Madam,
Sir,

Report on Characteristics of International Search Reports

1. This Circular is addressed to your Office in its capacity as an International Searching Authority under the Patent Cooperation Treaty (PCT). In that capacity, and as a member of the quality subgroup of the Meeting of International Authorities under the PCT, your Office is invited to comment on the annexed draft report on characteristics of international search reports with a view to sharing experiences of how to make good use of the information available and identifying useful further information which national Offices and the International Bureau should work towards providing.

Background

2. For the past four years, the International Bureau has prepared reports, presenting various characteristics of international search reports for discussion by the International Searching Authorities (see Circulars C. PCT 1360, 1398, 1434 and 1463). The most recent discussions by the quality subgroup are summarized in paragraphs 25 to 27 of Annex II to document PCT/MIA/23/24, as follows:

“25. In general, Authorities found the form of the report on characteristics of international search reports to be valuable, notably as a self-assessment tool. While not a direct measurement of quality, Authorities agreed that the graphs enabled trends to be seen over time and allowed measures to be taken when needed. One Authority reported that it had taken action when it had observed a relatively low ratio of the
The number of search reports with at least one XY citation to the number of search reports with A citations only. In terms of presentation, one Authority suggested that the graphs for a given characteristic should be presented with identical scales to make comparison between Authorities easier. Another Authority stated that it wished to have the opportunity to review the data before publication by the International Bureau.

“26. While expressing concerns about dedicating additional resources, some Authorities provided suggestions of further metrics that could be developed, including: the percentage of search reports with a finding of lack of unity of invention, broken down by receiving Office and nationality and residence of the applicant and by the International Searching Authority; the re-use of documents cited in the international search report in the national phase where the applicant had filed amendments under Article 19 and/or Article 34; the number of Office actions and the allowance rate in the national phase by origin of international search report, and a breakdown of the percentage of X, Y or E citations in characteristic 1.1 by origin of the applicant for a given International Searching Authority. One Authority stated that it measured the allowance rates for international applications which had entered the national phase before its Office in its capacity as a designated Office where it had acted as the competent International Authority and had issued a positive IPRP, but did not consider these rates to be as relevant when a different Authority had performed the international search.

“27. The Subgroup recommended that the International Bureau should continue to produce the report on characteristics of international search reports, taking into account the feasibility of the suggestions made by Authorities with regard to possible further metrics and any further ideas posted on the electronic forum at a later stage.”

Updated Report

3. The Annex to this Circular presents a report on characteristics of international search reports, updating the data presented in Circular C. PCT 1463 up to the end of the fourth quarter of 2015. The underlying data and a further explanation of the description of the data and definitions used are made available on the WIPO website.

4. The characteristics which are contained in the Annex are essentially unchanged compared to those in Circular C. PCT 1463, save to update the results to provide information concerning international searches transmitted to the International Bureau in 2015. The titles in chart 1.1 have been corrected to make clear that the figures include search reports with "E" category citations, but the underlying query has not changed.

5. As noted for last year’s report, the data for the final year is not complete because some search reports had not been processed by the European Patent Office in time to be reflected in the Autumn 2016 version of PATSTAT, which is the basis of the citation data in the reports. The data in particular for the final two quarters should be treated as highly provisional; comparison of the reports with those produced in 2015 suggests that those characteristics concerned with E and P category citations are particularly likely to deviate from a fully representative sample of international search reports.

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1 The full details are available with the electronic version of this circular from http://www.wipo.int/pct/en/circulars/index.html.
6. Technical breakdowns have again been made for four of the characteristics. As a result of the above concerns, the breakdowns have been made on the characteristics for international search reports from 2014 (as last year), rather than 2015. In addition to updating the data to provide a more complete and accurate picture, an error has been corrected in the percentage of international search reports with at least one X, Y or E category field. This affected primarily the results for the European Patent Office, where citations listed in PATSTAT with the unofficial category "I" were not included into the count of "X" category citations, of which "I" is a subset. New graphical representations of these technical breakdowns are available on the electronic forum of the quality subgroup.

7. The main report now includes characteristics for international search reports established by the National Institute of Industrial Property of Chile, but since that Office only delivered its first international search reports in 2015, it does not appear in the technical breakdowns.

8. None of the additional metrics referred to under paragraph 2, above, have yet been added to the report. Figures concerning the reuse of documents, numbers of Office actions or allowance rates in the national phase would require designated Offices to provide additional information which is not presently available to the International Bureau in a form which can readily be processed. However, an analysis relating to the question raised concerning unity of invention is being prepared and will be presented to the quality subgroup separately. Furthermore, the work preparing the new technical breakdowns has provided experience which may assist the production of new or easier to use information in the future, including breakdowns of characteristics by origin of the applicant, as had been suggested in the case of characteristic 1.1 (percentage of search reports with at least one X, Y or E citation).

Issues for the Quality Subgroup

9. As has previously been discussed, none of these characteristics provide any direct measure of quality of the international search reports. Moreover, it is not clear how any meaningful measure of quality could be made using the data currently available. On the other hand, the trends in the characteristics over time, or differences between different fields of technology within an Authority may provide useful pointers to areas which could be the subject of investigation.

10. The quality subgroup is therefore invited to continue discussions how they have been able to use these characteristics to assist quality-related work within their Office or how they believe these characteristics could be used to assist quality-related work among the International Authorities as a whole.

11. The experience from using these characteristics should also be taken into account in the more general discussions of what further information the International Bureau and national Offices should seek to collect and how that information can best be presented and used.

/...
12. In terms of presentation, the report remains very similar to the first report of its type prepared by the International Bureau in 2012, which in turn was based on a report prepared by the European Patent Office initially for the Trilateral Offices and then for the IP5. Most of the charts contain lines for 5 or 6 different Offices, to save space rather than to provide useful direct comparisons. The data for any particular Office is presented at various points in the report with multiple charts between, perhaps making consideration of issues involving the values in different charts more difficult. It is possible that different types of chart may present information in a more useful way (for example, in 2015 all of the pie charts were replaced by stacked bar charts when it was noted that this would allow the presentation of changes in the relevant characteristics over time). Changes in the format of the report to allow the information to be used more effectively can be made if the value to International Authorities is sufficient to justify the work involved.

13. In terms of content, it is recalled that the characteristics in this report were developed from “Stage 1” of an intended three stage process, which aimed eventually to measure the degree to which the international phase search had been found useful for the national phase examination. That process only moved to the later stages on a small scale, labor-intensive manual sample. The data currently collected is insufficient to make meaningful statistical analysis even for the simpler cases where the international application enters the national phase without amendment. Nevertheless, the eventual aim should be to seek metrics which are directly associated with the quality of the international phase products. Interim work should focus on metrics which are able at least to assist the identification of areas of potential concern (whether for quality of final products or effectiveness of processes) so that International Authorities or the International Bureau can devote resources to areas where improvements can be made.

14. This subject will be discussed at the physical meeting of the quality subgroup, to be held in Reykjavik, February 6 and 7, 2017. Comments on the characteristics, how the characteristics can be used effectively and what improvements to the presentation or content of characteristics and other metrics would be useful are invited on the quality subgroup’s electronic forum in advance of the meeting to assist delegations to prepare for an effective discussion of such issues during the physical meeting.

Yours sincerely,

John Sandage
Deputy Director General

Annex to Circular C. PCT 1490

CHARACTERISTICS OF INTERNATIONAL SEARCH REPORTS

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1.1 – PERCENTAGE OF PCT SEARCH REPORTS WITH AT LEAST ONE X, Y OR E CITATION

[Graph showing the percentage of search reports with at least one X, Y or E citation over time for different countries and a total graph.]
1.2 – PERCENTAGE OF PCT SEARCH REPORTS WITH A CITATIONS ONLY

[Graph showing percentage of search reports with A citations only over time for different countries and the total.]

[Graph showing percentage of search reports with A citations only for different countries and the total.]

[Graph showing percentage of search reports with A citations only over time for different countries and the total.]
1.3 – PERCENTAGE OF PCT SEARCH REPORTS WITH P OR E CITATIONS
1.3A – PERCENTAGE OF PCT SEARCH REPORTS WITH P CITATIONS

Percentage of search reports with P citations

Search date (year and quarter)

- CN
- EP
- JP
- KR
- US
- Total

Percentage of search reports with P citations

Search date (year and quarter)

- AT
- AU
- BR
- CA
- CL
- Total
1.3B – PERCENTAGE OF PCT SEARCH REPORTS WITH E CITATIONS

The diagram shows the percentage of PCT search reports with E citations from 2006 to 2016, divided by year and quarter. The data is differentiated by various countries and regions, including CN, EP, JP, KR, US, AT, AU, BR, CA, CL, and the total. The line graphs illustrate the trend over time, with peaks and troughs indicating variations in the percentage of search reports containing E citations for each region.
1.4 – PERCENTAGE OF CITATIONS IN THE CATEGORY OF P OR E

[Graph showing percentage of P or E citations over time for different countries, with lines for CN, EP, JP, KR, US, and Total, and another graph showing the same data with added categories for AT, AU, BR, CA, and CL.]
1.5 – PERCENTAGE OF CITATIONS IN THE CATEGORY OF P AND X
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[Graph showing the percentage of search reports with Y citations and without X citations over time for different countries and the total.]

- CN
- EP
- JP
- KR
- US
- Total

[Graph showing the percentage of search reports with Y citations and without X citations over time for different countries and the total.]

- AT
- AU
- BR
- CA
- CL
- Total
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P/E citations breakdown: ISA = A1

P/E citations breakdown: ISA = AU
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Percentage of search reports with at least one XY citation

Percentage of search reports (%)

ISA and top origins selecting the ISA

Percentage of search reports with at least one XY citation

Percentage of search reports (%)

ISA and top origins selecting the ISA
2.1 – AVERAGE NUMBER OF CITATIONS PER SEARCH REPORT

![Graphs showing average number of citations per search report over time for different countries and total averages.](image-url)
2.2 – AVERAGE NUMBER OF NPL CITATIONS PER SEARCH REPORT

[Graphs showing the average number of NPL citations per search report over time, with data for different countries like CN, EP, JP, KR, US, Total, AT, AU, BR, CA, CL, and Total.]
2.3 – AVERAGE NUMBER OF PATENT LITERATURE CITATIONS PER SEARCH REPORT

![Graph showing average number of patent literature citations per search report over different years and quarters for various regions.]

- **AT**, **AU**, **BR**, **CA**, **CL**, **Total**
Average number of PL citations per search report

Search date (year and quarter)

- EG
- ES
- FI
- IL
- IN
- Total

Average number of PL citations per search report

Search date (year and quarter)

- RU
- SE
- SG
- UA
- XN
- XV
- Total
2.4 – AVERAGE NUMBER OF X/Y PATENT LITERATURE CITATIONS PER SEARCH REPORT
2.5 – PERCENTAGE OF SEARCH REPORTS WITH AT LEAST ONE NPL CITATION

![Chart showing percentage of search reports with at least one NPL citation over time for different countries and the total]

- **CN**
- **EP**
- **JP**
- **KR**
- **US**
- **Total**
2.6 – PERCENTAGE OF NPL CITATIONS IN THE CATEGORY OF X OR Y IN ALL CITATIONS

[Graph showing the percentage of NPL XY citations over time for different countries and the total.]

[Graph showing the percentage of NPL XY citations over time for different countries and the total.]
2.7 – PERCENTAGE OF PCT SEARCH REPORTS WITH AT LEAST ONE X/Y NPL CITATION

[Graph showing the percentage of search reports with at least one X/Y NPL citation over time for different regions and the total.]

[Graph showing the percentage of search reports with at least one X/Y NPL citation over time for different regions and the total.]
2.8 – PERCENTAGE OF NPL CITATIONS IN ALL CITATIONS

[Graph showing the percentage of NPL citations by country and year/quarter]

- CN
- EP
- JP
- KR
- US
- Total

[Graph showing the percentage of NPL citations by country and year/quarter]

- AT
- AU
- BR
- CA
- CL
- Total
2.9 – DISTRIBUTION OF PATENT & NON PATENT LITERATURE CITATIONS

Distribution of patent and non patent literature citations: ISA = AI

Distribution of patent and non patent literature citations: ISA = AU
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Distribution of patent and non-patent literature citations: ISA = RU

Distribution of patent and non-patent literature citations: ISA = SE
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The diagrams show the percentage of patent citations in non-official languages over the years. Each line represents a different country or region, such as CN (China), EP (Europe), JP (Japan), KR (South Korea), US (United States), AT (Austria), AU (Australia), BR (Brazil), CA (Canada), and CL (Chile). The x-axis represents the search date in years and quarters, while the y-axis shows the percentage of citations. The data indicates a trend of decreasing citation percentages over time for most regions, with fluctuations.
3.2 – PERCENTAGE OF PATENT CITATIONS BY TOP PUBLICATION AUTHORITIES

Percentage of patent citations by publication authority (2015)

ISA and publication authorities

Percentage of patent citations by publication authority (2015)

ISA and publication authorities
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Percentage of patent citations by publication authority (2015)

Percentage of citations [%]

ISA and publication authorities

Percentage of patent citations by publication authority (2015)

Percentage of citations [%]

ISA and publication authorities

Percentage of patent citations by publication authority (2015)

Percentage of citations [%]

ISA and publication authorities

Percentage of patent citations by publication authority (2015)

Percentage of citations [%]

ISA and publication authorities
3.4 – PERCENTAGE OF PCT SEARCH REPORTS BY TOP APPLICANT’S ORIGIN

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### Percentage of search reports by applicants’ origin: ISA = AI

![Bar chart for ISA = AI](chart1)

### Percentage of search reports by applicants’ origin: ISA = AU

![Bar chart for ISA = AU](chart2)