

Regional PATLIB centres as integrated one-stop service providers for intellectual property services

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Abstract:

Exemplifying the case of PATON, a large patent information centre in Germany, this paper describes a wide range of services PATLIB centres can offer today. The expansion of its scope of products and services beyond classical patent information in order to become a regional patent centre is also described. The paper further argues that PATLIB centres can benefit from an increasing demand of patent statistics, a tendency PATON responded to with the development of its own in-house software tool, and deliver complex patent and literature analyses one-stop to create value for firms.

Key words: PATLIB, patent statistics, patent information services, technology commercialisation

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## 1. Introduction

More than 300 PATLIB centres are spread throughout the member states of the European Patent Convention. Their primary goal is to provide access to patent information for small- and medium-sized enterprises (SMEs), independent inventors, as well as academics. There are many centres offering not only solely patent information but also a portfolio of products and services related to intellectual property like search services, legal advice through patent attorneys, etc. [1, 2]. However, there are still more opportunities that PATLIB centres can implement to broaden their spectrum of activities. For PATON, one of the largest patent information centres in Germany located at the Technical University of Ilmenau, it is shown how activities were expanded beyond the scope exemplified above to become an integrated one-stop service provider for intellectual property services. Furthermore, it is argued that offering value-added services such as patent analyses and statistics might be a seminal service opportunity for PATLIB centres.

## 2. From a patent information centre towards a regional patent centre

Since its foundation 25 years ago as a polytechnic patent library, the fundamental functions of PATON were providing not only patent information but also information on trademarks, design patents, and technical standards to customers, namely academics and manufacturers. Over the years, PATON as PATLIB centre built up expertise with respect to patent databases [3]. This knowledge was later leveraged to create own databases for full-text documents from the worlds' major patent offices that complemented its patent library and information pools for intellectual property rights. The full-text delivery system served to complement searches in bibliographic databases as well as SDIs.

Currently, patent and literature retrieval services as well as training and seminars on using commercial databases are also provided. The seminars are designed to match experienced as well as inexperienced patent users, and cover general and field specific topics (patent searches for beginners, searches in pharmaceutical related fields, etc.), patent statistics, but also fundamental questions such as how to read patents. Even though most services are targeted at SMEs, a lot of multinational enterprises, academics, and patent attorneys are reached as well. In addition, through its location at the Technical University of Ilmenau, PATON is in charge for lecturing on information science with emphasis on information retrieval in literature and patent databases as well.

Several activities are clustered around the services related to patent information, even though they are not directly related to them. The services aim to facilitate the patenting process especially of SMEs as well as academic inventors, and offer assistance from the point of having a concrete idea about an invention, to the point when the invention is already a marketable patent.

- Patent counselling. Patent attorneys from the region offer legal advice once a week to people who consider filing for a patent or registering a trademark. The first counselling is provided free-of-charge.
- SMEs fulfilling certain requirements by the Federal Ministry of Education and Research (BMBF), for example, that have not filed a patent during the last five years, receive advice and help through PATON as intermediary in applying for financial aid to support their patent application process.
- PATON as a patent information centre serves as an outpost of the German Patent and Trademark Office (DPMA) for receiving patent, trademark and industrial design applications. The day when the application is received counts as priority date. Subsequently, the applications are forwarded to the DPMA. Receiving such kind of applications requires special training and technical infrastructure.
- Since 2002, legislation in Germany encourages universities to seek legal protection and commercialise their inventions. Before, it was up to the inventors like professors, research assistants, and laboratory staff to independently protect and commercialize their inventions. Now, the inventors receive 30 % of the revenues from licensing or selling the patent, while the remaining 70 % remain with the universities and are used to fund the patenting and commercialisation process. In this context patent commercialisation agencies (PVAs) were founded to act as intermediaries who help academic inventors to find partners in industry who are interested in buying or licensing the patent. PATON runs one of these agencies and is in charge for eight universities as well as other governmentally funded research institutes. The commercialisation process includes the evaluation of the invention and potential markets, that is, through the state-of-the-art and novelty searches, help with filing the patent, finding a licensor or a buyer for the patent, and preparing the appropriate contract.

The federal state of Thuringia where PATON is located in funds all activities related to universities, while those targeting customers in industry – SMEs, multinational corporations and independent inventors – are self-supporting. The situation is different with respect to the patent commercialisation agencies. In general, half of the budget of the PVA's is co-funded by the Federal Ministry of Economics and Technology, while the remaining share comes from various sources depending on the agency. In the case of PATON, the funds originate from the federal state of Thuringia. Furthermore, the Federal Ministry also covers half of the direct patenting costs of the inventions serviced by PVA's.

### 3. Patent statistics

In recent years initiatives of regional and national patent offices increased the awareness of patent information among corporate and academic inventors. Freely available databases such as Esp@cenet from the European Patent Office (EPO) and DEPATISnet from the DPMA are more frequently and widely used by inventors than commercial databases to gain a first overview about prior art before filing patent applications [4]. However, even though freely available databases can now be utilised to formulate relatively complex queries, they only allow the extraction of bibliographic and full-text contents. Patent statistics like citation analysis that can be very helpful in patent searches for novelty or infringement (see e.g. [5]) are not possible with free databases, even though it was reported on the EPIDOS conference that the EPO plans to integrate such capabilities into its Esp@cenet website. To gain usable results they require manual as well as intellectual work together with expertise in data handling - classical domains of professional patent searchers. Many companies are interested in additional services like market and competitor intelligence, searching potential partners, etc. [4]. In this case, freely available databases create demand for these value-added services.

Two or three years ago it was necessary to use databases provided by hosts like STN or Dialog to perform statistical analyses. For many professional searchers they are and supposedly will remain state-of-the-art while performing valuable searches and subsequent data analyses. However, users have to possess specific expertise to handle patent searches in these databases, particularly defining efficient queries that are a necessity for meaningful statistics. Recently, several hosts and commercial portal suppliers started integrating tools for statistical analyses in their products. Micropatent, Thomson Scientific, and recently, STN with its client software STN AnaVist are good examples [6-9]. STN AnaVist not only creates statistics such as two-dimensional graphs and tables based on bibliographic

records, but also analyses the texts of patents semantically, creating “patent landscapes”. These steps are milestones from the customers’ perspective because they make in-depth and sophisticated patent analyses easily available for a wide range of experienced patent information users. Many of them know about the existence and usefulness of patent statistics but were not able to create these statistics themselves due to obstacles with data processing from commercial databases.

So far, hardly anything has been written on the value of statistical analysis of patent data from the customers’ perspective [11, p. 193]. We believe that the reasons therefor are manifold. The main issue here is that their value depends on the particular situation of the customer. Often times such analyses are used as a first step to identify relevant documents that are worth a more in-depth analyses of a patents’ content. But industry applies statistical analyses for instance in the context of developing new technology strategies, new product development, identifying potential (cross-) licensing partners, etc. Often times they also serve to communicate technological positions and trends to top level managers. Even though such analyses are costly, especially when tailored towards particular needs of customers, their value often times exceeds their cost. This particularly depends on the firm size: Decision situations in SMEs usually involve smaller budgets, implying that the threshold costs for patent statistics are lower than in large enterprises. This means SMEs are more interested in standardised and therefore cheaper statistical analyses than large firms.

#### 4. PATON’s way towards an integrated patent centre with value-added statistical services

In addition to full-text document delivery and common search services, PATON performs statistical analyses based on a multifaceted data processing and presentation concept. The data used for analyses purposes is extracted from databases hosted at STN International. To be able to conduct user-specific requests, an in-house software tool called PATONanalyst was developed as a package of Excel XLA-modules [12]. The tool reads lists containing the results of bibliographic searches that were produced by commands such as ANALYZE, TABULATE, and DISPLAY in STN Express. It is possible to combine not only the results of searches from various databases, for example, bibliographic results from WPINDEX, citation counts from DPCI, and legal status information from INPADOC, but also information from scientific literature, for instance the Science Citation Index (SCI) or Inspec. Further, data from other sources can be included, such as from the Open Patent Services (OPS) system by the European Patent Office (EPO), or from patent data collections on CD-

ROMs. PATONanalyst tabulates data, includes filter functions to merge different spellings of inventor or applicant names, and finally creates a variety of different 2-D or 3-D statistical visualisations as illustrated in figure 1 and figure 2.

*{insert figure 1 and 2 about here}*

The basic processing functionalities like tabulation and statistical visualisations are profile-oriented, that is, there is a pool of predefined profiles for processing of the search results. Many PATON customers expect specific visualisations, respectively tabulation formats, and eventually merging of additional data. In such cases, the modularity of the application along with the Excel functionalities makes the tool very flexible. As a result, patent searchers can conveniently build user-specific search reports.

##### 5. Value added information services in PATLIB centres

So how can PATLIB centres adopt similar approaches to offer more value-added information services? First of all, they can act as intermediaries and deliver patent information to those SMEs and independent inventors who do not have the resources and knowledge for being direct customers of commercial database suppliers. In this case, PATLIB centres can leverage their expertise in analysis while relying completely on the products of commercial database suppliers to offer cost-efficient products.

“Companies do not see [...] that they can use patent information to monitor competitors and markets. Most companies use market information from other sources to do so.” [4, p. 5]. [10] describe how the Swiss Federal Institute of Intellectual Property sells its patent services: search and analysis packages are meaningfully labelled for example, competitor analysis, licensing partner search, evaluation of cooperation, etc. These buzzwords are much more tangible to the business world, and there are well-established markets trading this information. So bundling services and approaching new customers with products like competitor analyses is the second way. Since most of the already existing patent analysis tools only cover standard statistics like trend analyses, rankings of applicants and inventors, etc., PATLIB centres have at least two possibilities: On the one hand they can bundle different types of statistical analyses and create packages. On the other hand they can offer add-on products that integrate customer specific requests. Both can help to achieve a competitive edge and create additional value for customers. Especially with respect to packages of statistical analyses it is helpful to define in-house standards describing the content of such analyses. For instance, a competitor analysis could first give a ranking

of firms' patent activities in a certain technology field, followed by time-trends, applicants cited in the competitors' patents, applicants citing the competitors, etc. Such standards not only reduce the costs for creating the analysis. The properties and benefits of a standardised product can be marketed and communicated more easily to potential customers as well who are not necessarily patent experts. Such in-house standards also allow an easier handling of the customer specific add-ons.

Third, analyses of PATLIB centres can cover statistics that are not offered by commercial database suppliers yet, such as so-called patent or inventor portfolios [13–14]. Also, integrating non-patent literature might in many cases be very helpful. It is necessary to monitor both patent and literature information, especially in science-based technologies. So far, commercial database suppliers only offer a limited range of products and services related to non-patent literature statistics. Teaming up with academic institutions can enable PATLIB centres to develop new methods of patent analysis and keep a first-mover position with respect to a full range of patent analyses. Especially, semantic analyses are fields where many path-breaking developments can be expected in the following years. Current developments here are related to semantic classifications of patent documents [15], semantic document retrieval algorithms [16-17], but also statistical analyses applying semantic algorithms to e.g. identify inventors with certain characteristics [18]. In general, the potential to improve these activities by means of semantic algorithms is high [15, p. 9], and there are more efforts under way to build patent analysis tools around semantic algorithms.

## 6. Conclusion

There are several ways for PATLIB centres to expand their services around their core activity, namely, providing patent information. It was shown how PATON groups its services around SMEs and independent as well as academic inventors in the region. Furthermore, several perspectives were laid out as to how PATLIB centres can foster their activities related to patent statistics to create more value for new and existing customers.

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Figure 1:

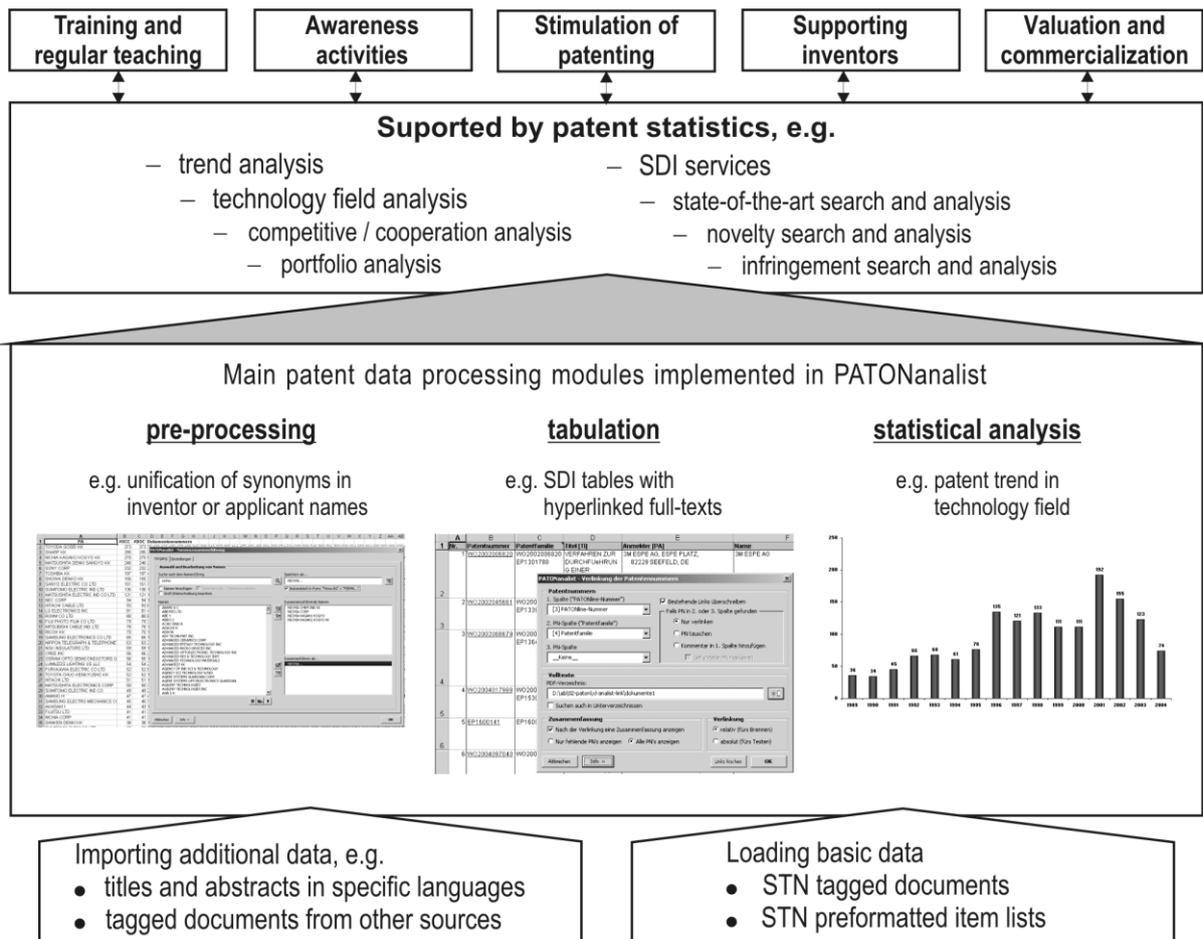
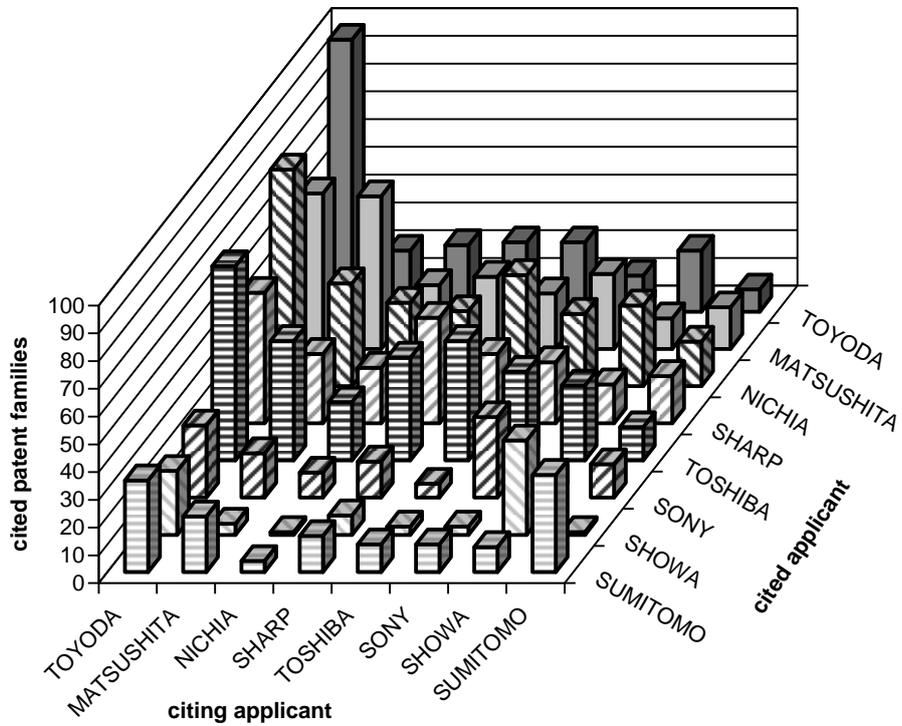


Figure 2:

**Who cites whom in patents? Overview about eight highly active applicants**

Area of search: Optoelectronic components based on GaN



**citation frequency (absolute, without time-window)**

Source: DPCI (last update: March 24, 2006)