



PATSTAT revisited: Suggestions for better usage



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ABSTRACT

This study provides a comprehensive summary of and guidance for using the EPO Worldwide Patent Statistical Database (PATSTAT), one of the most widely used patent databases for researchers. We highlight the three most important issues that PATSTAT users must consider when performing patent data analyses and suggest ways to deal with those issues.

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1. Introduction

While there are many approaches in economic and social studies, these can be roughly divided into two main types, namely the theoretical approach and the empirical approach. Neither of them can stand alone. Improved sophisticated models using theoretical analysis help better explain empirical analyses, and new findings arising from empirical analysis help set new theoretical models. Findings and discussions coming from theoretical and empirical analyses are used for various purposes including policy formation. Thus, both approaches must be used appropriately.

Lately, scholars have widely used patent data for empirical economic and social science research. One advantage of using patent data is that it provides useful information that enables us to understand the technological innovation process. An example of the first page of a patent application is illustrated in Fig. 1, depicting the type of information to be found. From the example, we can identify the patent office at which the patent was applied (the US in this example) (19),¹ its title (54), inventor names and

addresses (75), assignee name and address (73), application number (21), publication number (10), publication date (43), other related patent applications (60), foreign application priority data (30), patent classification (51), abstract (57), and best mode figure.

As the patent is often regarded as an output of R&D, analysis of the information acquired from patent documents reveal how R&D is conducted and how technological innovation is derived from inventions. Direct use of such raw information is one way to use patent data for economic and social studies.

Another way is to use statistical information retrieved from a large quantity of patent data called patent statistics. Dozens of patent statistics have been proposed by scholars for effective analysis of patent data [1–3]. Patent statistics are used in various fields such as science and technology, social sciences, and economics. In addition, empirical studies employing patent statistics have significantly increased in recent years. Table 1 presents the examples of frequently used patent statistics.

The objective of this study provides a comprehensive summary of and guidance for using the EPO Worldwide Patent Statistical Database (PATSTAT). As discussed, patent information has many uses, and therefore, guidance on using one of the most widely used patent databases will be useful to researchers in many fields including economics and social sciences for several reasons.

First, although scholars are performing increasing numbers of

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¹ For the numbers in parentheses in Fig. 1, see Appendix regarding the patent INID codes.



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(54) **METHOD FOR INDICATING PRECODING MATRIX INDICATOR IN UPLINK MIMO SYSTEM WITH BASED ON SC-FDMA**

(30) **Foreign Application Priority Data**

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(57) **ABSTRACT**

A method of transmitting PMI (precoding matrix indicator) information in an uplink MIMO system is disclosed. The present invention includes the steps of receiving channel information from a user equipment and transmitting information on a resource allocated to the user equipment in uplink transmission and PMI information indicating a precoding matrix to apply to a region of the resource among a plurality of precoding matrices to the user equipment based on the received channel information, wherein the resource allocated to the user equipment is allocated by a bundle unit of a prescribed number of subcarriers, wherein each of a plurality of the precoding matrices are applied to regions generated from dividing a whole frequency band into a prescribed number of regions, respectively, and wherein the precoding matrix applied to the resource among a plurality of the precoding matrices has a maximum area resulting from overlapping a frequency band occupied by the allocated resource with a frequency band having the precoding matrix applied thereto.

(73) Assignee: **LG ELECTRONICS INC.**, Seoul (KR)

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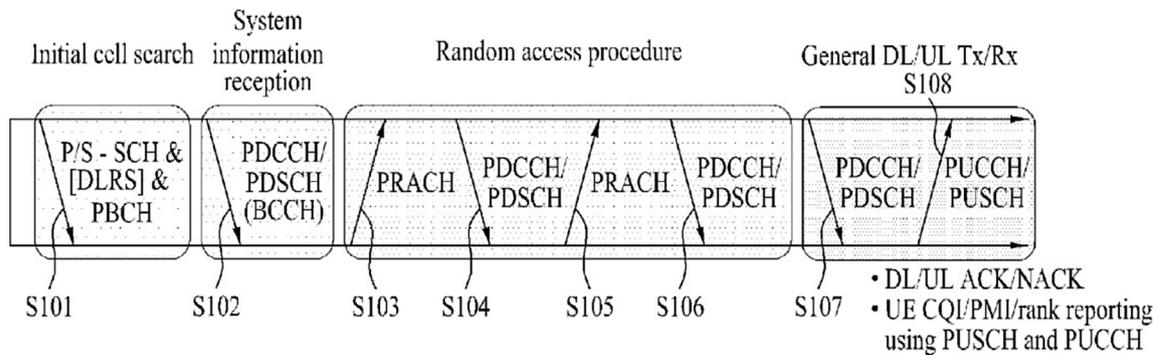


Fig. 1. Example of patent applications (first page).

patent data analyses, some researchers still face difficulties in performing patent data analyses, while others unintentionally perform patent data analyses inappropriately. Most knowledge regarding patent data analysis has been obtained through learning by doing or personal consultation with skilled users. Such methods are very time intensive. Providing a comprehensive summary and

guidance will help young researchers and new users save time and effort in accustoming themselves in performing patent data analyses.

Second, PATSTAT has become one of the most widely used patent databases for scholars. Patent data is increasingly being used for various purposes. As a response to increased demand, basics

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