

Meeting of International Authorities Under the Patent Cooperation Treaty (PCT)

Twenty-Fourth Session
Reykjavík, February 8 to 10, 2017

NUMBER OF WORDS IN ABSTRACTS AND FRONT PAGE DRAWINGS

Document prepared by the International Bureau

SUMMARY

1. The International Bureau has noted a large number of international applications where the length of abstract falls outside the number of words recommended in PCT Rule 8.1(b) or where the figure selected to accompany the abstract contains significant numbers of words, contrary to PCT Rule 11.11(a). Recognizing that the preferred range of lengths is a guideline for typical cases and that it will be necessary to diverge from this in specific cases in order to ensure an accurate and useful disclosure, International Authorities are invited to consider measures which could be taken to ensure the quality and utility of the abstracts in the international publication and to minimize the cost of translation where possible.

BACKGROUND

2. The PCT Working Group, at its ninth session, held in Geneva from May 17 to 20, 2016, discussed a working document titled “Number of Words in Abstracts and Front Page Drawings” (document PCT/WG/9/16). This working document shows that a large proportion of international applications are published with abstracts which fall well outside the recommended range of lengths and with significant quantities of text in the drawing chosen for the front page of the published international application. This results in increased translation and processing costs, but also raises the question of whether the abstract and drawing published on the front page might often not be optimal for the purpose of effective searching.

3. The objective of the abstract is set out in Rule 8.3 as follows:

“The abstract shall be so drafted that it can efficiently serve as a scanning tool for purposes of searching in the particular art, especially by assisting the scientist, engineer or researcher in formulating an opinion on whether there is a need for consulting the international application itself.”

4. The Working Group document sought views on whether the abstracts (including any accompanying drawing) were typically sufficient to meet the above objectives, as well as various issues aimed at allowing quality to be improved and/or costs reduced.

5. Paragraphs 110 to 116 of the Summary by the Chair of the session (document PCT/WG/9/27) outline the discussions of this proposal and the follow-up agreed by the PCT Working Group, as follows:

“110. Discussions were based on document PCT/WG/9/16.

“111. Several delegations representing Offices which acted as International Searching Authorities stated that the content and quality of the abstract and the selection of the accompanying figure were ultimately the responsibility of the International Searching Authority and that it was necessary for the Authorities to ensure that they met the appropriate standards and, where possible, to select drawings without too much text.

“112. Several delegations confirmed that there were significant difficulties for applicants and Offices in judging whether the length of abstracts established in languages other than English fell within the guideline set out in Rule 8.1(b) and suggested that improved guidance on this subject would be useful. One delegation pointed out that there was no direct evidence to prove the connection between the number of words in abstracts and high quality as well as the different characters of different languages should be considered. Delegations recalled that it was important to remember that “50 to 150 words” was only a guideline and that in some cases shorter or longer abstracts could be appropriate and of high quality. On the other hand, one delegation suggested that a strict limit might be enforced by receiving Offices, requiring the applicant to correct the abstract if falling outside a range established for each language. However another delegation stated that such a restrictive approach would not be desirable.

“113. Many delegations noted that methods of searching had changed considerably since Rule 8 had been written. Several delegations indicated that their Offices relied mainly on full text searching using text highlighting functions and machine translations, with limited use of abstracts prepared for search purposes. Nevertheless, other Offices and some patent information users relied heavily on abstracts for searching, noting that search facilities freely available to many users were less sophisticated than tools used by search examiners or other professional searchers. It was therefore important to understand the needs of all users of the abstract and accompanying drawing in order to determine suitable content and quality.

“114. One delegation suggested that a more relaxed approach might be appropriate for translation of text in drawings in some cases. For example, at present, applications filed in German sometimes included drawings with text in English, which the receiving Office requested to be replaced with translations into German and the International Bureau might translate one of the figures back into English. Perhaps, in some cases, the English language technical terms in the figures might be appropriate for all languages.

“115. In response to a query from one delegation, the International Bureau confirmed that the text in figures accompanying the abstract was currently made available only in image format and not in searchable form, both in the original language and any translation.

“116. The Working Group agreed that the International Bureau should issue a Circular inviting more detailed feedback on the issues set out in paragraph 23 of document PCT/WG/9/16, especially from designated Offices and representatives of applicants and patent information users, to help inform discussions to take place at the next session of the Meeting of International Authorities.”

DISTRIBUTION OF NUMBERS OF WORDS

6. Document PCT/WG/9/16 provided an overview of the numbers of words found in abstracts and drawings, showing the significant variation by language of publication. Such a variation was to be expected, noting that the recommended length of the abstract is defined in terms of the number of words when translated into English, which is not something which can be reliably determined by the applicant or International Searching Authority where the language of publication is not English. Annex I presents further breakdowns, noting variations by technical sector and by International Searching Authority.

7. The charts showing distribution of abstract lengths by International Searching Authority show sudden changes in shape around the 150 word mark for some Authorities which work largely in the English language. Given that this change is not as marked for all such Authorities or for the English language publications as a whole, this might imply that those Authorities check the lengths of abstracts and encourage their examiners to amend very long abstracts.

8. The charts showing distribution of abstract length and number of words in drawings by technology sector demonstrate, unsurprisingly, that there are very large variations across subject matter. Chemical applications typically have much shorter abstracts than other applications (though the word count does not include any chemical formulae which may appear). Electrical engineering is significantly more likely than other sectors to have large numbers of words in the drawing chosen to accompany the abstract. More detailed analysis¹ shows that the variation between fields of technology within these sectors is generally much smaller, save between the areas of electrical engineering in which inventions are, or are not, commonly represented in terms of flowcharts.

Effects of Numbers of Words on Publication and Database Views

9. Clearly, the number of words in the abstract is not a direct indicator of quality – some inventions can be well described in very few words, whereas for others a lengthy description may be essential. However, the proportion outside the recommended range is large and, in addition to the cost of translating long abstracts and the administrative costs of preparing drawings with large amounts of translated text, large numbers of words may cause difficulties in presentation, reducing the value of the information. Unless the information is provided to Offices and patent information users in useful formats and actively used by them, the costs of translation and associated administrative activities are difficult to justify.

10. The abstracts and accompanying drawings are made available in several formats. They appear in printed form on the front page of the published international application in both English and the language of publication. They appear on PATENTSCOPE in English, French and the language of publication – the abstract text is searchable, whereas any text in the drawing is not. Abstracts and accompanying drawings are made available to national Offices and patent information providers to use in other systems and different concerns may apply to different modes of use.

¹ available from the WIPO website at <http://www.wipo.int/pct/en/circulars/>

11. Annex II to this document reproduces the examples of abstracts and drawings accompanying the abstract on the front page of the published international application from the Annex to document PCT/WG/9/16. These cover a range of languages of publication and with various quantities of text, extracted from the front pages of published international applications within the sample and presented at approximately their original size. The examples were selected randomly from publications with particular characteristics and are intended to show the ease of reading information in different cases, rather than to represent examples of good or bad abstracts as such.

CIRCULAR C. PCT 1486

12. Circular C. PCT 1486 invited Offices and patent information users to answer the following questions:

- (a) Is the quality of abstracts typically sufficient to meet the objective set out in Rule 8.3?
- (b) Is the length of an abstract a useful guide to how useful it is likely to be and, if so, would it be valuable to set up systems to refer back cases falling outside the guidelines for confirmation or adjustment?
- (c) Is a drawing with large quantities of text useful as an item accompanying the abstract for the purpose set out in Rule 8.3 if, as is done at present, the translated text is set out at the side with reference letters and numerals to associate it with the relevant text in the original language drawing?
- (d) Are abstracts still used in the same way for searching and browsing as when the PCT Rules were written?
- (e) Are the French versions of front page drawings significantly used in relation to international applications published in other languages?
- (f) What might be done to encourage applicants to file better quality abstracts and drawings with an absolute minimum of text?
- (g) Should special systems be provided to better handle flowcharts or any other form of "drawing" which is likely to contain large quantities of text?
- (h) Do the answers to these questions differ significantly according to technical field, language or other issues?
- (i) What further analysis might be needed to understand and address the problem properly?

13. Responses have so far been received from 24 national and regional Offices. An initial analysis brings out the following points:

- (a) Offices use abstracts in different ways – in some cases, several different ways for different purposes at the same Office. Examiners are increasingly using the full text for most searches and also use commercially prepared abstracts, but the original abstract remains important for some searches and for efficient scanning of results to determine which publications to read in greater detail.
- (b) The ideal requirements for abstracts vary depending on a large number of factors, including subject matter, language and issues specific to individual applicants or patent information users.

(c) There are considerable differences in view on the proportion of abstracts which are of a poor quality. Some Offices consider that a large majority are appropriate. Others consider that the common approach of filing an abstract almost identical to Claim 1 fails to allow “the clear understanding of the technical problem, the gist of the solution of that problem through the invention, and the principal use or uses of the invention”. Some Offices indicate that professionally prepared abstracts are essential for effective search. Others again are uncertain and indicate that they have not yet been able to analyze the issue.

(d) Many Offices consider the length of the abstract to be an interesting indicator to the extent that very long or very short abstracts will often be sub-optimal for one reason or another, but it is generally emphasized that this is not true in all cases and that the length provides no measure of the quality of the information which is provided in individual cases.

(e) Large quantities of text in drawings is generally unhelpful and can readily be seen by the receiving Office, the International Bureau and the International Searching Authority alike. However, in some cases, flowcharts with text are a genuinely useful way of explaining the invention. More generally, particularly in the context of the PCT, where the consideration by substantive examiners is for the purpose of non-binding opinions, requiring the applicant to correct this type of formalities defect once the application has been filed risks introducing substantive problems (notably, addition of subject matter) which will be difficult or impossible to overcome in the national phase.

(f) It would, in principle, be useful to be able to search and better view text in non-paragraph formats such as flowcharts, but it is not clear what should be done to facilitate this.

(g) Some Offices indicate that it might be desirable for receiving Offices to intervene on abstracts, for example by inviting replacement abstracts to be provided or charging additional fees if the abstracts fall significantly outside the recommended range of lengths. However, several Offices indicated that any such procedures should not introduce new burdens such as counting words. Moreover, it was emphasized that only the International Searching Authority was in a position to evaluate the quality of an individual abstract.

(h) Several Offices suggested that it was important to provide training for users and to raise awareness of the importance to applicants of drafting the abstract well. Relevant issues might be the value of the publication for due diligence searches, reducing the risk of infringement of any granted patent and providing a good “advert” for the technology of the applicant.

(i) It was suggested that filing systems might offer machine translation services to estimate the length of abstracts once translated into English.

(j) One Office suggested that an analysis of the use of Form PCT/RO/106 might be useful to determine differences in patterns of formalities examination at different Office.

(k) Some Offices emphasize that input from patent attorneys would be useful – the Circular was sent to a number of organizations representing business, patent professional and patent information user organizations, but at the time of writing, responses have been received only from Offices.

IMPROVING THE QUALITY OF ABSTRACTS RECEIVED

Guidance to Applicants

14. The International Bureau notes the suggestions received in response to Circular C. PCT 1486 which suggest that many applicants might be willing to draft better abstracts if given suitable guidelines and explanations of why a good abstract may be in their own interest. The International Bureau will review the advice given in Chapter 5 of the PCT Applicant's Guide. To assist this, it would welcome any information concerning national guidelines on drafting abstracts, as well as views on other concerns sometimes stated, such as that applicants see using the text of Claim 1 as a "safe" option in that there are concerns that any discrepancies might affect the interpretation of the claims, despite the clear statement of PCT Article 3(3) that "[t]he abstract merely serves the purpose of technical information and cannot be taken into account for any other purpose, particularly not for the purpose of interpreting the scope of the protection sought".

Abstracts Drafted in Languages Other than English

15. One aspect of drafting which was of key concern was that applicants filing in languages other than English could not know how long the abstract would be when translated into English. It is suggested that guidelines be established in each of the languages of publication containing recommended ranges based on the ratio of the average numbers of words or characters in the language of publication to the average number of words in English from the translations of abstracts established by the International Bureau for publication during 2016, as follows:

Publication language	Number of abstracts published in 2016	Average number of words in abstract (source language)	Average number of words in abstract (English translation)	Multiplier	Equiv- alent of 50	Equiv- alent of 150	Suggested range in original language
Arabic	26	127	172	0.74	36.9	110.8	35 to 110 words
Chinese	26001	236 chars	150	1.57	78.7	236.0	80 to 240 characters
French	6183	125	126	0.99	49.6	148.8	50 to 150 words
German	16088	109	141	0.77	38.7	116.0	40 to 120 words
Japanese	41847	274 chars	135	2.03	101.5	304.4	100 to 300 characters
Korean	11866	77	132	0.58	29.2	87.5	30 to 130 words
Portuguese	480	131	129	1.02	50.8	152.3	50 to 150 words
Russian	824	122	171	0.71	35.7	107.0	35 to 110 words
Spanish	1497	118	116	1.02	50.9	152.6	50 to 150 words

REVIEW BY RECEIVING OFFICES

16. The International Bureau notes the suggestions received in response to Circular C. PCT 1486 which suggest measures which might be taken at receiving Offices and will consider whether to bring proposals to the PCT Working Group. However, the initial view is that any action is likely to be limited to a review of whether the Receiving Office Guidelines are sufficiently clear. Paragraph 147 currently states:

"The receiving Office checks whether the application contains an abstract as provided for in Article 14(1)(a)(iv) but not whether the abstract complies with Rule 8 (in particular, it is not the receiving Office's responsibility to check whether the abstract contains more than 150 words in English or when translated into English). ..."

17. It might be appropriate for receiving Offices also to bring the most extreme cases of very short, very long or obviously incorrect text to the attention of the applicant. However, in general the Office will not be in a position to judge the substantive quality of the text and consequently whether it is appropriate for the length to fall outside the normal recommended range of lengths. As such, it may be desirable to adapt filing systems to provide warnings to applicants prior to filing if the abstract length falls outside the expected range, but it would not seem useful to ask receiving Offices to check word counts. Nor does the International Bureau consider fee-related incentives to be desirable, since these would be likely to reduce the overall efficiency of the process. Further, they may cost more to implement than the likely improvement to quality would justify if the process was administered by the receiving Office, which is not competent to judge the quality of the result.

REVIEW BY INTERNATIONAL AUTHORITIES

18. It is clear that only the International Searching Authority is in a position to judge the merits of an individual abstract. Rule 38.2 provides a mandate for the International Searching Authority to establish an abstract if either no abstract has been received from the applicant, or if the abstract does not comply with Rule 8. The International Bureau hopes that translation costs can be reduced by long abstracts being shortened and fewer figures containing large numbers of words being selected to accompany abstracts. However, ultimately, the key factor must be to ensure that abstracts and accompanying drawings are fit for purpose.

19. The main guidance on how to decide whether an abstract is suitable and how to draft modifications is provided in paragraphs 16.36 and 16.37 of the PCT International Search and Preliminary Examination Guidelines, as follows:

Article 3(3); Rule 8.3

“16.36 In determining the definitive contents of the abstract, or establishing the text of the abstract anew, where it is missing, the examiner should take into consideration the fact that the abstract is merely for use as technical information and, in particular, must not be used for the purpose of interpreting the scope of the protection sought. The abstract should be drafted so that it constitutes an efficient instrument for the purpose of assisting the scientist, engineer or researcher in searching in the particular technical field and should in particular make it possible to assess whether there is need for consulting the international application itself. WIPO guidelines for the preparation of abstracts are found in WIPO Standard ST.12/A.

Rule 8.1(a), 8.3

“16.37 In considering the adequacy of the applicant’s abstract and figure, because of practical difficulties experienced by the International Bureau with publication, examiners when assessing or drafting abstracts, should have particular regard to the following:

“(a) It is important that the abstract be as concise as the disclosure permits (preferably 50 to 150 words if it is in English or when translated into English). Within this constraint the abstract must provide a summary of the technical information about the disclosure as contained in the description, claims and drawings. It should be drafted so as to serve as an efficient scanning tool for searching purposes in the art.

“(b) Phrases should not be used which can be implied, such as, “This disclosure concerns”, “The invention defined by this disclosure” and “This invention relates to”.

Rule 8.2(b)

“(c) Only one figure should normally be selected unless this would lead to inadequate disclosure. The inclusion of more than two figures should not be considered except in extreme circumstances where necessary information cannot be otherwise conveyed. Where none of the figures is considered useful for the understanding of the invention (even where the applicant has suggested a figure), no figure should be selected.

“(d) Abstracts may be incomprehensible if the numerals on the selected figure(s) do not correspond with those in the abstract.

“(e) An absence of reference numerals on the figures must be accepted as the examiner has no mechanism to initiate their provision.

Rule 8.1(d)

“(f) Each main technical feature mentioned in the abstract and illustrated by a drawing should be followed by a reference sign, placed between parentheses.”

20. The International Bureau invites International Authorities to consider whether the above guidance is sufficient and well followed.

21. In terms of length of abstracts, this should find an appropriate balance:

(a) The abstracts must be long enough to refer to the most important technical features which are relevant to users searching for technical information and gaining a general idea of the area in which protection is claimed;

(b) The abstracts should be short enough for readers to take in the key information at a glance; in particular, most abstracts should fit onto the front page of the published application (for users looking at conventional documents) or into screen spaces optimized to allow searchers to view most typical abstracts without needing to scroll or reduce the size of the text.

22. In terms of drawings accompanying abstracts, consideration should take into account whether the text which appears in the drawings:

(a) will be readable when reduced in size to fit on the front page; and

(b) will be easily understood if the translated text is presented below or at the side of the drawing, associated with reference numerals, as shown in Examples 3 and 4 of Annex II.

23. If International Authorities consider that there is a need to improve the guidance in the PCT International Search and Preliminary Examination Guidelines, it is proposed to seek further input from patent information users and to pass the responses of designated Offices and patent information users to the Quality Subgroup for further consideration.

24. The Meeting is invited to comment on measures which might be taken to reduce translation costs and improve the quality of information relating to abstracts and accompanying drawings.

[Annex I follows]

ANNEX I

**BREAKDOWNS OF LENGTH OF ABSTRACT
AND NUMBER OF WORDS IN ACCOMPANYING DRAWINGS**
(reproduced from Circular C. PCT 1486)

NOTE ON METHODOLOGY

1. The following breakdowns represent an analysis of the abstracts and accompanying drawings in international applications published from January to June 2015, excluding cases where a declaration was made under Article 17(2)(a) that no international search report would be established and no abstract was established (cases with such a declaration are included where an abstract was established).
2. The lengths of abstracts are based on the abstract in English or as translated into English.
3. The number of words in drawings is based on the number of words recorded in the International Bureau's database for the English language version of the drawing or, where that information is not available, for the French language version of the drawing (for most drawings which are originally in English, the words are not transcribed into the database in English and only the text of the French translation is available). This number is frequently slightly higher than the actual number of words in the original drawing (or their English language equivalent) since it includes as words any reference letters and numerals which the International Bureau has needed to add in order to associate the text with the appropriate part of the drawing.
4. The technical sector (and field for the more detailed breakdowns available on the WIPO website) for any particular international application is determined according to the values in the WIPO technology concordance table for the first IPC code appearing on the application. No partial counting is made for international applications with IPCs crossing different sectors and fields.

KEY FIGURES FOR LENGTH OF ABSTRACTTable 1: Across total sample

Total number in sample	Percentage <50 words	Percentage >150 words	Mean words	Min words	Median words	Max words
112931	7.2	25.5	122.8	5	120	720

Table 2: By International Searching Authority

ISA	Number using ISA	Percentage <50 words	Percentage >150 words	Mean words	Min words	Median words	Max words
EP	42766	9.4	22.9	118.9	5	115	669
JP	21969	2.1	38.5	137.8	14	136	461
KR	16194	8.0	14.1	111.6	11	106	720
CN	14167	2.9	47.1	147.1	8	148	441
US	10669	12.7	1.7	96.5	8	98	353
AU	1450	11.5	12.7	101.4	9	97	375
RU	1368	8.8	30.5	131.7	6	131	584
CA	1242	8.1	8.3	106.3	15	108.5	309
SE	763	3.1	37.0	140.0	27	135	619
ES	742	6.2	16.6	115.4	16	116	379
IL	522	13.8	8.2	102.6	18	101	373
FI	292	3.1	22.3	121.2	24	114	334
BR	278	7.2	28.8	127.7	25	116	501
IN	253	24.9	7.1	94.9	11	91	444
XN	117	3.4	41.9	140.3	25	138	344
AT	113	6.2	32.7	129.9	24	129	295
CL	25	4.0	28.0	126.2	48	124	226
EG	1	0.0	100.0	179.0	179	179	179

Table 3: By Technology Sector

Sector	Number in sector	Percentage <50 words	Percentage >150 words	Mean words	Min words	Median words	Max words
Electrical engineering	38574	2.9	26.3	128.4	5	127	545
Chemistry	25578	19.6	14.3	96.4	6	88	669
Mechanical engineering	22546	3.8	33.8	135.4	7	132	720
Instruments	17806	4.7	28.0	128.9	7	127	637
Other fields	8427	4.1	28.0	130.7	6	125	691

Table 4: By Language of Publication

Lang of pub	Number in lang of pub	Percentage <50 words	Percentage >150 words	Mean words	Min words	Median words	Max words
EN	58694	10.9	11.6	106.8	5	105	636
JA	21489	2.0	39.1	138.4	14	137	461
ZH	11825	1.6	54.1	154.3	14	156	441
DE	9247	6.1	39.1	138.9	11	132	669
KO	6170	5.8	30.5	130.2	12	118	720
FR	3753	4.4	28.4	126.8	7	126	452
ES	897	5.8	17.5	116.8	16	118	379
RU	558	2.0	62.4	170.4	22	172	584
PT	296	6.1	28.4	129.1	25	117.5	501
AR	2	0.0	50.0	224.5	111	224.5	338

KEY FIGURES FOR WORDS IN DRAWINGS

Table 5: Across Total Sample

Number in total	Percentage with words in title	Percentage >10 words	Percentage >100 words	Mean words	Max words
112931	31.3	31.3	3.7	17.1	609

Table 6: By International Searching Authority

ISA	Number nominating ISA	Percentage with words in title	Percentage >10 words	Percentage >100 words	Mean words	Max words
EP	42766	20.9	20.9	2.1	10.8	609
JP	21969	32.5	32.5	1.5	14.4	301
KR	16194	40.2	40.2	3.4	19.7	479
CN	14167	49.6	49.6	13.5	39.1	564
US	10669	38.0	38.0	3.2	18.4	545
AU	1450	24.5	24.5	2.3	11.7	250
RU	1368	19.3	19.3	1.5	9.6	301
CA	1242	33.6	33.6	3.1	16.6	502
SE	763	24.4	24.4	2.5	13.4	190
ES	742	6.7	6.7	0.0	2.6	87
IL	522	30.8	30.8	1.5	13.9	248
FI	292	31.2	31.2	6.5	18.7	238
BR	278	10.1	10.1	0.7	5.3	303
IN	253	20.9	20.9	2.8	13.5	461
XN	117	9.4	9.4	1.7	7.2	240
AT	113	13.3	13.3	0.0	5.9	87
CL	25	20.0	20.0	0.0	4.2	39
EG	1	0.0	0.0	0.0	0.0	0

Table 7: By Technology Sector

Sector	Number in sector	Percentage with words in title	Percentage >10 words	Percentage >100 words	Mean words	Max words
Electrical engineering	38574	57.1	57.1	8.6	34.7	564
Chemistry	25578	19.3	19.3	0.7	7.2	609
Mechanical engineering	22546	12.4	12.4	0.9	5.8	574
Instruments	17806	26.5	26.5	2.2	13.0	461
Other fields	8427	10.3	10.3	0.9	5.3	375

Table 8: By Language of Publication

Lang of pub	Number in lang of pub	Percentage with words in title	Percentage >10 words	Percentage >100 words	Mean words	Max words
EN	58694	33.7	33.7	3.9	18.2	574
JA	21489	32.2	32.2	1.4	14.1	301
ZH	11825	46.6	46.6	12.6	36.6	564
DE	9247	3.6	3.6	0.1	1.5	193
KO	6170	38.6	38.6	1.5	15.6	288
FR	3753	6.7	6.7	0.4	3.0	609
ES	897	6.9	6.9	0.1	2.8	140
RU	558	5.0	5.0	0.9	3.1	142
PT	296	9.8	9.8	0.7	5.0	303
AR	2	0.0	0.0	0.0	0.0	0

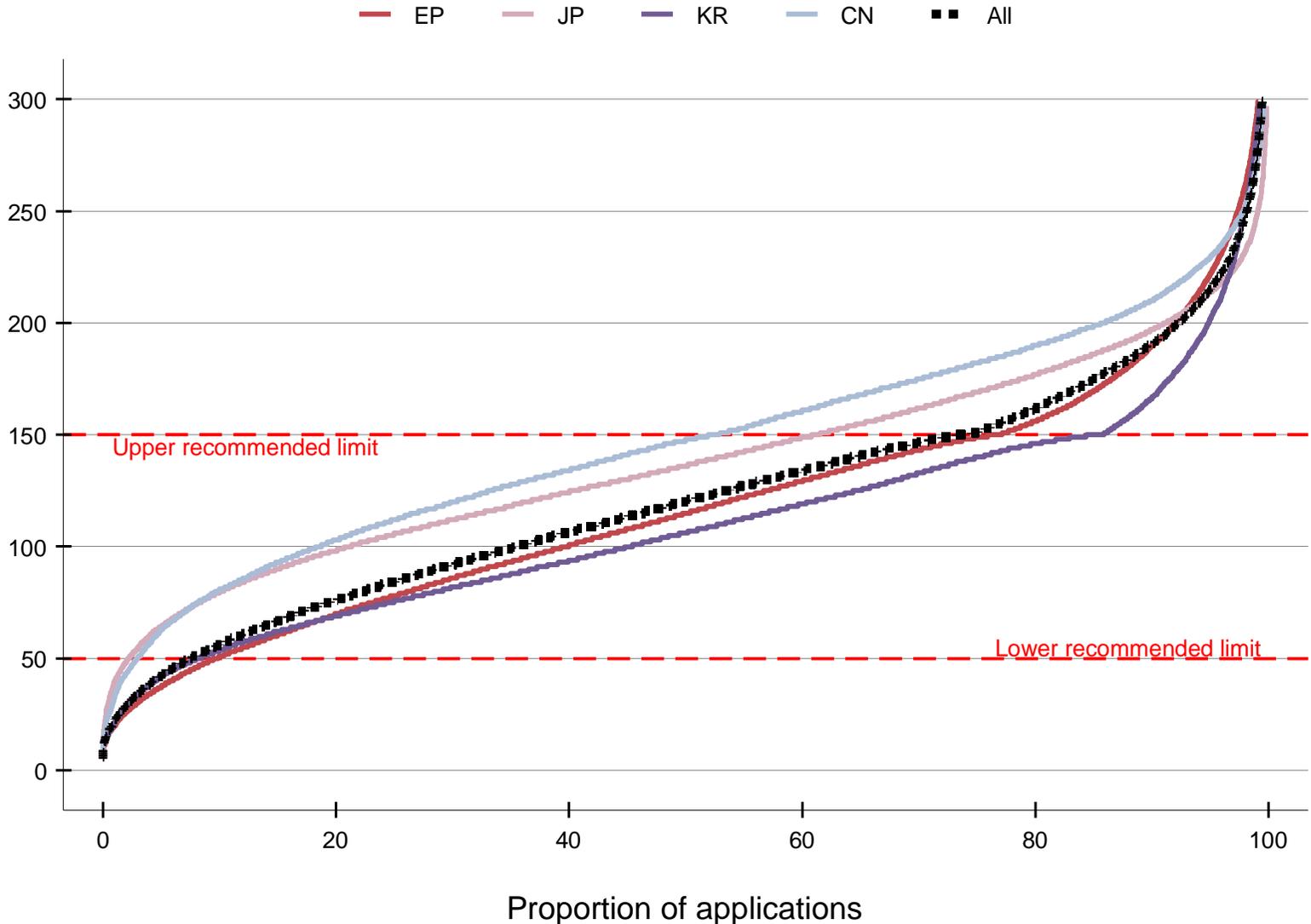
DISTRIBUTION OF ABSTRACT LENGTHS AND NUMBERS OF WORDS IN DRAWINGS

5. In the charts showing the distribution of abstract lengths and number of words in drawings within different breakdowns, the line shows the cumulative total proportions – that is, any point on a line shows the proportion of international applications in the relevant category for which the number of words in the abstract or in the drawing is the indicated number or less.

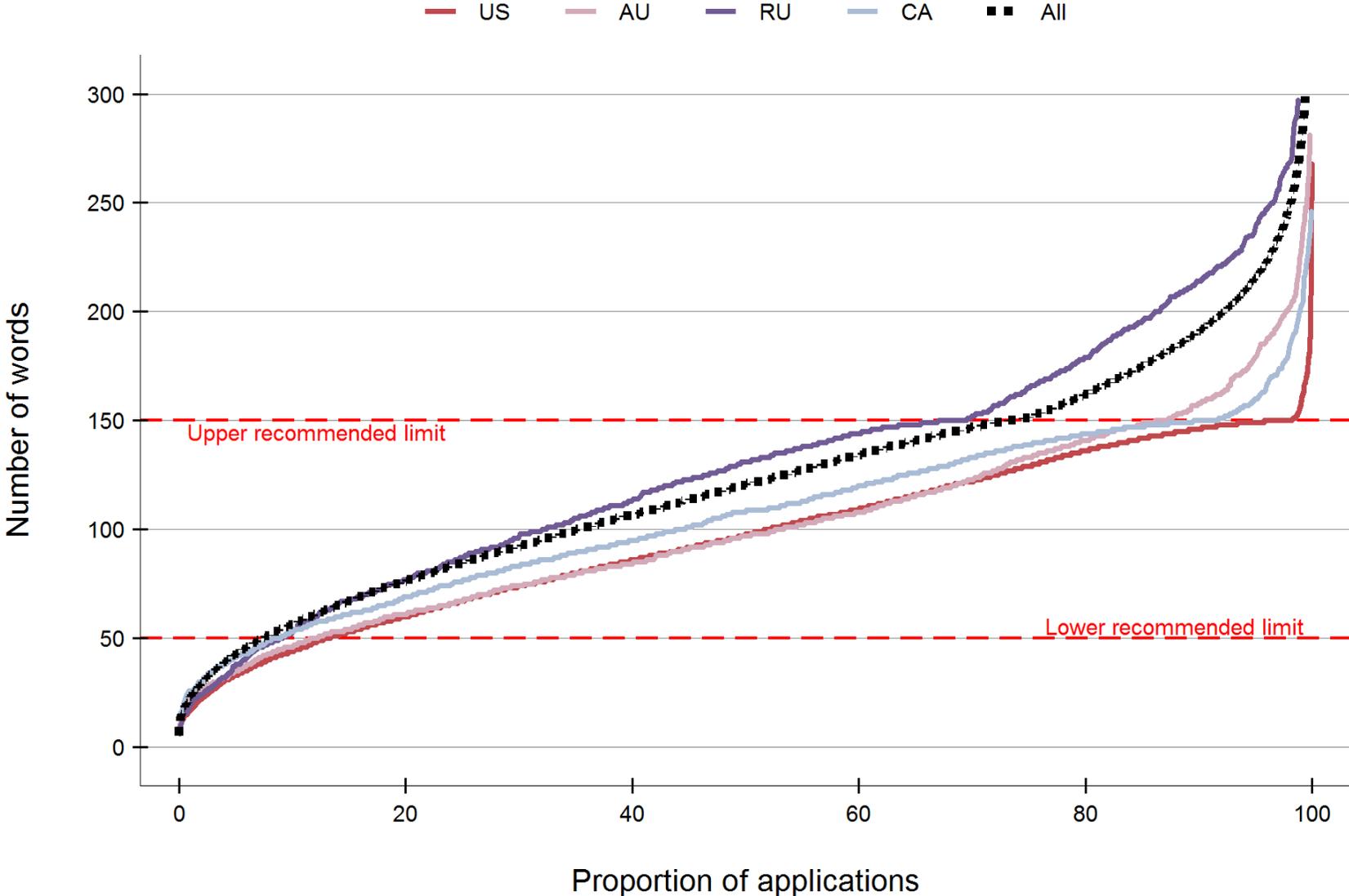
6. Each chart shows the distributions of numbers of words in abstracts or drawings broken down by different categories. Some categories may span multiple charts to avoid too many lines on a single chart. The charts by International Searching Authority and Language are split according to decreasing number of international applications for the category within the sample. The charts show only lines where the number of international applications in the relevant category is greater than 50; below this threshold the statistical variations are too great to identify meaningful trends.

7. Each chart includes a black dotted “total” line showing the distribution across all categories.

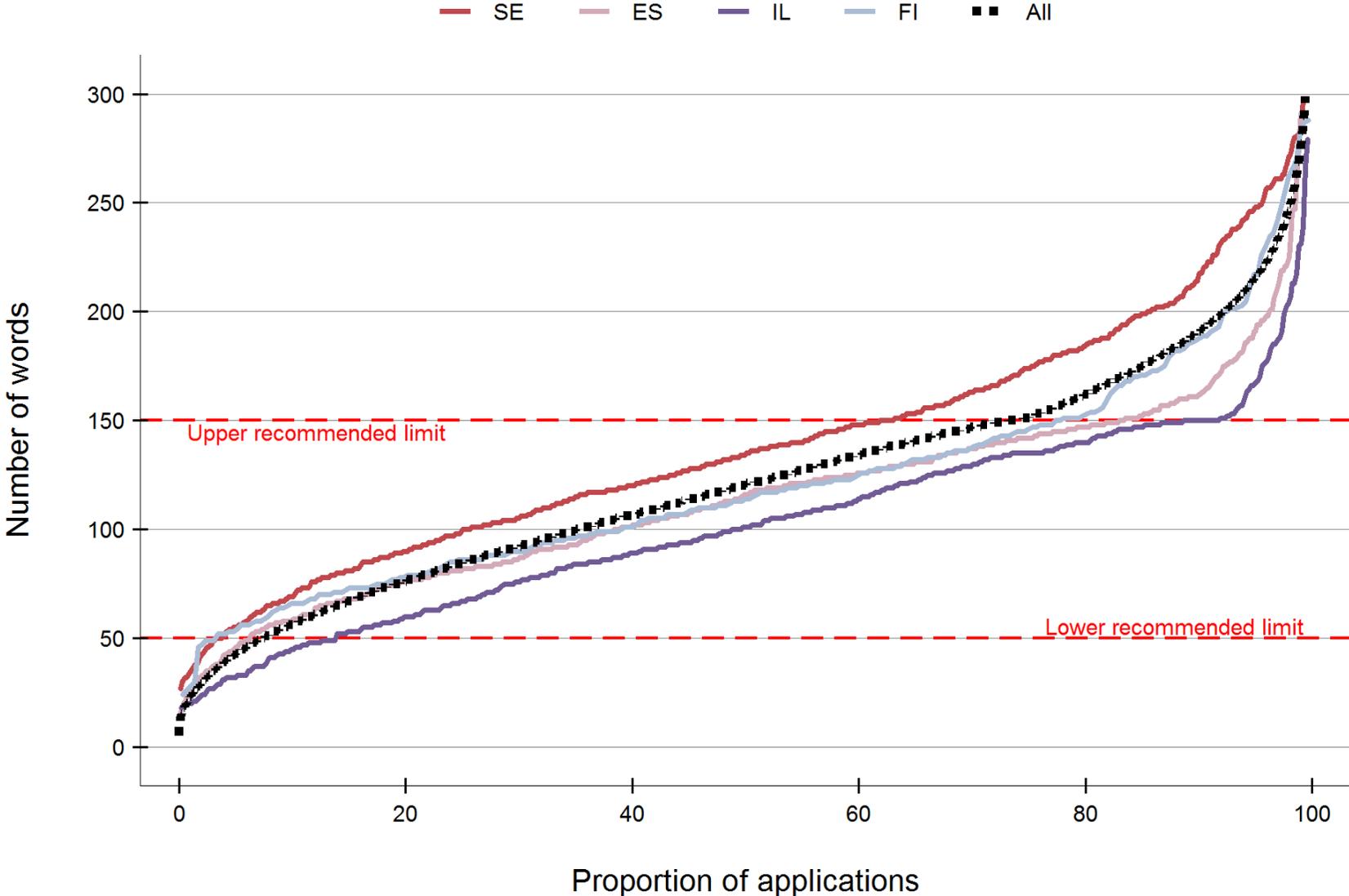
Number of words in abstract, by ISA (1/4)



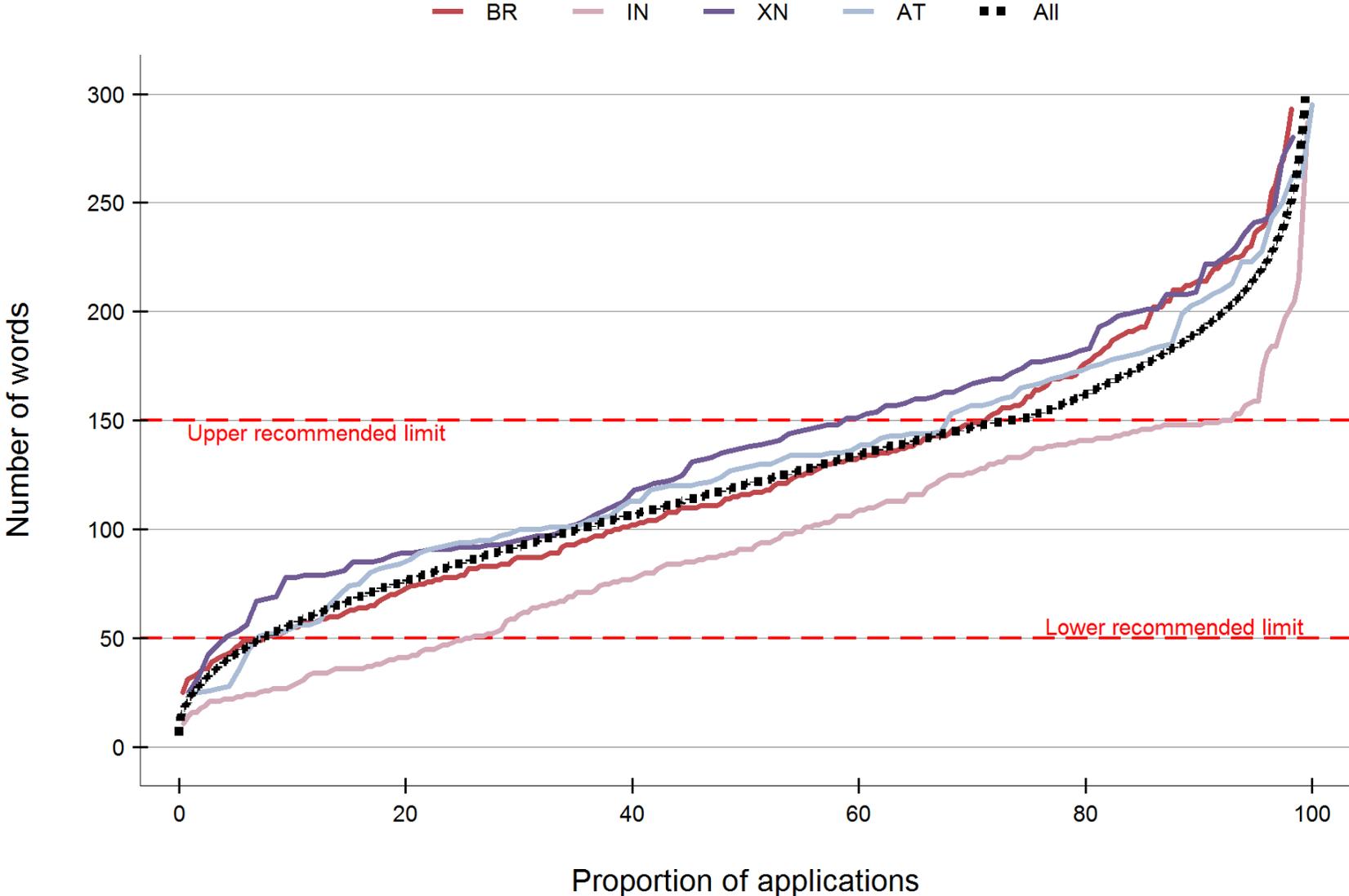
Number of words in abstract, by ISA (2/4)



Number of words in abstract, by ISA (3/4)

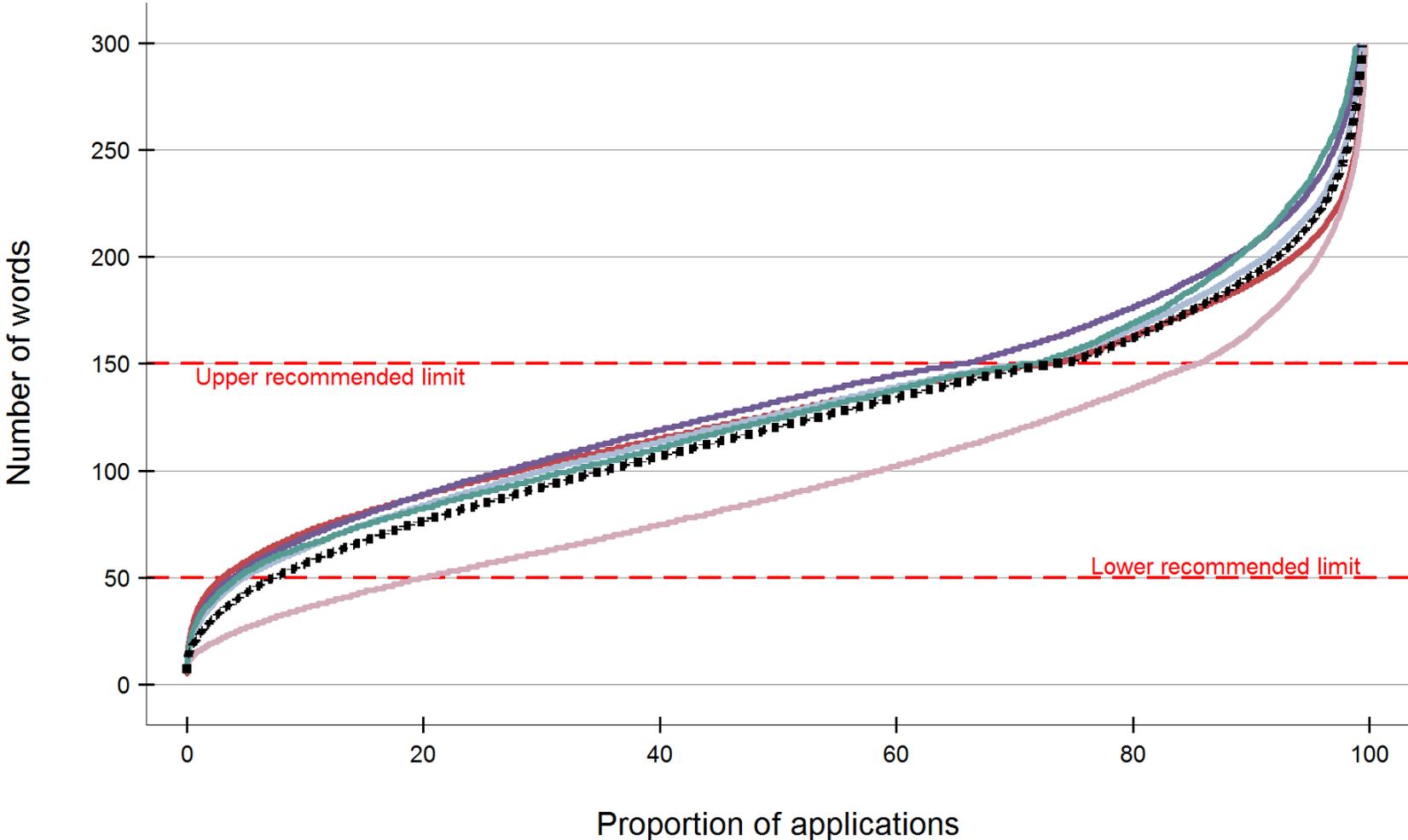


Number of words in abstract, by ISA (4/4)

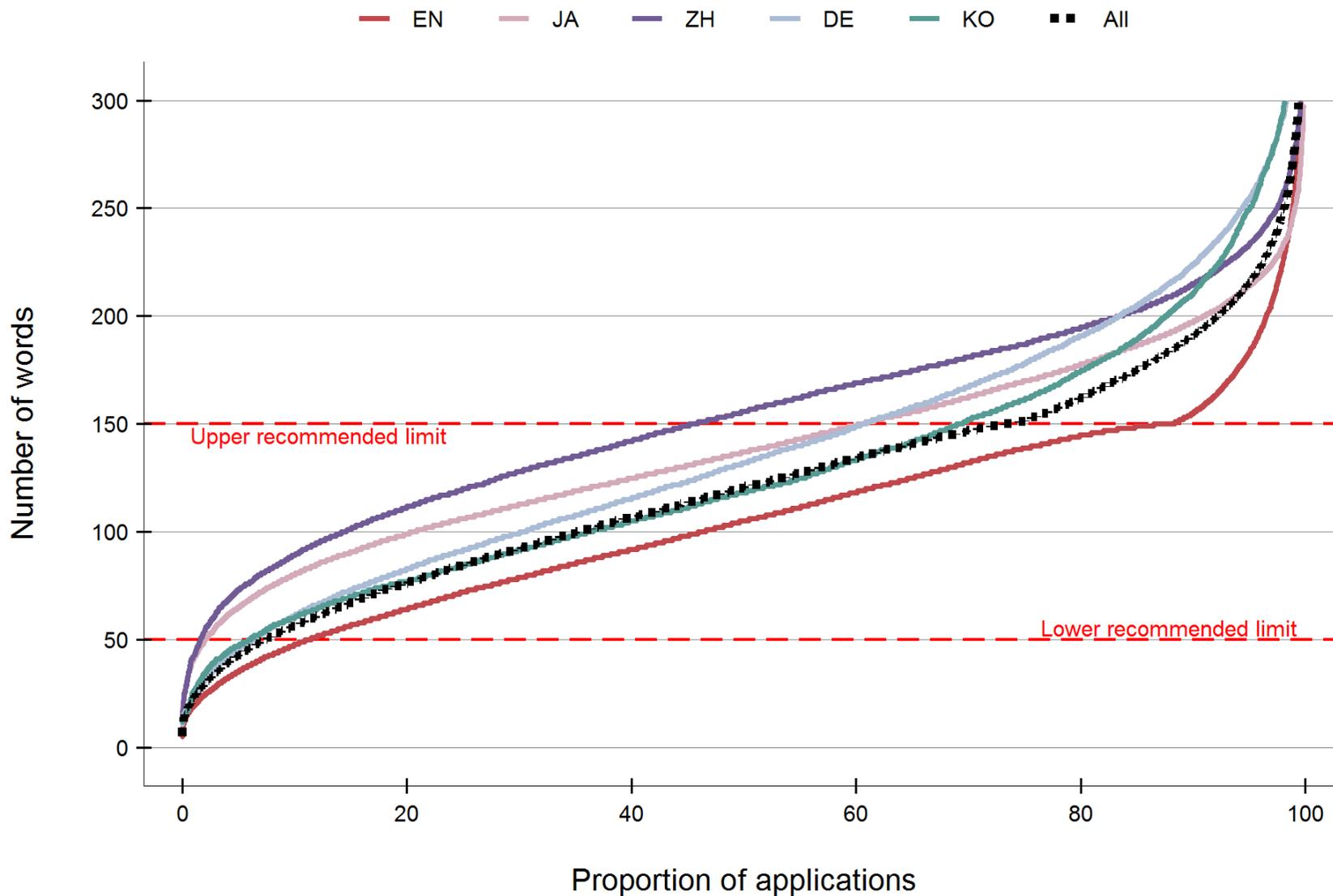


Number of words in abstract, by sector (1/1)

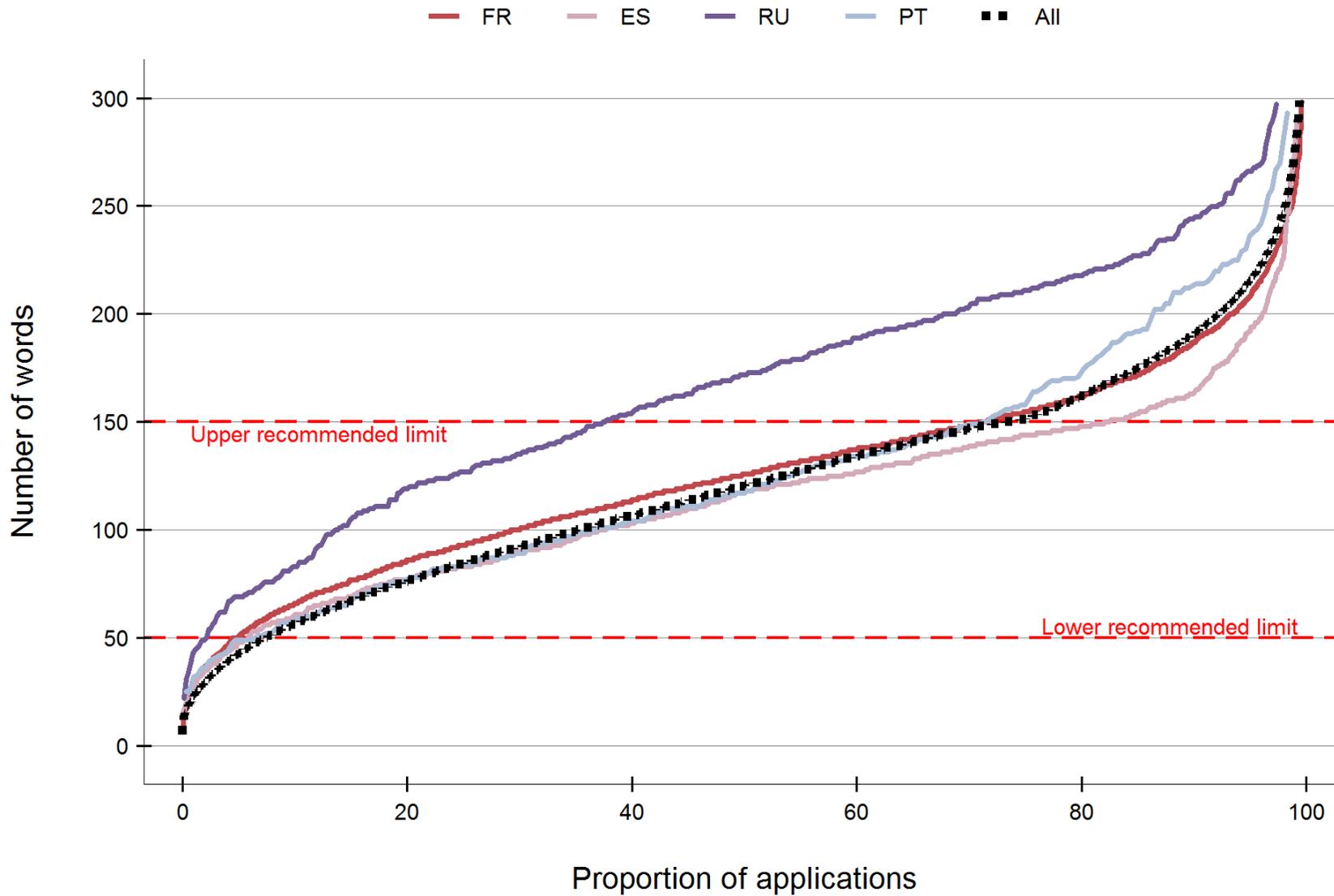
- Electrical engineering
- Chemistry
- Mechanical engineering
- Instruments
- Other fields
- All



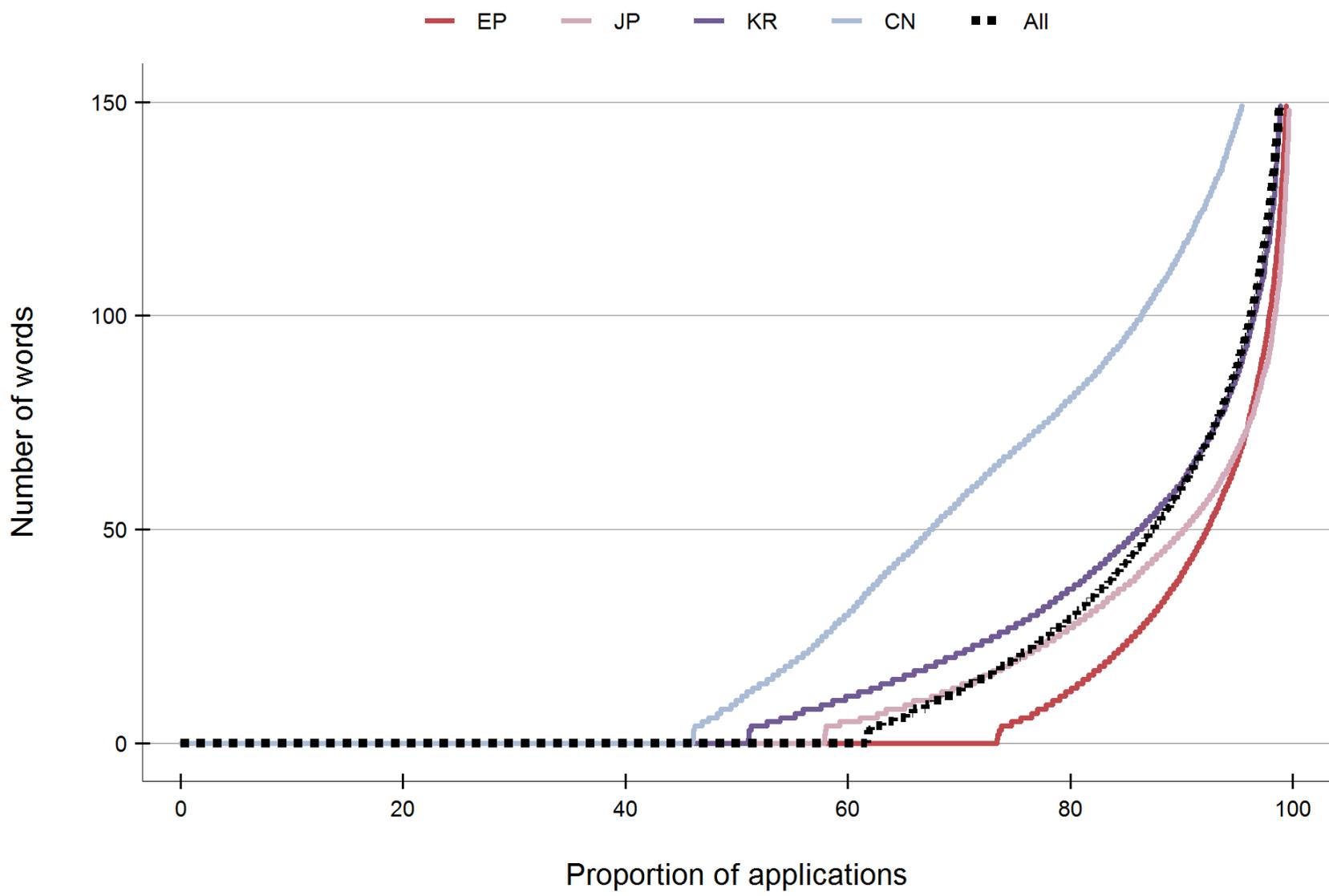
Number of words in abstract, by language of publication (1/2)



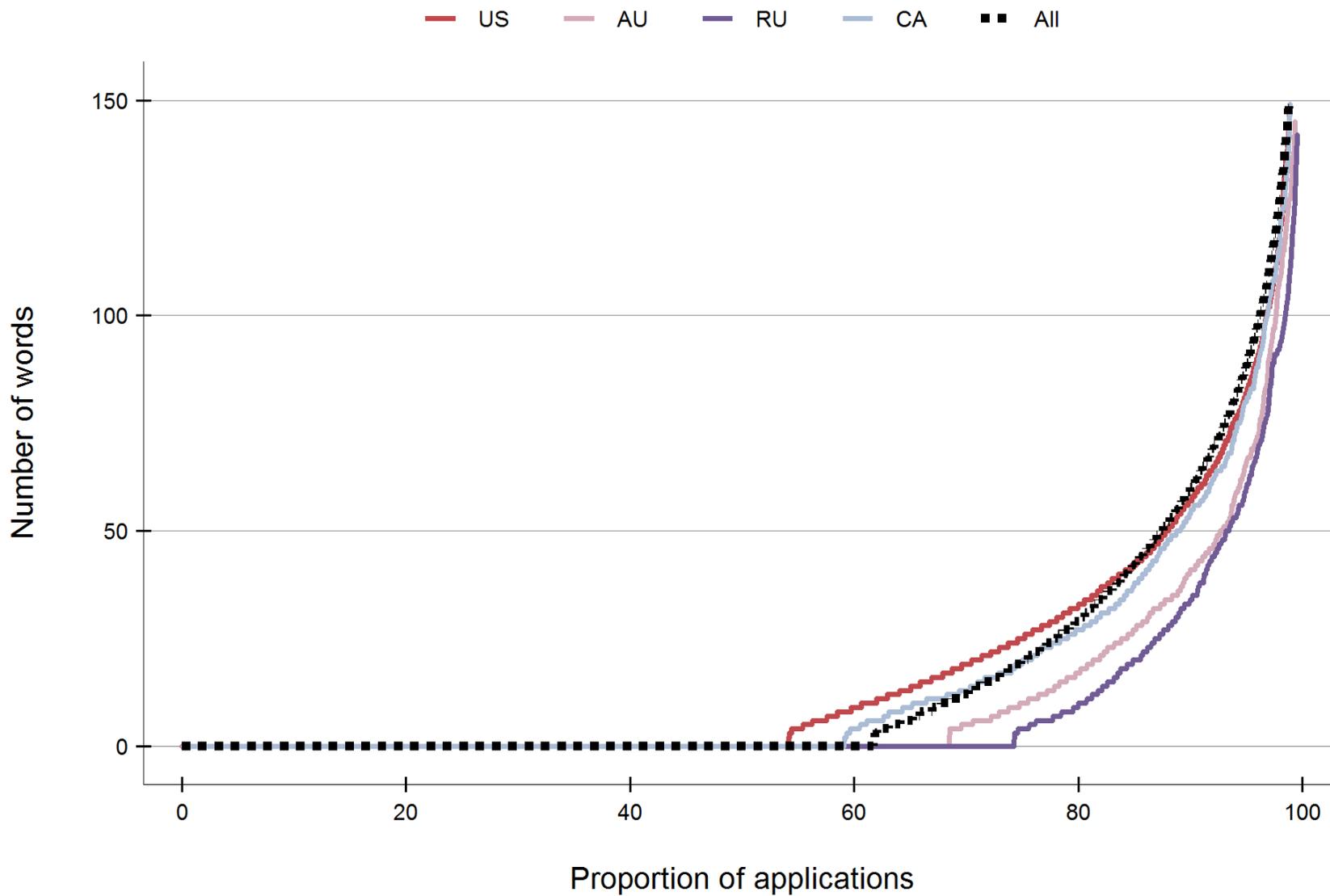
Number of words in abstract, by language of publication (2/2)



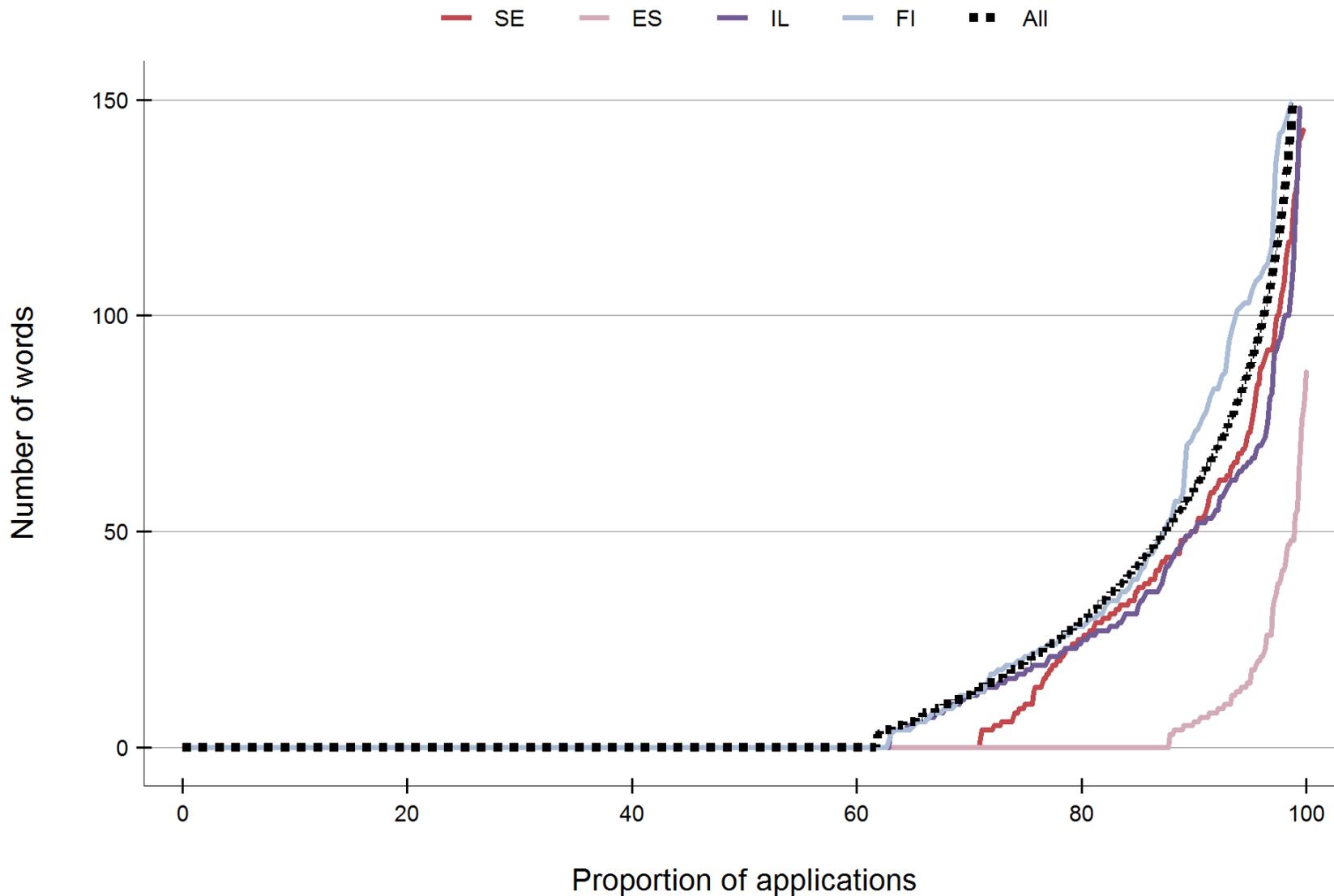
Number of words in drawing, by ISA (1/4)



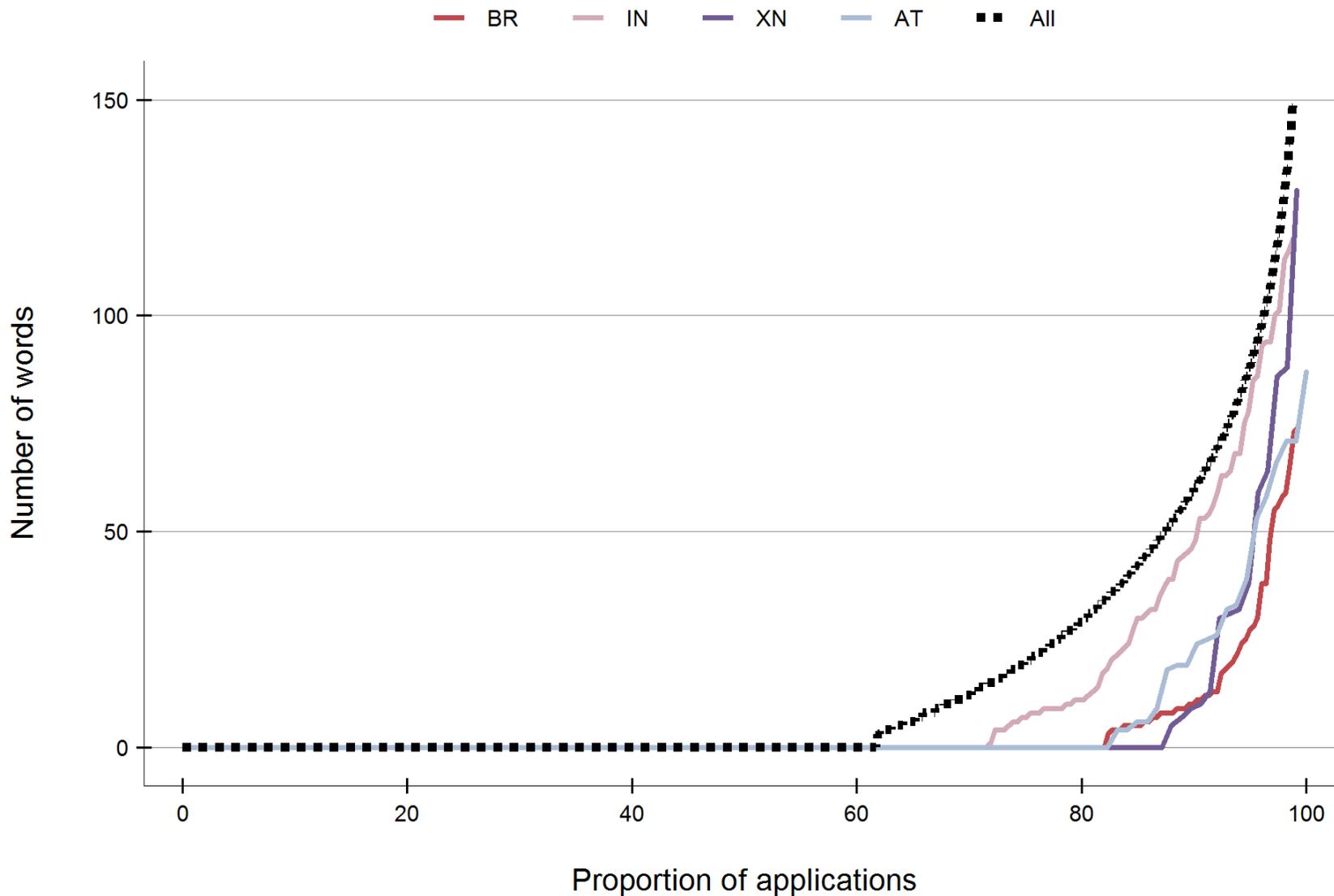
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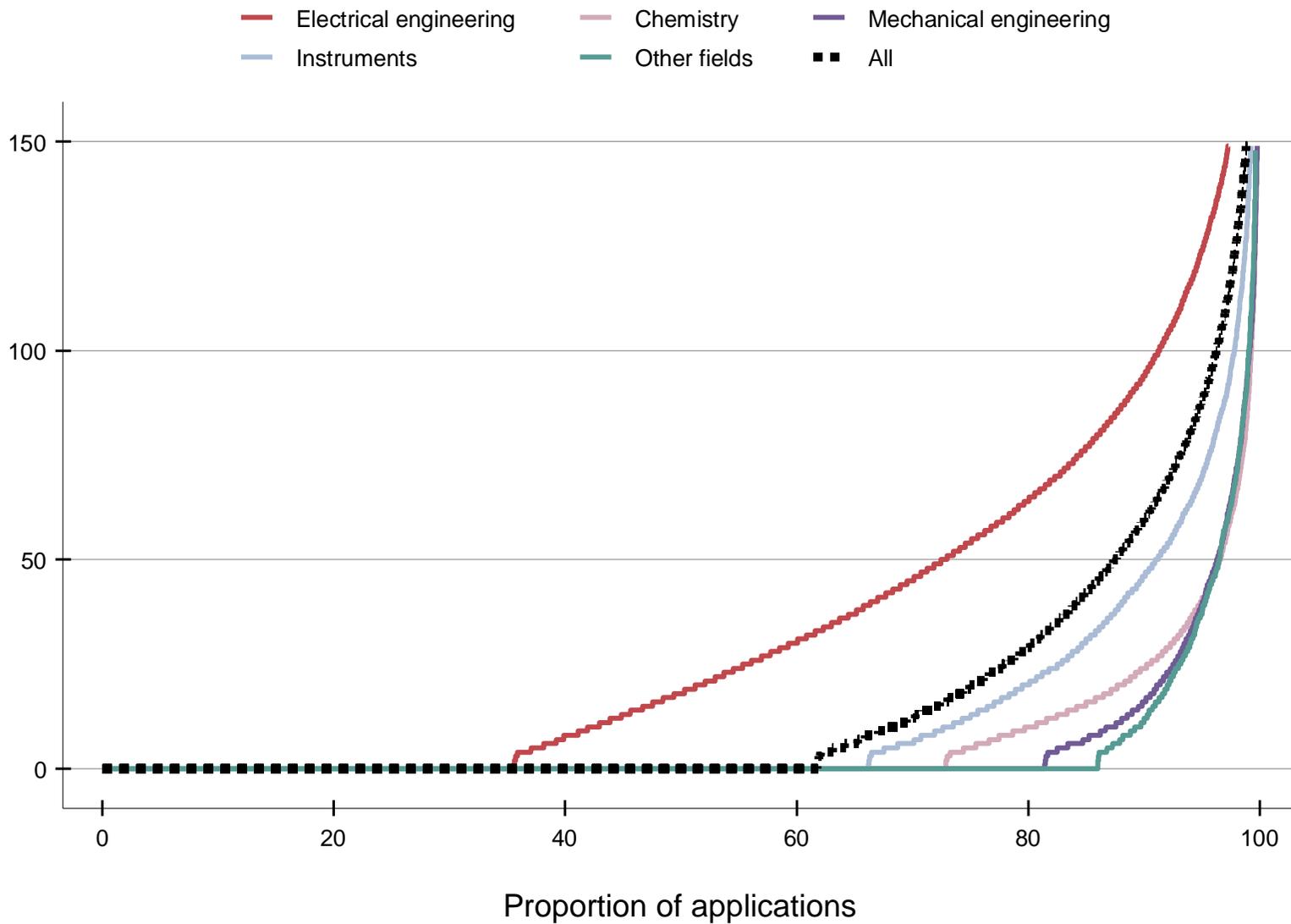
Number of words in drawing, by ISA (3/4)



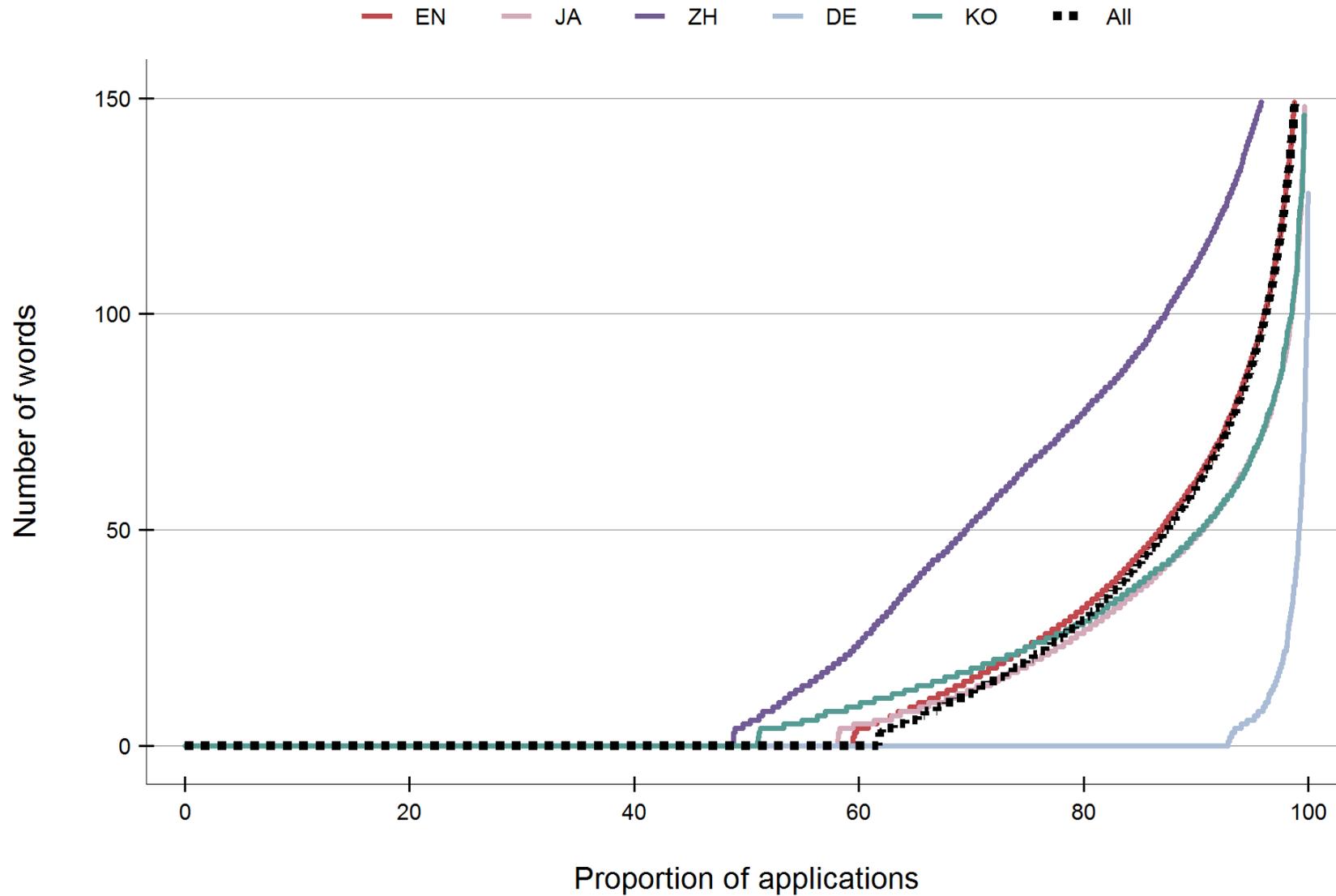
Number of words in drawing, by ISA (4/4)



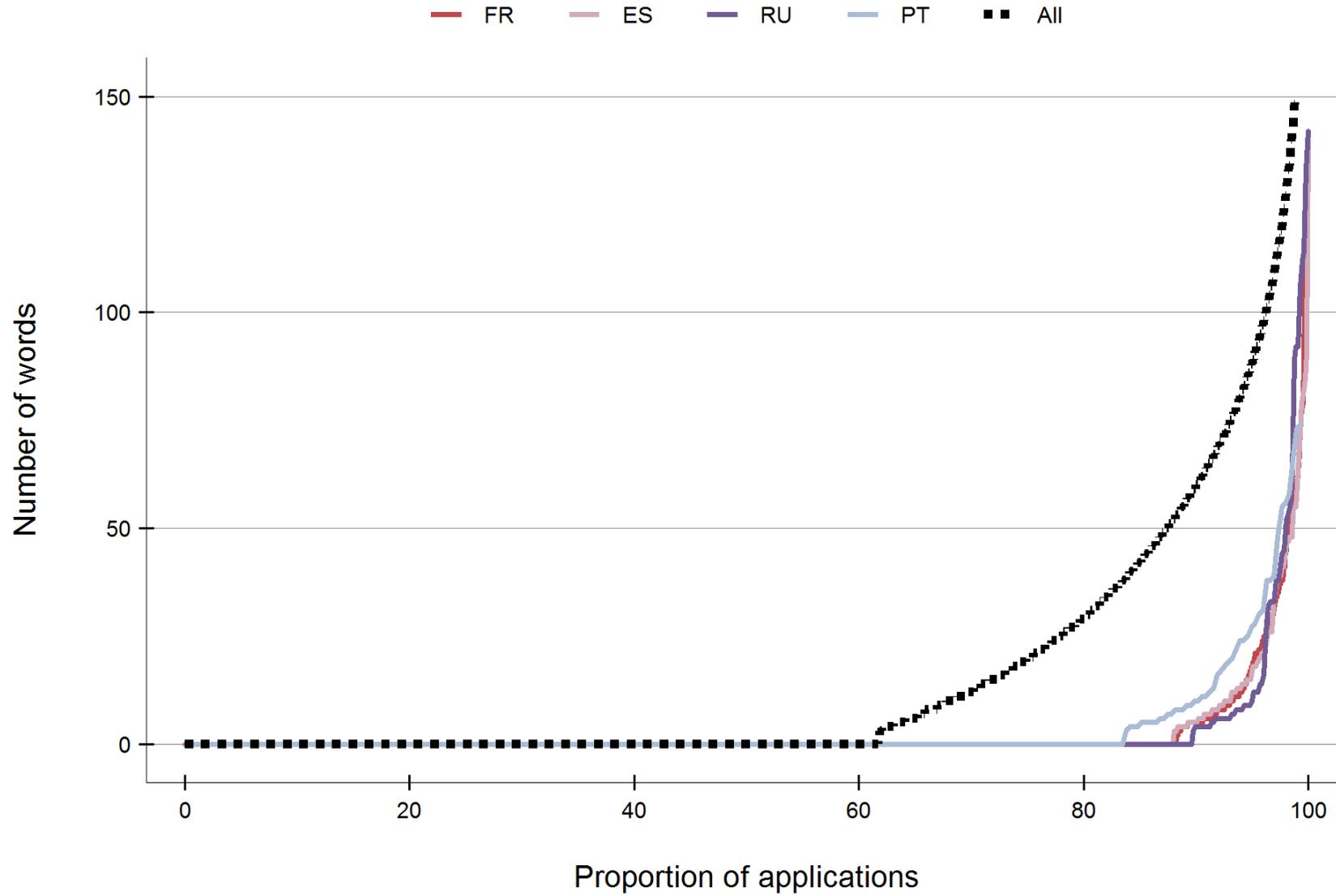
Number of words in drawing, by sector (1/1)



Number of words in drawing, by language of publication (1/2)



Number of words in drawing, by language of publication (2/2)



[Annex II follows]

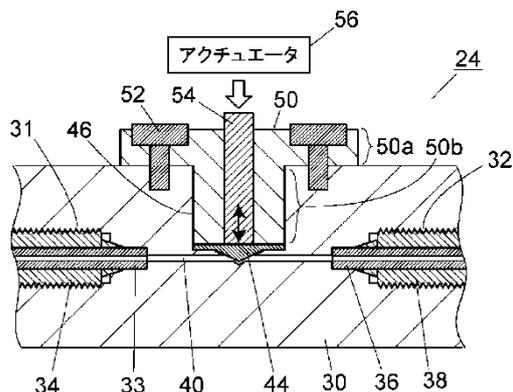
ANNEX II

EXAMPLES OF ABSTRACTS AND DRAWINGS
FROM FRONT PAGES OF INTERNATIONAL APPLICATIONS
WHERE THE DRAWING CONTAINS VARIOUS QUANTITIES OF TEXT

**EXAMPLE 1: ABSTRACT TEXT WITHIN RECOMMENDED RANGE; SINGLE
TRANSLATED WORD IN ACCOMPANYING FIGURE**

(54) Title: PRESSURE CONTROL VALVE AND SUPERCRITICAL FLUID CHROMATOGRAPH

(54) 発明の名称 : 圧力制御バルブ及び超臨界流体クロマトグラフ



56 Actuator

(57) Abstract: This pressure control valve is provided with: a pressure control block having a recess formation surface, which is a flat surface in which a recess is formed in a shape converging towards the bottom, and two inner flow paths, one end of which is in the inner wall surface of the recess; a valve member having a front surface with a surface area greater than that of the recess opening, wherein the periphery of said front surface is in close contact around the recess in the recess formation surface and the center of said front surface is inserted into the recess; and a valve driving mechanism which adjusts the size of the gap between the valve member and the inner wall surface of the recess by pressing the center of the back surface of the valve member towards the recess and deforming the valve member.

(57) 要約: 圧力制御バルブは、底部に向かって収束する形状の凹部が形成された平面である凹部形成面及び凹部の内側壁面に端部をもつ2本の内部流路を有する圧力制御ブロックと、凹部の開口よりも面積の大きい前面を有し、その前面の周縁部が凹部形成面の凹部の

周囲に密着するとともに前面の中央部が凹部内に挿入される弁体部材と、弁体部材の背面中央部を凹部内側へ押圧して弁体部材を変形させることにより、弁体部材と凹部の内側壁面との間の隙間の大きさを調節するバルブ駆動機構と、を備えている。

EXAMPLE 2: ABSTRACT TEXT OVER 400 WORDS

(54) Title: SET FOR ADHESIVELY ATTACHING OVER A TRACHEOSTOMA OF A LARYNGECTOMIZED PATIENT

(54) Bezeichnung : SET ZUM AUFKLEBEN ÜBER EIN TRACHEOSTOMA EINES LARYNGEKTOMIERTEN PATIENTEN

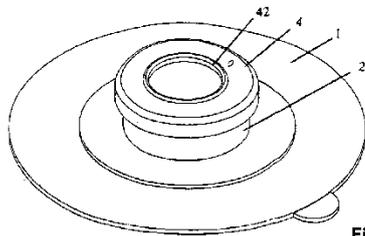


Fig. 1a



Fig. 1b

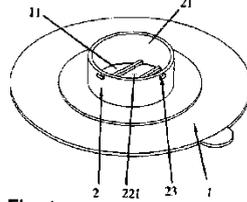


Fig. 1c

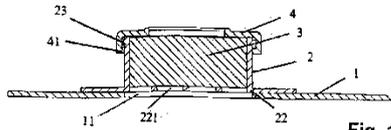


Fig. 1d

(57) Abstract: The invention relates to a set for adhesively attaching over a tracheostoma of a laryngectomized patient. The problem addressed by the invention is that of specifying a set for adhesively attaching over a tracheostoma of a laryngectomized patient, which set is economical in production and use, is very light, has good breathing activity with simultaneous filtering of the breathed air, very good sealing behavior when properly adhesively attached over a tracheostoma in the neck of a patient, and ensures easy filter replacement while also being easy to use and comfortable to wear. This problem is solved in that the set comprises a neck patch (1), a housing (2), a cover (4) having four variants of the design of the cover, and a sponge-like breathing filter (3) for cover variants one to three, the neck patch (1) is a thin, planar, flexible film, which is adhesive on the proximal side of said film and which has a centrally arranged passage hole (11), the passage hole (11) is surrounded on the distal side of the film at the edge of the passage hole by a housing (2) having a central hole (21), the housing (2) has a bottom (22), the housing (2) has at least one first coupling element (23) in the region of the outer edge of the distal opening of the housing, the first coupling element (23) retains the cover (4) having the breathing filter (3), the breathing filter (3) having a rotationally symmetric shape, which is supported in the housing (2), the cover (4) has an edge, which partially surrounds the housing (2) and which has at least one second coupling element (41) on the side of the edge of the cover facing the housing (2), by means of which at least one second coupling element the cover (4) is connected to the housing (2), the bottom (22) of the housing (2) being designed as an ventilation structure that leaves 70-80% of the passage hole (11) of the film free, the ventilation structure is designed in the form of through-holes (221) in the bottom (22), the breathing filter (3) is supported in the housing (2) on the proximal side of the breathing filter and is retained by the cover (4) on the distal side of the breathing filter (3) and has a passage hole (11), which partially leaves the breathing filter (3) free, provided the breathing filter is used in the set.

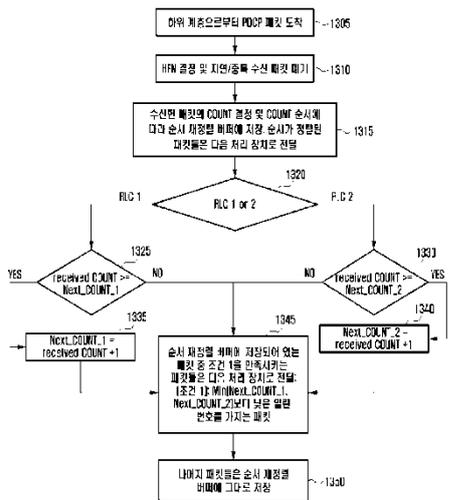
ventilation structure of the bottom (22) on the proximal side of the breathing filter and is retained by the cover (4) on the distal side of the breathing filter, and the cover (4) is connected to the distal side of the breathing filter (3) and has a passage hole (11), which partially leaves the breathing filter (3) free, provided the breathing filter is used in the set.

(57) Zusammenfassung:

[Fortsetzung auf der nächsten Seite]

(54) Title: METHOD AND APPARATUS FOR TRANSMITTING/RECEIVING DATA USING PLURALITY OF CARRIERS IN MOBILE COMMUNICATION SYSTEM

(54) 발명의 명칭 : 이동 통신 시스템에서 복수의 캐리어를 이용하는 데이터 송수신 방법 및 장치



- 1305. PDCP packet arrives from lower layer
- 1310. Determine HFN and discard delays/overlapping reception packets
- 1315. Determine counts of received packets, store packets in sequence rearrangement buffer according to count, sequences, and transmit rearranged packets to next processing unit
- 1325. Transmit packets which meet condition 1 among packets stored in sequence rearrangement buffer to next processing unit. [condition 1]: packet which has serial number smaller than Min(Next_COUNT_1, Next_COUNT_2)
- 1350. Store remaining packets in sequence rearrangement buffer without change

(57) Abstract: The present specification relates to a mobile communication system and, more particularly, to a method and an apparatus for transmitting/receiving data using a plurality of carriers in a mobile communication system.

(57) 요약서: 본 명세서는 이동통신 시스템에 관한 것으로, 보다 구체적으로 본 발명은 이동 통신 시스템에서 복수의 캐리어를 이용해서 데이터를 송수신하는 방법 및 장치에 관한 것이다.

EXAMPLE 4: VERY LARGE QUANTITIES OF TEXT IN ACCOMPANYING DRAWING

(54) Title: NETWORK SERVICE BASED CONFIGURATION IMPLEMENTATION METHOD AND SYSTEM

(54) 发明名称 : 基于网络业务的组态实现方法和系统

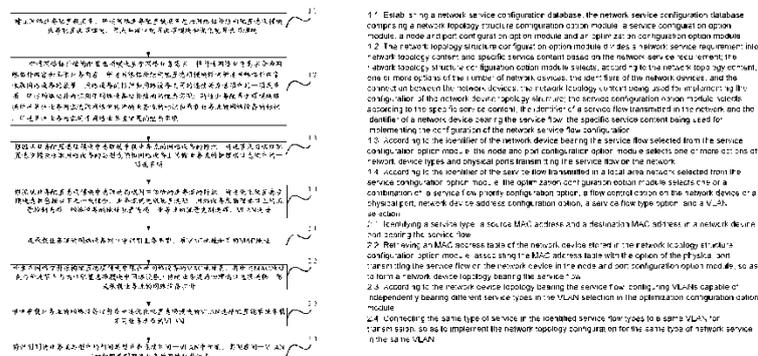


图 1/ Fig.1

(57) Abstract: Disclosed are a network service based configuration implementation method and system, the method comprising: establishing a network service configuration database for a user; selecting from the database the configuration information such as topology structure, the identifier of a service flow and the identifier of a network device bearing the service flow, a physical port, and VLAN selection, and the like, based on network topology content and specific service content of a network service requirement, thus identifying a service type, a source MAC address and a destination MAC address in a network device port bearing the service flow; establishing a network topology from the identifier of the service flow and port configuration information in the network service configuration database; implementing a configuration by transmitting the same service in a VLAN selection, and issuing the configuration information to each network device, thus reducing the complexity of a network configuration. The configured network enables specific service transmission to be more identifiable, and improves the reliability of a network configuration list.

(57) 摘要:

[见续页]