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Learning path for patent examiners

Defining the scope of the search: Intermediate level

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Introduction

This publication, "Defining the scope of the search, Intermediate level", is part of the "Learning path for patent examiners" series edited and published by the European Patent Academy. The series is intended for patent examiners at national patent offices who are taking part in training organised by the European Patent Office (EPO). It is also freely available to the public for independent learning.

Topics covered include novelty, inventive step, clarity, unity of invention, sufficiency of disclosure, amendments and search. Also addressed are patenting issues specific to certain technical fields:

- patentability exceptions and exclusions in biotechnology
- assessment of novelty, inventive step, clarity, sufficiency of disclosure and unity of invention for chemical inventions
- the patentability of computer-implemented inventions, business methods, game rules, mathematics and its applications, presentations of information, graphical user interfaces and programs for computers
- claim formulation for computer-implemented inventions

Each publication focuses on one topic at entry, intermediate or advanced level. The explanations and examples are based on the European Patent Convention, the Guidelines for Examination in the EPO and selected decisions of the EPO's boards of appeal. References are made to the Patent Cooperation Treaty and its Regulations whenever appropriate.

The series will be revised annually to ensure it remains up to date.

Disclaimer

All references to natural persons are to be understood as applying to all genders.

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1. Learning objectives

Participants to this course will learn:

- The definition of non-unity in search and the origin of partial search reports
- The possible reasons for limitation of search
- The differences between the various categories of claims
- How to identify the subjective technical problem of an invention
- How to analyse the claims and the description of an application

2. Preliminary analysis for formal aspects and exclusions

The search division may exclude certain subject-matter from the search. These exclusions result from certain subject-matter not complying with the provisions of the European Patent Convention (EPC) relating to either exclusions from patentability or industrial applicability (see the Guidelines (GL) B-VIII, 1 and 2). These exclusions include discoveries, scientific theories and mathematical methods, aesthetic creations, computer programs, business methods and methods of treatment of the human body as defined in Articles 52(2) and 53 EPC.

Subject-matter may also be excluded from search when a meaningful search is impossible for some or all the claims, or for a part of a claim, for other reasons (see GL B-VIII, 3), or where the application does not comply with Rule 43(2) EPC (see GL B-VIII, 4).

If a European search is incomplete because of exclusions from patentability (Articles 52 and 53 EPC), the extended European search report (EESR) is prepared in line with the procedure described in IB-XI, 6.2.2. This could be the case, for example, when claims relate to:

1. methods of treatment using an apparatus
2. computer programs as such
3. business methods as such

However, where the claim(s) can be easily reformulated in an allowable format excluding the non-patentable embodiments from the scope of the claim(s) and a complete search can in fact be carried out, the EESR is prepared in line with the procedure set out in IB-XI, 6.2.1 (see also GL B-VIII, 2.1). For claims directed to computer-implemented inventions and business methods, see IB-VIII, 2.2.

Legal references:

Art. 52 EPC; Art. 53 EPC; Art. 54 EPC; Art. 55 EPC; Art. 56 EPC; Art. 57 EPC, Art. 82 EPC; Art. 83 EPC; Art. 84 EPC; R. 26 EPC; R. 29 EPC; R. 43 EPC, GL B-III, 3.11

3. Non-unity in search / partial search report / no search

When dealing with the question of unity at the search stage, the search division applies the same criteria as in the substantive examination (see GL F-V). The division will not raise an objection of lack of unity merely because the inventions claimed are classified in separate classification groups, or merely for the purpose of restricting the search to certain sections of the documentation, for example certain classification groups (see, however, GL B-V, 3.3).

The assessment of unity cannot be made once and for all. Normally, the search division will develop a first view even before it carries out the search. This first assessment is necessarily ***prima facie***,

based on general knowledge and the statements of prior art contained in the application. For example, unity would be doubtful ***prima facie*** if an application had two independent product claims directed to a printer on one hand and to a thioalcohol compound on the other.

During and after the search, the assessment is reconsidered in the light of the documents found. The beginning of the substantive examination is a further procedural step where the previous findings on unity are reconsidered. A position previously adopted may even be superseded later in the proceedings in view of new facts and evidence.

A previous position on unity of invention is maintained unless there are compelling reasons which lead to a situation where the position must be changed.

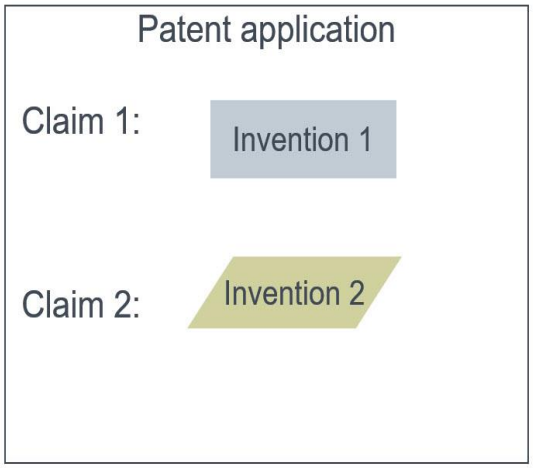
The final decision on the question of unity of invention is taken by either the examining division or the competent board of appeal. Therefore, as a matter of principle, any previous finding on unity is open to review.

The procedures for dealing with cases which lack unity and where Rule 63 or Rule 62a EPC applies are dealt with in B-VIII, 3.4 and 4.5, respectively.

When the claims of the application do not relate to one invention only, or to a group of inventions linked to form a single general inventive concept, the search will normally be restricted to the invention or the linked group of inventions mentioned first in the claims (see GL B-VII and F-V, 3.4). The applicant will be notified of the restriction of the search for the above reasons in a communication accompanying the partial search report (see GL B-VII, 1.2).

More than one invention claimed: Non-unity

Inventor

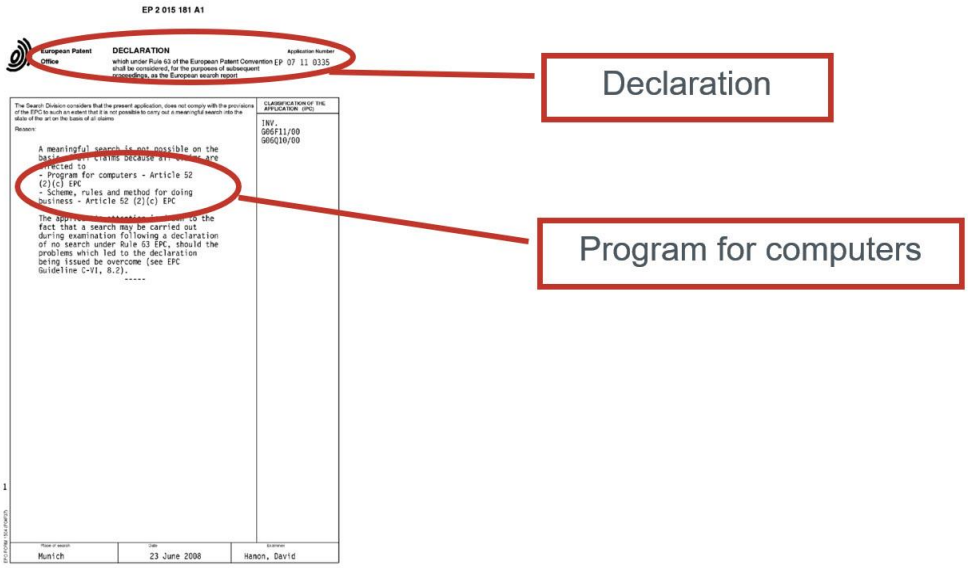


1x additional fee to be paid

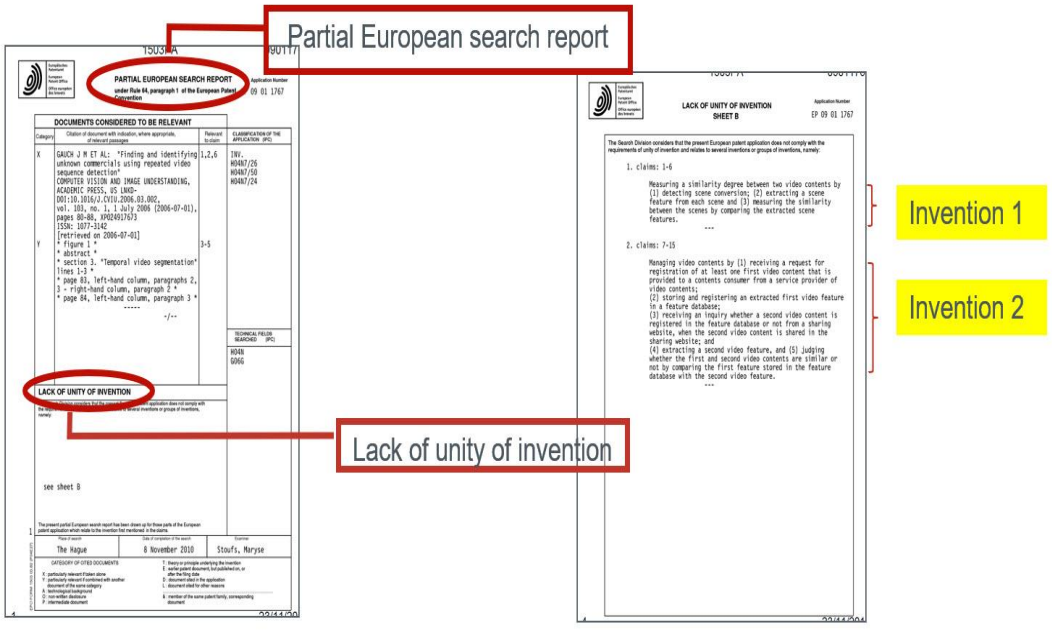
The requirement of unity of invention serves a regulatory function in the interest of an efficient procedure up to grant (T 110/82; GL F-V, 6). It would be unfair to regard as having unity of invention those applications which, because of their heterogeneous content, entail a far greater than average expense to process, especially in respect of search, since this expense must partly be borne by the fees levied for other applications. A further aspect is the requirement for comprehensibility of the application's subject-matter, which may be impaired by heterogeneous subject-matter.

On the other hand, the general purpose of dealing with interconnected substantive issues within a single procedure would not be achieved if provisions relating to unity of invention were applied too strictly. For this reason, interconnected matter must not be split up needlessly (see GL F-V).

A declaration of "no search" is made for non-patentable subject-matter excluded under Articles 52 and 53 EPC:



- What does a non-unity search report look like?



Examples

EP17186770 – Espacenet

EP17186770 – EP Register

Legal references:
Art. 82 EPC, R. 63 EPC, R. 64 EPC, R. 13 PCT, GL B-VII, GL B-VII, 1.4 and B-VII, 3, GL PCT EPO B-VII, 7, GL B-I, 2, GL B-III, 3.12

4. Limitation of search: reasons, legal framework, cases, clarification requests, consequences

The search division is responsible for drafting EESRs under Article 92 EPC, including a search opinion pursuant to Rule 62(1) EPC, as well as for drafting all the various types of search report referred to in GL B-I, 1 and B-II, 4.

The search division is also responsible for issuing a pre-search invitation under Rule 62a(1) EPC (see also GL B-VIII, 4) to clarify or limit the subject-matter to be searched. Issuing an invitation under Rule 63(1) EPC is also the responsibility of the search division (see GL B-VIII, 3.1).

Furthermore, in the case of lack of unity, the search division draws up a partial search report and a provisional opinion on the patentability of the invention (or unitary group of inventions) mentioned first in the claims (see GL F-V, 3.4). This opinion gives reasons for the non-unity findings, together with an invitation to pay additional search fees under Rule 64(1) or Rule 164(1) EPC (see GL B-VII, 1.2 and B-XI, 5). The member of the search division responsible for the search on a European application is also normally the first member of the examining division for that application.

If the EPO considers that the application does not comply with the EPC to such an extent that it is impossible to carry out a meaningful search into the state of the art on the basis of all or some of the subject-matter claimed (see GL B-VIII, 1, 2 and 3), it will invite the applicant to file, within a period of two months, a statement indicating the subject-matter to be searched. The invitation will also give the reasons for this finding and may additionally indicate the claimed subject-matter on which the search division considers it feasible to base a meaningful search.

In the case of medical method claims, a complete search report is issued only when the claims can easily be reformulated as patentable subject-matter (see GL B-VIII, 2.1). If an incomplete search report (or a declaration of no search) is envisaged, an invitation must be sent in respect of the claims that cannot easily be reformulated.

If the applicant does not reply in time to the Rule 63(1) invitation, the search division will determine what to search. In this case, a partial search report will be drawn up accordingly; in exceptional cases the division will draw up a declaration replacing the search report. This limitation of the search has consequences in examination (see GL H-II, 5 and 6.1). Any late-filed reply is included in the file for use in the examination phase because it may be helpful to know the arguments given by the search division for carrying out an incomplete search.

Given that the search report should be published together with the application, the two-month period prescribed under Rule 63 EPC is not open to further processing, but it is possible to request re-establishment of rights (see OJ EPO 2009, 533).

In certain cases, it may be appropriate to send an invitation under both Rule 63 (see GL B-VIII, 3.1) and Rule 62a(1) EPC (see GL B-VIII, 4.1). This may be necessary, for example, in cases where clarifying which claim(s) to search under Rule 62a EPC does not make it clear what subject-matter to search because the application contains several independent claims in the same category, of

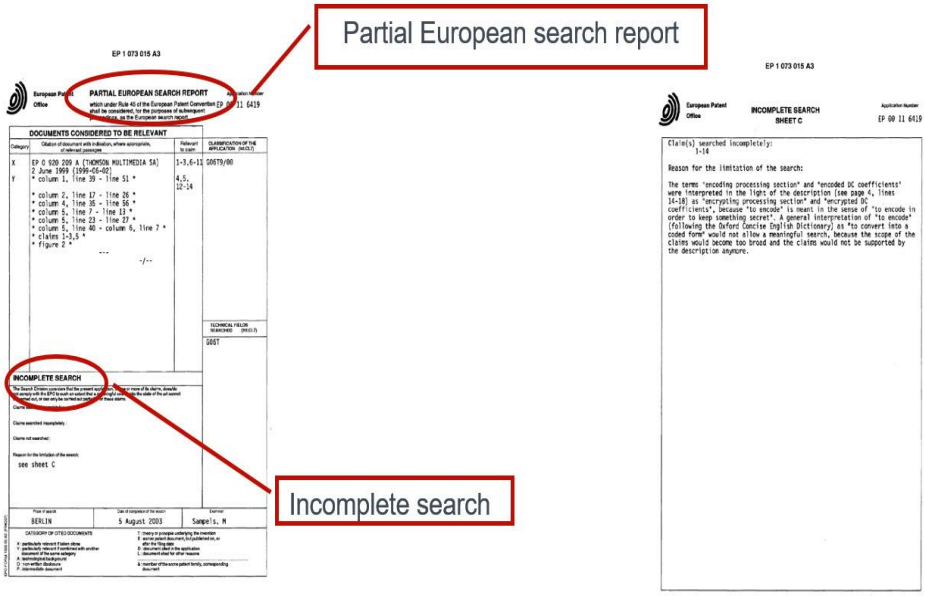
which none or only some can undergo a meaningful search. In these cases, invitations under both Rule 62a(1) and Rule 63(1) EPC will be sent in a single communication, which gives rise to the same two-month time limit for reply under both rules. Applicants wishing to respond to both invitations should do so simultaneously.

In response to these invitations under Rule 62a(1) and Rule 63(1) EPC, the applicant must not indicate independent claims (in response to the Rule 62a(1) invitation) or subject-matter (in response to the Rule 63(1) invitation) which are mutually inconsistent. If the applicant provides inconsistent indications, the search division may, depending on the circumstances, either:

- elect to search the claims indicated by the applicant under Rule 62a(1) EPC, where necessary limiting the subject-matter searched as per Rule 63(2) EPC, or
- elect to search the subject-matter indicated by the applicant under Rule 63(1) EPC and as defined in the first independent claim of a particular category which is consistent with that subject-matter under Rule 62a(1), last sentence, EPC

Though sent in the same communication, the Rule 62a(1) and Rule 63(1) invitations are legally separate. Consequently, applicants may also reply to only one of the invitations and not to the other. If they reply only to the Rule 62a(1) invitation, option (i) of the previous paragraph applies. If they reply only to the Rule 63(1) invitation, option (ii) applies.

- What does an incomplete search report look like?



Where the search was limited to certain subject-matter pursuant to Rule 63 EPC (see GL B-VIII, 3.1 and 3.2), the claims must be amended such as to remove the unsearched subject-matter, with the description being adapted accordingly.

Where the search has been limited to certain claims pursuant to Rule 62a EPC (see GL B-VIII, 4.1 and 4.2), the claims must be amended in such a way as to remove the unsearched independent claims, with the description being adapted accordingly.

To this end, the claims may be amended, for example, by deleting an unsearched independent claim or by making an unsearched independent claim dependent on another independent claim of the same category which has been searched, provided this complies with Articles 123(2) and 84 EPC.

In both cases, amendment is necessary unless the applicant can convincingly argue that the invitation(s) sent under Rule 62a(1) and/or Rule 63(1) EPC was/were not justified.

Any such amendments may be made only in examination proceedings or, preferably, in reply to the search opinion (see GL F-IV, 3.3). Since the applicant may not amend the claims before receiving the search report (Rule 137(1) EPC), any claims filed in reply to a Rule 62a or Rule 63 invitation will be taken only as an indication of what the applicant wants the EPO to search and will be dealt with accordingly (see GL B-VIII, 3.2 and B-VIII, 4.2). The applicant will then have to confirm that it wishes to maintain these amendments formally on entry into the examination phase (see GL A-V, 2.2).

Under Rule 64(1) EPC, for a search report drawn up for all those inventions in respect of which search fees have been paid, the different inventions (and corresponding claims in full or in part) which have been searched must be indicated in the search report (see GL B-VIII). The search division makes a declaration that:

a. either a meaningful search has not been possible on the basis of all claims (this declaration replaces the search report) or
b. a meaningful search has not been possible for one or more of the claims in part or in full, in which case the claims concerned are to be mentioned in the declaration accompanying the incomplete search report

In both cases (a) and (b), the reasons for not carrying out or restricting the search are indicated (for example in the case of non-patentable subject-matter or unclear claims). If necessary, full reasoning is provided in the search opinion (see GL B-VIII, 3.3, for the content of the EESR in these cases).

Legal references:

Art 52(2) EPC, Art. 52(3) EPC, Art. 53 EPC, R. 63 EPC, R. 62a EPC, GL B-I, 2, GL B-VIII, 2; 3.1; 3.2; GL B-VIII, 4, GL B-VIII, 5, GL H-II, 5, GL B-X, 8

5. Starting a search: importance of reading the claims

Reading the claims is essential because they determine the extent of the protection conferred by the granted European patent (Article 69(1) EPC). Therefore, the search is carried out on the basis of the claims, with due regard to the description and any drawings (Article 92 EPC). When beginning a search, examiners will therefore read and analyse the claims, study the description, compare the claims and the description for clarity and mutual support, and define the search target. The search division studies the contents of the description and/or drawings when performing the search to:

- identify the technical problem and its solution
- establish definitions of unclear terms not defined in the claims
- establish definitions of clear terms given a different definition from their usual meaning
- ascertain any fallback positions (often shown by examples)

The aim of the search is to identify prior art which is relevant to novelty and/or inventive step (see GL B-II, 2). The search is directed to the essential features of the invention and considers any changes in the (objective) technical problem addressed by the invention which may occur during the search because of the retrieved prior art (see GL B-IV, 2.3 and 2.4, and G-VII, 5.2).

When interpreting claims for the purpose of the search, search examiners will also take into consideration any prior art that incorporates technical features which are well-known equivalents to

the technical features of the claimed invention, and which may be relevant for assessing inventive step (see GL G-VII, Annex, 1.1(ii)).

Legal references:
Art. 92 EPC, Art. 69(1) EPC, GL B-III, 3.1, GL B-III, 3.2

6. Claim categories: physical entities and activities

When reading the claims, search examiners should identify the claim categories, of which there are only two: physical entities and activities. Physical entities include products, substances, compositions, compounds, objects, articles of manufacture, apparatuses and devices (physical entities comprising interconnected or related parts). Activities include processes, methods (activities involving products, energy, processes or living things) and uses (employing a substance or process for a specific purpose).

When the application contains claims of different categories, all these must be included in the search (for cases not complying with Rule 43(2) EPC, see GL B-VIII, 4). However, if a product claim appears to be both new and non-obvious, the search division will not make any effort to search claims for either a process that inevitably results in the manufacture of that product or a use of the product (see GL F-IV, 3.8 and G-VII, 13).

When the application contains claims of only one category (physical entity or activity), it may be desirable to include other categories in the search. In a claim directed to a chemical process, for example, it can be assumed that the starting products form part of the state of the art and need not be searched. The intermediate products are only searched when they form the subject of one or more claims, but the final products will always have to be searched (except when they are known).

Examples

A claim directed to "The improvement of a transmission system comprising a …" is unclear because the improvement can be either an activity (transmission method) or an entity (controller).

Similarly, a claim to "A communication between two buildings…" could be an entity (communication system) or a way of communicating (activity).

Legal references:
GL B-III, 3.10

7. Independent and dependent claims

When analysing the claims, examiners must determine whether claims are dependent or independent. Claim A is dependent on claim B if two conditions are met: claim A contains all the technical features of claim B and claim A is in the same category (entity or activity) as claim B. An independent claim is any claim which is not a dependent claim. An independent claim is less restricted in scope than its dependent claims.

The search carried out in sections of the documentation to be consulted for the independent claim(s) must include all the dependent claims (for cases not complying with Rule 43(2) EPC, see GL B-VIII,

4). Dependent claims are interpreted as being restricted by all features of the claim(s) on which they depend.

Therefore, where the subject-matter of an independent claim is novel, that of its

dependent claims will be too (see, however, GL F-VI, 2.4.3). When the patentability of the subject-matter of the independent claim is not questioned as a result of the search, there is no need to make a further search or cite documents in respect of the subject-matter of the dependent claims (see, however, GL B-II, 4.2(iii) and B-XI, 1.2).

Examples

Example 1

In an application relating to cathode ray oscilloscope tubes, in which the independent claim is directed to specific means along the edge of the front of the tube for illuminating the screen and a dependent claim is directed to a specific connection between the front and the main part of the tube, in the sections of the documentation consulted for searching the illumination means the search division also searches for the connecting means (whether or not in combination with the illumination means).

If, after this search, the patentability of the illuminating means is not questioned, the search division will not extend its search for the connecting means to include further sections of the documentation which are likely to contain material pertinent to or specifically provided for these connections.

Example 2

If, in an application dealing with a pharmaceutical composition for treating nail infections, the patentability of the subject-matter of the independent claim relating to specific combinations of the active ingredients is not questioned as a result of the search, there is no need to continue the search for dependent claims dealing with the use of a specific volatile organic solvent as a carrier in the composition.

Legal references:
R. 43(4) EPC, GL B-III, 3.7

8. Using a search table

Examiners use search tables because they help assess the relevance of prior-art documents. The technical features of a claim are listed in the search table and the search table reminds the examiner to take all relevant technical features into consideration. Remember that the keywords in the search table should not be restricted to the terminology used in the application. Take a look at the following search table example:

	Search concept 1	**Search concept 2**	**Search concept 3**	**Search concept 4**
	Lifting	Submerged body	Buoyant bodies	Into interior
Classification /C				

	Search concept 1	Search concept 2	Search concept 3	Search concept 4
/CCI **/IC** **/FT**				
Keywords				

The European search is a thorough, high-quality, all-encompassing search. Nevertheless, bear in mind that no search can ever obtain 100% completeness due to the inevitable imperfections of any information retrieval system and its implementation.

The search is carried out such as to minimise the possibility of failing to discover anticipations for any claims or other highly relevant prior art. For less relevant prior art, which often exists with a fair amount of redundancy among the documents in the search collection, a lower recall ratio can be accepted (see, however, GL B-III, 2.3). For limitations of the subject-matter searched by the EPO, see GL B-VIII.

The scope of the international search is specified in Article 15(4) PCT, which states that the International Searching Authority must endeavour to discover as much of the relevant prior art as its facilities permit and must, in any case, consult the documentation specified in the PCT Regulations (Rule 34 PCT). It follows from this stipulation ("as its facilities permit") that the scope of an international search will be equivalent to a European search. International and European searches will thus be fully compatible.

Accordingly, if the EPO carried out the international search or the supplementary international search, no supplementary European search report need be drawn up and the international search report prepared by the EPO takes the place of the European search report unconditionally (Article 153(6) EPC; see OJ EPO 2010, 316; OJ EPO 2011, 616; see also GL B-II, 4.3).

Examples

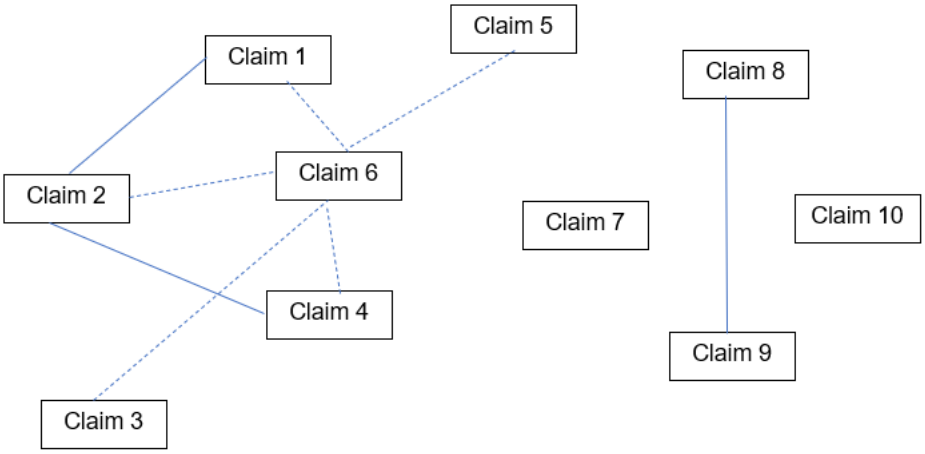
See the search table shown above directed to a method for lifting submerged bodies by filling the interior with ping-pong balls.

Legal references:

GL B-III, 2.1

9. Claim trees

When analysing the claims, examiners often draw up a claim tree. The claim tree is a graphical illustration showing the dependencies between claims. Claim trees help identify claims where the category is not clear. Note the following claim tree, in which dotted lines indicate multiple dependencies:



For claims characterised by a combination of elements (e.g. A, B and C), the search is directed towards the combination. However, when searching sections of the documentation for this purpose, sub-combinations, including the elements individually (e.g. A and B, A and C, B and C, and A, B and C separately), are searched in those sections at the same time. A search in additional sections of the documentation for either sub-combinations or individual elements of the combination is only performed if still necessary for establishing the novelty of the element and assess the inventive step of the combination.

Examples

See the claim tree shown above, where claim 6 depends on any of the previous claims.

Legal references:

GL B-III, 3.2, GL B-III, 3.7, GL B-III, 3.9, GL B-II, 3

10. Defining search concepts using keywords and classification symbols

Keywords

The search concepts are defined using a combination of keywords and classification symbols. Keywords are technical terms which describe the key features of the invention claimed in a distinctive fashion and are often the most precise and most effective tool for formulating search queries. Keywords can be registry numbers, references to standards, codes for micro-organisms, information on sequence listings, etc. They can be extracted from the claims and from the embodiments (e.g. the examples) and should be accompanied by synonyms to ensure the search has complete coverage.

Next the search division starts the search process by formulating a search strategy, i.e. a plan consisting of a series of search statements expressing the subject of the search and resulting in sections of the documentation to be consulted for the search. In its initial phase, a search strategy will contain one or more combinations of the basic components mentioned in GL B-III, 2.2.

The search process is iterative in the sense that the search division reformulates its initial search statement(s) according to the usefulness of the information retrieved during the search (see GL B-III, 1.1 and B-IV, 2.4 and 2.6).

The search is carried out on the basis of the claims, with due regard to the description and any drawings (Article 92 EPC). The claims determine the extent of the protection which will be conferred by the European patent if granted (Article 69(1) EPC).

Sometimes it may be desirable to extend the subject-matter of the search to include the "technological background" of the invention. This would include the following:

- the preamble to the first claim (i.e. the part preceding the expression "characterised by" or "characterised in that")
- the state of the art which the description of the application alleges to be known but without any specific citations
- the general technological background of the invention (often called "general state of the art")

Classification symbols

The search is carried out (for example using keywords, classification symbols or indexing codes) within in-house or external collections of documents or databases, the contents of which are systematically accessible. These are primarily patent documents from various countries, supplemented by articles from periodicals and other non-patent literature (see GL B-IX). The documents and articles are classified in the following classification schemes:

- International Patent Classification (IPC), used by all patent offices of World Intellectual Property Organization (WIPO) member states
- Cooperative Patent Classification (CPC), a joint scheme used by the EPO and the United States Patent and Trademark Office (USPTO)
- national classification schemes (for example the FI and F-term classification schemes used by the Japan Patent Office (JPO))

When using classification groups, the search division selects the groups to be consulted for the search, in both directly relevant fields and neighbouring fields. When appropriate, the search division will also consult other classification (e.g. FI) or indexing (e.g. F-term) schemes. Consulting colleagues in a similar technical field or in fields related to the content of the application is also an option (see GL B-I, 2.1). When in doubt about the appropriate fields in which to conduct the search, the search division may request advice from appropriate classification experts.

Usually various search strategies are possible, and the search division exercises its judgement, depending on its experience and knowledge of the available search tools, to select the most appropriate search strategy. The search division gives precedence to search strategies yielding sections of the documentation in which the probability of finding relevant documents is highest. Usually, the main technical field of the application will be given precedence, starting with the basic components (see GL B-III, 2.2) most relevant to the example(s) and preferred embodiments of the claimed invention.

When considering whether to extend the search to other less relevant sections of the documentation, the search division will take account of the results already obtained.

Legal references:
GL B-IV, 2.2, GL B-III, 3.1, GL B-III, 3.13, GL B-II, 3

11. Defining the technical features and subjective technical problem of an invention

A complementary approach to searching is to consider the technical problem that the invention seeks to address and identify the technical features that solve this problem. To do so, examiners need to consider equivalent or alternative solutions and likewise describe them with keywords, adding synonyms, alternative spellings and plurals. The next step is to formulate search queries which describe either the problem or the solutions proposed in the application.

Under Rule 42(1)(c) EPC, the description must mention the technical problem the application intends to solve (see also GL F-II, 4.5). This allows the technical problem addressed by the invention to be recognised even though it might not be immediately apparent from the claims. However, if the objective technical problem addressed by the claimed invention changes in view of the retrieved prior art (see GL G-VII, 5.3, H-V, 2.4; T 39/93; OJ EPO 1997, 134), it is to be redefined such that it remains related to the problem initially mentioned in the application (see GL G-VII, 5.2; see also T 184/82, T 732/89; OJ EPO 1984, 261).

Legal references:
R. 42(1)(c) EPC, GL B-III, 3.2.2

12. Analysing the description: citations, examples

When taking on an application to be searched, the search division first studies it to determine the subject of the claimed invention, taking account of the guidance given in B-III, 3. For this purpose, search examiners analyse the claims with a critical eye in the light of the description and drawings.

The search division studies the content of the claims, description and drawings sufficiently to identify the problem addressed by the invention, the inventive concept leading to its solution, the features essential to the solution as found in the claims and the results and effects obtained (see, however, GL B-III, 3.5). Furthermore, where technical features which are not present in the claims are indicated in the description as being essential for solving the stated problem, these features are included in the search (see GL F-IV, 4.3(ii), and T 32/82).

Legal references:
GL B-IV, 1.1

13. Comparing claimed subject-matter with the disclosure in the description and drawings

When reading the claims, examiners should check for consistency between the claims and the description, determine the way in which the claims generalise the embodiments and see if the claims

are clear and supported by the description. Any inventive concepts in the description that do not appear in the claims should be identified at this stage. Some technical features of the claims may be defined by such unclear terms that the scope of the claims cannot be unambiguously determined. In these cases, search examiners should use the description and/or drawings to interpret the meaning of the terms in question (see GL F-IV, 4.2).

Examples

Claim 1: "Pneumatic tyre comprising a wide groove disposed in a tread portion, characterised in that the wide groove is provided on the groove bottom with at least one longitudinal rib extending in the longitudinal direction of the wide groove."

Description: "The term 'wide', as used in the context of the present invention, means no less than 20 mm wide."

The term "wide" in claim 1 is unclear since it is a relative term with no well-defined meaning in this technical field. Consequently, the scope of the claim is unclear (F-IV, 4.6; Article 84 EPC).

However, the description gives an unambiguous definition of this term. The definition of "wide" as being "no less than 20 mm wide" is considered when the search is carried out (an objection to the clarity of the term "wide" under Article 84, second sentence, EPC is subsequently raised in the search opinion). The definition of "wide" in the description is also a fallback position (see GL B-III, 3.2.5).

In some applications the meaning given to a technical term by the description and/or the drawings differs from that term's commonly recognised meaning in the technical field of the application. This may lead to the meaning of the term – and so the scope of the claim – becoming broader (see Example 1) or narrower (see Example 2).

Examples

Example 1

Claim 1: "Halide salt of compound A."

Normally the term "halide salt" means a fluoride, chloride, bromide or iodide salt.

Description: "In the context of the present invention, the term halide salt means fluoride, chloride, bromide, iodide or tosylate salt."

In this example, the claim at first sight appears to be clear since it makes use of a technical term ("halide salt") with a clear and well-established meaning in the technical field of the application. However, the description gives this term a broader meaning than its well-established one (its meaning has been extended to include tosylate salt).

Example 2

Claim 1 in this example is the same as in Example 1 but the description defines "halide salt" as meaning fluoride, chloride or bromide salt.

In this example, the meaning of "halide salt" is narrower than in its established definition (it does not cover iodide salt).

In both cases, the search considers the definition of the terms as generally recognised in the technical field of the application and also as defined in the application itself.

Legal references:
GL B-III, 3.2.3; GL B-III, 3.2.4

14. Defining the essence (core aspects) of the invention

Having studied the whole application (description, claims and drawings), examiners should briefly summarise, in their own words, the core aspects of the invention and note any additional aspects which might be inventive.

The objective of the search is to identify prior art which is relevant to novelty and/or inventive step (see GL B-II, 2). When interpreting claims for the purpose of the search, the search division will also take into consideration any prior art that incorporates technical features which are well-known equivalents to the technical features of the claimed invention and which may be prejudicial to inventive step (see GL G-VII, Annex, 1.1(ii)).

Legal references:
GL B-III, 3.2

15. Comparing claims and description: anticipating fallback positions

A claim may contain undefined, unclear terms for which no clear preferred embodiments are given in the claims but for which clear preferred embodiments are expressed in the description and/or drawings (i.e. a "fallback position", as referred to in B-III, 3.2(iv) and 3.2.3).

In this case, the search will be based on the broadest technically sensible interpretation of the term. If, however, the meaning of the term in question is so unclear that no meaningful search can be carried out, it is justified to limit the scope of the search as per Rule 63 EPC.

In principle, and as far as possible and reasonable, the search covers all the subject-matter to which the claims are directed or to which they might be expected to be directed after having been amended (see, however, GL B-VII, 1.3 for lack of unity, and H-II, 6 for the ambit of Rule 137(5) EPC).

Examples

Where an application relating to an electric circuit contains one or more claims directed only to the function and manner of operation, and the description and drawings include an example with a detailed non-trivial transistor circuit, the search will include this circuit.

However, if the application as filed contains one broad claim, with no dependent claims, this is not sufficient for the application to be entitled to a search for all the features of the many embodiments covered by the wording of that claim (see T 1679/10).

Where the patentability of the subject-matter of the independent claim is questioned, assessing whether the subject-matter of the dependent claim as such is novel and involves an inventive step may require the search to be continued in other sections of the documentation, e.g. in one or more

additional classification units. No such special search is carried out for features that appear to be *prima facie* trivial or are known in the art.

However, if a handbook or other document showing that a feature is known can be found rapidly, it may be cited (see GL G-VII, 6(iii)). When the dependent claim adds a further feature (rather than providing more detail of an element already featuring in the independent claim), the dependent claim is to be considered in combination with the features in the independent claim and dealt with accordingly (see GL F-IV, 3.4).

Legal references:
GL B-III, 3.2.5; GL B-III, 3.5; GL B-III, 3.8

16. Refining the search table (iterative search)

The search division continuously evaluates the results of its search and, if necessary, reformulates the subject of the search accordingly. For example, the selection of the classification units to be searched (or the order in which they are searched) may need to be altered during the search on the basis of the results obtained.

The search is an iterative process. Search examiners need to progressively refine or broaden their query if too many or too few documents are found. In addition, if additional synonyms or equivalents are found to exist, these should be incorporated in the search strategy. It goes without saying that search examiners should consider changing the search strategy used if it proves to be inadequate. Lastly, the search table should be used to verify that the search covers all relevant aspects of the invention claimed.

Take a look at the following refined search table for an application claiming a method for lifting submerged bodies by filling the interior with ping-pong balls:

	Search concept 1	**Search concept 2**	**Search concept 3**	**Search concept 4**
	Lifting	Submerged body	Buoyant bodies	Into interior
Classification **/C** **/CCI** **/IC** **/FT**				
Keywords	Lifting Raising Pushing up Refloating	Submerged body Sunken (yacht) Sunken (boat or ship) Wreck	Buoyant bodies (Ping-pong) balls Floating (aid)	Into interior Hose through hole Introduce

	Search concept 1	Search concept 2	Search concept 3	Search concept 4

The search division uses its judgement, in light of the results obtained, to decide during the search whether it needs to approach the search documentation differently, for example by consulting documents mentioned in patents revealed by the search (e.g. documents cited in the description or in a search report). In addition, the division may consult documentation beyond that available in-house (in external databases or on the internet, for example; see GL B-IX).

Legal references:
GL B-IV, 2.4

17. Beyond the course

You can deepen what you have learned during this course with the following further readings:

- Guidelines for Examination in the European Patent Office, Part B: Guidelines for Search
- WIPO, PCT International Search and Preliminary Examination Guidelines

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