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A look at the abundance of Chinese utility models

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ABSTRACT

This article explores the multitude of Chinese utility model filings both from a statistical as well as from a legal standpoint. Both assignee and IPC analysis are used to gain insights into filing patterns and practices. A comparison of Chinese, German, and Japanese utility model laws show similarities and differences between the statutes and practices in these countries.

1. Introduction

Everyone in the patent industry has these last few years witnessed the growth in numbers of patent applications, only slowed down by the economic crisis of 2008/2009 for a short intermission. While patents are becoming economically ever more important on a worldwide scale, there is one country standing out with its application and publication numbers, which is China. As can be seen from Fig. 1 while German publication numbers decline slightly, Japanese numbers stagnate at a high level, US and European patent publications show a steady but modest growth, Chinese publication numbers are soaring. At the same time China's role as a trade partner and a violently growing industrial nation make the country ever more important for the traditional industrial countries both in Asia as well as in the West.

This leads to all kinds of questions concerning the reasons for, the origins of, and the risk these documents may pose. We cannot but speculate on the reasons for this interest in intellectual property rights in the People's Republic of China. On the origins of the publications we can say more which can be substantiated with facts. The inclusion of Germany in the list of countries that we are going to consider along with the US, the European Patent Office and Japan is due to the fact that we will not look at all publications in China but will concentrate on one kind of document whose publication numbers are increasing even faster than patents: utility models. Most utility models laws were imported and modeled after the German one [1]. It will serve as the starting point for a thorough comparison and discussion of utility model laws and practice in Germany, Japan, and China in the second part of the article.

2. The numbers

In China there is a system of incentives in place to promote innovation and this we find mirrored in the number of patent applications. The one measure best known is the exemption from 15% of the sales tax [2,3], if your company qualifies as a high tech company. This status requires ownership of intellectual property rights. Applicants need to own at least one patent application or alternately six utility models or other IP rights for their IP right assessment score to be in the top range [4]. This practice is by no means exclusive to China [5] – for an overview see Ref. [6] and especially for the British practice see Ref. [7]. Other measures like influence on the tenure track for professors and allocation of flats for workers and developers are only rumored and there is no official source known to the authors to prove or disprove them. At the same time record numbers of patent agents as reported by Intellectual Assets Magazine [8] are taking the bar exam, who then are looking for an occupation.

Under these circumstances of a subsidized system the question arises who does file all these applications? What piqued our interest also was the extremely high number of utility models. Of

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0172-2190/

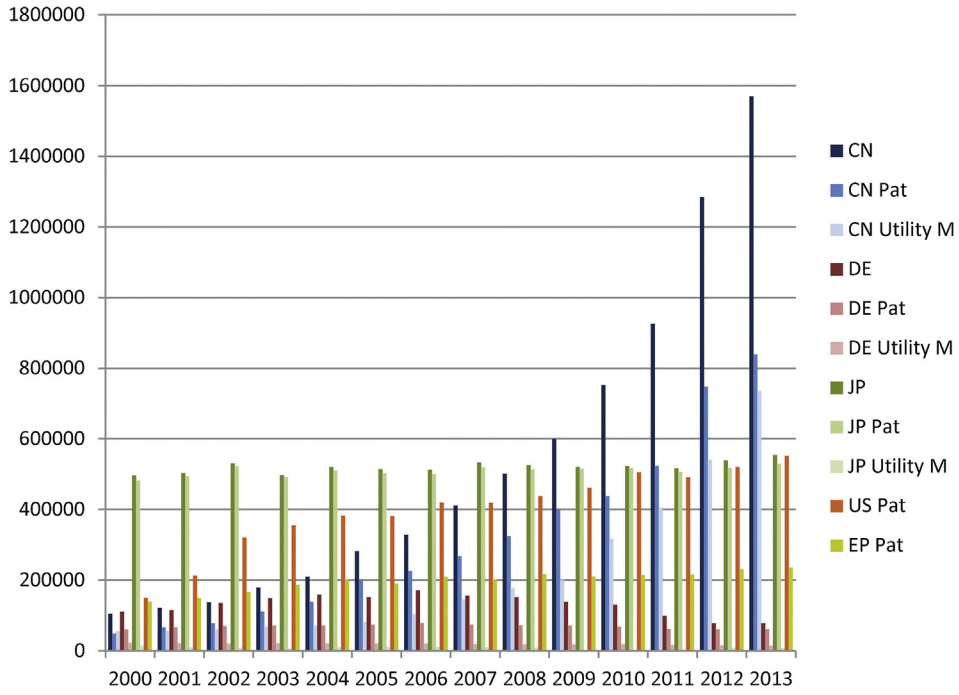

Fig. 1. Publications of CN, DE, JP, US and EP patent offices 2000 to 2013.

course they are much less expensive to get, but is the protection comparable to the one afforded by patents? Does it make a difference what I want protected i.e. are utility models filed by different applicants in different fields of technology? We ran a number of queries to identify the country of origin, the main applicants and the main technology areas in which Chinese utility models are filed which are described in more detail below. First the methods used to access the data and second what data were examined especially and some conclusions considered safe to draw will be introduced.

2.1. Description of methodology

Nowadays most patent databases are collections of data that are organized into so-called patent families [9] – that is priority, application and publication details of patents ideally describing the same invention are grouped together in accordance with one of several definitions of a patent family. Most are based on the Inpadoc family definition, as the EPO's DocDB database which is also at the heart of many commercial offerings. This has several advantages, e.g. when it comes to multi-language searching, to finding different publications from different years with similar to identical content, to citation searching on a whole set of similar documents, even for competitor assessments where one can readily gain insights into filing patterns. On the other hand it can have severe disadvantages especially when it comes to statistical questions: Inpadoc families have a tendency to grow rather quickly since they rely on patents sharing ANY priorities as opposed to the so-called simple families which only consider patents kin which share ALL priorities. While this is mainly a problem with US documents which make use of very extensive filings by claiming partial priority (continuation-in-part) from sometimes obscure/preliminary original documents - the real problem lies in most database providers not offering a query language which can finely differentiate between different family members or their data are not preprocessed (e.g. by splitting patent number information into country code, patent number proper and kind code for indexing) to allow detailed retrieval.

Unless otherwise stated all our data stem from the INPADOCDB patent database hosted by STN. Together with its companion file INPAFAMDB it represents most of the world's patent literature, although only partly covering the content of publications beyond bibliographic data with half of them having abstracts [10]. INPADOCDB has one entry per patent/utility model, although covering different publication stages of this one document. A European application published without search report, granted and changed in opposition then could have four publication stages marked by patent kind code: A2, A3, B1 and B4. Nevertheless the parallel French member of the same family will have to be searched separately (or found via the “SFAM” command, or via a special display format). Another reason for the choice of the INPADOCDB database lies in the alignment and standardization of data and data descriptors and the fine-tuning STN's query language “Messenger” allows for. So INPADOC does not only record assignee or inventor data as supplied by the patent offices but adds a standardized form of these in an additional field. Data are not just recorded in plain lists but there are various relationships between the data and their place in the file: this allows – apart from the ubiquitous adjacency operators “W” and “A” for words adjacent in the same or any order – for a whole range of proximity operators like “same paragraph” (P), “same sentence” (S), “same information unit” (L) [11]. These do not only cover their obvious semantic relations but may have - depending on database - different and specialized meanings.

In family databases it is often not possible to search for more intricate relationships than what document has a family with any publication in a certain year because you can mostly only search for the like of: “PC = WO AND PD ≥ 20130101”. This will return all the families that have at least one PCT publication and at least one family member that have been published on, or after January 1st, 2013. You cannot tweak the query to find only those where the PCT document was published in your target time frame. Some sources allow at least a little more leeway by e.g. offering query fields like “PDCC” for the publication date (PD) of a certain publication with a certain country code (CC). In the above case you could then force