHOE MACHINERY CORP
- UNION SPECIAL MACHINE CO
- Brother Kogyo Kabushiki Kaisha
- ジューキ株式会社
- The Singer Company
- BARUDAN CO LTD
- Juki Corp.
- SINGER CO
- JUKI CORPORATION
- SINGER COMPANY
- DUERKOPP ADLER AG

Here we've got a list of the top applicants, or rather main applicants, in our search results.

These top applicants may be important competitors for our sewing machine manufacturer, since they appear to be prolific innovators and likely hold extensive patent rights in the field of technology.

## Top applicants

- **JUKI CORP**
- SINGER MFG CO
- BROTHER IND LTD
- ブラザー工業株式会社
- UNITED SHOE MACHINERY CORP
- UNION SPECIAL MACHINE CO
- Brother Kogyo Kabushiki Kaisha
- **ジューキ株式会社**
- The Singer Company
- BARUDAN CO LTD
- **Juki Corp.**
- SINGER CO
- **JUKI CORPORATION**
- SINGER COMPANY
- DUERKOPP ADLER AG

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Let's take a closer look at some of the companies in our list of top applicants.

In fact, it appears that one company, namely Juki Corporation, appears multiple times under slightly different names, including its Japanese name.

## Challenges

- **Name variations**

This takes us to our first challenge when analyzing sets of patent documents according to applicants (or inventors).

Often applicants will appear in patent documents under various spellings, for example in different languages, with and without indications of their type of business, and with or without abbreviations.

## Top applicants

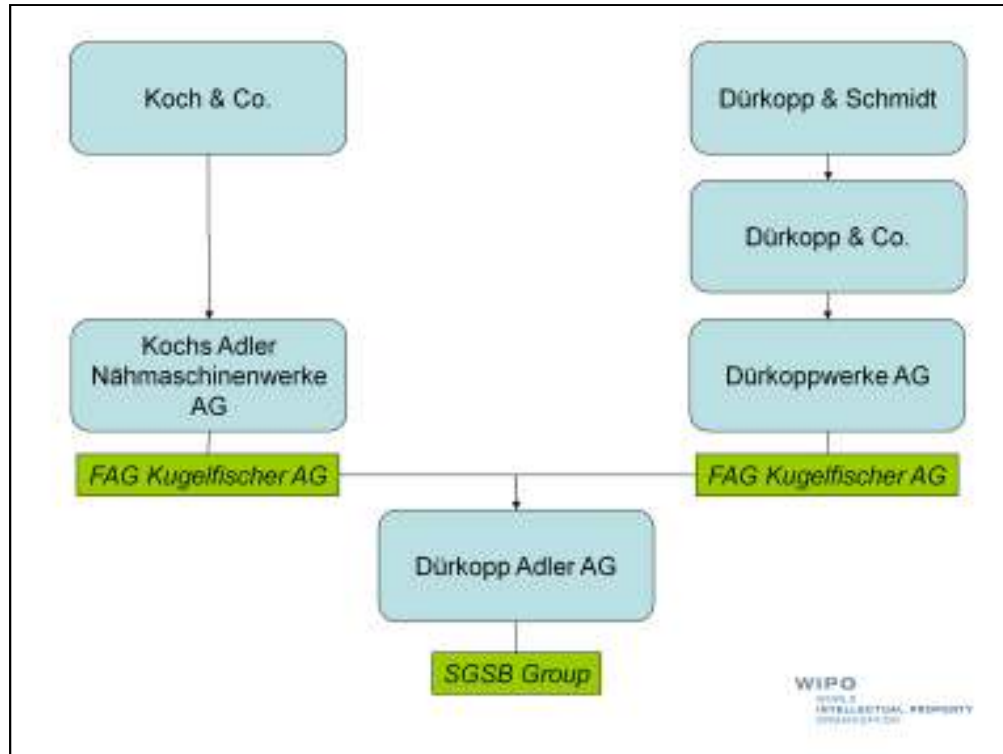
- JUKI CORP
- SINGER MFG CO
- BROTHER IND LTD
- ブラザー工業株式会社
- UNITED SHOE MACHINERY CORP
- UNION SPECIAL MACHINE CO
- Brother Kogyo Kabushiki Kaisha
- ジューキ株式会社
- The Singer Company
- BARUDAN CO LTD
- Juki Corp.
- SINGER CO
- JUKI CORPORATION
- SINGER COMPANY
- DUERKOPP ADLER AG

Let's take another look at our list of top applicants.

## Top applicants

- JUKI CORP
- SINGER MFG CO
- BROTHER IND LTD
- ブラザー工業株式会社
- UNITED SHOE MACHINERY CORP
- UNION SPECIAL MACHINE CO
- Brother Kogyo Kabushiki Kaisha
- ジューキ株式会社
- The Singer Company
- BARUDAN CO LTD
- Juki Corp.
- SINGER CO
- JUKI CORPORATION
- SINGER COMPANY
- **DUERKOPP ADLER AG**

One of the companies on our list of top applicants is “Duerkopp Adler AG”.



Dürkopp Adler AG was the result of a complex history of name changes, changes in type of business, and mergers and acquisitions, starting with the founding of Koch & Co in Bielefeld, Germany in 1860 and including more recently the acquisition of Dürkopp Adler AG by the Chinese SGSB Group.

Countless patent applications have been filed by the subsidiaries and predecessors of Dürkopp Adler AG, which could be included in the number of patent documents to be attributed to the company.

## Challenges

- Name variations
- **Name changes**
- **Subsidiaries and predecessors**

This raises another set of challenges, namely name changes and subsidiaries and predecessors.

Not including results for the same company under a different name or its subsidiaries and predecessors could give us a false impression of their patent filing activity.

Certain patent database systems attempt to address these challenges, name variations, name changes, and subsidiaries and predecessors, in different ways.

## Solutions

- World Intellectual Property Organization
- World Intellectual Property Org.

They may attempt to match them based on similarity.



## Solutions

- World Intellectual Property Organization
- World Intellectual Property Org.
- WIPO

→ **World Intellectual Property Organization**

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Or they may harmonize names.

## Solutions

- World Intellectual Property Organization
- World Intellectual Property Org.
- WIPO

→ **Organization 156**

Or they may assign unique codes to applicants.

## Solutions

- World Intellectual Property Organization
  - United International Bureaux for the Protection of Intellectual Property

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They may also include subsidiaries or predecessors within the results of a given organization.

## Challenges

- Name variations
- Name changes
- Subsidiaries
- **Patent families**

Another challenge you may face when analyzing sets of patent documents are the presence of patent families within these sets. Patent families are groups of patent documents that relate to the same invention or several closely related inventions. They are generally defined as sharing one or more common “ancestors”, or priority documents.

## Results: List

US	4991528 - Method and apparatus for detecting improper stitches for a chainstitch sewing machine	12.02.1991	D05B 65/06	07332227	The Charles Stark Draper Laboratory, Inc.	Bello Stephen L.
ZA	1990/01248 - METHOD AND APPARATUS FOR DETECTING IMPROPER STITCHES FOR A CHAINSTITCH SEWING MACHINE	28.11.1990	D05B	1990/01248	THE CHARLES STARK DRAPER LABORATORY INC	STEPHEN L BELLO
WO	WO/1990/012140 - METHOD AND APPARATUS FOR DETECTING IMPROPER STITCHES FOR A CHAINSTITCH SEWING MACHINE	18.10.1990	D05B 65/06	PCT/US1990/001173	THE CHARLES STARK DRAPER LABORATORY, INC.	BELLO, Stephen, L.

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As we can see here, the Charles Draper Laboratory filed multiple patent applications for the same invention, namely a “Method and Apparatus for Detecting Improper Stitches for a Chainstitch Sewing Machine”, after initially filing a patent application in the United States.

If we were to count each individual patent document here individually, it would lead us to count the same invention multiple times and thus overestimate the actual innovative activity of Charles Draper Laboratory.

As a result, we may prefer to count patent families in a set of patent documents rather than individual patent documents. Certain database systems can help us do this by grouping patent documents into patent families. When evaluating your results, it is important to keep in mind whether your results have been grouped into patent families and, if yes, how your results have been grouped, according to which patent family definition.

## Challenges

- Name variations
- Name changes
- Subsidiaries
- Patent families
- **Patent filing practices**

A related challenge stems from differences in patent filing practices among patent offices.

Legal and procedural differences (for example requirements concerning unity of invention, or how closely a set of inventions must be related in order to be claimed in a single patent application) can mean that numbers of patent applications may not be comparable among different patent offices. All else being equal, a patent office with stricter unity of invention requirements would, for example, tend to have a greater number of patent applications than a patent office with less strict requirements.

## Tasks

- Retrieve a set of patent documents in a specific area of technology (sewing)
- Analyze the set of documents by applicant name
- **Analyze documents associated with a specific applicant by**
  - **technology**
  - patent office
  - publication date

So now that we've taken a look at some challenges we may face when analyzing set of patent documents, let's move on to our next task, namely examining the patent portfolio of a specific applicant by technology, patent office, and publication date.

Doing so will allow us to get an idea of the different areas of technology in which a company is active, which markets it is targeting, and how its patenting activity has evolved over time.

# PATENTSCOPE: Results

WIPO PATENTSCOPE  
Search International and National Patent Collections

Results 1-10 of 21,176 for Criteria: CIP="8669" Office: All Language: EN Date range: free

No.	Cl.	Pub Date	Desc	View	All	Limit Length	18	3	
1	WO	2002/100090	METHODS AND SYSTEMS FOR SECURING A SLEEVE FOR BIPOLEULAR DEVICES	20.04.2004	1001/101	g	PCT/US2002/044201	INL, BORN & ASSOCIATES, INC.	BRANDON, KENNETH S.
<p>The present disclosure describes methods and apparatus for preparing a sleeve used to surround and assist in delivering an expandable implant to the vasculature of a human patient. The sleeve is formed by curving a sheet (200) of material, longitudinally folding the material, and securing the longitudinally folded material with an integrated member such as wire or thread to form a sleeve. This is done by clamping and advancing the sleeve between rotating opposed bevels of two opposing gears (404, 426), thereby forming a plurality of folds along the edge of the sleeve and securing the plurality of folds along the edge of the sleeve with an end of a tubular securing member (442) aligned with grooves extending circumferentially within the gears. The resulting sleeve can then receive an inflatable device.</p>									
2	WO	2002/100090	LA METHOD AND APPARATUS FOR LOADING AND TRANSPORTING TUBULAR DEVICE PRODUCTS	20.04.2004	1001/101	g	PCT/US2002/044201	SANFON S.P.A.	LOGGIO, TIZIANO

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Let's go back to our search results and take things up from there.



# PATENTSCOPE: Results

WIPO PATENTSCOPE  
World Intellectual and National Patent Collections

Home | Search | Results | Topics | RSS | Sitemap | Feedback | Privacy Policy

Results 1-10 of 21,876 for Criteria: C:"8669" Offset: 1 All Language: EN Display: tree

No.	Cl.	Pub Date	Desc	View	All	Limit Length	18	3		
1	WIPO	2010/1108993	METHODS AND SYSTEMS FOR SECURING A SLEEVE FOR INDIVIDUAL DEVICES	20.04.2010	1081	101	g	PCT/US2010/044201	DL, BORN & ASSOCIATES, PC	BRANDON, Kevin S.
The present disclosure describes methods and apparatus for preparing a sleeve used to surround and assist in delivering an expandable implant to the vasculature of a human patient. The sleeve is formed by curving a sheet (200) of material, longitudinally folding the material, and securing the longitudinally folded material with an elongated member, such as wire or thread, to form a sleeve. This is done by clamping and advancing the sleeve between rotating opposed beams of two opposing gears (40A, 40B), thereby forming a plurality of folds along the edge of the sleeve and pinching the plurality of folds along the edge of the sleeve with an end of a rotator pinching member (442) aligned with grooves extending circumferentially within the gears. The resulting sleeve can then receive an inflatable device.										
2	WIPO	2002/0108999	LA BOTTING AND APPARATUS FOR LOADING AND TRANSPORTING TUBULAR TEXTILE PRODUCTS	20.04.2004	2065	740	g	PCT/US2002/044207	SANFON S.P.A.	LOGGI, Tullio

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For this next task, we'll have to carry out a new search, so let's select the "Search" menu item highlighted here in red.

# PATENTSCOPE: Results

The screenshot shows the WIPO PATENTSCOPE search results page. The search menu is open, and 'Advanced Search' is highlighted with a red box. Below the search bar, there are two search results listed in a table format.

No.	Cl.	Title	PubDate	PubNo.	PubNo.	AppNo.	Applicant	Inventor
1.	WO	2014/143087 - METHODS AND SYSTEMS FOR SECURING A SLEEVE FOR ENDOLUMINAL DEVICES	24.04.2014	1001104	g	PCT/US2013/065021	WILSON & ASSOCIATES, PC	BRANDON, Mark S.
2.	WO	2014/143089 - A METHOD AND APPARATUS FOR LEAVING AND TRANSFERING TUBULAR TEXTILE PRODUCTS	24.04.2014	0963102	g	PCT/US2013/065021	WILSON & ASSOCIATES, PC	BRANDON, Mark S.

The present disclosure describes methods and apparatus for preparing a sleeve used to surround and assist in delivering an expandable implant to the vasculature of a human patient. The sleeve is formed by cutting a sheet (202) of material, longitudinally folding the material, and securing the longitudinally folded material with an elongated member (204) as here or herein, to form a sleeve. This is done by clamping and advancing the sleeve between rolling distal ends of two opposing jaws (222, 224), thereby forming a plurality of folds along the edge of the sleeve and securing the plurality of folds along the edge of the sleeve with an end of a tubular joining member (202) aligned with grooves extending circumferentially within the jaws. The resulting sleeve can then receive an endoluminal device.

We can choose from a number of different interfaces, including the simple, structured (or field combination), advanced, and cross-lingual semantic search interfaces. But for this exercise, let's use the advanced search interface, so that we can take advantage of its powerful and transparent query features.

From the "Search" menu, we'll select "Advanced Search", highlighted here in red.

# PATENTSCOPE: Advanced search

The screenshot shows the WIPO PATENTSCOPE Advanced search interface. At the top, the WIPO logo and 'PATENTSCOPE' are displayed, along with a navigation menu for various languages: English, Spanish, French, Arabic, Chinese, Korean, Japanese, Portuguese, Persian, and Russian. Below this, the text 'Search International and National Patent Collections' is visible. A navigation bar contains links for 'Search', 'Browse', 'Advanced', 'Guidance', 'Help', 'Login', and 'Help'. The main search area features a 'Search For:' text box, a 'Language:' dropdown menu currently set to 'English', and a 'Stemming' checkbox that is checked. There are also 'Other' and 'All' options for language selection. A 'Search' button is located at the bottom right of the search area. The WIPO logo and 'WORLD INTELLECTUAL PROPERTY ORGANIZATION' are visible in the bottom right corner of the page.

Doing so will take us to the advanced search interface.

As you will notice, the query language is set by default to the interface language. The query language is important, since if you have selected the stemming option, PATENTSCOPE will search for variants of your search terms in the query language, unless you have selected “All” as the language.

## Top applicants

- **JUKI CORP**
- SINGER MFG CO
- BROTHER IND LTD
- ブラザー工業株式会社
- UNITED SHOE MACHINERY CORP
- UNION SPECIAL MACHINE CO
- Brother Kogyo Kabushiki Kaisha
- **ジューキ株式会社**
- The Singer Company
- BARUDAN CO LTD
- **Juki Corp.**
- SINGER CO
- **JUKI CORPORATION**
- SINGER COMPANY
- DUERKOPP ADLER AG

As you recall, one of our top applicants in the field of sewing was Juki Corporation, which appeared multiple times under slightly different names, including its Japanese name.

## Terms

- Juki Corp
- Juki Corp.
- Juki Corporation
- ジューキ株式会社

Let's collect all the different ways in which this company appeared in our analysis result as possible search terms.

## Terms

- Juki Corp
- Juki Corp.
- Juki Corporation
- ジューキ株式会社

You will notice that the English names under which the company appeared share a common root, or stem.

## Terms

- "Juki Corp\*"
- "ジューキ株式会社 "

We can represent these variants using a wildcard operator, as you may recall from other webinars.

We should also treat the terms as phrases, using quotation marks, or inverted commas.

## Query

■ "Juki Corp\*" OR "ジューキ株式会社"

We can join our two resulting search terms using the OR operator, since they can be considered synonyms for each other and we would like to retrieve documents that contain one or the other term, not necessarily both.



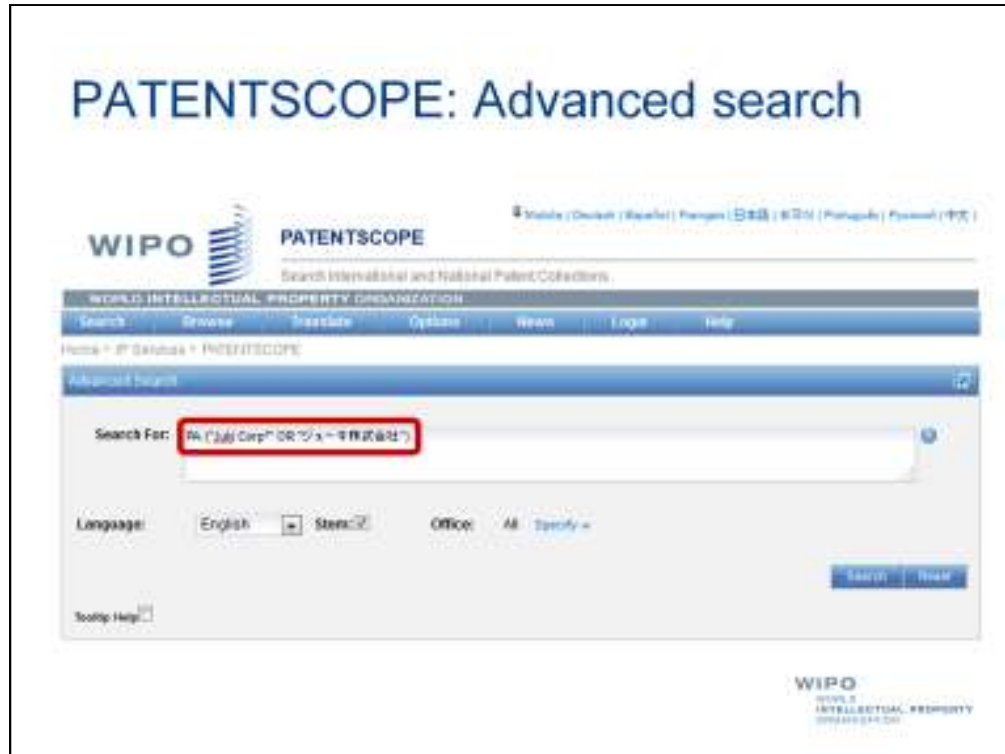
## Query

■ PA:("Juki Corp\*" OR "ジューキ株式会社")

PA → Applicant name (PATENTSCOPE)

Finally, in order to avoid false hits, such as mentions of Juki Corporation in the description of a patent document, let's also specify that the terms should be found in the applicant name field.

The applicant name field is represented in PATENTSCOPE by the "PA" field code, where the terms to be found in the field should be surrounded by parentheses, or brackets, and a colon should be used to separate the field code from the terms.



With our search query prepared, we can simply go to the advanced search and paste our search query into the query box highlighted in red...

# PATENTSCOPE: Advanced search

WIPO PATENTSCOPE  
Search International and National Patent Collections.

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Search Browse Results Options News Login Help

Home > IP Services > PATENTSCOPE

Advanced search

Search For: BA (1/1) Corp OR 'S' -# RZABD

Language: English [v] Stem: [v] Office: All [v] [v]

Search [v] Reset

Scoping Help [v]

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...and then click the “Search” button.

# PATENTSCOPE: Results



**PATENTSCOPE**

Search International and National Patent Collections

[Home](#) | [Search](#) | [Results](#) | [Help](#) | [Feedback](#)

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Results 1-10 of 4,798 for **Colony Wc Jaki Corp OR "of a - 4 INJURY" Chemical Language EN Structure DNA**

prev. 1 2 3 4 5 6 7 8 9 10 next Page 1 of 480

Refine Search **Colony Wc Jaki Corp OR "of a - 4 INJURY"**

Country		Class. IPC		Pub. Appl. No.		Pub. No.		Pub. Date	
Name	No.	Name	No.	Name	No.	Name	No.	Date	No.
Japan	3000	H01L	3079	JAKI CORP	2187	USPC 442420	58	1998	207
China	401	H01L	3408	"of a - 4 INJURY"	881	INNOVUS PHARM	44	2000	234
Republic of Korea	254	H01L	125	JAKI CORP	360	INNOVUS PHARM	44	2001	504
United States	99	H01L	120	JAKI CORP	207	TEGA-BIOPHARM	43	2000	387
ECT	8	H01L	191	JAKI CORP	200	TECHNICAL SERVICES	41	2001	308
France	7	H01L	98	JAKI CORP	01	SAISON THERM	31	2004	227



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As you can see here, we have retrieved nearly 5000 results, representing individual patent documents from different patent collections.

## Results: Analysis

Country	Main No.	Main Inv.	Main Applicant	Main Inventor	Pub. Date
Japan	3000	0008	3078	JUN-CORP	3187
China	401	4E4N	446	シム - 株式会社	491
Republic of Korea	254	EE5H	126	Jun Corp	306
United States	194	001B	120	JUN CORPORATION	287
PCT	8	001B	131	Jun Corporation	206
Mexico	7	006T	99	Jun Corp	33
Singapore	2	006P	98	Jun Corporation	26
European Patent Office	2	4E2P	35	シム - 株式会社, 東京経済大学産学連携研究センター	22
		4E2P	38		14
		EE5C	87	NAKAGISHI JUN KK	33
		EE5D	85	Jun Corp	33
		EE5I	82	SAMINI	33
		EE5L	57	株式会社シム - 株式会社	33
				JUN-CORP	33

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We can use the built-in analysis feature again to give us an overview of our results.

As you may remember, one of our tasks was to find out in which areas of technology this company is active.

## Results: Analysis

The screenshot shows a software interface with a menu bar (Options, Tests, Graph, Options) and a toolbar (100, 100). The main area contains a table with the following columns: Country, No, Main IPC, No, Main Applicant, No, Inventor, No, Date, No. The 'Main IPC' column is highlighted with a red box.

Country	No	Main IPC	No	Main Applicant	No	Inventor	No	Date	No
Japan	3000	D008	3076	AIKI-CORP	3187	SAITO MASARU	58	1986	207
China	401	A63H	846	アム - 株式会社	691	SHIROZUKA YOSHINOBU	44	2008	364
Republic of Korea	254	B60H	126	Aiki Corp.	306	SEDA MASARU	43	2001	351
United States	594	D01B	120	AIKI CORPORATION	387	TACHIGAWA MITSURU	43	2002	357
PCT	8	D01B	131	Aiki Corporation	306	TACHIGAWA MITSURU	43	2001	366
Mexico	7	D06T	99	Aiki Corp.	33	KASUDA TOSHINOBU	37	2004	227
Singapore	2	D06P	99	Aiki Corporation	26	ANDAMA TATSUHIKO	37	2001	269
European Patent Office	2	A63P	95	アム - 株式会社, 東京製織株式会社, 株式会社 アム	22	O SEWO	33	2006	303
		A63P	99	AKAGISHI(株) 株式会社	14	KURODA RYOSUKE	33	2007	313
		B60C	87		8	KAMAZURA SHUJI	33	2008	371
		B60C	85		3	ANDO KAZUMASA	33	2008	336
		B21J	62		3	SAKAMOTO SHINJI	32	2010	208
A63L	57			3	SAKAMOTO SHINJI	32	2011	94	

The fields of technology can be represented by patent classification, or here the main IPC subclasses.

## Top IPC subclasses (Juki)

- D05B → Sewing
- H05K → Printed circuits and electrical components
- B65H → Handling thin or filamentary material, e.g. sheets, webs, cables
- G01B → Measuring

The top IPC subclasses represent:

1. Sewing
2. Printed circuits and electrical components
3. Handling thin or filamentary material, for example sheets, web, cables (but also possibly threads)
4. Measuring

## Challenges

- Name variations
- Name changes
- Subsidiaries
- Patent families
- Patent filing practices
- **Related fields of technology**

This takes us to a further challenge we may face when analyzing sets of patent documents, namely that a different fields of technology may be related to the field of technology in which we are interested.



## Related fields of technology



- Mechanical
- Electrical
- Electronic

Photo source: nzyukim (Wikimedia)

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The field of sewing has evolved dramatically from the simple thread and needle.

So if we want to explore this field of technology, we may want to include mechanical, electrical, or electronic aspects of sewing machines in our search, capturing such aspects as thread feeding or circuit boards.

## Tasks

- Retrieve a set of patent documents in a specific area of technology (sewing)
- Analyze the set of documents by applicant name
- **Analyze documents associated with a specific applicant by**
  - technology
  - **patent office**
  - publication date

Let's move on to our next task, namely examining the patent portfolio of Juki Corporation by patent office.

Doing so can give us an indication of the countries or regions in which Juki Corporation sees market potential, including possibly opportunities to manufacture or sell its products.

## Results: Analysis

The screenshot shows a software interface for patent analysis. At the top, there are navigation options: 'Options', 'Tools', 'Graph', 'Options', and 'List'. Below this is a table with the following columns: 'Country', 'Main Inv.', 'Main Applicant', 'Main Inventor', and 'Pub. Date'. The 'Country' column is highlighted with a red box. The table contains the following data:

Country	Main Inv.	Main Applicant	Main Inventor	Pub. Date
Name	No.	Name	No.	No.
Japan	3036	DAIICHI 3078	JUKI CORP	3187
China	401	HEXIN 846	ジュー株式会社	891
Republic of Korea	254	BEEM 126	JUKI Corp.	306
United States	594	0018 120	JUKI CORPORATION	387
PCT	8	0016 191	JUKI Corporation	306
Mexico	7	0087 88	JUKI Corp.	33
Singapore	2	006P 88	JUKI Corporation	36
European Patent Office	2	HEEP 95	ジュー株式会社, 東京経済大学産業技術研究所	22
		HEEP 88		33
		EPNC 87	NAKASHIWA JUKI KK.	33
		EPDC 85	JUKI Corp.	33
		EPDC 85	SAMITEI	33
		EPDC 82		32
		HEP 57	株式会社ジュー	33
			JUKI CORP.	33

At the bottom right of the screenshot, the WIPO logo is visible, along with the text 'WIPO WORLD INTELLECTUAL PROPERTY ORGANIZATION'.

Again, we can look at our analysis results, to see the top patent offices at which Juki Corporation is filing its patent applications.

## Top patent offices (Juki)

- Japan
- China
- Republic of Korea
- United States
- PCT
- Mexico
- Singapore
- European Patent Office

The top patent offices, include Japan, China, the Republic of Korea, United States, Mexico, Singapore, and the European Patent Office. A number of patent applications have also been filed through the international patent filing system, under the Patent Cooperation Treaty, or PCT.

## Top patent offices (Juki)

- Japan (82%)
- China (8%)
- Republic of Korea (5%)
- Others (5%)

But as we can see, the vast majority of patent documents in our set of patent documents have been published by the Japan Patent Office and other Asian patent offices, which may suggest that Juki Corporation sees the Asian market as particularly important for its products.

## Tasks

- Retrieve a set of patent documents in a specific area of technology (sewing)
- Analyze the set of documents by applicant name
- **Analyze documents associated with a specific applicant by**
  - technology
  - patent office
  - **publication date**

Finally, let's complete our last task, namely examining the patent portfolio of Juki Corporation by publication date.

Doing so can give us a picture of the historical evolution of patent filing activity by the company.

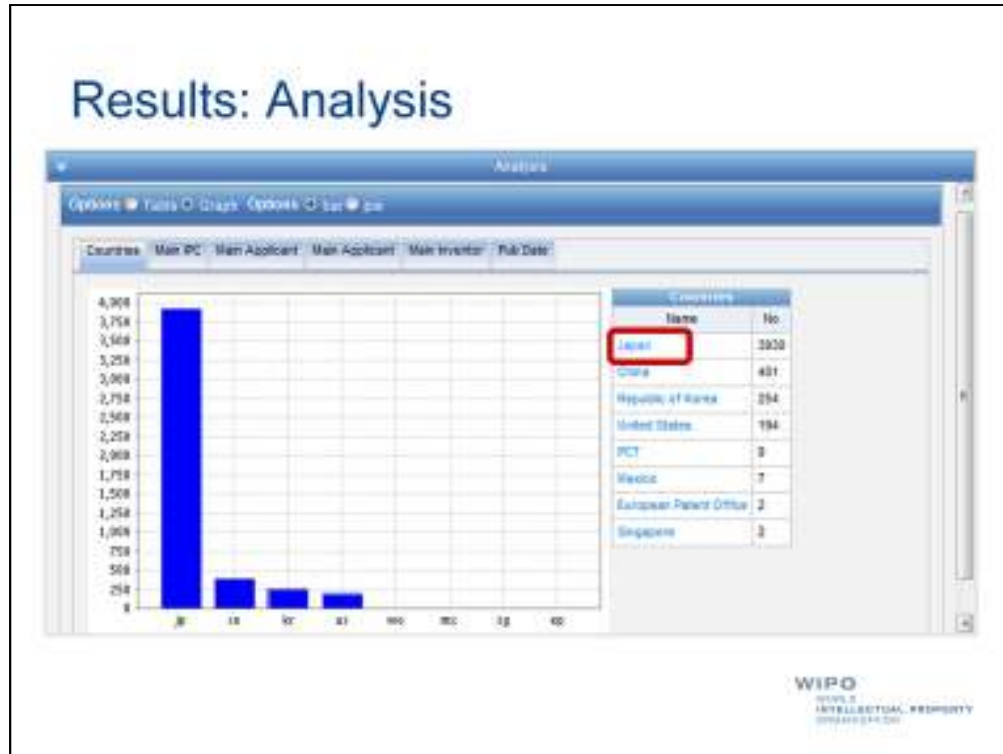
## Results: Analysis

Country	No	Main No.	Main Applicant	No	Main Inventor	No	Date	No.	
Japan	3000	0008	3078	JUN-CORP	3187	SAITO MASARU	88	1906	207
China	401	8E8N	888	シム - 株式会社	881	SHIROZUKA KOSANORI	44	2008	384
Republic of Korea	254	8E8H	128	Jun Corp	306	SEDA MASARU	43	2001	351
United States	594	0018	120	JUN CORPORATION	287			2000	357
PCT	8	0018	131	Jun Corporation	206	TACHIGAWA MITSUNAO	43	2001	366
Mexico	7	0087	88	Jun Corp	88	KASUDA TOSHINO	37	2004	227
Singapore	2	006P	88	Jun Corporation	28	ANDAMA TATSUHIKO	37	2001	289
European Patent Office	2	8E2P	88	シム - 株式会社, 東京経済大学産業研究所 (株) 産業 中心	22	O SEHO	33	2008	303
		8E2P	88			KURODA RYOSEI	33	2007	313
		8E8C	87	NAKASHIWA JIRO KK	14	KAMAZURA SHIJI	33	2008	371
		8E8C	88	Jun Corp	8	ANDO KAZUMASA	33	2008	338
		8E2I	82	SAMIRI	3	SAKAMOTO SHINJI	32	2011	208
		8E8L	87	株式会社シム - 株式会社	3	ANDAMA TATSUHIKO	37	2001	289

A common saying is that “a picture is worth a thousand words”, or in this case dozens of numbers.

So let’s go from the table view to the graph view by clicking the “graph” radio button highlighted here in red.

## Results: Analysis

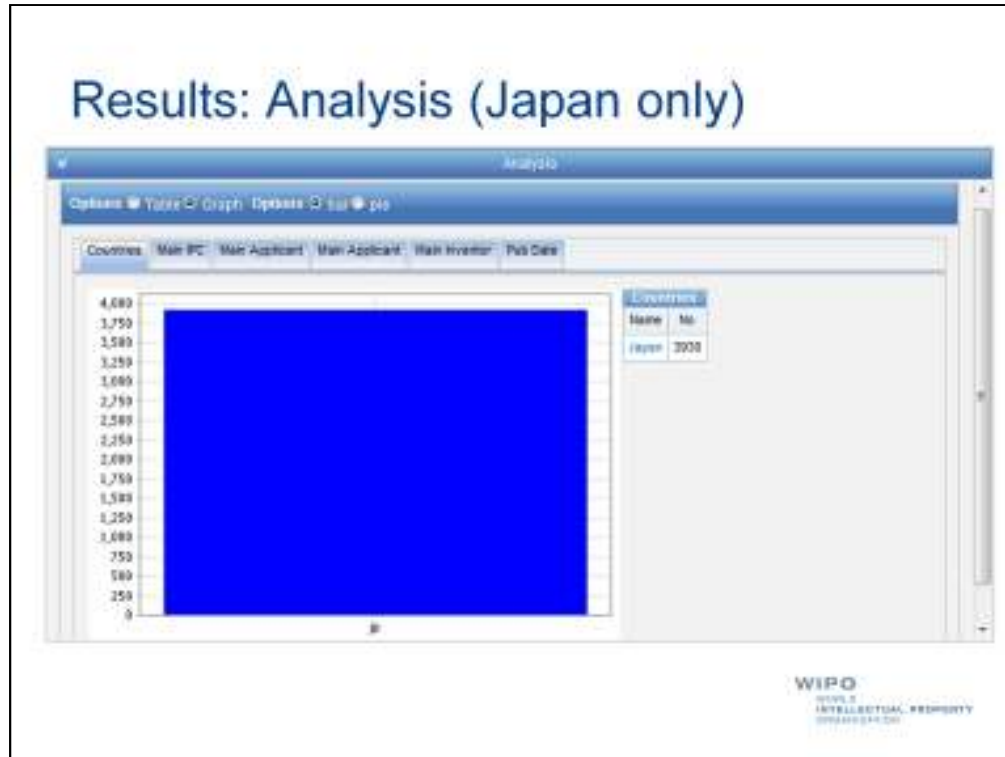


Now we can see the dramatic difference in filing activity by Juki Corporation at the Japan Patent Office and other patent offices.

As a next step, let's select Japan for our analysis to address the problem of double-counting inventions belonging to the same patent family.

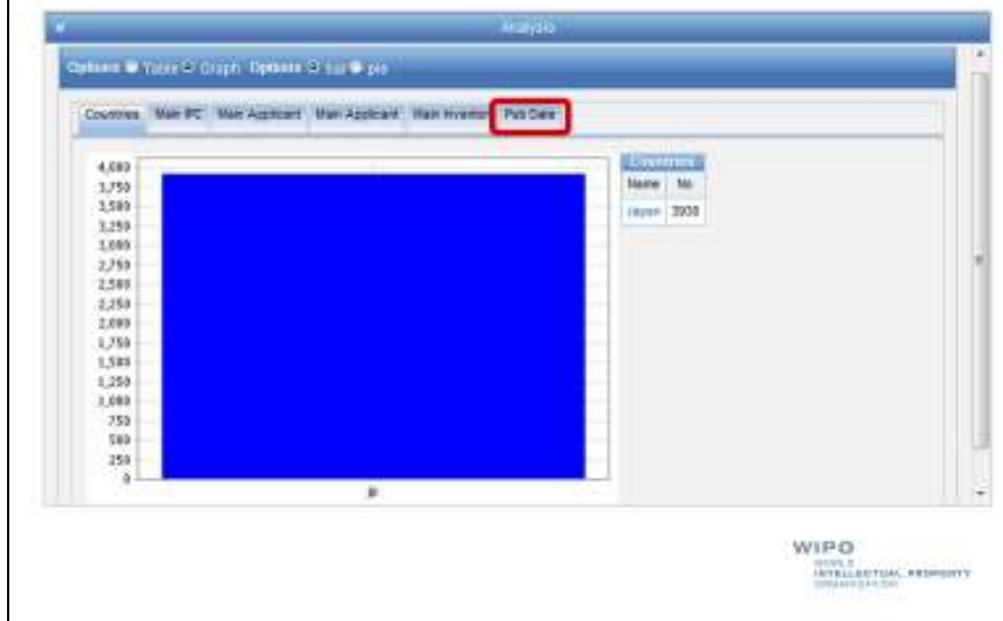


## Results: Analysis (Japan only)



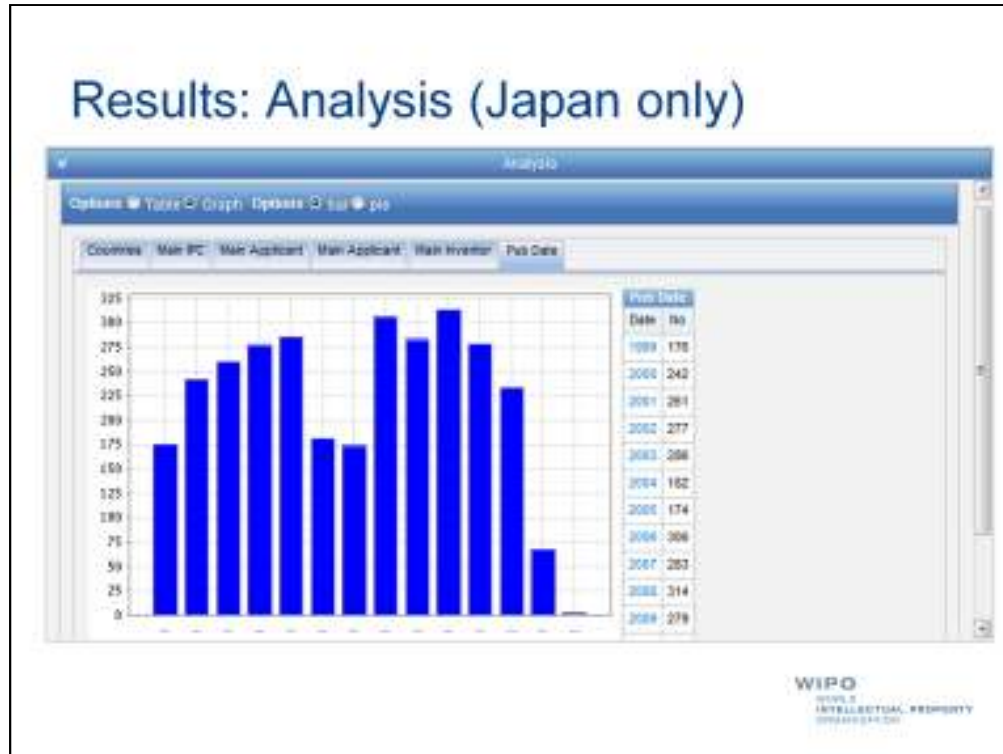
Doing so will filter our results, so that we only include patent documents published by the Japan Patent Office.

## Results: Analysis (Japan only)



As a next step, we'll select the "Pub Date", or publication date, tab.

## Results: Analysis (Japan only)



Now we can see the patterns of patent filing by Juki Corporation in Japan over time, which seems to suggest a significant drop-off in the last two years, taking into account the fact that patent applications are generally not published until 18 months after their priority date, or date of first filing and that several months still are ahead of us in this year.

## Tip!

- Keep in mind which coverage is provided by the patent database system you are using.

I'd like to conclude with two tips.

Firstly, for any patent search and analysis, it is important is to keep in mind which coverage is provided by the patent database system you are using.

## Coverage: General distinctions

- **Patent collections**  
Which countries or regions?
- **Time period**
- **Document types**  
Patent applications? Granted patents? More?
- **Document elements**  
Bibliographic data? Descriptions? Claims?
- **Languages**  
Multiple language versions? Translations?

You need to be aware which patent collections are included, which time period is covered, which type of patent documents are included, which parts of a patent document you are able to search, and which languages (including names) are available.

For example, if your patent database system does not include India in its patent collection, your results will not allow you to draw conclusions about patent filing activity in that particular country.

## Coverage: PATENTSCOPE

Country	Start date	End date	Pat. Regs. (IPC /Patent/ Invention)	All records	Notes
ACT	20.10.1970 - 04.04.2019	20.10.1970 - 24.04.2014	2412433 Total records: 240542 English: 973,645 French: 9392 Spanish: 1724 German: 29008 Korean: 2241 Japanese: 2676 Chinese: 73072 Russian: 1925 Portuguese: 588	2412433	
Argentina	10.02.1982 - 30.06.2015	01.01.1984 - 30.06.2015	8555	109,344	
Australia	10.03.1997 - 24.06.2000	10.03.1997 - 29.06.2000		7,411	
Brazil	24.04.1972 - 01.06.2015	24.04.1988 - 24.06.2015	200771	109,824	Total records: 200771 Portuguese: 100714
Canada	12.08.1988 - 21.01.2014	01.01.2014		2,180,112	Total records: 1,000,000 English: 400,000 French: 400,000
China	03.01.2003 - 24.01.2008	03.01.2008 - 24.02.2008		5,822	
China	05.04.1989 - 14.10.2015	05.01.1989 - 14.10.2015		2,140,280	Total records: 2,134,000 Chinese: 2,079,000
Colombia	14.02.1990 - 21.12.2010	14.02.1990 - 21.12.2010	484	10,300	Total records: 500 Spanish: 300
Cuba	03.10.1988 - 01.02.2015	03.10.1988 - 01.02.2015		6,815	
India	11.03.1969 - 16.01.2012	11.03.1969 - 16.01.2015	1825	2,137	Total records: 1724 Spanish: 179
Guatemala Rep.	01.11.2001 - 16.04.2013	01.11.2001 - 16.04.2013	1886	2,381	Total records: 1200 Spanish: 1300
Hong Kong	02.10.1990 - 24.06.2010	02.10.1990 - 24.06.2010		2,288	
Israel	27.04.2004 - 03.04.2014	27.04.2004 - 03.04.2014		2,261	
El Salvador	14.01.1970 - 19.02.2011	14.01.1970 - 19.02.2015		1,260	

[http://patentscope.wipo.int/search/en/help/data\\_coverage.jsf](http://patentscope.wipo.int/search/en/help/data_coverage.jsf)

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As a result, it is critical to refer to the documentation on the patent database system you are using.

This will tell you what your search results might be able to tell you and more importantly what they cannot tell you.

## Tip!

- Keep in mind that a company that develops a particular invention need not be the same company that commercializes the invention → Licensing

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Secondly, you need to keep in mind that a company that develops a particular invention need not be the same company that commercializes it.

For example, many companies could be considered “idea factories” that do not actually create products themselves but license their inventions to other companies that do.

## Review

- Retrieve a set of patent documents in a specific area of technology (sewing)
- Analyze the set of documents by applicant name
- Analyze documents associated with a specific applicant by
  - technology
  - patent office
  - publication date

To sum up, let's look at the tasks we've successfully carried out.

1. We've retrieved a set of patent documents in a specific area of technology, namely sewing.
2. We've analyzed the set of documents by applicant name.
3. We've analyzed a set of documents associated with a specific applicant by technology, patent office, and publication date.



## Review

- Who are main innovators in our field of work?
- In which other areas of technology are these innovators active?
- In which markets are these innovators particularly active?
- How has their innovative activity evolved over time?

These tasks have allowed us to help our sewing machine manufacturer answer the following questions:

1. Who are main innovators in our field of work?
2. In which other areas of technology are these innovators active?
3. In which markets are these innovators particularly active?
4. How has their innovative activity evolved over time?

## Challenges

- Name variations
- Name changes
- Subsidiaries
- Patent families
- Patent filing practices
- Related fields of technology

We've also looked at a number of challenges we may face when analyzing sets of patent documents and some of the ways in which we can address these challenges.



With that, I'd like to thank you for following this webinar and invite you to keep in touch with the TISC team by email at [tisc@wipo.int](mailto:tisc@wipo.int)

I'll be taking a few minutes now to answer any questions that may have been raised during the course of this webinar.

Please feel free to ask any questions you may not have had the chance to ask earlier.