

CA/nn/09

Orig.: en

Munich, 27.02.2009

SUBJECT: Examiner productivity landscape

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2. Central Staff Committee

ADDRESSEES: Administrative Council (for information)

SUMMARY

The present document describes the production/productivity landscape as experienced by the examiners. The three major aspects of the examiner production/productivity landscape are (a) the reporting system, (b) the search and examination procedure, and (c) the behaviour of applicants and patent attorneys. These aspects will be discussed individually.

TABLE OF CONTENTS

Subject	Page
I. INTRODUCTION	1
II. THE EXTERNAL DIMENSION	1
III. IMPACT OF PROCEDURAL CHANGES	4
IV THE REPORTING SYSTEM	6
V. THE WORKING ENVIRONMENT	9
VI. CONCLUSIONS	9

I. INTRODUCTION

1. Examiner productivity has been the subject of much discussion both in the Administrative Council and in the Office. In the opinion of the Central Staff Committee the perspective of the examiners concerned has, however, been neglected. The present document attempts to rebalance the situation and describe the production/productivity landscape as experienced by the examiners.
2. The three major aspects of the examiner production/productivity landscape are (a) the reporting system, (b) the search and examination procedure, and (c) the behaviour of applicants and patent attorneys. These aspects will be discussed below in reverse order.

II. THE EXTERNAL DIMENSION

3. When the EPO started the only prior art available to an examiner was in the form of a well-classified paper collection consisting mainly of patent literature. Individual classes would consist of some 100-200 documents. Even if several classes had to be searched the number of documents checked would rarely be more than a few hundred. These documents would normally have been classified by the examiner concerned, meaning that he/she would be quite familiar with the paper collection, in particular after a few years of searching. Frequent re-organisations assured that the documentation was permanently kept in good shape. The search examiner's work mainly consisted of checking through the documents in a few classes and, more rarely, consulting an examiner working in another technical area.
4. Since then the amount of prior art that needs to be searched in the form of traditionally classified patent documents increases steadily. From Figure 1, one notes a more than four fold increase of records in EPOQUE search database in only 7 years. In particular, from 2007 till 2008 a growth of 18.4% was registered.
5. More importantly, however, searches are nowadays not limited to what once was the EPO's paper collection but additionally cover a multitude of specialised external databases as well as all the information available in the internet.
6. The size of the documentation available on the internet roughly doubles every 5 years¹. In Feb. 2007 the number of indexed pages on the Word Wide Web was estimated at ~ 29.7 billion. Whereas most of this material obviously is not relevant

¹ <http://www.labnol.org/internet/internet-size-to-double-every-5-years/6569/>

for a patent examiner it provides a vast amount of back-ground noise from which potentially relevant documents must be extracted.

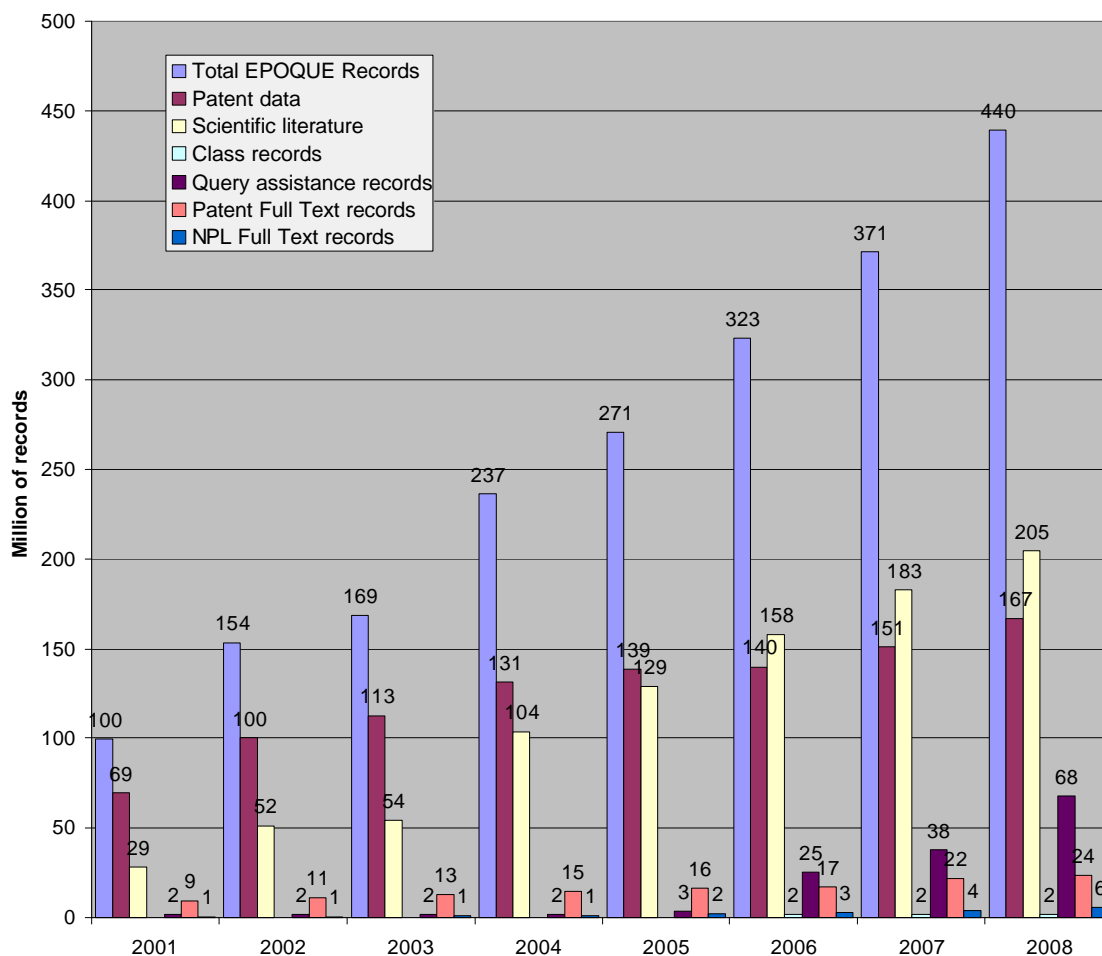


Fig. 1 Evolution of number of records in EPOQUE search databases

7. In addition, from Figure 1, one notes that scientific literature has grown more rapidly than patent data. In the last 7 years, patent data grew by a factor of 2.4, from 69 to 167 million records. While the scientific literature grew by a factor of 7, from 29 to 205 million records. This implicates that the search examiner now has more places in which he has to look, while the available time per file is decreasing.
8. For fields such as chemistry, pharmacy and biotechnology the scientific literature is of prime importance. Also in this area the number of publications is increasing constantly, and it has been increasing more rapidly in recent years. For instance,

from 2003 to 2005 the increase in papers published in journals of the American Chemical Society was 21.0%, or 10.0% per year. This is considerably higher than the 1988-to-2003 average of 5.5%. For CAS (Chemical Abstracts) the increase in the number of papers abstracted was 12.5%, or 6.1% per year².

9. The growth in the volume of biosequences has been stronger than that of any other data. For example, the number of entries in the EMBL database has gone up from 48 million in 2005 to 152 million in 2008, i.e. it has tripled in only 3 years³.
10. A large part of the documentation that needs to be searched is not or only partially classified or classifiable, e.g. Derwent's, EPO's Virtual Library Catalogue, Non-Patent Literature (NPL) databases, full text databases in EN DE and FR, external databases like Chemical abstracts and Beilstein. Whereas some of these databases (e.g. Chemical abstracts and Biological abstracts) can be searched together, many external databases must be queried individually.
11. Faced with such a multitude of databases, it is not sufficient for the examiner to simply check through a few well document classes. Before starting to search the examiner must define a good search strategy: where (in which databases) to start searching, which tools to use, how to combine them, how to narrow or to extend the search, whom to consult, and when to stop. Such extensive search strategies require the development of new skills through better training, a higher level of awareness and absolute concentration at work. We observe therefore that despite, or better: because of the development of dedicated electronic search tools the examiner's work has become more complex, more specialised and longer.
12. It is difficult to quantify the impact of the increase in volume of the prior art and the increased diversification of the databases on the individual examiner. The data available to us show that between 2003 and 2007 (i.e. in a mere 4 years) the number of electronic documents actually looked at by the examiner increased by 36%, and that in 2007 the number of documents checked by the examiner per search report was over 900.
13. At the same time the complexity of the files received by the EPO has increased. For 2006 – 2008 no exact data are available to the staff representation. An earlier study by the EPO's Controlling Office (CA/73/05) showed, however, that applications received by EPO in 2004 had 21 claims on average, against 14 claims 10 years earlier. This corresponds to a 50% increase in the number of claims to be searched and examined.

² <http://pubs.acs.org/cen/science/84/8448sci1.html>

³ <http://www.ebi.ac.uk/embl/Services/DBStats/>

14. The number of pages per application follows a similar trend. Voluminous applications tend to require more examiner actions, more often require oral proceedings, and are more likely to end up being refused than less voluminous applications. The increase in the volume of the applications received at the EPO thus has a strong negative impact on the amount of work that needs to be done per file by its examiners.
15. The recent decision by the Administrative Council not to charge the applicant extra fees for the first 16 claims (previously 10 claims) has led to a further increase in the average number of claims per application and hence in the amount of work per file.
16. The Paris criteria were introduced in order to decrease the legal uncertainty for third parties caused by long patent processing time. However, the demand that applications be processed more rapidly in order to meet the Paris criteria has a negative impact on the workload of the examiner. Previously it was common practice in the more difficult technical fields (in terms of applicant behaviour) to write a number of communications in order to solve outstanding objections. This is no longer considered desirable because it increases the duration of the procedure. In the vast majority of the technical fields the applicant demands oral proceedings as a procedural obstacle in case the examiner is minded to refuse the application, thereby blocking a rapid refusal and obliging the examiner to invite first.
17. Oral proceedings are considerably more time-consuming than second communications because oral proceedings require 3 examiners to prepare the case, be present during the hearing, (write and) discuss the minutes as well as the decision, if any. Extensive data (e.g. development over 10 years) on the number of oral proceedings held in the EPO are not available to us. We have, however, been informed that between 2007 and 2008 the number of summons that was sent increased from about 9820 to 11.400, i.e. summons for oral proceedings increased by over 10% in a single year.

III. IMPACT OF PROCEDURAL CHANGES

18. Changes in the organisation of the work and procedural changes conspire with the increases in the volume of prior art and the complexity of the applications in putting more work on the examiner. One such change was BEST, i.e. having search and examination done by the same examiner. BEST was expected to bring a 14% increase in productivity. However, it is generally recognised that specialisation increases efficiency. It should therefore not have come as a surprise that lowering of the degree of examiner specialisation through the introduction of BEST has not brought the promised benefits in efficiency. Whereas BEST is

appreciated by the majority (but by no means all) of the examiners for the job diversification it brings, BEST also requires the examiners to stay informed about a much wider range of developments (e.g. changes in search tools as well as decisions of DG3). This means more work for the examiners, and work that is not “rewarded”, i.e. not reflected in the examiner productivity figures.

19. Although a logical consequence of BEST, the introduction of the EESR⁴, i.e. the decision of the Office to produce and deliver a first communication together with the search, also had a negative impact on the examiner’s workload. Compared to a mere search an EESR is estimated to require, on average, an extra 2 hours. The extra work has been reflected in the fees that the Office demanded: the search fee was raised from EURO 690 to 960 (an almost 40% increase !) but not in the time accorded to the examiner, see Figure 2.
20. The additional time investment, which is not accounted for at the search stage, is lost if the EESR subsequently does not return for examination. Of the European applications (EESRs) some 13% of the files do not return to the examiner for examination.
21. For the examiner a non-returning EESR is doubly disadvantageous because previously an application that was withdrawn after a first communication (i.e. the procedural equivalent of an EESR) would count as a final action for the examiner. With the EESR this is no longer the case.
22. Whereas it may seem reasonable that a withdrawal by the applicant does not count towards examiner productivity, this argument overlooks the fact that applications are withdrawn at that stage for a reason: usually that the examiner has found good prior art and taken the extra time to write sound arguments explaining its pertinence. Yet not only is this extra work at the search stage not accounted for, but the reward which used to be given for the subsequent withdrawal has been silently discounted as well.
23. It is furthermore important to realise that an examiner is not rewarded extra time for files of above average difficulty. No longer counting relatively easy final actions such as withdrawals thus has the effect that the average difficulty of the files to be treated increases, and hence the pressure on the examiner increases.

⁴ See <http://www.epo.org/about-us/press/releases/archive/2005/01072005.html>

24. The same applies to PCT files where since 2004 an EISR (Extended International Search Report)⁵ is produced, i.e. again a first opinion is sent together with the search. This means an average additional 2h work for the examiner for the search.
25. Moreover, the applicant now is no longer obliged to demand a (further) preliminary examination in order to benefit from extended time limits. In 5 years this has reduced the number of files returning for an IPER (International Preliminary Examination Report) to 1/3rd of the original volume. Prior to this change the applicant would frequently not answer to the first examination report meaning that the first communication could simply be copied in the IPER. This required only a minimal amount of work for an action that was accounted for as a final action. Now these files no longer return to the examiner. As a consequence a relatively easy final action is "lost" for the examiner, again increasing the difficulty of the overall basket.

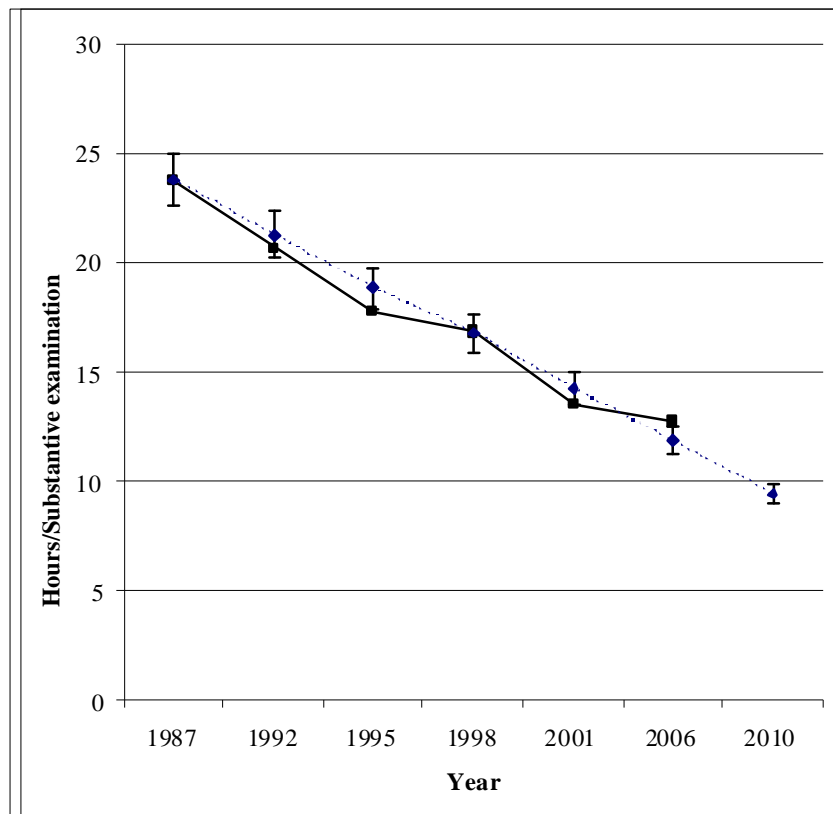
IV THE REPORTING SYSTEM

26. Since 1990 the reporting system for examiners has changed several times. Some of the changes were relatively minor and clear in the sense that it was easily possible for the examiner to relate the demands put upon him/her in any given reporting period with those of the previous reporting period. However, the change to Pro-Pro, I and then II, and from Pro-Pro to PAX changed the way productivity was expressed, from resp. files / year (e.g. 74 files / year), to time per file (e.g. 3.15 days / file), to "productivity factor" (1 being the average) and now to individual annual production targets.
27. These changes have made the reporting system itself and the development in the demands upon the examiners rather intransparent. Nevertheless there is a feeling of increasing pressure coming from the reporting system. We have therefore quantified this perception by re-calculating the time available for a standard EP examination under the diverse reporting system.
28. When the Office opened its doors in 1977, nobody knew what productivity could reasonably be expected from a patent examiner working in three languages, possibly all three not his mother tongue. The initial figure was set at about 45 files a year of 220 working days, i.e. 4.8 days for the examination of a file was considered a reasonable average. Note: this was examination only, i.e. without the search.

⁵ Official Journal 2/2004, p.7

29. Ten years later, in 1987, experience had shown that more could be reached and the minimum required for a substantive examiner to obtain a "good" marking in productivity was 74 EP applications in 220 working days, i.e. an average maximum time of 23.8 hours (3 days) for an EP examination. Technical factors and language factors applied. For instance an examiner having a non-official language as a mother tongue, working on a file in his second official language, would see his productivity requirements reduced to 92%. Technical factors equally applied, ranging from about 0.8 - 1.3.
30. Facing increasing backlogs, Mr. Braendli decided in 1992 that 85, rather than 74, examinations a year would be a "fair contribution" and the minimum required for an unqualified "good" marking. This meant an increase of 15%, leaving the examiner a maximum of 20.7 hours for an EP examination.
31. In the 90's the Office gradually introduced BEST. Figures for savings varied but 14% is commonly cited and used as a basis for the reporting system, meaning 17.8 hours for an EP examination.
32. In 1998 Mr. Kober requested a "special effort" to increase productivity by 5%, maintained and to be followed up by a further 1% in the following years. For a BEST examiner that meant a maximum of 16.9 hours on average for an EP examination in 1998.
33. In 1999 a new reporting system was introduced ("Pro-Pro"). Two years later (in 2001) a BEST search and examination together were considered to take on average 3.15 days. With a search accounted as 1.4 days that left 1.75 days or 13.7 hours on average for an examination under BEST. *This is about half the time available 15 years earlier.*
34. In 2007 again a new reporting system ("PAX") was introduced. Under PAX examiners have an individual yearly target given in numbers of searches and examinations, which can be in various ratios. Productivity is no longer expressed in terms of time / action (or action / time). For classification and opposition time budgets are made available. As a consequence a direct comparison with the previous systems is not possible and most examiners no longer have a clear idea of time available per action. A positive aspect of PAX is that refusals (which tend to be very time consuming) are better rewarded. However, the average time available for search and examination does not seem to have increased.

35. The overall development can be seen in the figure below. This graph shows a steady increase of the productivity pressure on the examiner.



36. When considering the above figures it is important to realise that an examiner's working time is not only devoted to examination as a first examiner. Other tasks such as examination as a second or Chairman, oral proceedings in examination, misc. reading (technical, legal, Staff Notes) and meetings (directorate meetings and other) have to be accommodated without time deduction.
37. A comparison between different patent offices of the time allowed (or required) for a search and examination is difficult due to difference in procedures, in the nature of the files and in the way examiner time is counted (e.g. whether meetings and computer failure time can be deducted, how much unaccounted for work needs to be done etc.). Therefore a comparison of the historical development of the time allowed, or required for a search and examination *within* the various offices would probably give more relevant information.
38. The only office for which such figures are available is the USPTO. In the USPTO the average time allowed for a search and examination has remained stable at

20h since 1976, i.e. unlike in the EPO, in the USPTO there has been no increase in the efficiency of the examiner since 30 years, nor has any been demanded. Moreover, the fact that the examiners have not been given more time in view of the increasing volume of prior art and the increasing file complexity is heavily criticised both by the examiners themselves and by the stakeholders in industry.

V. THE WORKING ENVIRONMENT

39. Search and examination are intellectual activities that require a very high level of concentration. Unfortunately the working environment in the EPO during the last 5-10 years has not at all been conducive for this type of work. Apart from the partially inevitable changes in working procedures and tools, there have been many structural changes. For example: DG1 has been restructured 3 times in the last 5 years, and restructuring ("areas of competence") is still ongoing. The instability is not limited to structural changes: the whole reward and compensation package of EPO staff is currently under review and changes are not expected to be for the better. Last but not least the EPO's own President paints a rather negative picture of the EPO both inside and outside the Office. As a consequence the working environment in the EPO is perceived as hostile by a majority of staff.
40. Support for the examiners has been lagging behind the demand put upon them. In three subsequent Staff Surveys "better functioning of the computer systems" was identified by examining staff as the most important factor to improve the efficiency of their work. Relief was promised through a 82 million Euros investment in IS infrastructure ("Future Patent Tools"). The project proposal has, however, been given the red light by independent external reviewers⁶. Moreover, the criticism was so serious that it is doubtful whether it is possible to improve the initial flawed proposal in order to provide the high quality design that is needed. In other words: relief is not in sight.

VI. CONCLUSIONS

41. Patent examiners worldwide are faced with a strong increase in the volume of prior art that needs to be considered and in file complexity, and a decrease in applicant cooperation. For the EPO examiner, changes in the procedure that have been implemented in recent years have led to more work being invested upfront but

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[http://babylon/projects/babylon/acepo.nsf/0/4bf891ec916229dbc12575520052dad5/\\$FILE/Gateway%20Report%20FPT.pdf](http://babylon/projects/babylon/acepo.nsf/0/4bf891ec916229dbc12575520052dad5/$FILE/Gateway%20Report%20FPT.pdf)

additional time has not been awarded for the additional work. Improving the timeliness of grants has also required an extra effort and investment of time. This has equally not been recognised in the demands, in number of files, put on the examiner. On the contrary: the pressure exerted on the examiner through the reporting system has continuously increased whereas staff benefits are under attack. Under the circumstances the reported discontent of the examiners (Staff Survey 2008) should not come as a surprise.