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IP prior-art searching

Summary guidelines

In light of eponymous online training session held for FTMC on 17th November 2020, present document summarizes main guidelines when performing a prior-art search.

Whenever an idea is generated, it sounds relevant to check how unique the concept of creation is.

In case of commercial prospects, it is important to investigate the allowable use thereof.

Further, considering the idea appears to be rather disruptive, or represents significant improvement as compared to the art, the question may be whether or not the idea should be protected, and if so, which kind of protection may be appropriate.

How to search for patents and patent applications?

The following **databases** publicly and freely available, can for example be used:

- <https://worldwide.espacenet.com/> recommended for worldwide searching
- <https://www.uspto.gov/> to be used for searching US patent references
- <https://www.wipo.int/portal/en/> useful when looking for international patent applications
- <https://www.google.com/?tbs=pts> full text searching feasible

Why searching for prior-art?

Does my invention exist already?

To check whether or not the invention exists already, hence find out the **novelty** of the invention, the state-of-the-art or so-called prior-art, i.e. patents and patent applications as well as non-patent literature including other information publicly available, can be searched for.

Can I freely use my idea?

To check whether or not the idea can be freely used, hence find out the freedom of use or so-called **freedom-to-operate**, existing patent rights can be investigated, e.g. using the Espacenet database as mentioned above. Patent rights are national/regional rights, and therefore the search can for example be limited to those countries where the idea potentially is to be used or commercialized. Patent rights are valid for maximum 20 years, and hence the search can be restricted in timeframe, only considering the past 20 years. The patent search can be focused on the content using keywords and/or classifications (IPC and/or CPC).

Maybe I consider filing a patent?

In case patent protection would sound relevant for your invention, the minimum requirements for patenting should be checked: novelty, inventive step and industrial applicability. Novelty is related to all or not existing prior-art, whereas inventive step being related to the (technical) challenge involved to arrive at your invention. Industrial applicability can be related to the aspects of practicality and the creation in practice (not only in theory) of your invention; for example a time machine not being feasible. It is noted that the invention is rendering a technical solution for a technical problem.

Having fulfilled the patentability requirements, you may consider whether or not it is appropriate to file a patent application. The decision to patent or not to patent may be based on one or more reasons. Under the umbrella of an IP policy, and/or overall IP strategy a possible flow may be determined for the decision process of patent filing.

What is the outcome of prior-art searching?

Whenever performing a prior-art search, the following possible outcome may result:

- Freedom-to-operate assessment: based on the search results found, it may be concluded that there appears to be sufficient freedom-to-operate
- Patentability analysis: based on the search results found, the invention seems to be patentable
- Technology landscaping: with the search results found, interesting information has come to surface of the (potential) competition

How to achieve freedom-to-operate?

Following actions can be taken in case freedom-to-operate is disputable, and needs to be achieved:

- Stop
- Invent or design around
- Buy in rights – license in
- Sell the idea – license out
- Cross-license
- Litigate / invalidate – court

Patent (application) structure

First page: Bibliographic data – Abstract

Text part: Field – Background – Aim – Summary – Description/Embodiments – Claims

Drawings

Search report e.g. in case of EP/PCT patent application

Publication numbers of patents and patent applications may have letter A (possibly A1, A2) in general in case of applications, or letter B (possibly B1, B2) for indicating granted patents, as extension.

How to search on Espacenet?

For quick searching, the '**Smart search**' tool of Espacenet can be used. In case for example a specific patent number or a known applicant's name can be entered, it may be convenient to choose this way of searching.

However, in general, for more detailed or in depth searching, the '**Advanced search**' tool will be selected for use.

The screenshot shows the Espacenet Patent search interface. The main search area is titled "Advanced search" and includes several input fields for search criteria. Red arrows point to specific fields with example annotations:

- Title:** "plastic and bicycle" (Example: *conduct* and laser* and chemical* and electr* and polymer**)
- Publication number:** "WO2008014520" (Example: *US or EP*)
- Application number:** "DE201310112935" (Example: *2000:2020*)
- Priority number:** "WO1995US15925" (Example: *valstybinis*)
- Publication date:** "2014-12-31 or 20141231" (Example: *bayes martin*)
- Applicant(s):** "Institut Pasteur" (Example: *C23C18 or H05K3*)
- Inventor(s):** "Smith" (Example: *C23C18 or H05K3*)
- CPC:** "F03G7/10" (Example: *C23C18 or H05K3*)
- IPC:** "H03M1/12" (Example: *C23C18 or H05K3*)

At the bottom of the page, there is a footer with the text: "Sitemap Accessibility Legal notice Terms of use Last updated: 26.08.2019 Worldwide Database 6.3.5.00.1; 92p"

It is recommended to use the worldwide version of Espacenet, for searching patents and patent applications all over the world. Particularly in case of a patentability search, this is required while anything that is anywhere in the world publicly available can be novelty destroying.

In order to direct the search towards a specific subject, domain or theme, keywords and/or classifications can be entered as search terms. Rather by entering keywords in the field of 'Title and abstract' than in the field of 'Title', the search can be focused on a particular topic, in broadest sense, by making use of truncated words with an * (allowing for any possible extensions of those words), including logical AND/OR/NOT can be applied. Further broadening the search can be achieved for instance by using (truncated) synonyms for the (truncated) words chosen.

The technical fields of all respective inventions appearing in patents and patent applications, are categorized and inventoried in standardly known and commonly used classifications. While using Espacenet, either IPC (International Patent Classification) or CPC (Cooperative Patent Classification) can be given in the provided fields. Such classification can be known for example from a known patent reference, or else can be searched for by means of the '**Classification search**' tool of Espacenet.

As illustrated below, by simply entering some keywords, possible applicable classifications are suggested.

The screenshot shows the Espacenet Patent search interface. At the top, there is a header with the Espacenet logo and navigation links for Deutsch, English, Français, Contact, and Change country. Below the header is a navigation bar with links for About Espacenet, Other EPO online services, Search, Result list, My patents list (0), Query history, Settings, and Help. The main content area is titled 'Cooperative Patent Classification' and features a search bar with the text 'electroless catalytic plating'. To the left of the search bar are several utility boxes: 'Smart search', 'Advanced search', 'Classification search', 'Quick help' (with a list of help topics), and 'Selected classifications' (with 'nothing selected'). Below the search bar is a table of suggested classifications. The table has three columns: 'Symbol', 'Classification and description', and 'Action'. The first row is 'C23C 18/00' with a description: 'Chemical coating by decomposition of either liquid compounds or solutions of the coating forming compounds, without leaving reaction products of surface material in the coating; Contact plating'. Other rows include 'H05K 3/00', 'H05K 2203/00', 'B01J 31/00', 'B01J 23/00', 'B01J 2531/00', 'B01J 37/00', 'B01J 35/00', 'H01L 21/00', and 'H01L 23/00'. At the bottom of the page, there is a footer with links for Sitemap, Accessibility, Legal notice, Terms of use, and a last updated date of 26.08.2019.

In view of a freedom-to-operate assessment in particular, geographical area or jurisdiction and maximum lifespan of the patents are important to consider. Focusing for instance on only US and EP market to commercialize a new product, it may be sufficient to check active patent rights in US and EP only for avoiding potential conflicts, and therefore enter 'US or EP' in the 'Publication number' field. In order to limit patent search results to only those of maximum 20 years old, the timespan '2000:2020' can be entered in the field of 'Publication date'

Whenever the patent portfolio of one or more applicants is requested, the field of 'Applicant(s)' can be used, wherein (part) of the name(s) of applicant(s) can be entered.

Similarly, one or more persons' names (or part thereof) of inventors can be entered in the field of 'Inventor(s)'.

Patent information to be found on Espacenet

The example is given that when searching on 'valstybinis' as Applicant, the patent portfolio of FTMC can be retrieved. As a result, approximately 44 results are found in the Espacenet database.

One of the results is entitled 'METHOD FOR FORMATION OF ELECTRO-CONDUCTIVE TRACES ON POLYMERIC ARTICLE SURFACE' for a US patent application, being part of a patent family having next to the US, corresponding European (EP), Chinese (CN), Japanese (JP), Korean (KR), Lithuanian (LT) and international (PCT) patent references.

When selecting the EP patent family member by means of browsing and clicking the EP number 'EP3512980 (A1)' in the 'Also published as' of the 'Bibliographic data' page, the page as illustrated below is viewed.

On the left of that page, a gray menu is given wherein the following can be chosen: Bibliographic data, Description, Claims, Mosaics, Original document, Cited documents, Citing documents, INPADOC legal status, and INPADOC patent family. Current selection of this menu, being 'Bibliographic data' is highlighted.

When selecting 'Description' in the menu, the entire text of the patent reference is shown in its original language. A patent translate button is provided to generate a machine translation in the selected language. Similarly, when 'Claims' is selected, the claims of the patent reference are shown and can be machine translated in case wanted. When 'Mosaics' being selected, the drawings of the patent reference are depicted.

Pdf-version of the original document, i.e. patent (application) publication, can be viewed and subsequently downloaded by selecting 'Original document' in the menu.

Patent citations, either referring to the patent reference in particular, or else being referral for the patent reference, can be shown by selecting 'Citing documents' or 'Cited documents' respectively.

Further, legal status can be given in brief by means of 'INPADOC legal status'. However, to have an accurate knowledge and more detailed information regarding the legal status of the patent reference, it is recommended to view the 'Global Dossier' or 'EP Register' both being indicated on the 'Bibliographic data' page.

← About Espacenet Other EPO online services ▾

Search Result list **★ My patents list (0)** Query history Settings Help

Refine search → Results page 1 → US2019360104 (A1) → EP3512980 (A1)

EP3512980 (A1)
Bibliographic data
Description
Claims
Mosaics
Original document
Cited documents
Citing documents
INPADOC legal status
INPADOC patent family

Bibliographic data: EP3512980 (A1) — 2019-07-24

★ In my patents list ↗ EP Register 📄 Report data error 🖨️ Print

METHOD FOR FORMATION OF ELECTRO-CONDUCTIVE TRACES ON POLYMERIC ARTICLE SURFACE

Page bookmark EP3512980 (A1) - METHOD FOR FORMATION OF ELECTRO-CONDUCTIVE TRACES ON POLYMERIC ARTICLE SURFACE

Inventor(s): RATAUTAS KAROLIS [LT]; RACIUKAITIS GEDIMINAS [LT]; JAGMINIENE ALDONA [LT]; STANKEVICIENE INA [LT]; NORKUS EUGENIJUS [LT] ±

Applicant(s): VALSTYBINIS MOKSLINIŲ TYRIMŲ INSTITUTAS FIZINIŲ IR TECH MOKSLŲ CENTRAS [LT] ±

Classification: - international: C23C18/16; C23C18/20; C23C18/28; C23C18/30; C23C18/40; C23C18/44; H05K3/18

- cooperative: C23C18/1608 (EP, US); C23C18/1612 (EP, US); C23C18/204 (EP, US); C23C18/285 (EP, US); C23C18/30 (EP, US); C23C18/405 (EP, US); C23C18/44 (EP, US); H05K3/182 (EP); H05K3/187 (EP); H05K3/381 (EP); H05K1/034 (EP); H05K1/0346 (EP); H05K2201/0141 (EP); H05K2201/0145 (EP); H05K2201/015 (EP); H05K2201/0158 (EP); H05K2203/107 (EP, US); H05K2203/125 (EP); H05K3/187 (US)

Application number: EP20170765488 20170906 Global Dossier

Priority number(s): LT20160000514 20160913 ; WO20171855362 20170906

Also published as: CN109844178 (A) JP2019526711 (A) → JP6749482 (B2) KR20190046821 (A) → LT2016514 (A) → LT6518 (B) US2019360104 (A1) WO2018051210 (A1) → less

Abstract not available for EP3512980 (A1)
Abstract of corresponding document: WO2018051210 (A1)

Translate this text into patenttranslate powered by EPO and Google

The present invention relates to a production of electro-conductive traces on the surface of polymeric articles using laser excitation for the areas to be metallised, followed by activation of the laser-treated areas with a metal salt solution, the article is later rinsed in distilled water, and the activated areas are metallised in the chemical plating bath. The aims of the invention are to produce cost-effective conductive traces of the circuits for the application in 3D moulded interconnect devices, to increase the quality of the circuit traces improving the selective metallization process. An irradiation dose and scanning parameters for the surface excitation are chosen experimentally, provided that a negative static charge appears on the surface of the laser-irradiated areas. The chosen parameters ensure that any surface degradation of the polymer is avoided. The activation solution used in the method is aqueous solution consisting of one chosen salt comprising: silver (Ag), copper (Cu), nickel (Ni), cobalt (Co), zinc (Zn), chrome (Cr), tin (Sn) salt.

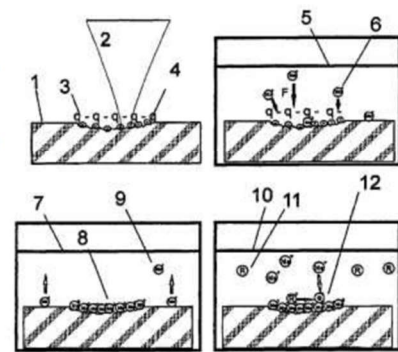


Fig.1

When selecting 'INPADOC patent family' the entire patent family including all patent family members is shown.

Concluding notes

The public domain is huge, and hence something similar or alike, is probably there, to be found. Please note that you are not the only inventor in the world.

Search and find, and iterate this process to get the routine.

When scanning the IPR field, active and potential market players may come to surface. Please remember that patent database results are not always 100% match with what is known from the market. It may be that early stage initiatives or start-ups only become visible in the patent database.

Good luck!

Enjoy your own prior-art search!