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Legal Validity Metrics for Patent Offices and Law Firms — Recycling of Patent Court Appeal Decisions for Quality Management

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ABSTRACT

In all relevant patent systems an adversely affected party has the possibility to appeal the patent office's decision in front of a patent court or Board of Appeal (BoA). Within a European context, the EPO is, in a way, even engaging in de facto competition with national patent offices. As an example, the German Patent and Trademark Office (DPMA) provides quasi identical patent products and offers the same kind of legal recourse to the German patent court (BPatGer) for these products. Both offices offer an opposition procedure which is open for appeal, and also in the case of a refusal, both offices offer the possibility of appeals. Thus, the EPO Boards of Appeal are engaged in making decisions every year on around 2000 cases and, e.g., the BPatGer on 600 cases regarding the legal validity of the first instance's work. It is thus remarkable that, so far, nobody has systematically included the work of the patent courts in a statistical legal validity evaluation in the context of the Patent & Trademark Offices' (PTOs') quality assurance systems.

Since there is obviously a need to establish a common standard for the comparison of first and second instance legal teachings in patent law, a methodology for comparative legal validity analysis is proposed in this paper. I have tested and optimised the approach while working as a project manager at the European Patent Office, based on analysis of 2300 appeal decisions from seven annual batches.

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Key conclusions

Patent case law is suitable for statistical analysis of first instance decisions and patent attorney's work.

The legal validity levels of the PTO first instance as required by the national patent acts can be measured for all relevant legal patentability requirements.

The legal validity of EPO refusal decisions appears to be comparatively higher than the validity of opposition decisions in view of the EPO Boards of Appeal.

1. Introduction

With the methodology described in this paper, it is possible for the first time to provide a statistical representation of the level of harmonisation between the whole annual body of EPO judicial[1] and executive instance[2] decisions.[3] This paper concentrates on the practical application of the developed approach and provides for a brief summary of the applied methodology and explains the practical use of the developed legal validity indicators. It is an extraction directed to practitioners taken, with permission, from a more extensive English paper in the *Journal of World Intellectual Property* which also explains the legal and further theoretical aspects of the approach ([2]; p. 168—188). There is also a German paper dedicated to this

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[1] The EPO Boards of Appeal are referred to as courts in the framework of this paper. cf. EPO Enlarged Board of Appeal, decision G 2/06, Reasons 4. The expression 'executive instance' shall solely cover the first — examination and opposition — instance.

[2] Within the framework of this paper, the PTO examining and opposition decisions are considered first instance decisions while the EPO BoA and national patent courts are considered the second legal instance.

[3] For the EPO statistical figures please refer to: European Patent Office (2012), EPO Office Journal, Special Edition, European Patent Office Board of Appeal Case Law, 3. For the German statistical figures please refer to: German Bundespatentgericht, Annual report, 2011, 82.

subject ([3]; p. 153–173). It is intended to stimulate interest in systematic legal validity analysis based on patent court decisions - an important statistical resource for patent offices as well as for the user community which has so far not been systematically exploited. Finally, the underlying thesis of this paper is that the applied legal theories and principles can be used effectively also for comparative legal validity studies within the Chinese, German, Japanese, Korean and US patent systems.

2. Patent case law is sufficiently representative and suitable for statistical analysis of first instance decisions

If we want to investigate the issue of representativeness further in depth, it is worth taking a look at the population of the relevant output of the EPO. Figure 1 (not to scale) illustrates the population of EPO products, which are relevant for comparative legal validity analysis. As a rule of thumb one may say that about 45% of the EPO's opposition decisions and 25% of the refusal decisions are appealed. These numbers stand for excellent sample sizes which allow for a statistical accuracy of the results of around 1.6%[4] — which represents a dream-score for quality managers.

In order to allow an appropriate interpretation of the proposed legal validity metrics, it is important to understand and to balance the likelihood of economic and purely validity related motivations to file an appeal. In this connection it is necessary to distinguish between the *representative* character[5] of the legal substantive content and the degree of *statistical* randomness of the appeal event. It is already safe to say at this point that — as far as legal validity is concerned — the population of opposition appeals and refusal appeals is a sufficiently representative (but not random) sample of the respective underlying opposition or refusal cases.[6] In other words: there is an economic selection effect when a party adversely affected by the first instance decision decides to appeal. It is, however, most likely that below-average legal validity of first instance opposition decisions is not the driving factor for appeals. The remainder of this paper is therefore concerned with the methodology of the analysis and does not present further investigations related to selection effects.

3. Modelling of appeals against refusal and opposition

One important prerequisite to extract reliable statistical legal information from patent validity decisions is a standardized, descriptive methodology which is applied to the first instance decision and to the succeeding appeal judgement. The information gained this way is systematically "granulated" down to a level of detail which allows precise coverage of relevant changes and amendments of the case.[7] Figure 2 illustrates this process. For such a process it is, of course, necessary to distinguish between appeal
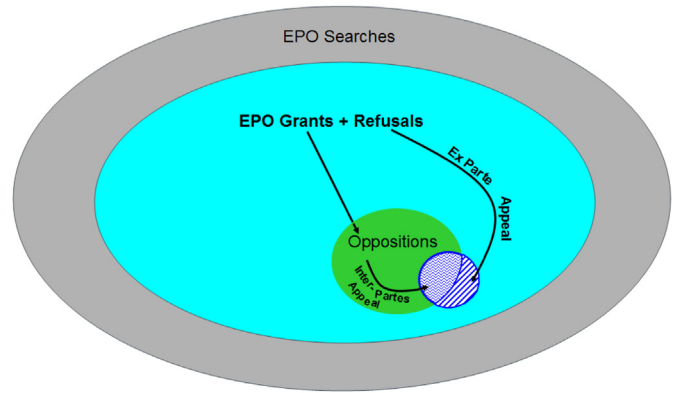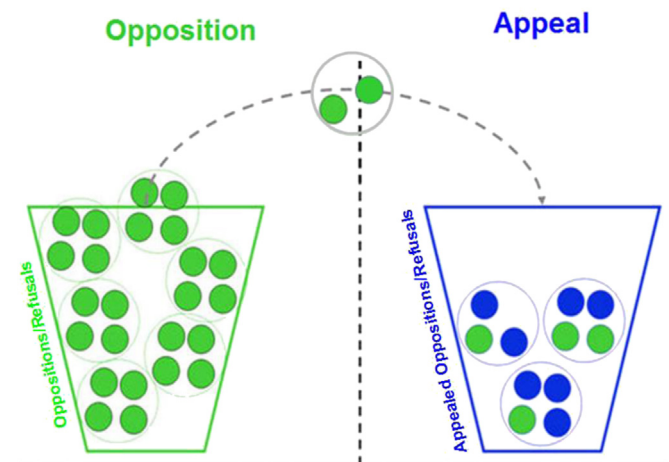

Fig. 1. Population of EPO patent products.

Fig. 2. Modelling of the feature components of appealed PTO decisions.

against *refusal/rejection* and appeal against *opposition/re-examination/trial*.

3.1. Quality relevant results achieved by comparative legal validity analysis

The results that can be achieved with this methodology enable reliable statements in view of

- the **quality** of the opposition/re-examination/invalidation procedure and refusal/rejection **decisions**
- the **level of harmonisation** with regard to the interpretation of law between the executive and appeal instance
- the **legal validity** levels of the PTO first instance for all relevant legal **patentability requirements**
- appropriate **patentability thresholds**
- the quality of the patent attorneys' profession.

3.2. Case law analysts apply a reproducible "ex-ante" analysis approach

Within the framework of this paper, the concept of modelling is directed to a *descriptive* methodology applied by professional case law analysts. Namely, a concept is required which allows for systematic "granulation" and classification of the decision content in such a way that the extracted information can be handled by the case law analysts who are in charge of comparatively analysing the first and second instance decisions in close connection with the

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[4] With a confidence interval of 90%.

[5] i.e. the comparability of the population of the first instance's work against which an appeal was filed with *these* first instance decisions which were not appealed — in terms of the legal issues which are raised.

[6] The aspect of representative character vs. statistical randomness is further discussed in the author's book ([2]; chapter B.III). The impact of selection effects on the representative character of the selected cases is not the subject of this article which concentrates on an empirical legal methodology. Since this paper focuses on the methodological aspects of comparative case law analysis which are decoupled from statistical considerations, it is sufficient to know at this place that the negative impact of the selection effect is sufficiently low, while the selection effect for refusal appeal appears to be slightly larger than for opposition appeal.

[7] Important examples are: the substantive legal arguments, amendments of the claimed matter, admissibility issues or the prior art cited against the claims, etc.