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SUBJECT: The increased voluminosity of patent applications received by the EPO and its impact on the European Patent System

DRAWN UP BY: President of the European Patent Office

ADDRESSEES: Administrative Council (for information)

SUMMARY

Applications received by EPO in 2004 had 21 claims on average, against 14 in 1995 - a 50% increase. This growth in voluminosity of applications has been experienced by other patent offices as well. The increase in Europe seems to follow a trend coming from the US, transmitted via the PCT and via EPO filings with US family members. Emerging technology fields, biotechnology and information technology, lead the trend. As the increase in the voluminosity of applications was combined with a surge in the number of applications, the number of claims searched or examined each year per examiner (net capacity) at EPO has increased from 1300 in 1996 to 2200 in 2003, i.e. an increase of 69%. Voluminous applications incur higher processing costs to the EPO (time to search and examine, including more communications and more frequent oral proceedings) and lower revenue to all patent offices (as a lesser proportion goes to grant). Voluminous applications have a longer pendency time, leading for those which are granted to a delayed validation in EPO member states and a later payment of the corresponding fees. As higher voluminosity often means broader scope of protection sought, and as pendency lasts longer for voluminous applications, these applications are a source of uncertainty for competitors and technology users in Europe. This inflation of unchecked rights could have detrimental effects on the European economy. In that sense, voluminosity is closely related to quality.

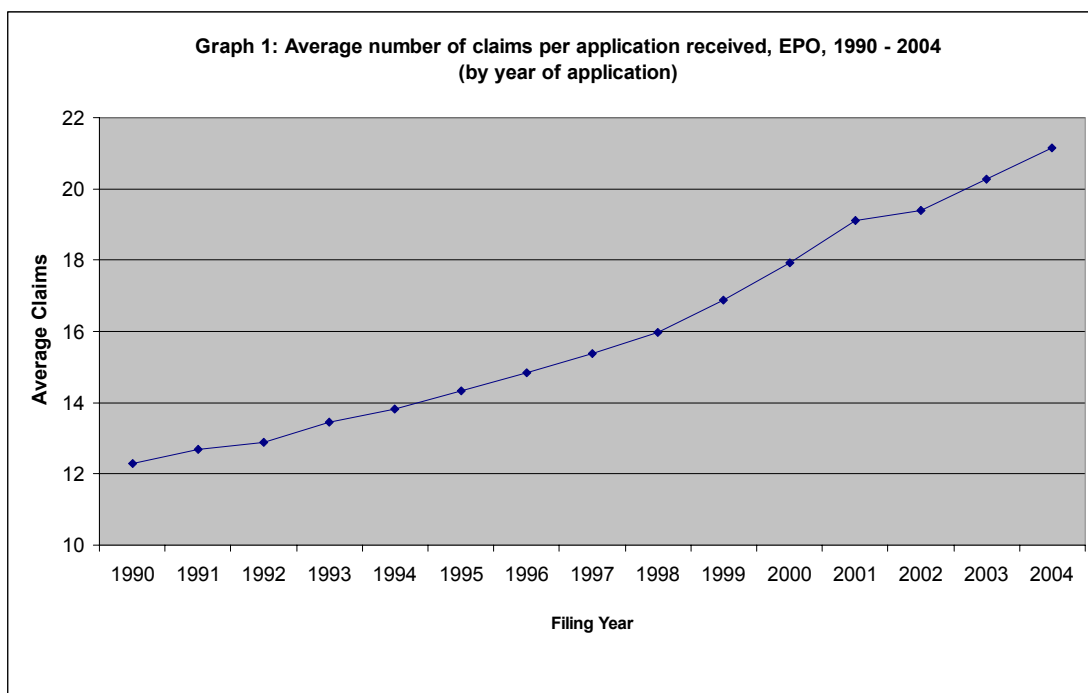
I. INTRODUCTION

The Controlling Office of the EPO is developing quantitative economic research. This note is a first publication of that sort. It is based on a substantial data collection and analysis exercise which has benefited from the expertise and time of DG1 staff. In the course of this exercise, new databases better fitted to statistical uses are being developed, which will serve as a basis for future studies.

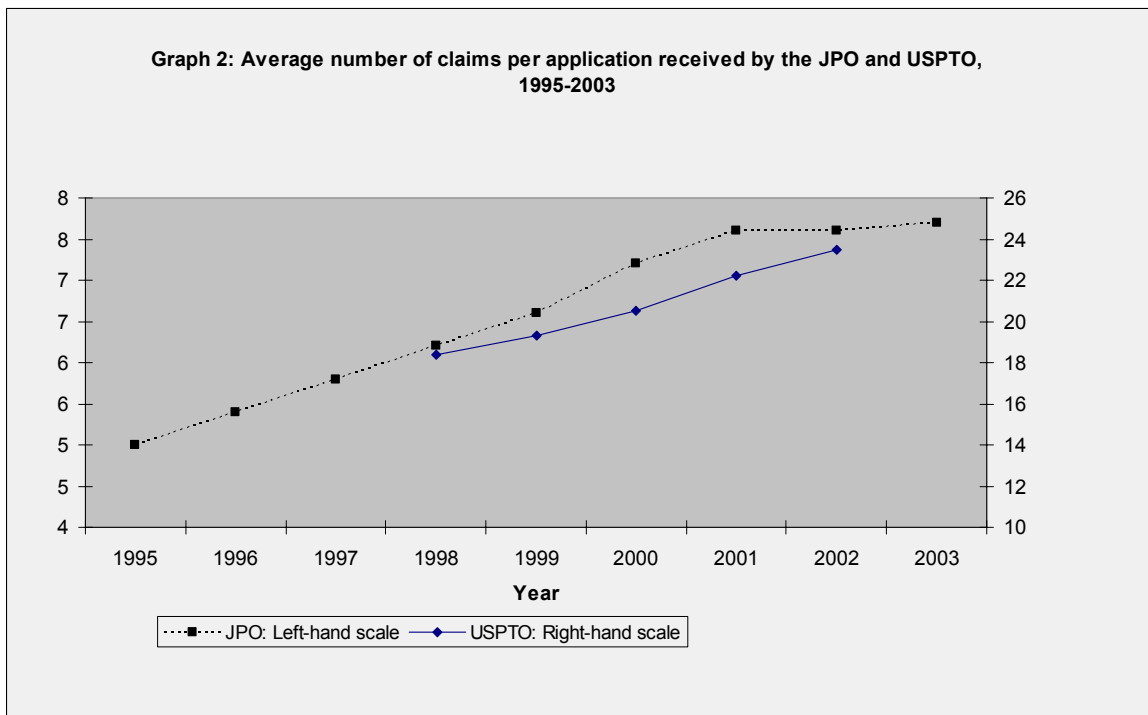
II. THE INCREASE IN VOLUMINOSITY

Patent applications are extremely diverse and affect the working of patent offices to a very different extent. Some applications are less costly to search and examine than others, some applications generate more revenue to patent offices than others. Voluminosity, defined as the "length" of an application, seems to be a key characteristics of patents in that regard. As compared with other notions such as "complexity", voluminosity has the advantage of being quantifiable. It could be measured notably by the number of pages or by the number of claims. In the following we focus on claims as the number of pages is not completely standardised. However, both measures follow similar trends.

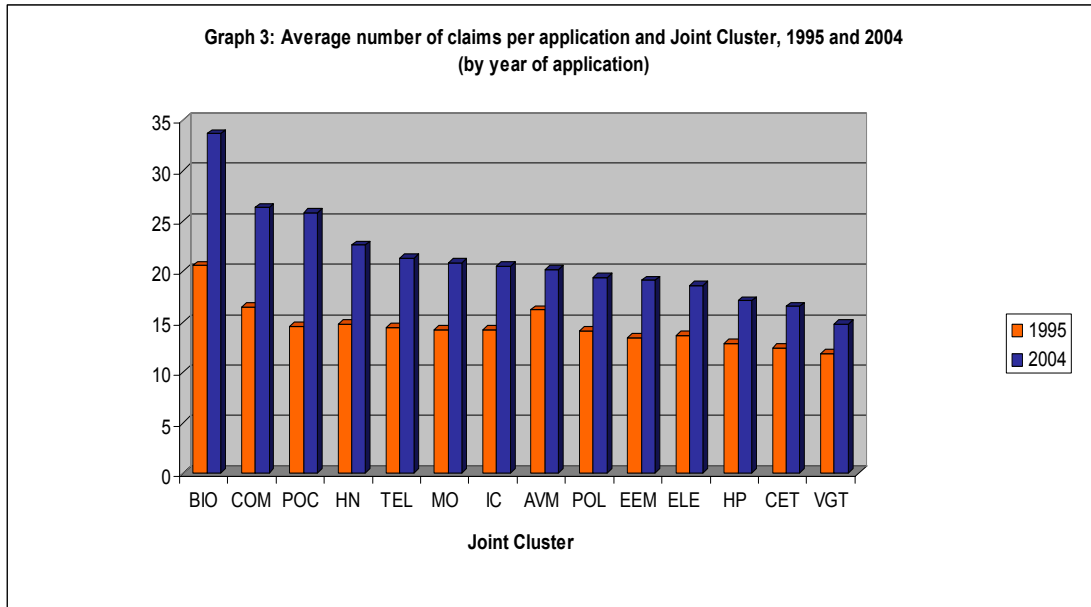
The number of claims of the average application to the EPO was 21 in 2004 filings against 14 in 1995 filings, which represents a 50% increase (4.4% average increase per year). The growth was steady over the entire period, with only an apparent slowdown in 2002 due to the decision of the EPO not to search PCT filings originating from the US in the fields of biotech and business methods. Applications with hundreds of claims are not unusual anymore and an application published in 2005 had 19368 claims.



A similar trend has been experienced by other patent offices in the world, such as the JPO (5.5% per year between 1995 and 2003) and the USPTO (6.3% per year between 1998 and 2002).



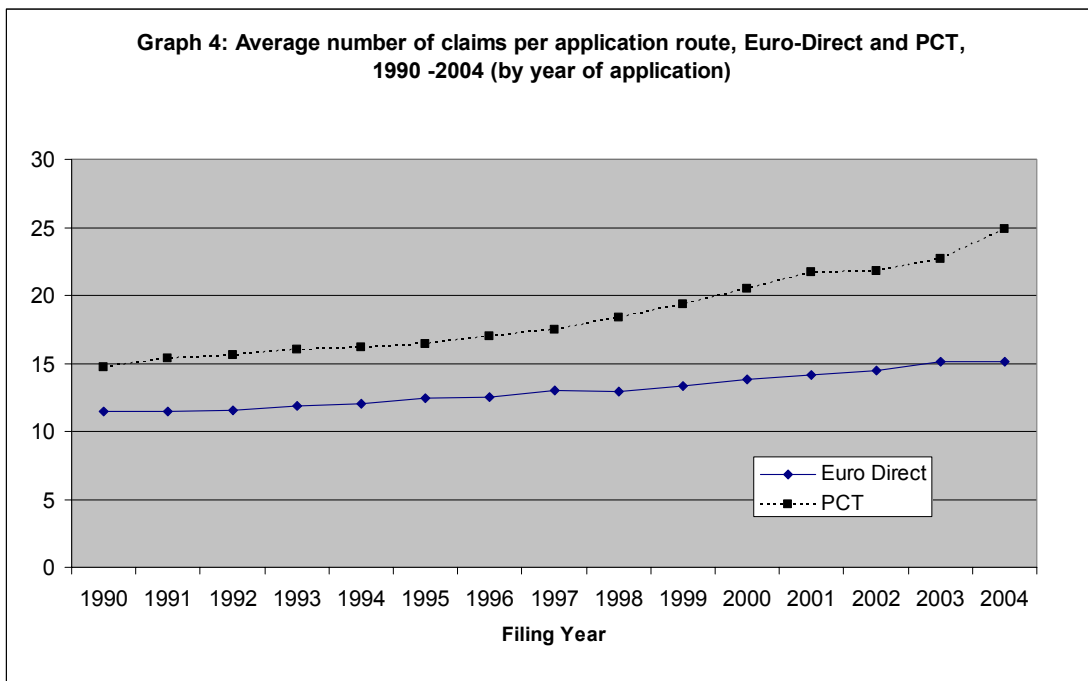
All Joint Clusters (JCs) of the EPO experienced an increase in the voluminosity of applications, although to a different extent. As a result, the dispersion of voluminosity across JCs is now significant, ranging from 14 (Vehicles and General technology) to 33 (Biotechnology) in 2004, instead of 12 to 20, respectively, in 1995.



III. FACTORS OF INCREASE IN VOLUMINOSITY

Certain patterns in the data allow to identify major factors which are behind the increase in voluminosity ¹. The driving factor seems to be the transmission to Europe of habits developed by applicants in the US patent system. The US patent system commands more voluminous applications, and as applicants tend to carry out their patenting strategy at a global level they file similar applications in different offices. This could also reflect the fact that applicants are being confronted with increasingly similar economic and regulatory conditions in various parts of the world.

Applications going through the PCT route are more voluminous than others (25 claims instead of 15 claims for Euro direct in 2004). As the share of PCTs has increased as compared with Euro-direct (PCT applications jumped from one third to more than one half of all applications to EPO between 1995 and 2004), this difference in level contributes significantly to the overall growth in voluminosity.



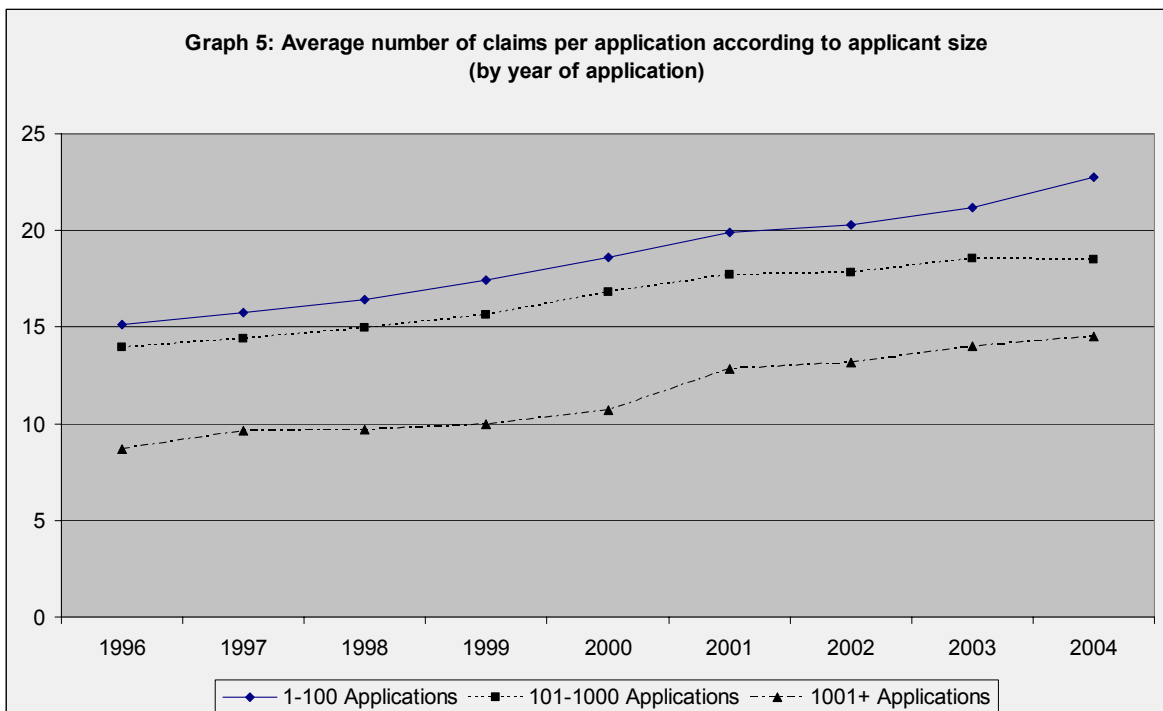
It should be noted also that both types of applications experienced substantial increases in the number of claims during this period of time, by 2.3% a year for Euro-directs and 4.7% for Euro-PCTs.

¹ In addition to the statistics presented here, an econometric analysis was performed (allowing to account separately for the individual contribution of each factor), which validates the following conclusions.

Regardless of the route they take, EPO applications which also go to USPTO are more voluminous than others: That includes applications with a US applicant and applications with a non-US applicant but US priority.

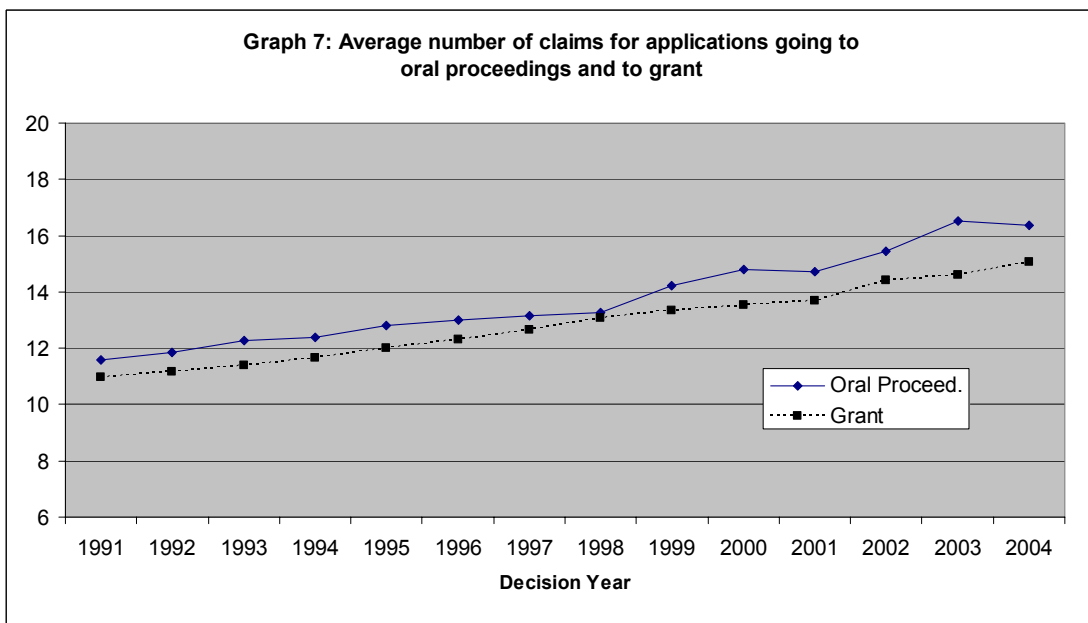
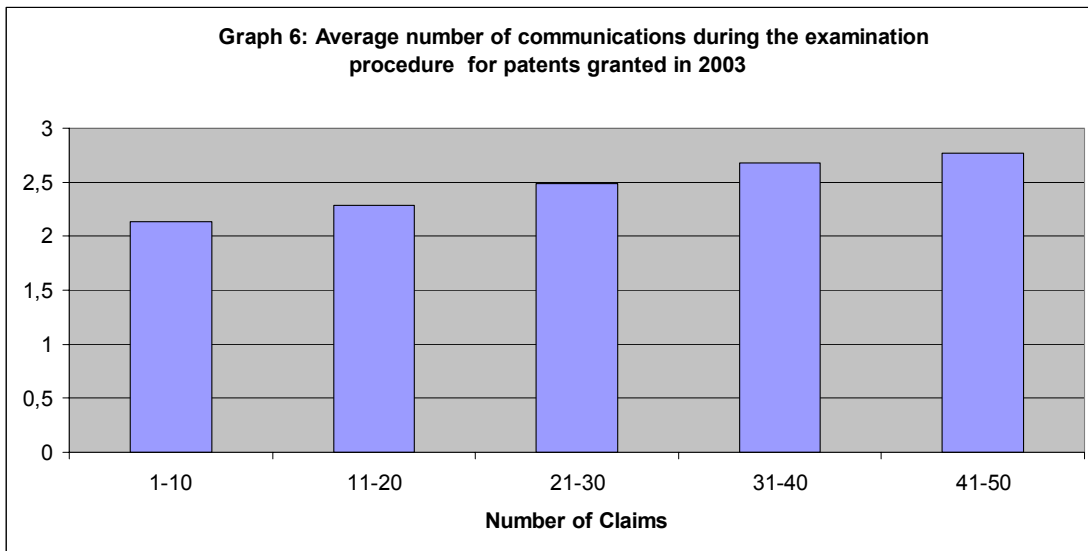
Applications in emerging fields, biotechnology and information technology, are more voluminous than in traditional fields (see graph 3) while the share of these fields in total applications to EPO has been increasing. This higher voluminosity remains after controlling for other factors such as the country of residence of the applicant or the route followed by the application.

Finally, it also appears that smaller applicants file larger applications: In 2004, applicants with 100 applications and less filed an average of 22 claims per application, against 15 claims for applicants with more than 1000 applications.

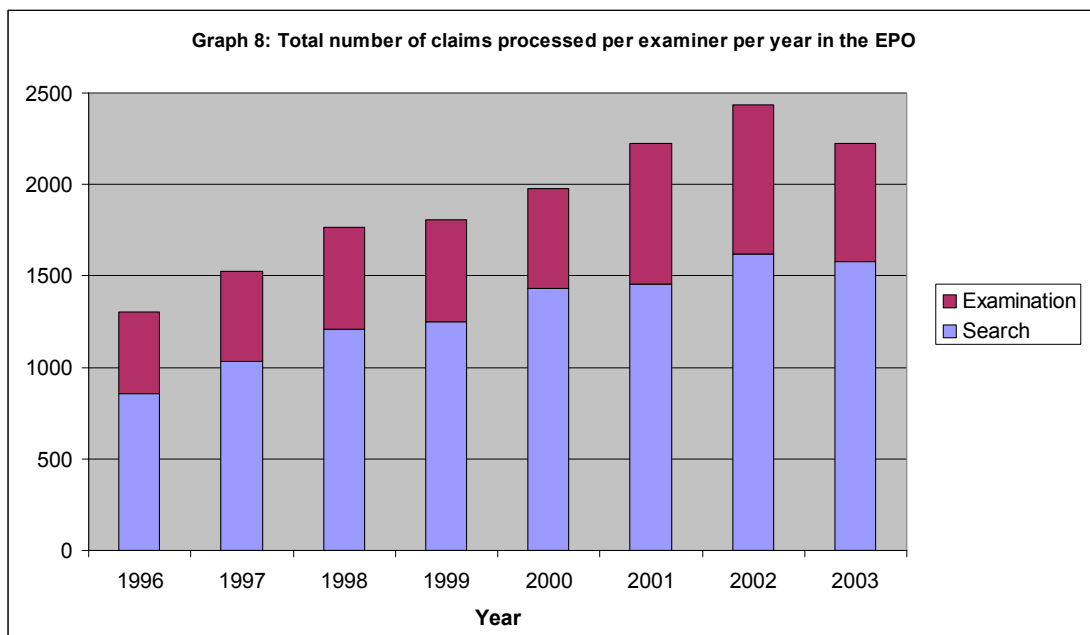


IV. IMPACT OF INCREASED VOLUMINOSITY ON THE EPO WORKLOAD

Search and examination are more costly for more voluminous applications. In addition to the time needed to read and process the application (not recorded), this cost can be quantified by the number of communications and the frequency of oral proceedings. More voluminous applications are associated with more communications between the examiner and the representative of the applicant (graph 6) and with more frequent oral proceedings (graph 7).

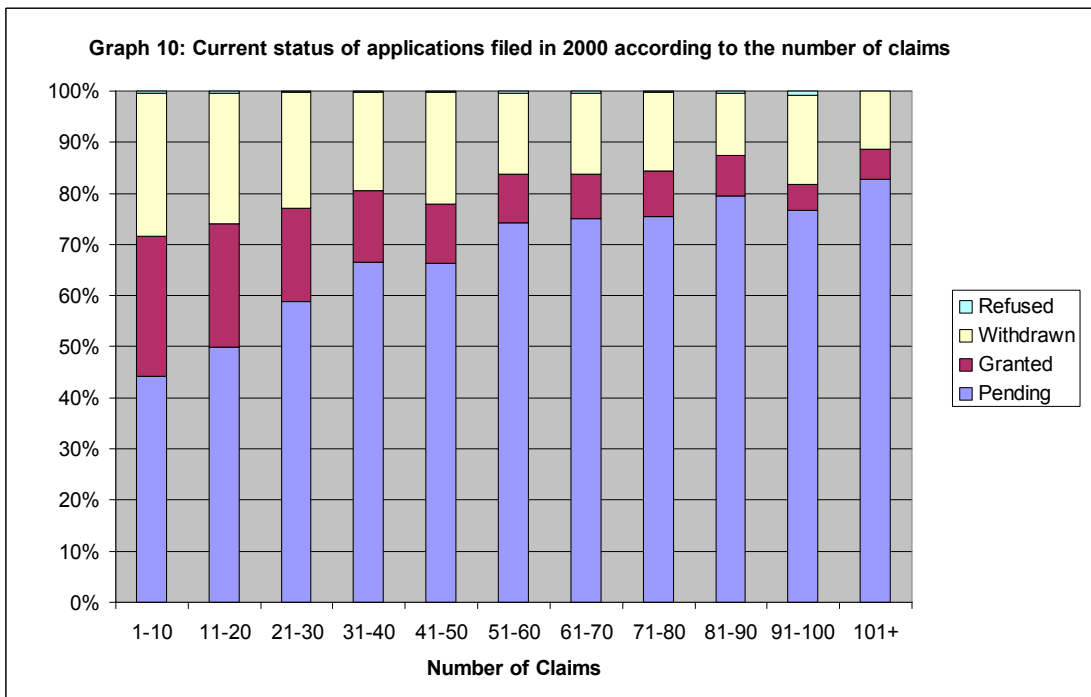
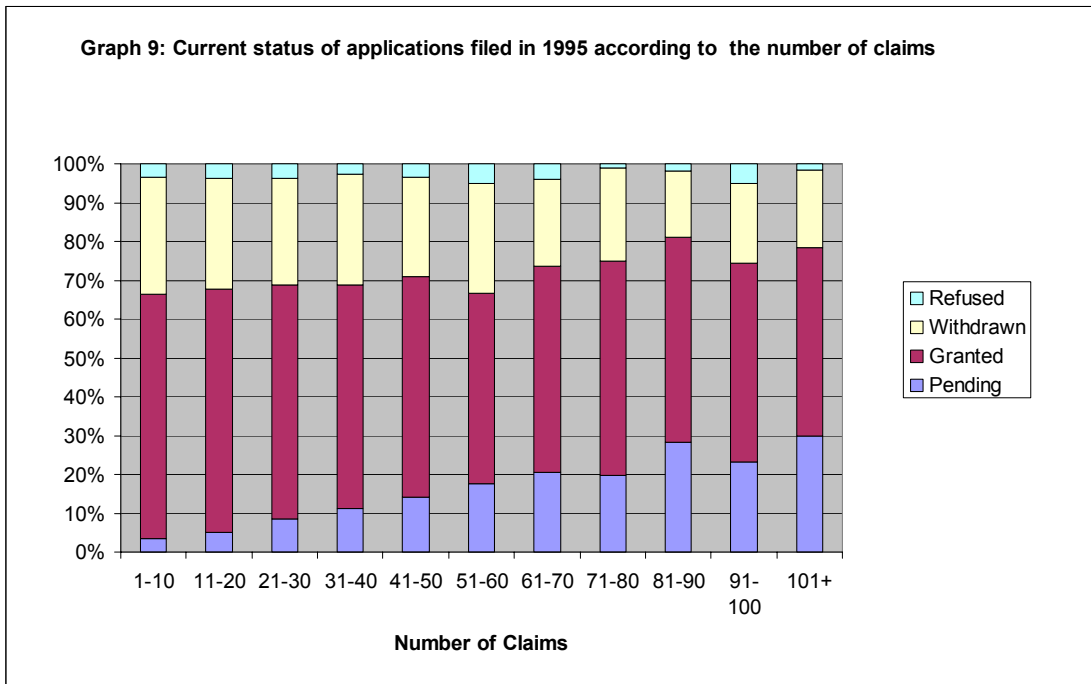


Hence applications with a higher number of claims add more than other applications to the workload of EPO. In order to capture that effect, the number of claims processed by examiner per year was calculated. This indicator is the sum of the number of claims contained in the applications searched and examined (final actions) during a given year EPO-wide, divided by the effective number of examiner years available ("net capacity"). The number of claims processed by examiner per year was about 2200 in 2003 against 1400 in 1996 (graph 8). This corresponds to an average growth of 8% per year. This reflects the compound effect of the increase in the number of filings (which has nearly doubled in ten years time) and of the increase in the number of claims per filing (plus 50%), altogether involving a tripling in the EPO workload in this period.



More voluminous PCT applications are less often than others transferred to the regional stage: among PCT applications filed in 2000, 80% of those with 10 claims and less were transferred, against only 50% of applications with more than 100 claims. In view of the current fee structure, that is not neutral on the budget of the EPO. In addition, more voluminous applications result less often in a grant (63% of 1995 filings with 10 claims or less had resulted in a grant by January 1st, 2005, against 48% of filings with 101 claims and more; these figures are confirmed for the year 2000 cohort - see Graphs 9 and 10), which ultimately reduces fees paid by applicants to national patent offices. Those which are granted follow a longer

procedure than less voluminous applications, so that they enter later in the national stage: The proportion of 1995 filings still pending on January 1st 2005 was 3% for applications with 10 claims and less against 30% for applications with 101 claims and more.



Overall, the procedure lasts longer for more voluminous applications and fewer of them end up with a grant. That is detrimental to the European economy as the uncertainty for competitors and technology users generated by the pending status of an application is compound by the voluminosity of the application, which often involves larger scope of protection sought.

ANNEX 1 STATISTICAL METHODOLOGY

General:

National filings, in particular for France and other former IIB members states, and other searches are not included in the statistics. However, further EP or PCT applications on the basis thereof have been included. Number of claims of applications refer to the number of claims at filing (which differs from the number of claims at grant as examination often results in dropping certain claims). The data come from the EPASYS database of EPO. The data labels referred to below are the EPASYS labels.

Graph 1: Represents the average number of claims of all applications, EP direct and PCT, filed with the EPO from 1990 to 2004.

Graph 2: Number of claims at filing

Graph 3: Selection of those applications filed in 1995 and 2004 only. Includes all types of applications, EP direct, PCT, Euro PCT Bis.

Graph 4: Illustrates the average number of claims for euro-direct and PCT applications. These two types of applications are distinguished by the WPCTAP variable. For the euro-direct applications WPCTAP is not encoded, while for the PCT, WPCTAP is encoded.

Graph 5: Illustrates the average number of claims per applicant size, measured in terms of number of applications. Applicants are identified by the variable APPRCODE1 (having dropped the last digit). It should be noted, however, that applicants' codes are not consolidated.

Graph 7: For estimating the oral proceedings we used as a criterion the date the action took place (ORALDATE), while for grants we used the date of dispatch of the intention to grant the patent (IGRADISP).

Graph 8: "Net capacity" is defined as effective examiner time available for search, examination and opposition after correction for leave, absences, and time spent on other activities. One year is defined as 180 days. Data on capacity and production are derived from CA/40 and CA/35 documents for the period covered. For 2003, some data were obtained from PD Means.

In 2003 several changes in practice took place which might have contributed to the decrease as compared with 2002: the effect of the new Rule 29(2) EPC, the effect of PCT Lite and the expansion of BEST. Rule 29(2) was introduced in order to

limit the number of independent claims in each category and may therefore also have had a knock-on effect of reducing the total number of claims. PCT Lite had the effect of effectively decreasing the number of PCT Chapter II examinations carried out by examiners. The expansion of BEST had the effect that a substantial amount of examiner time went into writing pre-communications. The work spent on these communications will probably have a delayed effect on the number of claims processed in grants to be issued in the coming years. For 2004, complete data are not yet available for EP grants as not all IGRA's issued in 2004 have yet led to a published patent.

Graphs 9 and 10: For calculating the number of Grants, Refusals and Withdrawals we used the dates of legal effect (EPPUDATE2, REFULEG, ADWILEG) while for withdrawals we also included those actions that were proactively taken by the applicant (WDRAREC). Non transferred PCT applications are not considered. These applications have not got an encoded filing fee (FFEE) date and consequently have not entered the regional phase. The current status of applications is defined as of January 1st, 2005.