APPLICATIONS

Section 14: The application

14.01 This section prescribes the manner of making an application, its form and content, the requirements which must be fulfilled by the contents, and provides for withdrawal of the application. Specific provisions relating to some of these matters are also laid down in rr.12-16.

The Regulatory Reform (Patents) Order 2004 and Patents (Amendment) Rules 2004: Coming into Force and Transitional provisions

14.01.1 The form and contents of an application as set out in s.14(1) and the conditions governing withdrawal of applications at the request of the applicant under s.14(9) were deregulated by the Regulatory Reform (Patents) Order 2004 ("the 2004 Order") in conjunction with the Patents (Amendment) Rules 2004 ("the 2004 Rules"). The 2004 Order and the 2004 Rules incorporated the principles of Articles 5 and 6 of the Patent Law Treaty, and both statutory instruments came into force on 1 January 2005. The Patents Rules 1995 as amended have been replaced entirely from 17 December 2007 by the Patents Rules 2007.

CODE OF PRACTICE

14.01.2 The Code of Practice (the first part of which can be found below) identifies best practice points for patent applicants and agents, which if followed widely will lead to savings and efficiencies in the Office, and consequently to better service and better value. Examiners and other Office officials may on occasion draw the Code to the attention of the applicant or agent, and may ask for it to be complied with before the case is processed further if that would be more efficient.

14.01.3 However, it is not to be expected that best practice can always be adhered to. The Office has no right to demand compliance with the Code of Practice because the Code is advisory only and has no legal force.

14.01.4 If an application does not comply with one of the points of the Code of Practice then this does not necessarily justify an objection under the Patents Act or Rules. For example, an application having more than one independent claim in one category would not comply with code point 1e, but this would not usually justify an objection under s.14(5)(b). When drawing attention to non-compliance with the Code of Practice, examiners should therefore make it clear whether they are also raising a formal objection under the Act or Rules.

CODE OF PRACTICE FOR APPLICANTS AND AGENTS

Drafting and filing patent applications

This part of the Code of Practice for applicants and agents relates to the drafting and filing of patent applications under the Patents Act 1977. The quality of the application that is received by the Office determines in large part the effort that has to be expended during the statutory search and examination, in putting the application in a state to be granted, and is thus a central factor for the Code. The Code does not seek to eliminate the need for search and examination, but rather to optimise drafting towards UK law and practice and to avoid formulations that are clearly problematic for the UK search and examination. When drafting specifications for filing at this Office the aim should therefore

be to adhere to the Code points below.

This part of the Code also deals with presentational and procedural matters that have to be checked by the Office after the initial filing. The Office tries to keep red tape to a minimum, but some formalities are necessary for the system to work properly. There is substantial scope for efficiency savings if the best practices set out in this Code are known and followed.

POINT 1: The claims as filed: structure

The claims as filed should be structured to have:

- a One independent claim defining all the technical features essential to the invention or inventive concept. Inessential or optional features should not be included in this claim; consequently terms such as “preferably”, “for example”, or “more particularly” should not be included, as the feature being introduced by such terms does not restrict the scope of the claim in any way. The independent claim should include sufficient details of interrelationship, operation or utility of the essential features to enable the scope of the claim to be determined (see 14.110.1); and

- b Dependent claims incorporating all the features of the independent claim and characterised by additional non-essential features (see 14.134).

In addition:

- c Further independent claims are only justified where the inventive concept covers more than one category, e.g. apparatus, use, process, product (see 14.165 to 14.168), complementary versions within one category, e.g. plug and socket, transmitter and receiver, which work only together (see 14.161), or distinct medical uses of a substance or composition (see 14.162).

Therefore claims as filed should not, where it might have been avoided, contain:

- d Multiple unrelated inventions that would clearly give rise to a plurality objection (see 14.157.1).

- e Multiple independent claims in any one category, even if only one inventive concept is present (see 14.110.1 and 14.140).

- f Claims of a total number or complexity not justified by the nature of the invention (see 14.110.1 and 14.140).

- g Claims which are in principle unsearchable by reason of the number of alternatives embraced, or the choice of characterising parameters or desiderata (see 14.110 and 14.133).

- h Dependent claims that are not fully limited by the terms of the preceding independent claim, e.g. dependent claims which omit, modify or substitute a feature of an independent claim (see 14.134).

If these points are not met on filing, suitable claim amendments should be filed if the search examiner requests them to enable search (see 17.94.9 and 17.108). Amendments may be required by the substantive examiner before examining such claims (see 18.43.1 and 18.39).

The above points also apply at the entry into the UK national phase of international applications under the Patent Cooperation Treaty.

POINT 2: The claims as filed: patentability

- a The claims as filed should not, where it might have been avoided, define an invention which is clearly excluded from being patentable under the Act (see 1.07 to 1.32).

If this point is not met on filing, suitable claim amendments should be filed if the search examiner requests them to enable search (see 17.94.9). Examiners may either require amendment before searching or examining such claims, or may issue a report that a search would serve no useful purpose (see 17.94-17.94.10 and 17.98).

POINT 3: Other aspects of the specification as filed

- a The use of a compact style of consistory clause, which in the description defines the invention by reference to the claims, is encouraged (see 14.148).

- b Trade marks are an indication of the origin rather than the composition or content of goods, and should not be used in patent applications where a generic term can be used instead. Trade marks are only permitted in claims where it can be shown that their use is unavoidable and does not introduce ambiguity (see 14.137). Where marks that are registered are mentioned, they should be acknowledged as such (see 14.70 and 14.71). If a trade mark is not registered, its owner should be indicated (see 14.70).

- c Passages which confuse the scope of the invention (see 14.64.1) or claims that are unspecific (e.g. those claiming "Any novel matter...") (see 14.139) should not be filed.

- d The specification should be clear and precise. It should not repeat matter unnecessarily, nor should it contain matter which is irrelevant to the invention (see 14.64) - for example the complete details of well-known ancillary features need not be given.

- e Only the most relevant prior art should be discussed (see 14.83 and 14.84). For example, a few documents which illustrate how a problem has previously been approached could be discussed with a view to distinguishing the invention in suit from them or illustrating its advantages.

- f If the specification has been drafted abroad then it should be adapted to comply with sections 14(3) and 14(5) of the Patents Act 1977 and the Code points before it is filed here. Action should be taken to ensure that it is written in a reasonable standard of English before it is filed.

- g The patent specification is intended to describe the invention precisely and it is vital that the meaning of all abbreviations and words used is clear and unambiguous. Words, abbreviations or acronyms used in the specification that are new, may be considered to be jargon, or may be at risk of being ambiguous (for example because their meaning is not yet generally settled in the field in question) should not be used unless unavoidable, in which case a definition should be given in the specification.

POINT 4: The abstract

- a The abstract and abstract title should meet the requirements of rule 15 of the Patents Rules 2007, summarising the distinctive technical features, technical field and principal use of the invention in technical language (see 14.173 to 14.184).

- b An abstract having wording that merely reproduces an independent claim will not comply with this Code and may be rejected on the ground of non-compliance with the Rules (see 14.184).

POINT 5: Forms and formalities on filing

- a The presentation of the application (including drawings) should meet the requirements of rule 14 of the Patents Rules 2007 (see 14.26 - 14.57). For example, documents must be legible and capable of reproduction, and the margins should be kept clear and free from headers or footers denoting references or other matter (see 14.28).

- b An official form should be used where required by the Rules, and it should be completed fully and accurately (see 14.04 for the application form).

- c Supporting documents should also be provided where appropriate; for example:

  a fee sheet where fees are being paid
  a covering letter where some explanation is needed.

- d To allow us to direct incoming items quickly to the right place all appropriate identifiers should be given:

  - Form 1 should give ADP number(s) and customer reference;

  - Forms and letters filed after Form 1 should give application number and (optionally) customer reference;

  - Fee sheets should give all relevant details, such as deposit account number or credit/debit card details;

  - Bank transfers should state the application or patent number, or, if not known, the reason for payment e.g. search fee.

In correspondence with applicants and their representatives, the Intellectual Property Office will use customer references if given, and will tell agents the applicant's ADP numbers (see 14.04.1 and 14.04.5).

- e If it is critical that an application be filed within a certain time window such as the twelve months of the Paris Convention, the application should be filed with sufficient time remaining for any fatal defects to be detected and put right.

- f The originals of faxed documents should only be filed when requested to do so by the Office (see 14.02).

- g. Electronic filing of applications is strongly encouraged; official fees are reduced for certain electronically-filed documents. See www.ipo.gov.uk/p-apply-online.

[Deleted]

Section 14(1)

Every application for a patent -

(a) shall be made in the prescribed form and shall be filed at the Patent Office in the

prescribed manner;

(b) [repealed]

Section 14(1A)

Where an application for a patent is made, the fee prescribed for the purposes of this subsection ("the application fee") shall be paid not later than the end of the period prescribed for the purposes of section 15(10)(c) below.

s.119

CoP

14.02 The prescribed form of the application is laid down in the rules. The filing fee was abolished by the 2004 Order, which replaced it with the application fee specified in s.14(1A). An application may be filed by hand, by post, or by facsimile transmission (fax). Alternatively, an application may be submitted online via the Office website, or using the secure online filing system provided by EPO Online Services if the filer has completed the enrolment procedure for that service. The number for fax filing of applications is +44 (0)1633 817777. Applications should not be sent to any other fax number in the Office; amendments and correspondence relating to applications should not be sent to any other number unless specifically instructed otherwise in a particular case. Although the Office's designated fax filing machines are open to receive transmissions 24 hours a day, seven days a week and record the time and date of receipt automatically, the filing date accorded is the date of receipt if the Office is open for that class of documents; if not, the next working day (see also 14.29). Confirmation copies are only required if requested by the Office e.g. if there is a problem with the clarity/completeness of the faxed document received. Confirmatory copies should be prominently marked "In confirmation of fax". See also 22.07 for filing considerations relating to documents which might include information of relevance to national defence or security. The hours and days when filings may be made are governed by s.120. Under r.97 of the Patents Rules 1995, an application filed by post was deemed to have been filed when the letter containing it would be delivered in the ordinary course of post. However, the Patents Rules 2007 do not include a rule relating to postal deeming and therefore any document posted on or after 17 December 2007 will be accorded the date of receipt it is actually received in the Office.

[Normally if an urgent document is expected by fax, the intended recipient should instruct the sender to mark the header sheet clearly as urgent and for the attention of the recipient. The staff attending the fax machine should be alerted by telephone (ext.4570) and will then advise the recipient when the fax arrives so that it may be collected by hand. In the exceptional case that correspondence or draft amendments is requested to be sent to a fax machine other than at the number above it is the recipient's responsibility to ensure that it is properly stamped as received and sent to Index & Scan to be scanned on to the relevant dossier.]

Section 14(2)

Every application for a patent shall contain -

(a) a request for the grant of a patent;

(b) a specification containing a description of the invention, a claim or claims and any drawing referred to in the description or any claim; and

(c) an abstract;

but the foregoing provision shall not prevent an application being initiated by documents complying with section 15(1) below.

14.03 While an application must eventually contain all the items referred to in s.14(1A) and this subsection, the final proviso of s.14(2) makes clear that for an application to be initiated and given a filing date it is sufficient for it to comply with the conditions of s.15(1), (see 15.02-15.06).

REQUEST FOR THE GRANT OF A PATENT

r.12(1)
r.25(1)

14.04 The request must be made on Patents Form 1; this is designated a formal requirement (see 17.07).

Considering each part of the form:-

1 Reference Number

CoP

14.04.1 Although there is no obligation to provide such a reference, it is clearly in the applicant's interest to do so, since until an application number has been accorded by the Office there is no reliable way of identifying a particular application. It may also be useful should any confusion arise over the application numbers accorded to several cases filed together. If provided, the Office will use the applicant's reference number in correspondence related to the application.

14.04.2 [deleted]

2 Applicant's Details

CoP
r.12(2)
r.12(3)

14.04.3 The applicant's name and address should be entered in Part 2 of the Form (see 15.03), but failing that the Form must contain sufficient information to enable the applicant to be contacted. Where a date of filing is accorded to an application which does not give the applicant's name and address, the applicant must be notified of the failure, and the comptroller may refuse the application if the applicant fails to file his name and address within two months of such a notification. Under r.108(1) together with r.108(5) and (7), the two-month period for filing the applicant's name and address may be extended at the comptroller's discretion in tranches of 2 months, but no extension may be granted after two months following the expiry of the period as prescribed or previously extended - see 123.36.10-12. Where Parts 2 and 4 of the Form do not, between them, contain enough information to enable the applicant to be contacted, the contact information in Part 12 may suffice.

[If contact details are provided by establishing contact is difficult, advice should be sought from Legal Section.]

s.7(1)

14.04.4 An application may be made by any person either alone or jointly with another. ("Person" means either an individual or a corporate body, see 7.02). If the inventor is not also an applicant he should not be named on Form 1.

CoP

14.04.5 An applicant who is an individual should apply in his true name. Exceptionally, a pseudonym may be used if it is well established and is customarily used by the individual for banking and other business purposes. The name must be given in full, the surname or family name being underlined. Letters or statements denoting academic or professional qualifications may appear after the name. A statement of nationality or occupation is not required and should not be given. Once a particular established name and signature has been used subsequent business should not be effected by the same individual using a different name or signature unless the name has changed, eg due to marriage. A corporate body should be designated by its legal name and the country of incorporation and, where appropriate, the state of incorporation within

that country should be given. In the case of either an individual or a corporate body, a business name or trading style, eg "trading as XYZ", or a former name is not required and should not be given. If known, the automatic data processing (ADP) number of the applicant should be given for identification of the applicant; this number will supplied to an applicant's agents.

14.04.6 If an application is made on behalf of a Government Department, the applicant should be stated to be the Secretary of State or Minister responsible for the department, and not the individual holding such office. Applications from police forces should be made by the relevant Police Authority.

14.04.7 Each applicant must give, in full, a permanent address, which may be either a private or a business address. A c/o is not acceptable unless it can be shown that it is a permanent address for the applicant which the Office can rely on for communicating with the applicant, e.g. if, in the case of a company, it is registered with Companies House as the company's address. It is in the applicant's best interests to provide the Office with a secure and reliable address. Standard abbreviations, e.g. Rd, USA, are allowable.

14.04.8 Since the United Kingdom does not accord diplomatic recognition to Taiwan the statement "Republic of China" for the country of incorporation or address of an applicant located in Taiwan cannot be accepted and should be objected to. If the applicant disagrees he should be advised that the onus is on him to ascertain from the Foreign Office what is considered to be an acceptable designation.

14.04.9 Where there is not enough space on the form for the details of more than one applicant, any further names and addresses should be given on a continuation sheet and the use of a continuation sheet should be indicated in parts 3 and 9 of the form.

3 Title of Invention

r.44(1)(d) 14.04.10 This is the title entered in the register and in the list of new applications in the Journal. By virtue of s.14(1)(a) and r.12(1), a title is a formal requirement, thus if there is no title given on Form 1 the applicant should be required to provide one, or to confirm that the title, if any, on the specification is to be used on Form 1. (See also 14.49-51 and 19.24). The title should avoid disclosing the invention, since it is published in the Journal prior to publication of the application under s.16(1).

4 Address for Service Details

14.04.11 If the applicant has appointed an agent his name should be given in this part of Form 1. The agent need not be registered (see 274.03).

[If the agent's name is missing from Form 1, but it is clear from the information supplied who the agent is, the agent's details should be inserted on OPTICS by the Formalities Examiner, and Form 1 annotated appropriately.]

[Deleted]

CoP r.101(1) 14.04.12 An agent filing an application is assumed to be duly authorised to act for the applicant, and in general no specific evidence to this effect is required. (The comptroller has the power to require an agent to produce evidence, at any stage in proceedings, that he is authorised. This will be done only if there is some reason for doubting the authority or for requiring it to be confirmed). If however, subsequent to the filing of Form 1, the applicant wishes to change his agent or an agent is appointed for the first time, the incoming agent must file Patents Form 51 (in duplicate where one agent replaces another). Notification on Form 51 should not be made if the (new) agent will only perform administrative tasks such as paying renewal fees or registering an assignment. If an applicant who has been represented by an agent decides to dispense

with the services of the agent and represent himself as a private applicant, then he should be advised to provide written confirmation of this change. A copy of the applicant's letter will then be sent to the former agent.

[The Office is no longer prepared to retain general authorisations; if one is filed it should be returned to the agent. If a specific authorisation is filed it will, although redundant, be allowed to remain on the file.]

r.103

CDPA s.281(5)

r.104

PR Sch. 4 Part 1

14.04.13 Every application must include an address for service, which must be in the United Kingdom, another EEA state or the Channel Islands. An address for service of a patent agent cannot be accepted in the Channel Islands (see 281.04). The address for service is treated for all purposes as the address of the person concerned with the proceedings and all communications must be addressed to the applicant at or c/o this address. Communication with the applicant can only be through this address; if an agent has been appointed and the applicant contacts the office direct he must be advised to communicate through his agent. If there is no acceptable address for service on an application and there is sufficient information to contact the applicant, he should be contacted and be directed to file an acceptable address for service within 2 months (this period cannot be extended – see 123.36.1). If an acceptable address is not provided within this time period, or there is insufficient information to make contact with anyone to provide such an address, the application is treated as withdrawn.

[Where the address for service is not in the EEA or the Channel Islands, a request for compliance with this requirement within 2 months should be made, with a warning that failure to comply will lead to the application being withdrawn under r.104(4)(a).]

[If no address has been given at part 5, but it is clear from the information given that an agent is acting for the applicant the Agent's address will be entered on OPTICS by the formalities examiner, and Form 1 annotated appropriately. Likewise if no agent has apparently been appointed and an address given in part 3 is within the United Kingdom, another EEA state or the Channel Islands, this will be entered as the address for service on OPTICS.]

[Deleted]

5 Declaration of Priority

r.6(1) & (4)

14.04.14 If priority is claimed from an earlier application (see s.5), the date and country of filing of the earlier application should normally be declared at the time of filing the application in suit. The file number of the earlier application should preferably also be stated if it is available. A copy of the earlier application and any necessary translation do not however need to be filed at this stage.

6 Claiming an Earlier Application Date

s.15(9)

14.04.15 The number of the earlier application and its filing date should be given. In the case of an application under s.15(9) (a divisional application) the request for an earlier filing date must be made at the time of filing the application in suit, (see 15.18).

7 Inventorship

s.13(2)

14.04.16 Where all the applicants named in Part 2 of the Form 1 are also the inventors, a mark should be made in the top "Yes" box. If one or more of the applicants is not an inventor, the top "No" box should be marked instead. Where there is one or more inventor whose name is not given as an applicant in Part 2 of the Form, a mark should be placed the lower "Yes" box in part 7 of the Form. It follows that the lower "No" box in part 7 of the Form should only be marked in the case where all inventors are named applicants and all named applicants are inventors.

s.7(3) 14.04.17 Since "inventor" means the actual deviser of the invention a corporate body cannot claim to be an inventor. Where an applicant named in Part 2 of the Form is a corporate body and the top "Yes" has been marked in Part 7, an objection should be raised.

8 Application Fee

s.15(10)(c)
r.22(2)
r.22(7)

14.04.17.1 While the application fee may be paid at any time up to the expiry of the period prescribed by r.22(7), nevertheless when it is paid at the time of filing this fact should be indicated by placing a mark in the “Yes” box in part 8 of the Form 1, and where it is not paid at the time of filing it follows that the “No” box should be marked.

9 Documents making up the application

14.04.18 It should be noted that the information in the check list relates to the application as filed; pages filed subsequently should not be indicated in this check list.

s.15(1)(c)(ii)
s.15(10)(b)
r.22

14.04.18.1 Where the application is not accompanied by a description, and a reference to an earlier application under s.15(1)(c)(ii) is relied upon for qualifying for a date of filing, the application number, country of filing and date of filing of that earlier application should be entered in Part 9 of the Form. A reference must be substantiated by the filing of a certified copy within the time specified by rule 22(3), which is four months from the date of filing, and a description must be filed within the time specified by rule 22(1), which is the same period as for the claims and abstract and is the later of twelve months from the earliest date or two months from the date of filing. Where both a description is filed and the details of an earlier application are given in Part 10 of the Form, the applicant (or his agent) should be contacted to clarify under which of the (mutually exclusive) options of s.15(1)(c) the application is made.

[If the check list has not been completed, or if it has been completed in a manner which is not consistent with what has been filed, the formalities examiner should raise the matter with the agent or applicant.]

10 Documents accompanying the application

14.04.19 Documents or forms filed subsequently should not be indicated in this check list.

11 Request

14.04.20 The form must be signed at this part either by the or each applicant or by the agent who has filed the application. Where a signature is missing, the formalities examiner should raise an objection requiring a duly signed form to be submitted (see 15A.20).

12 Person to contact

14.04.21 If a contact name and telephone number is given any telephone enquiry about how the form has been filled in should be made to the person named.

Application of Rule 4(2)

r.4(2)

14.04.22 Where an earlier version of Form 1 is used, and where the information on that Form is sufficient for the application in question, no objection should be raised and the Form should be regarded as a Form acceptable to the comptroller and containing the information required.

[14.05-14.24 Deleted]

Amendment or correction of Form 1

r.49 14.25 If the applicant wishes to correct his or her name, then Form 20 is required. However, correction of any of the other information given on Form 1 merely requires notification in writing. (See 19.05-19.12, 32.06 and 117.17-117.21.)

FORM AND PRESENTATION OF DOCUMENTS

r.25(1)
r.25(2)

14.26 The size and presentation of the documents (including drawings) making up an application are governed by r.14. The requirements of r.14(1), (2) and (3) are designated as formal requirements (except for where an application is delivered in electronic form or using electronic communications, in which case only the requirements of rule 14(1) are formal requirements); those that are not so designated are identified in paragraphs 14.54, 14.55 and 14.57. Some general provisions regarding the content of the specification are laid down in r.12(4)-(7); these are not designated formal requirements.

Size and presentation

PR Sch. 2 part 1

14.27 All documents making up an application must be on A4 matt white paper.

PR Sch. 2 parts 1-3
CoP

14.28 For drawings, the minimum margins must be 20mm at the top and the left hand side, 15mm at the right hand side and 10mm at the bottom. There must not be any frames (lines surrounding matter). For documents other than drawings the minimum margins must be 20mm at the top, right, left and bottom. The margins of all documents should be completely blank, even from case reference details; line numbers and page numbers are regarded as being part of the text rather than being in the margin.

[It will not be necessary to object to de minimis deviations from the prescribed minima if it is certain that printing and binding of the document will not be affected.]

PR Sch. 2 part 1 para. 2

14.29 The contents of all documents, including drawings, making up an application or replacing such documents must be suitable for reproduction.

Any document which has been filed by facsimile transmission (fax) must be legible, and the responsibility for ensuring legibility rests with the sender. If upon subsequent examination any part of a document received is unintelligible, no filing date will be accorded to that part. Appraisal of documents filed by fax occurs not upon receipt but when they are examined in the normal course of business (see 14.02).

PR Sch. 2 parts 1-3

14.30 The description, claims and abstract must use at least 1½ line spacing and the capital letters in any typeface or font used must be more than 2mm high.

[If the specification of a private applicant's case does not meet the r.14 requirements the applicant should be given the opportunity to overcome any deficiency. In the event that the applicant does not comply with an initial request and providing that there are no other outstanding requirements, the specification should be retyped in the Office with the approval of the Formalities Manager. The retyped application should be accompanied by a suitable printer's instruction. The applicant should also be advised in writing that his application has been retyped and given four weeks from the date of the letter being issued in which to object. If there is no objection, the application can be allowed to proceed to A-publication.]

14.31 [deleted]

PR 1995 r.20(2)

14.32 The specification (including drawings) and abstract, and any replacement sheets, must be filed in duplicate for cases filed before 26 June 2006, but there is no need to do so for cases filed after this date. (See also 14.02 and 14.29 regarding documents filed by fax.) Carbon copies are acceptable provided that the requirements set out in Schedule 2 are met.

PR Sch. 2 paras. 8 & 13

14.33 The request for grant (Form 1), the description, the claims, the drawings and the abstract must each begin on a new sheet. The pages of the description, claims and abstract are normally secured, eg by stapling, in the top left-hand corner; the request for grant and the drawings normally remain as separate sheets.

PR Sch. 2 paras. 4, 5, 12 & 14

14.34 The pages of the description and claims must be numbered consecutively in a single series. This is so even when the claims and/or the abstract are filed later than the description. The sheets of drawings must also be numbered consecutively in a single series, and the drawings themselves must be numbered consecutively in a single series. Where a sequence listing is set out at the end of the application, it must be numbered consecutively in a separate series.

[When re-numbering of pages is required as a consequence of addition or excision of pages, this should be effected by either the formalities examiner or the search/substantive examiner as may be expedient and replacement pages therefor should not be required. (Numbering with a letter suffix (eg page 2a) is not satisfactory and should be corrected (together with deletion of any explanatory note such as "page 2a follows" on a preceding page) before an application is sent for grant). The formal re-numbering will then be effected in Publishing Section prior to B publication. No objection should be raised to the absence of line numbering.]

PR Sch. 2 para 6

14.35 For documents other than drawings, page numbers must be located at the top or bottom of the page (but not in the margin) in the centre; the numbers are regarded as part of the text rather than as being in the margin.

[If page numbers are in the wrong place and there is a space in the right place, the amendment should be made by the formalities examiner by deleting and re-entering without making an objection. Line numbering may be ignored when measuring margins.]

Alterations

PR Sch. 2 part 1

14.36 All documents, including drawings, making up an application or replacing such documents must be suitable for reproduction and must not include frames (lines surrounding matter).

14.37 Alterations may thus be allowed if they can be regarded as de minimis. Any such alterations in manuscript should be neat and printed rather than written. They must not extend into the minimum margins and they must not be so placed as to hinder the normal scanning of the page by the reader. They must also be in black ink - blue ink is not acceptable as it cannot be reproduced reliably.

[In applying the de minimis rule the overriding consideration is that the resulting document must, in all respects, be suitable for direct reproduction and that the legibility of the text must not be impaired by any alterations. Further, the number of alterations and the manner of their execution should not give the page an untidy appearance. The determination of where to draw the line must be left to good sense. As a guide it may be taken that if, say, one or two words of a claim are changed, the consequential manuscript amendment of these words whenever they occur throughout the description could be permitted. On the other hand, a manuscript amendment of several lines should not be regarded as de minimis. Manuscript insertions made by the examiner should be printed, but objections

should not be raised if the applicant or agent writes rather than prints provided the writing is neat and clearly legible.]

14.38 The question as to what is the number and nature of deletions that would be considered reasonable is a matter for judgement; it should be borne in mind that the aim is to obtain a document which is reasonably free of deletions. It may be reasonable to delete the same word or part of a word throughout the specification, or to delete a few words, all or part of a sentence or a short paragraph on a single page. A single deletion comprising most of a page is not considered reasonable unless it is done in a manner leaving the deleted area blank. Nor is it considered reasonable to have many deletions on a single page, or deletions which break up the text in a manner making reading awkward. No objection is raised to otherwise reasonable deletions occurring on several pages so long as the total number remains moderate having regard to the length of the specification. While the extent of deletions may not be such as to require objection the subsequent inclusion of further deletions may not be allowable.

14.39 Whilst the overriding consideration is that the specification shall be capable of being directly reproduced, there is a further consideration that any deletions should not either by their number or the manner of their execution spoil the appearance of the finished document. Deletions should preferably be effected by erasure or obliteration - visible or "invisible". Striking-out should be clear and neat; a straight-edge should be used, except for crossing out single letters. Deletions should be made in black ink and be such as to ensure satisfactory reproduction. There must be no uncertainty as to the extent of the deletion.

Further requirements for drawings

PR Sch. 2 para. 18

14.40 Drawings must not only be such as to permit direct reproduction, as laid down in paragraph 2 of Schedule 2, but the scale of the drawings and the distinctness of their graphic execution must be such that it would still be clear if it were reduced by linear reduction to two thirds of its original size. Since the drawings when reproduced may be of a different size than when filed, no scale should be specified in words and no dimensions should be given in the drawings. If it is considered desirable, a scale or other reference for making reference may be included, but it must be represented diagrammatically.

PR Sch. 2 part 3

14.41 Drawings must comprise black lines and must not be shaded. Cross-sections should be indicated by hatching.

PR Sch. 2 para. 12

14.42 Figures of the drawings should be numbered consecutively in a single series, independently of the numbering of the sheets.

PR Sch. 2 para. 20

14.43 All numbers, letters and reference signs on the drawings should be simple and clear; brackets, circles or inverted commas should not be used in association with numbers and letters. The capital letters in any typeface or font used in any drawing must be more than 3mm high. The Latin, and, where customary, the Greek alphabet should be used.

14.44 The drawings should not contain extensive textual matter, however a single word or a few words such as "water", "steam", "open", "closed", "on", "off", "Section on AA" may be allowed as aiding understanding of the drawings. In the case of electrical circuits and block schematic or flow sheet diagrams, a few short catchwords are allowable and may be desirable. If extensive text is present, such that the sheet may be considered to constitute part of the description, then objection should be raised under r.14(3) together with paragraph 19 of schedule 2, which states that a drawing must not be included in the description.

14.45 The title of the invention, and the applicant's or agent's name, should not appear on the drawings.

14.46 Flow sheets and diagrams are considered to be drawings.

Language

r.14(1) r.113(1) s.15(2)(a)

14.47 Apart from the certified copies of priority applications required by r.8, all documents (including drawings) making up an application, or replacing such documents, must be in English or Welsh. Where the original document is not in English or Welsh this requirement can be met by the foreign-language document being accompanied by a translation into English.

r.12(8) r.12(9)

14.47.1 Notwithstanding the requirement to file an application in English, an application can qualify for a date of filing if the description (or what appears to be the description) is in a foreign language, providing that the indication that a patent is sought and the identity of the applicant (or the means of contacting him) are in English. Where a date of filing is accorded to an application comprising a foreign-language description, the applicant must be notified of the failure to comply with r.14(1). The comptroller may refuse the application if the applicant fails to file a description in English or Welsh within two months of such a notification (extendable at the discretion of the comptroller under r.108(1) together with r.108(5)-(7)).

Content of the application

r.12(4) r.12(7)

14.48 The specification should state the title of the invention and should continue with the description, claim or claims and any drawing referred to in the description or any claim, in that order. Where the specification includes drawings, the description must include a list of drawings briefly describing each of them. The claims should be headed in such a way that the commencement of the claims is clearly identifiable, eg by the title "Claims". In *R v Comptroller-General of Patents, ex parte Penife International Ltd* [2004] RPC 37 which considered the requirement of Art.11(1) of the PCT to file claims with the application, it was held that a consistory clause setting out the scope of the invention was part of the description and was not a claim.

[There is no prescribed preamble to the claims. Although the simple title "Claims" is preferred, no objection should be raised to any title which serves the required purpose. The title "What I (or we) claim is", (as used under the 1949 Act) is allowable.]

Title

r.12(6)

14.49 The title must be short and indicate the matter to which the invention relates. If it is not in agreement with that given on Form 1, (see 14.04.10), or even if there is no title on the specification, the specification as filed should be published under s.16(1). The substantive examiner will in due course require the presence of a suitable title on the specification but it is permissible for this to differ from that on Form 1; amendment of the latter would not be necessary.

[The maximum length of a title permitted by OPTICS on the computerised register is 158 characters (see OM(P) 5.5.6). If a title to be entered on the Register exceeds this the Office will amend the title accordingly (see also 18.42, 18.86).]

14.50 The title should not contain a fancy or trade name, a person's name, the word "patent" or the abbreviation "etc" - whatever is intended to be covered by this later term should be indicated more explicitly, or the words "and the like" may, if appropriate and clear in context, be used.

14.51 The titles of specifications (and those on Form 1) are used by patent searchers and to be of assistance in this connection a title should not only adequately indicate the subject of the invention but should also avoid the use of words which might convey different meanings to persons interested in different arts.

Some requirements for the technical content

PR Sch. 2 para. 19

14.52 The request for grant, the description, the claims and the abstract must not contain drawings; any drawings forming part of the specification must be on sheets which are separate from the text and numbered as a separate series.

r.13(7) PR Sch. 2 para. 5

14.53 The description, the claims and the abstract may contain chemical or mathematical formulae. If it is considered necessary an applicant may be required to file a copy of such formulae prepared in the manner prescribed for drawings (see 14.31). For applications which include a sequence listing, this listing is considered to form part of the description (rather than the drawings) and therefore may be inserted at any point in the description. It is usual, however, for the sequence listing to be placed at the end of the description and before the claims. Alternatively, a sequence listing may be set out at the end of the application, in which case it must be numbered consecutively in a separate series to the description and claims, and rule 12(4) does not apply. See 15A.04 for practice at preliminary examination stage when a sequence listing has not been filed.

[Rule 13(6) requires that, if it is reasonably possible, a sequence listing shall be delivered in electronic form or using electronic communications, even where the patent application is not delivered in electronic form or using electronic communications.]

PR Sch. 2 para. 22 r.25(1) r.14

14.54 The description and the abstract may contain tables. The claims may contain tables of information only if the comptroller agrees. This is one of the requirements set out in part 4 of Schedule 2 and is therefore not a formal requirement. The question as to whether tables in a claim are allowable is therefore a matter for the substantive examiner, and no objection should be raised at an earlier stage.

PR Sch. 2 part 4 r.25(1) r.14

14.55 The terminology and any references used must be consistent throughout the application for a patent. Only technical terms, signs and symbols which are generally accepted in the field in question may be used. The same features should be denoted by the same reference sign throughout the application. References must only be included in the drawing(s) where they are mentioned in either the description or the claims. These are not formal requirements; hence amendment to meet them should not be required at the preliminary examination stage.

PR Sch. 2 para. 24-25

14.56 Where units of measurement used in the application are not standard international units of measurement, the equivalent standard international units of measurement must be provided, and where no international standard exists, units must be used which are generally accepted in the field. Temperatures should be given in degrees Celsius (centigrade), except that as a matter of practice, degrees Kelvin are acceptable to express cryogenic or colour temperatures. There is, however, no objection to non-standard units used in a statement of prior art by way of direct quotation.

[Council Directive 80/181/EEC (as amended by Council Directive 89/617/EEC and Directive 1999/103/EC of the European Parliament and of the Council) prescribes the use of SI units. While applicants should be advised to use such units, there is no sanction against the use of non-SI metric-based units (eg Angstrom units), and they should not be objected to.]

r.25(1)

14.57 The EC Units of Measurement Directive (Council Directive 80/181/EEC, as amended by Council Directive 89/617/EEC and Directive 1999/103/EC of the European Parliament and of the Council of 24 January 2000) requires the sole use of metric units in documents (such as patent specifications) sent out by any part of government on or after 1 October 1995. Under transitional provisions which last until 31 December 2009, non-metric units may be used but only in conjunction with metric ones and then only as supplementary indications with metric units predominating. There is therefore an inconsistency between paragraph 24 of Schedule 2 of the Patents Rules 2007 and the Directive in that the Rules permit dual expression without limit to time and

without any requirement for metric predominance. The same inconsistency exists between the Directive and PCT Rule 10.1(a). Moreover, for international applications entering the national phase it is not permissible under the PCT to impose national or regional requirements relating to the form or the content of the application different from or additional to those of the PCT itself. Pending resolution of these inconsistencies, examiners should simply ensure that the requirements of paragraph 24 of Schedule 2 are met in any specification sent for grant. No amendment should be required at the preliminary examination stage to secure compliance with that rule, since it does not define a formal requirement nor is it specified in rule 23 as being one of the rules relevant to preliminary examination. Applications which do not comply with paragraph 24 of Schedule 2 (or the Directive) are nevertheless published under s.16 as filed.

[RC35 should be used to object to the absence of metric or Celsius units. When both non-metric and metric values are given, the examiner should not check that the conversions are accurate for consistency's sake, but objection should be raised in the case of manifest error.]

Section 14(3)

The specification of an application shall disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by a person skilled in the art.

s.130(7) 14.58 S.14(3) is one of the provisions which is intended to have, as nearly as practicable, the same effect as the corresponding provisions of the EPC, PCT and CPC. A.83 EPC and a.5 PCT require the invention to be disclosed "in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art".

14.59-60 [deleted]

s.76(2) 14.61 It is the responsibility of the applicant to ensure that, at the time of filing the application, the disclosure is clear and complete in respect of the invention claimed in each of the claims. If it is not, then either the application must be refused or, if it is possible to do so, the claims must be restricted to that which has been adequately disclosed. Deficiencies in the disclosure cannot be rectified by adding matter subsequent to filing.

CLARITY OF DISCLOSURE

14.62 The description is presumed to be addressed to a person skilled in the art who is doing his best to understand and not to criticise; technological defects or obscurities which are unimportant and do not cast doubt on the scope of the invention are not fundamentally objectionable. Objection should not be raised merely because it is possible to describe the invention more clearly (cf. *Schwarzkopf and Ors' Application*, 31 RPC 437).

14.63 Since disclosure of the invention is the consideration in return for which the applicant is granted a monopoly the highest degree of good faith is called for, and the disclosure should be clear, precise, honest and open. A designedly ambiguous description or one that is wanting in distinctness, either by negligence or unskilfulness, will invalidate a patent (*British Ore Concentration Syndicate Ltd v Minerals Separation Ltd*, 27 RPC 47; *Cincinnati Grinders (Inc) v BSA Tools Ltd* 48 RPC 33). Allowance will however be made for the difficulties of the case (*Natural Colour Kinematograph Co Ltd v Bioschemes Ltd*, 32 RPC at page 269).

14.64 A specification should not contain superfluous or irrelevant matter (*Francis' Application*, 27 RPC 87). Complicated mathematical calculations and analyses

are undesirable unless they are necessary to a full understanding of the invention. The curtailment of an inordinately long specification may be requested (*LD Corporation's Applications*, 66 RPC 4), but this should be done only in the most extreme cases.

CoP 14.64.1 The description should not contain passages which confuse the scope of the invention. Therefore, phrases such as ".. the invention should be taken to include any modifications, whether novel or not..." are unacceptable.

14.65 Where particular description or drawings do not exemplify the invention claimed, for example where they are included by way of explaining the invention or for comparison or where they relate to prior art, the description should make this clear.

Technical or specialised terms; Trade marks

14.66 The description should be as clear and straightforward as possible, with the avoidance of unnecessary technical jargon. Since however it is addressed to persons skilled in the art to which it relates it is acceptable, and will often be desirable, for it to use technical terms which are well known in that art. Little known or specially formulated technical terms may be used provided they are adequately defined and that there is no generally recognised equivalent. Foreign terms may be used where there is no English equivalent. Terms already having an established meaning should not be used differently if this is likely to cause confusion, but in some circumstances it may be appropriate for a term to be borrowed from an analogous art.

14.67 A recognised trade description should not be used in such a way as to give rise to uncertainty or ambiguity; eg "leather" should not be used as a general term covering materials resembling leather, unless the precise meaning given to the word "leather" is defined.

14.68 If a specification contains a reference to a proprietary article or specific product the composition of which is not well known, the description should state the composition of the article or the way in which it is prepared. If the applicant maintains that the information is well known in the art, or if the specification so states, and the examiner is unable to verify this, evidence in support of the contention may be required.

14.69 The use of proper names or similar words to refer to materials or articles is undesirable in so far as such words merely denote origin, or where they may relate to a range of different products. The product should be sufficiently identified, without reliance on the word, to enable the invention to be carried out by the skilled person. Such words which have generally accepted meanings as standard descriptive terms may however be used without further explanation; examples are Bowden cable, Belleville washer, zip fastener.

CoP 14.70 A trade mark should preferably not be used in a specification since it is an indication of origin rather than of composition or content and on that account cannot properly be used to describe an article. (For trade marks in claims, see 14.137). If a registered trade mark is used it should generally be accompanied by wording showing that it is a trade mark, since its use as a descriptive term without acknowledgement may be prejudicial to the rights of its owner (Official Ruling 1914 (A) 31 RPC Appendix i). However, a word that has been registered as a trade mark only requires acknowledgement if it is being used in the specification with reference to the goods or services for which the trade mark is registered. Acknowledgement should preferably take the form of "(RTM)" inserted after the trade mark. However, use of the symbol ® is also regarded as acceptable. The acknowledging of registered trade marks should extend to their obvious derivatives; for example, a word such as 'bonderizing' should be acknowledged as being derived from the registered trade mark 'Bonderized'. Any word which is a trade mark should commence with a capital letter. Any statement that a term is a trade mark or a registered trade mark should not be challenged, nor should any attempt be made to determine whether such a term is being used within its registered class; the registered owner may be using the mark for goods not covered by registration and he

may have common law rights to its use in this way. If a mark is known not to be registered it is good practice to indicate the name of the owner. The validity of the trade mark is not material. Community trade marks and international trade marks registered under the Madrid Protocol (and effective in the U.K.) should be acknowledged in exactly the same way as trade marks registered directly with the Office. (For acknowledgement of trade marks without the applicant's consent, see 19.23-19.26).

> [In order to check whether a word used in a specification is a registered trade mark, the examiner should access the Trade Mark Database provided on the Office's external website. This contains details of all trade marks registered or effective in the U.K., including Community and international trade marks effective in the U.K. RC11 should be used to object (in a s.18(3) report) to the use of one or more unacknowledged trade marks. The clause asks for acknowledgement that any such word is a trade mark, if retained (see also 19.25-19.26). See 14.137 if a trade mark is used in a claim.]

14.71 A number of words which are registered trade marks have come into such general use that the fact that they are trade marks tends to be overlooked. Examples of such words are 'Bakelite', 'Caterpillar', 'Filofax', 'Frisbee', 'Jacuzzi', 'JCB', 'Kodak', 'Lycra', 'Rollerblade', 'Tabloid', 'Thermos', 'Vaseline', 'Velcro', 'Walkman' and 'Yale'. Such words should be acknowledged in just the same manner as other less well-known trade marks.

COMPLETENESS OF DISCLOSURE

14.72 At least one embodiment of the invention or at least one method of performing the invention must be described, although if the claims themselves provide an enabling disclosure and are supported by the description then in appropriate cases this may provide a sufficiently complete disclosure. In many cases a single example or embodiment will suffice, but where the claims cover a broad field several examples or alternative embodiments or variations extending over the area to be protected by the claims may be necessary. The House of Lords in *Biogen Inc v Medeva plc* [1997] RPC 1 held that for the purposes of s.14(3) and 72(1)(c) the disclosure must be sufficient to enable the whole width of the claimed invention to be performed, and the disclosure of a single embodiment will not always satisfy the requirement regardless of the width of the claim. This was followed by the House of Lords in *Kirin-Amgen Inc v Hoechst Marion Roussel* [2005] RPC 9, where Lord Hoffmann held that whether the specification is sufficient or not was highly sensitive to the nature of the invention. To determine this question, the first step was to identify the invention and decide what it claimed to enable the skilled man to do. It was then possible to ask whether the specification enabled him to do it. In *Generics (UK) Limited and others v H Lundbeck A/S* [2009] UKHL 12, [2009] RPC 13, Lord Neuberger held that the disclosure of one method of making a single product provides an enabling disclosure for a claim to that product and entitles the patentee to the full monopoly of the product *per se*, even if the only inventive step was the method of making the product. Similarly, the EPO Board of Appeal in *Kirin-Amgen/Erythropoietin II* (T 636/97) held at paragraph 4.5 that it is not always necessary for the description to enable every method of arriving at the claimed subject matter to be carried out, because then no dominant patent could exist and each developer of a new method of arriving at that subject matter would be free of earlier patents.

Pumfrey J held in *Minnesota Mining & Manufacturing Co's (Suspension Aerosol Formulation) Patent* [1999] RPC 135 that a specification is insufficient if it provides no teaching relating to the criteria according to which the skilled man is taken to be using the invention. What will suffice to satisfy the criterion that the disclosure must be sufficient across the whole width of the claimed invention will vary depending upon the nature of the claim. Thus, for example, when there is in truth more than one product which is claimed, the question has to be asked whether the invention of one product is the invention of the other. Unless it is they are different inventions and each must be sufficiently described. A similar conclusion had been reached by the Court of Appeal in

that case and *Chiron Corp. and ors v Murex Diagnostics Ltd and ors* [1996] RPC 535 (pages 612 and 613).

14.72.1 This approach is consistent with that taken by the EPO Technical Board of Appeal in *Exxon/Fuel oils* [1994] 9 OJEPO 653 (T409/91) and *Unilever/detergents* [1995] 4 OJEPO 188 (T435/91) which held that an application should provide enough information to allow a person skilled in the art to carry out substantially all that which falls within the ambit of what is claimed. In T435/91 the Board considered the sufficiency of a 'functional' definition of a component in a claimed composition and found that the indefinite and abstract host of possible alternatives must all be available to the skilled person if the definition is to satisfy the requirement for sufficiency. The sufficiency of a claim to a functionally-defined product was also at issue in T 1743/06 INEOS Silicas. In this case, the Board held that, while it was acceptable that the skilled person would need to use a reasonable amount of trial and error to select conditions which would achieve the desired result, there must be adequate instructions in the specification, or on the basis of common general knowledge, to lead the skilled person towards success, through evaluation of initial failures. In *Mycogen/Modifying plant cells* [1997] OJEPO 408 (T 694/92) claims were rejected for lack of sufficient disclosure in the specification because serious doubt existed that the technique described allowed the effect to be readily obtained over the full range of applications claimed. Similarly in *Sumitomo/Oxygen-enriched gas* [1998] EPOR 240 (T 440/92) a specification was held insufficient where it was not apparent that the advantageous process conditions and results which formed the basis of the invention would be obtained over the range of the claim. However, only if there are serious doubts, substantiated by verifiable facts, may an application be objected to for lack of sufficient disclosure.

14.72.2 The Court of Appeal in *Novartis AG v Johnson & Johnson* [2010] EWCA Civ 1039 drew on the EPO case law in T 435/91, T 694/92 and (in particular) T 1743/06 when considering the sufficiency of a claim to a contact lens defined almost entirely by desirable characteristics. Jacob LJ observed that the material for the lens could be selected from 2 vast ranges of polymers, and there was little or no guidance on how to select a pair of polymers with the desired properties:

> "Generally patents with functional claims give you guidance as to what to do if you embark on a trial and error process. The reader can learn from the errors so as to reach something that works. But not here."

The claim was therefore considered to amount to "if you try any pair of polymers, to see if they work...and find anything that does, we claim it." Moreover, it was not clear even whether the examples provided in the patent "worked" according to the parameters defined in the claim. The patent was therefore revoked on grounds of sufficiency.

14.73 The applicant is not required to disclose the best method of performing the invention which he is entitled to claim. (Rule 5.1(a)(v) of the PCT specifies that the best mode should be described, but goes on to say that where the national law of a designated state does not require description of the best mode (as in the UK) failure to describe the best mode shall have no effect in that State).

14.74 It is neither necessary nor desirable that details of well-known ancillary features should be given, but the specification must disclose any feature essential for carrying out the invention in sufficient detail to render it obvious to the skilled person how to put the invention successfully into practice. In *Badische Anilin and Soda Fabrik v La Societe etc du Rhone*, 15 RPC 359, a specification which referred merely to the use of an autoclave, of unstated material, was held to be insufficient, since it was necessary for success that an iron vessel be used, and it was shown that other autoclaves, eg enamelled, were frequently used in the trade. In *Mayne Pharma v Debiopharm and Sanofi-Synthélabo* [2006] EWHC 1123 (Pat), it was held that for a claim defining "a stable oxaliplatin solution formulation comprising oxaliplatin, an effective stabilising amount of a buffering agent ... and a pharmaceutically acceptable carrier" to be sufficient, it must be possible to design a test which can answer the question: "have I used such an amount or not?". The specification pointed, however, to the answer "you don't have to add any at

all", and the invention so claimed was therefore insufficiently disclosed.

14.75 The degree of skill or knowledge to be expected of the hypothetical addressee of a patent specification will naturally depend on the degree of complexity of the art in question - particularly when the art in question is especially complicated and difficult it is inappropriate to consider him to be a workman on the shop floor. The date at which sufficiency has to be judged is the date of filing, not the date of publication, per Lord Hoffmann in *Biogen Inc. v Medeva plc* [1997] RPC 1. The hypothetical addressee should also be presumed to have been aware of what was common knowledge and to have had access to everything in the state of the art at the filing date of the application. He should also be presumed to have had at his disposal the normal means and capacity for routine work and experimentation. In some cases the specification may be regarded as addressed to a group of such persons, but this should not be a design research team capable of invention but a team of skilled technicians without the capacity to make elaborate additions or modifications to what is disclosed (*Valensi and another v British Radio Corporation Ltd*, [1973] RPC at page 377). Such a team may consist of persons skilled in different arts, and different parts of the specification may be addressed to separate such persons, who must be assumed to co-operate for the purpose in view, each making good any deficiencies in the others technical equipment (*Osram Lamp Works Ltd v Pope's Electric Lamp Co Ltd*, 34 RPC at page 391). In *Halliburton Energy Services Inc v Smith International (North Sea) Ltd* [2006] RPC 2, the Patents Court held that where a programmer formed part of the addressee team of a computer-based invention, it was essential to form a view of his capabilities. It was mentioned that the writing of anything other than a trivial program required substantial effort in writing and debugging even though much programming required no creative thought and a competent programmer would have substantial experience in his area of expertise. The court in *Kirin-Amgen Inc. v Roche Diagnostics GmbH* [2002] RPC 1 concluded that, once the addressee's skill and knowledge has been assessed, it may nevertheless be appropriate to consider that the skilled man might consult someone else on a certain point when trying to implement the teaching of the patent. Since a patent is a document which is intended to be practical, rather than theoretical, in nature - and its teaching is there for the purpose of being worked - it would be unrealistic to adopt too rigid an approach to the question of the knowledge of the skilled addressee.

14.76 The specification does not need to disclose all the details of the operation to be carried out in order to perform the invention if these details are obvious and clear on the basis of either common general knowledge or of expert knowledge in the field concerned. A useful test, given in *Edison and Swan Electric Light Co v Holland*, 6 RPC at page 282, consists in asking whether anything new has to be found out by a person of reasonably competent skill following the directions in the specification in order to succeed; if the answer is yes, the disclosure is not complete enough. Thus, in *Chiron Corpn v Organon Teknika Ltd* [1994] FSR 202 where it took the applicants themselves several years from filing an application, claiming among other things a vaccine, to successfully produce the vaccine, the vaccine claim was held to be invalid. However, in *American Cyanamid v Ethicon*, [1979] RPC 265, in which it had been contended that a patent claiming a surgical suture made of a particular polymer was invalid for, inter alia, insufficiency in that it did not point out the need for adequately drying the polymer and freeing it from undesired monomer, it was held that the disclosure was not insufficient since these were steps which "the instructed reader desirous of achieving success could be expected, if necessary, to take". Accordingly the hypothetical addressee had to be prepared to display a reasonable degree of skill and common knowledge of the art in making trials and to correct obvious errors and omissions in the specification if a way of correcting them could readily be found (*Mentor Corporation v Hollister Inc* [1993] RPC 7), although is not expected to exercise any invention or any prolonged research, inquiry or experiment. Referring to this case, Pumfrey J in *Halliburton Energy Services Inc v Smith International (North Sea) Ltd* [2006] RPC 2 agreed that the straightforward test for sufficiency was whether the specification required the addressee to carry out tests or developments that went beyond routine trials. Where the specification is very complex and its development would be expected to be accompanied by a great amount of work, it is always necessary to keep a balance between the interests of the public and the

interests of the patentee in the sense that it is necessary to guard against imposing too high a standard of disclosure merely because the subject matter was inherently complex.

In *Eli Lilly & Co. v Human Genome Sciences, Inc.* [2008] EWHC 1903 (Pat), Kitchin J held that the specification must be sufficient to allow the invention to be performed without undue burden, having regard to the fact that the specification should explain to the skilled person how the invention can be performed. The question whether a burden is undue must be sensitive to the nature of the invention, the abilities of the skilled person and the art in which the invention has been made.

The skilled person is also taken to be trying to make the invention work, as held by Lord Hoffmann in *Kirin-Amgen Inc v Hoechst Marion Roussel* [2005] RPC 9. Thus if the skilled person would quickly realise that one method would work and another would fail, the specification is not insufficient because the claim is expressed in terms broad enough to include both methods. However, in this case a claim defining recombinant erythropoietin as having a higher molecular weight than urinary erythropoetin was held to be insufficient because whether or not a product fell within the claim depended on the choice of urinary erythropoetin and the specification did not tell the skilled person how to make this choice.

14.76.1 For example, in *American Home Products Corp. v Novartis Pharmaceuticals UK Ltd* [2001] RPC 8, the invention concerned a Swiss-type claim (see 4A.28 - 4A.31) for the use of a known antibiotic (rapamycin) for the preparation of a medicament for inhibiting organ or tissue transplant rejection. The Court of Appeal reversed the lower court's decision and held that the claim did not cover derivatives of rapamycin. The court then observed that, had the claim covered derivatives, the patent would have been insufficient because there was no disclosure in the description enabling the skilled person to decide which of the many possible derivatives would have worked. Although there was a strong possibility that some of the large number of derivatives would work in the same way as rapamycin itself, it was impossible to say which would so work, unless the skilled person undertook the "vast and correspondingly burdensome" research task necessary. Thus the court distinguished between a sufficient description, which requires the skilled person to use his skill to perform the invention, and an insufficient description, which requires the skilled person to go to the expense and labour of trying to ascertain which of the products encompassed by the claim actually has the required properties. Similarly, in *DSM NV's Patent* [2001] RPC 35, a claim was insufficient because a skilled worker seeking to implement the invention over the whole width of the claim would have been required to depart from the express teaching of the patent and experiment over a long period of time before possibly achieving the desired result.

14.76.2 However, the approach taken in American Home Products (above) where the specification discloses a "principle of general application" was clarified by the Court of Appeal in *Kirin-Amgen Inc. v Transkaryotic Therapies Inc*. [2003] RPC 3, and at the House of Lords appeal (*Kirin-Amgen Inc v Hoechst Marion Roussel* [2005] RPC 9). Lord Hoffmann held that "a principle of general application" was simply an element of the claim stated in general terms. Such a claim was sufficiently enabled if it could be reasonably expected that the invention would work with anything falling within the general terms. For example, a requirement of "connecting means" was enabled if the invention could reasonably be expected to work with any means of connection, but it was not necessary for the patentee to have experimented with all of them.

14.77 The criteria for adequacy of disclosure are the same whatever the form of the claim and are not stricter when the claim is of functional form, that is when it is limited by result, eg is of the "No-Fume" type (see 14.120), (*International Business Machines Corporations Application* [1970] RPC at page 542). However, where claims are defined by functional features or desirable results, the specification does need to provide enough instruction for the skilled person to be able to achieve the desired result without embarking on a research program (see 14.72.1-14.72.2)

14.78 The disclosure of the invention is not incomplete merely because a reasonable degree of difficulty is experienced in its performance. For example, in an invention in which a switchable semi-conductor is used for switching electric circuits on

and off without using contacts, residual current continues to flow in the circuit when switched off; if however this residual current adversely affects the use of the switch in certain fields only, and can otherwise be reduced to negligible proportions by routine further development of the semi-conductor, the disclosure is complete enough. This is so also where a proportion of failures occur in practice, as can arise for example in the manufacture of small magnetic cores or electronic components, provided that this is accompanied by repeated success, and provided that the satisfactory parts can be readily sorted by a non-destructive testing procedure. If however the alleged results of the invention are unrepeatable or if success is obtained in a totally unpredictable way the disclosure may be regarded as not complete enough.

14.79 If successful performance of the invention is inherently impossible because it would be contrary to well-established laws (eg where the alleged invention is a perpetual motion machine) objection may arise under s.14(3). If the claims are directed to its function and not merely its structure objection may also arise under s.4(1) - see 4.05 and also *Eastman Kodak Co. v American Photo Booths Inc*. (BL O/457/02), in which the hearing officer held that the invention could not function as described and claimed, and so lacked both industrial applicability and sufficiency of disclosure. Similarly, the Hearing Officers in *Blacklight Power Inc.'s Application* BL O/170/09, and *Robinson's Application* BL O/336/08 held that the applications in question were both insufficient and lacking in industrial applicability as the claimed inventions relied on scientific theories of doubtful validity. The hearing officers in these cases followed the test set out in the Patents Court judgment in *Blacklight Power Inc. v The Comptroller-General of Patents* [2009] RPC 6 and held that there was not a reasonable prospect that the applicant's theory might turn out to be valid if it were to be fully investigated at a trial – see 4.05.1-4.05.2. Regardless of whether objection arises under s.4(1) or s.14(3), one of the procedures set out in 17.94-17.96.4 should be followed at the search stage.

14.80 The fact that a specification does not refer to a step which may well be useful for the purpose of being able to reproduce consistently reliable products of commercial quality and range does not render the disclosure incomplete provided that the directions in the specification leads to a product which has "patent utility", ie, is suitable for and fulfils the purpose for which the specification states it is intended. (*American Cyanamid v Ethicon*, [1979] RPC at page 265).

14.81 Since the applicant is required merely to provide enough information to make possible performance of the invention without recourse to inventive ingenuity, it is not necessary to point out the best of many alternatives, or the best of many alternative sources of supply of a component or starting material since the selection requires only trial and error and not invention. However where the sole justification for the invention is the attainment of a particular advantage by a selection among alternatives the advantage must be fully described.

s.1(1)(c) 14.82 The applicant is not obliged to state the intended use of the invention. However it is a condition of patentability that the invention be capable of industrial application. It will normally be self-evident in what way this is so, but there may be a few instances, eg in relation to methods of testing, where this is not apparent and must be made so.

Prior art

14.83 The applicant is not obliged to describe or acknowledge the prior art, since the reader is presumed to have the general background technical knowledge appropriate to the art. There may however be instances in which the absence or inadequacy of a statement of prior art renders it difficult to understand how the invention is to be performed, or documents, found during the search or otherwise, may show that the statement of prior art is inadequate or misleading. This could be the case if an ambiguous presentation gave the impression that the prior art had solved less of the problem that was actually the case.

14.84 A specification may include fair and reasonable comment on prior inventions with a view to distinguishing the invention in suit from them or illustrating its advantages, but no statement disparaging a prior patent or describing it in an unfair or misleading manner should be included. There is however no objection to a mere statement that a prior invention is in some respects unsatisfactory.

References to other documents

s.76(2) 14.85 An application as filed may contain a reference to another document or internet webpage, in which further information is to be found. Alternatively, it may refer to another document or webpage "the contents of which are incorporated herein by reference". The allowability of such references need only be considered if the further information to be found in the other document is essential for there to be a clear and complete disclosure of the invention. Since the date at which sufficiency has to be judged is the date of filing, not the date of publication (see 14.75), Pumfrey J in *Halliburton Energy Services Inc v Smith International (North Sea) Ltd* [2006] RPC 2 held that a document referred to in the specification must have been published by the date of filing the application for a reference to be effective. Where a reference to an internet page is essential for a complete disclosure of the invention, a copy of the verifiably-dated web page showing its contents prior to the date of filing must be provided. References in the form of application numbers should be objected to under s.14(3), and replaced with the relevant publication numbers by the applicant, providing the application was published at the time of filing the application in suit. References to documents containing essential information and published later than the filing date, or not at all (including applications withdrawn before publication and applications unpublished at the time of filing of the application in suit) should be deleted as irrelevant by the applicant; supplementing or replacing the reference by an indication of the contents of the documents (beyond what is already explicitly contained in the application as filed) is not allowed. Since a person skilled in the art would not be able to carry out the invention at the date of publication of the application without knowledge of the contents of the unpublished (or later published) document, objection should be raised under s.14(3).

> [If the entire text of another specification is appended to the application in suit it should be removed from the copy for the printer but should remain on the open part of the file so that it will subsequently be published by laying open. The following footnote should be added to the front page of the printed application (see 16.29) - "A specification referred to in the application and appended to it is not included in this print but is available for inspection in accordance with the provisions of Section 118(1) of the Patents Act 1977". At substantive examination the removal from the specification of the appended specification should be required. Relevant matter from it may be added to the description if required for sufficiency.]

14.86 Provided that the publication requirements set out above are satisfied and if requested by the applicant, the examiner should allow a reference to be replaced by the matter referred to, provided that when the reference is to another application, the matter was present in that application as filed; where the language of the documents referred to is other than English and the disclosure of the invention would not be clear and complete enough without the reference, such replacement should be required. Where the reference is to a document not readily available to the examiner the applicant should be asked to file a copy and/or a translation, as necessary.

14.87 Following the introduction of an indication on the front page of granted patent specifications of cases related as a parent or divisional, the Patents (Amendment) Rules 1999 removed the legal authority for insisting on cross-references between applications. There is however no reason why applicants should not be encouraged to include cross-references in other suitable circumstances where the front page will not give any warning of a related application or patent, eg where another application of the same date by the same applicant claims matter described in the application in suit.

Relationship of s.14(3) with s.14(5)

s.125(1)
s.76(2)

14.88 Since "the invention" whose disclosure must be clear and complete is that defined in the claims, the requirement of s.14(3) may overlap with those of s.14(5), that the claims define the invention, be clear and be supported by the description, since all are concerned with the relationship between the extent of the disclosure and the scope of the claims. Thus while a claim may, when read on its own, appear to be clear and to define the invention, objection arises if there is a statement in the description which is inconsistent with the claim or in some other way casts doubt on the true scope of the invention; examples would be a reference to an embodiment or variant not falling within the scope of the claims, or a misleading account of the prior art. Objection in such a case should be made under s.14(5). In a further instance, if the claims are unduly broad and speculative having regard to what has been disclosed, it may be difficult to decide whether the objection should be that the disclosure is incomplete, or that the claims are not supported by the description. Since the only available remedy lies in restriction of the claims, the addition of further examples or features being prohibited, objection in these circumstances before grant should, as a matter of general practice, be made under s.14(5). Objection may be raised under s.14(3), but only in the clearest cases, when the disclosure appears inadequate to support a valid claim.

14.89 [deleted]

14.90 Objection does not arise under s.14(3) merely because particular matter claimed is absent from the description, since it is the specification (which includes the claims) which is required to disclose the invention; objection should in such a case be made under s.14(5)(c), (see 14.145). However while the insertion in the description of a passage in agreement with an originally unsupported claim may overcome the objection under s.14(5)(c), objection will remain if this passage is not in itself a clear and complete enough disclosure of that particular aspect of the invention, so that the applicant has failed to discharge his duty under s.14(3) not only to disclose the invention but to do so in a manner which allows it to be performed.

[***Section 14(4)*** *Repealed*]

14.91 Subsections (4) and (8) of s.14 were concerned with how an invention which required for its performance the use of a micro-organism could be disclosed. This is now provided for in s.125A.

[14.92 to 14.104 Deleted]

Section 14(5)

The claim or claims shall -

(a) define the matter for which the applicant seeks protection;

(b) be clear and concise;

(c) be supported by the description; and

(d) relate to one invention or to a group of inventions which are so linked as to form a single inventive concept.

Section 14(6)

Without prejudice to the generality of subsection (5)(d) above, rules may provide for treating two or more inventions as being so linked as to form a single inventive concept for the purposes of this Act.

14.105 [deleted]

s.130(7) 14.106 Ss.14(5) and (6) are specified as provisions which are so framed as to have, as nearly as practicable, the same effect as the corresponding provisions of the EPC, PCT and CPC; a.84 EPC and a.6 PCT use essentially the same wording as s.14(5)(a)-(c), and a.82 EPC is essentially the same as s.14(5)(d). (There is no requirement of unity of invention in the articles of the PCT, but Rule 13.1 of the Treaty is essentially equivalent to s.14(5)(d)).

14.107 The provision in the Rules referred to in s.14(6) is to be found in r.16. There is no article in the EPC or PCT equivalent to s.14(6) but Rules 44 and 13.2 of the respective treaties use wording similar to that of r.16. (See further 14.159).

DEFINING THE INVENTION: CLARITY

14.108 With the exception of r.16 there is no provision in the Rules regarding the form and content of claims. Although the EPC and PCT Rules do contain such provisions, s.130(7) is not interpreted as requiring compliance with these rules, and indeed some of the provisions of the EPC and PCT are at variance with UK practice. Rule 43(1) EPC and Rule 6.3 PCT prescribe the so-called Germanic form of claim, in which a recital of the prior art is followed by a statement of what characterises the invention. This type of claim is often described as being in “two-part form”, and in the US is sometimes referred to as a Jepson claim. (The PCT Rule goes on to say that where the national law of a State does not require this form of claiming, failure to use it shall have no effect).

14.109 In contrast it is established practice in UK law that the form of the claim is a matter for the applicant, any claim which fulfils the requirements of the Act being acceptable. Although the Germanic form of claim may in many cases be the most convenient, particularly for example when the invention is an improvement in a known type of apparatus, the applicant cannot be required or urged to present his claim in this way. In *British United Shoe Machinery Co Ltd v A Fussell and Sons Ltd*, 25 RPC at page 651, it was stated that "a man must distinguish what is old from what is new by his claim; but he has not got to distinguish what is old from what is new in his claim".

CoP 14.110 The claims must be drafted in terms of the technical features of the invention and should not contain any statements relating, for example, to commercial advantages or other non-technical matters. In addition, claims should not define the invention over the prior art by unusual, non-standard or unreasonable parameters against which no comparison with the prior art can be made, unless the invention does not allow of a clear alternative definition. Statements of purpose, or reference to results or desiderata should only be used in claims if they assist in defining the invention and no better mode of definition is possible. It is not necessary that every feature should be expressed in terms of a structural limitation. Functional limitations may be included provided that a skilled man would have no difficulty in providing some means of performing this function without exercising inventive skill (see 14.48 for the relation of claims to the description).

CoP 14.110.1 The claims as a whole should aim to define and delimit the features of the invention, with the independent claims clearly establishing the essential features of the invention as well as sufficient details of interrelationship, operation or utility to establish that the invention achieves the intended objectives. The more independent claims there are, the more doubt is cast on the essential features of the invention, particularly where there is more than one independent claim in the same category, such

as multiple independent claims for a product, process, apparatus, or use. The aim should therefore be to define the essential features of the invention using a single claim for each category, and to leave additional non-essential features to dependent claims. Under certain limited circumstances, this may not be appropriate, for example: where the invention relates to a number of closely-related products - such as transmitters and receivers (see 14.161 and 14.166), where there are different uses of a product or apparatus, or where there are closely-related alternative solutions to a particular problem. It follows that claims in a style where many independent claims in one category are included, all of varying scope and features, are particularly inappropriate. In addition to lacking clarity, this style of patent claim may also be considered to lack conciseness (see 14.140) and give rise to plurality of invention (see 14.157-14.168).

Construction of the claims

s.125(1) (See also 2.11-2.17, 125.01-125.24 and, with regard to biotechnological inventions, 76A.07-76A.09)

14.111 The requirement that the claims shall be clear applies to individual claims and also to the claims as a whole, and is of the utmost importance in view of the function of the claims in defining the monopoly sought. Each claim should be read giving the words the meaning and scope which they normally have in the relevant art. The claim should also be read with an attempt to make technical sense of it; such a reading may involve a departure from the strict literal meaning of the wording of the claim (see 14.114). The claims are to be interpreted having regard to the description and any drawings (see also 14.116, 125.10-125.12). If, in a particular case, the description gives the words used in a claim a special meaning, by explicit definition or otherwise, this should be clear from a reading of the claim alone; where a special meaning is given to a term or phrase in a claim by a definition in the description the use of some such phrase as “as hereinbefore defined” will reduce the risk of ambiguity. A reference to prior art in the specification is a factor to be taken into account in interpreting a patent. In *Ultraframe (UK) Ltd v Eurocell Building Plastics* [2005] RPC 7 the Patents Court held that this would depend on the way the prior art was acknowledged. If the specification identified some particular feature of the prior patent as disclosing a problem which the inventor claimed to have overcome, it might be of considerable relevance in interpreting the width of the claim.

14.112 In *Electrical and Musical Industries Ltd v Lissen Ltd*, 56 RPC 23, Lord Russell stated “The function of the claims is to define clearly and with precision the monopoly claimed so that others may know the exact boundaries of the area within which they will be trespassers. Their primary object is to limit and not to extend the monopoly ... The claims must undoubtedly be read as part of the entire document, ... but the forbidden field must be found in the language of the claims and not elsewhere”. The prima facie meaning of words used in a claim may not be their true meaning when read in the light either of a definition found elsewhere in the specification or of technical knowledge possessed by persons skilled in the art. In these circumstances a claim may bear a meaning different from that which it would have borne had no such assisting light been available. Thus, if the draftsman has specifically indicated somewhere in the specification what he means by a particular expression, then that must be taken into account - see *Kirin-Amgen Inc. v Roche Diagnostics GmbH* [2002] RPC 1, in which Neuberger J also cautioned against too heavy a reliance on dictionary definitions, which are “shorn of any relevant context”. The House of Lords appeal on this case, *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9, confirmed that the meaning of words is what the skilled person would have understood the author to mean by using these words. Nonetheless, the starting point for interpreting words – especially non-technical words – in a claim will usually to be their ordinary definition, before considering their context and use in the specification; as held by the Court of Appeal in both *Fabio Perini SPA v LPC Group plc and others* [2010] EWCA Civ 525 and *Occlutech GMBH and anr v AGA Medical Corp. and anr* [2010] EWCA Civ 702. Further, in *Virgin Atlantic Airways Ltd v Premium Aircraft Interiors UK Ltd* [2010] RPC 8, the Court of Appeal held that the skilled reader is taken to suppose that the patentee knew some patent law – that his claim is for

the purpose of defining the monopoly and that it should be for something new. Knowledge of that may well affect how the claim is construed. For instance, the patentee would not be expected to have claimed what he had expressly acknowledged was old.

14.113 There is no justification for departing from the unambiguous and grammatical meaning of a claim and narrowing or extending its scope by reading into it words which are not in it, or for using stray phrases in the body of a specification for the purpose of narrowing or widening the boundaries of the monopoly fixed by the plain words of a claim. For example, the Court of Appeal in *Fabio Perini SPA v LPC Group plc and others* [2010] EWCA Civ 525 rejected an argument that the word "slit" should have a narrowly-defined meaning based on the exemplification in the patent, rather than the ordinary meaning of a long, narrow opening. The patentee is under a statutory obligation to state in the claims what is the invention he desires to protect. In *Glaverbel S A v British Coal Corporation* [1995] RPC 255 the Court of Appeal held that the claims should be read together with the body of the specification but if a claim is expressed in clear language, ie the meaning of the claim is clear, the monopoly sought cannot be extended or cut down by reference to the rest of the specification. This approach has subsequently been endorsed in, for example, *Lubrizol Corporation v Esso Petroleum Co. Ltd* [1998] RPC 727 and *Cartonneries de Thulin SA v CTP White Knight Ltd* [2001] RPC 6.

14.113.1 In the UK, "consisting of" is generally interpreted to mean "consisting exclusively of" whilst "comprising" is generally interpreted to mean "including" (i.e. other integers or features may be present). The conventional interpretation of "comprising" to mean "including" was approved of by Kitchin J. in *DLP Ltd's Patent* [2007] EWHC 2669 (Pat), [2008] RPC 11. These terms are considered to be clear unless, on the facts of the particular case, there is genuine doubt as to their meaning. See also 14.123.1.

14.114 In view of the differences in the scope of protection which may be attached to various categories of claim (eg directed to a product, process, apparatus or use), the wording of a claim should leave no doubt as to its category.

Purposive construction; variation in non-essential features of a claim

(see also 125.13-125.15)

14.115 A patent specification should be given a purposive construction rather than a purely literal one as held by Lord Diplock in *Catnic Components Ltd and another v Hill and Smith Ltd* [1982] RPC 183 (see also 125.11-125.13). Variation in unessential features of the claimed invention may not be sufficient to take a product or process outside the protection of the claim. In *Catnic*, a claim to a lintel having inter alia a support member "extending vertically" was held to have been infringed by otherwise identical lintels in which the support member was 6° or 8° from vertical, since this produced a negligible reduction in the vertical support provided by the member. Another example of purposive construction was the interpretation of the word "opaque" by Jacob J in *Minnesota Mining and Manufacturing Co. and anr. v Plastus Kreativ AB and anr.* (BL C/64/95; upheld on appeal [1997] RPC 737) who asked why a flap must be opaque, considering the inventor's express stated purpose, and construed the term to encompass variants which the skilled reader would have realised would have no material effect upon the way the invention worked, and excluded those that would have been thought to have a material effect. However, when considering this case in *Nikken Kosakusho Works v Pioneer Trading Co*. [2005] FSR 15, Mann J held that although the meaning of a word in a claim can be qualified or explained by reference to the objective intended to be realised, this has to be stated clearly enough in the specification; otherwise the skilled but unimaginative reader, through whose eyes the patent had to be read, would be confused.

The Protocol to Article 69 of the EPC

(see also 125.09-125.25)

14.116 The statement in s.125(1), that the invention and the protection conferred are specified in the claims as interpreted by the description and drawings, must be read in light of the Protocol on the Interpretation of Article 69 of the EPC which reads:

"*Article 1*
General principles

Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of legal certainty for third parties.

Article 2
Equivalents

For the purpose of determining the extent of protection conferred by a European patent, due account shall be taken of any element which is equivalent to an element specified in the claims."

The House of Lords in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9 held that the purposive approach in *Catnic* was precisely in accordance with the Protocol.

Inventions defined by ranges

14.117 In *Auchincloss and another v Agricultural & Veterinary Supplies Ltd. and Others* [1997] RPC 649, Peter Prescott QC (sitting as a deputy judge) distinguished (at pages 663-665 and 689) a stated range from the term "descriptive word or phrase" used by Lord Diplock in *Catnic* and found that a departure from this range, however small, is not a variant in the *Catnic* sense. He stated (at page 689):-

"The aim of the *Catnic* line of cases is to ascertain the purpose of the patentee, but objectively, that is, through the eyes of the skilled reader of the document. Where the patentee has expressed himself in terms of a descriptive word or phrase there may be room for supposing that he was using language figuratively, and did not intend to restrict himself to the purely literal meaning. But where the patentee has defined an integer of his claim in terms of a range with specified numerical limits at each end, his purpose must be taken to have been to claim thus far and no further."

14.117.1 In *Halliburton Energy Services Inc v Smith International (North Sea) Ltd* [2006] RPC 2, Pumfrey J held that a claim which defined the axial force on each cone as being between 31 and 35 per cent of the total axial force should be construed to mean the specified number to two significant figures, so including, for example, 30.500 per cent to 35.499 per cent.

Invention defined by reference to intended use

14.118 A claim to an apparatus or material for a particular purpose is construed as a claim to any apparatus or material having the features specified which is suitable for that purpose (see 2.12-2.14). On the other hand, a claim to something "when used in" a particular process is regarded as protecting only the use of the invention in this way (see 2.15), while a claim to "the use of" a material is regarded as equivalent to a claim to a method of using the material (see 2.16).

14.119 A claim merely directed to "Apparatus for carrying out the method of .... according to claim X", or some such wording will not normally be clear in scope. The claim should clearly specify the essential features of the apparatus unless all the integers

which would constitute such apparatus are clearly implicit in the method claimed, and all such apparatus would be novel and non-obvious.

14.120 The area defined by the claims must be as precise as the invention allows. As a general rule, claims which attempt to define the invention, or a feature thereof, by a result to be achieved should not be allowed. However, they may be allowed if the invention can only be defined in such terms and if the result is one which can be directly and positively verified by tests or procedures adequately specified in the description and involving nothing more than trial and error. In *No-Fume Ltd v Frank Pitchford Co Ltd*, 52 RPC 231, a claim to an ash receptacle for smokers in which the dimensions of certain parts were such that smoke from objects thrown into the receptacle did not emanate from the receptacle was allowed on the grounds that the invention could be realised by dimensions other than those disclosed, by experiments not involving inventive ingenuity. However, claims of this kind are generally undesirable and it should be noted that the *No-Fume* claim was allowed solely because the invention did not admit of precise definition independently of the result achieved. Any claim which includes a subordinate clause prefaced by words such as "so that" or "the arrangement being such that" requires special consideration from this point of view.

Chemical cases

14.121 Where the invention relates to a chemical compound it may be characterised in a claim in various ways, eg by its chemical formula, or, exceptionally, by its parameters or as a product of a process. Characterisation of a chemical compound solely by its parameters should, as a general rule, be allowed only in those cases where the invention cannot be adequately defined in any other way, for example in the case of macromolecular chains. In such cases however only parameters usual in the art should be employed to characterise the compound, since use of unusual parameters may disguise lack of novelty (see 2.18-2.20 and 3.88-3.93). As far as ‘product-by-process’ claims are concerned (e.g. “Product X obtained by process Y”), the House of Lords in *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9 held that these claims should be construed as a claim to the product as such in line with EPO practice (see Decision T 150/82 *International Flavors and Fragrances Inc* [1984] OJEPO 309); this is irrespective of whether the term “obtained”, “obtainable”, “directly obtained” or an equivalent wording is used. Claims for products defined in terms of a process of manufacture are allowable only if the products as such fulfil the requirements for patentability; a “product-by-process” claim is not rendered novel merely by the fact it is produced by means of a new process. A claim for a patentable product defined by its process of manufacture is only allowable if the product cannot satisfactorily be characterised by reference to its structure or composition; if the product can be defined by other means, an objection under clarity and/or conciseness should be raised.

14.122 Chemical "process" claims should define the starting material, the end product and also the means adopted for converting the one into the other (*British Celanese Ltd's Application*, 51 RPC 192). The definition of a process in the claims with reference to such "tools of the trade" as condensation, polymerisation, esterification and sulphonation, or even by the use of the term "reacting", is permissible provided the specification contains no reservations affecting the universality of the process. In *Kirin-Amgen Inc v Hoechst Marion Roussel Ltd* [2005] RPC 9, the House of Lords held that the protection conferred by a process claim should extend to products directly obtained by the process in accordance with EPC Article 64(2).

14.123 The extent to which the ingredients of a composition need to be specified in order adequately to define the invention depends greatly on the subject-matter concerned. Thus a claim to "a pharmaceutical composition containing compound X together with a diluent or carrier" is allowable, X being a medically active compound which characterises the composition, and the diluent or carrier being any material suitable for the purpose and being choosable by knowledge of the art or by non-inventive experiment. In the field of alloys, sufficient of the constituents should be specified such

that the claim is not speculative and is adequately supported by the disclosure.

14.123.1 In EPO Decision T 589/89, NATIONAL RESEARCH/Polyurethane compositions ([1994] EPOR 17), the use of the word "comprising" was held to mean that further reactive ingredients may be present in the claimed composition. However, where the word "consists" is used, the proportions of the specified ingredients must total 100 per cent (EPO Decision T 711/90, unreported). This is consistent with the long-standing practice in the UK that “consisting of” is generally interpreted to mean “consisting exclusively of” whilst “comprising” is generally interpreted to mean “including” (i.e. other integers or features may be present). The EPO has interpreted the phrase “consisting essentially of” as meaning that unspecified components could be present in the claimed composition if the characteristics of the claimed composition are not materially affected by the presence of these unspecified components (EPO Decision T 472/88, GENERAL ELECTRIC/ Thermoplastic resin ([1991] EPOR 486), EPO Decision T 340/89, GENERAL FOODS/caffeine ([1992] EPOR 199), EPO Decisions T 522/91 and T 759/91(each unreported)). This settled view of the EPO is followed in the UK. Thus a claim to a composition "consisting essentially of X, Y and Z" could be found to be anticipated if the prior art includes such a composition which also contains other components which do not appear to materially affect its characteristics (e.g. its activity or function).

Omnibus claims

14.124 Claims to the preferred embodiments of the invention which end with some such words as "substantially as described and shown (or illustrated) in the accompanying drawings" are allowable as claims limited to the embodiments described and depicted in the drawings. Such claims fall within the type known as "omnibus" claims which also include claims referring to examples (eg in chemical cases) or to tables. In *Raleigh Cycle Co Ltd and Anr. v Miller and Co Ltd,* 65 RPC 141, such a claim directed to a generator "constructed, and arranged substantially as described with reference to and as illustrated in the accompanying drawings" was construed as a narrow claim, but was held, by virtue of the qualification "substantially", to have been infringed by a generator not having stepped stator windings, even though the only embodiment specifically disclosed did have such windings.

14.125 An omnibus claim should not suggest that a drawing, example or table illustrates or exemplifies the invention if it does not, for example if it is present for comparison or as prior art, but there is no objection to referring to the invention "as described with respect to" such drawings, examples or tables, provided the wording of the claim and of the description makes the position clear. However the words "substantially as described" are insufficient by themselves to limit a claim to the embodiment described, and its scope will be construed to be as wide as the statement of invention. In such cases care should be taken to ensure that the invention is set forth in precise terms in the body of the specification, that ambiguity does not arise and that the statement of invention is not broader than the main claim (see 14.146). With regard to omnibus claims of copending applications describing the same apparatus, see 18.95.

Disclaimers

14.126 A disclaimer is a form of claim limitation. It is an amendment to an already existing claim comprising the incorporation of a “negative” technical feature. Typically, this will entail excluding specific embodiments or areas from a general feature. A disclaimer is allowed if what remains once the disclaimed material has been subtracted from the claim is clearly supported; that is, the disclaimer does not add matter contrary to s.76(2). An exception to this is that an “undisclosed” disclaimer (that is, where neither the disclaimer as such nor the subject matter excluded by it was disclosed in the application as filed, such that the disclaimer appears to add matter contrary to s.76(2)) is allowed providing certain criteria are met. These criteria were set out by the EPO Enlarged Board of Appeal in joined cases G1/03 (*Disclaimer/PPG*) and G2/03 (*Disclaimer/Genetic Systems*) [2004] 8-9 OJEPO 413 and [2004] EPOR 33.

14.127 The Board held that an undisclosed disclaimer was allowable to restore novelty in the following circumstances:

a) Delimiting a claim against an anticipation published after the priority date. Where a novelty objection is raised under section 2(3), an undisclosed disclaimer may be allowed to distinguish between an application and the s.2(3) prior art. The purpose of a disclaimer excluding a conflicting application is merely to take account of the fact that different applicants are entitled to patents in respect of different aspects of inventive subject matter. The disclaimer splits the invention as a whole into two parts: in respect of the identical part, it preserves the rights of the first applicant; for the rest, disclosed for the first time in the later application, it attributes the right to the second applicant;

b) Delimiting a claim against an anticipation in an unrelated field that the skilled person would never take into consideration (i.e. an accidental anticipation). This occurs when a piece of prior art would be disregarded by the skilled person, either because it belongs to a technical field remote from that of the invention, or because its subject matter suggests it would not help to make the invention. An undisclosed disclaimer may be allowed to distinguish an application from prior art such as this, even if cited under s.2(2). Take, for example, a claimed invention that concerns a large group of chemical compounds with certain properties which are advantageous for a specific use. One single compound within that group turns out to be known for a completely different use and, therefore, only properties irrelevant to the new use are known. A disclaimer may be used to prevent that one single compound from presenting a bar to patenting the group. A disclaimer cannot be used to delimit a claim against an anticipation that is not accidental;

c) Delimiting a claim against subject matter excluded from patentability for non-technical reasons, such as methods of treatment of the human body or inventions contrary to public morality For example, a method of avoiding offspring of a certain sex would be contrary to public morality when applied to humans, but not when applied to cows. If the claims are directed broadly to mammals, an undisclosed disclaimer may be used to exclude human beings and so avoid objection under s1(3). A disclaimer that excludes subject matter not eligible for patent protection may only serve the purpose of removing such specific legal obstacles. It is unlikely that a disclaimer can be used to disclaim excluded matter in general in order to meet to the requirements of novelty, inventive step, clarity and support, which all claims must satisfy;

Undisclosed disclaimers cannot be used to delimit a claim against non working embodiments. If a claim is directed to a large number of alternatives, some of which do not work, then either the specification will contain sufficient criteria for finding appropriate alternatives over the claimed range or there are problems relating to the sufficiency of disclosure of the invention or the level of inventive step. A disclaimer is inappropriate for dealing with either of these situations. Furthermore, the disclaimer should not remove more than is necessary either to restore novelty or disclaim excluded subject matter. A disclaimer that was relevant to assessment of inventive step or sufficiency of disclosure would add subject matter and would not be allowed.

The decision of the Board was considered in *M-Systems Flash Disk Pioneers Ltd v Trek Technology (Singapore) Pte Ltd* (BL O/318/06), where amendment by undisclosed disclaimer was held in principle to be allowable to limit a claim in the light of conflicting prior art under s. 2(3), although the Hearing Officer was unable to exercise discretion to allow the amendment on other grounds.

Clarity

14.128 A claim is bad if it contains internal contradictions. The EPO Technical Board of Appeal has held that a claim to a composition containing, *inter alia,* 40-95% of polyamide was not clear since, even if the other essential constituents were present in the minimum quantities specified the maximum amount of polyamide that could

be present was 89% (Decision T02/80; OJEPO 10/81).

14.129 A claim should not include vague or equivocal forms of wording which leave the reader in doubt as to the exact scope of a feature. Examples of this are relative terms such as "thin", "wide", "strong". If such terms appear in a claim it is usually necessary to have them either defined or excised. No objection arises, however, if the relative term has a recognised meaning in the art, eg "high-frequency amplifier", and this is the meaning intended. The term “predetermined” may need consideration: it may be meaningful in some contexts, e.g. to distinguish between fixed and variable values, but meaningless in other contexts, e.g. where all comparable values are fixed. In *Nikken Kosakusho Works v Pioneer Trading Co*. [2006] FSR 4, a tool chuck had “an annular groove of predetermined depth”, and it was held that this phrase was objectionable and in itself implied nothing about either the criteria for choosing the depth, or the range of values it should have. On the other hand, in *Folding Attic Stairs Ltd v Loft Stairs Co. Ltd.* [2009] FSR 24, the Patents Court held that a claim to a manufacturing process wherein an element was spaced at “a preset distance” from another element was meaningful in the context of the claim; it meant the spacing between these elements was selected by the manufacturer with a specific aim as described in the specification. The term “predetermined size” in the same claim was also held to be clear in context. Hence, if it is clear from the description that these factors are essential to the performance of the invention, they should be made explicit when clarifying the claims.

14.129.1 Although the claims are interpreted in the light of the description, it was held in *IGT/Acres Gaming Inc.’s Application* [2008] EWHC 568 that if a claim seems to bear a meaning that is, in fact, inconsistent with its real meaning when read in the context of the whole document, the claim is obscure and open to objection under s.14(5)(b) because the reader may be misled as to its scope.

14.130 Generalising expressions such as "substantially" or (applied to numerical data) "about" should be construed, both as regards the extent of the monopoly and the relationship between the invention and the prior art, according to the subject-matter and the context. They may be allowable if they do not render the scope of the claims indeterminate. In *PLG Research v Ardon,* [1995] RPC 287 Aldous J. applied the *Catnic* principle in holding that "substantially uniplanar" did not exclude an insubstantial departure from uniplanarity due, for example, to features inherent in manufacture. "Uniplanarity" should be judged on the basis of the eye of the skilled addressee, who would judge a departure by its size and quality. On the other hand, where such generalising expressions are inappropriate, eg a reference to "an alkyl group containing about five carbon atoms", objection should be raised.

14.131 The question as to whether such terms as "back", "front", "above", "upwardly", are allowable or whether they introduce uncertainty into the claim, must be decided upon the facts of the case. Particular care is needed when for example the location of a feature of the invention is defined by reference to apparatus not forming part of the invention claimed or even by reference to a person using the invention, although there will be many instances when such references are rendered clear by the inclusion of expressions such as "when in use", or "when held by an operator".

14.132 Expressions such as "preferably", "for example", "such as" or "more particularly" should be objected to if they cast doubt on the scope of a claim.

14.133 A claim whether independent or dependent, can refer to alternatives provided that this does not make the claim obscure or difficult to construe (see also 14.164). However, such claim formulations should be avoided if, by reason of the large number of alternatives, the generality of the claim is impossible to search in its entirety. Markush claims are an example of this type of claim: such claims set out a number of alternatives (possibly using words such as “selected from the group consisting of …”). They are often used in chemical cases as a way of setting out various functionally-equivalent alternatives in one or more parts of the chemical compound being claimed.

14.134 A claim whose wording suggests that it is appendant to a preceding claim, so that it purports to incorporate all the features of the preceding claim, but which on inspection is found not to be properly so appendant (since, for example, it states that a feature of the preceding claim is omitted or replaced by a different feature, so that the claim is not fully limited by the terms of the preceding claim) may be open to an objection of inconsistency. However a claim which expressly states that it is directed to a modification of the subject-matter of an earlier claim and particularises the modification may be acceptable, provided the scope of the claim is clear. Care should be taken to ensure that a search carried out in respect of a claim which is modified in this way by a later claim has covered the matter claimed in the later claim. (See also 14.164).

14.135 When a claim includes reference letters or numerals used in the description and drawings these should not influence the construction of the claim, but should be taken as a helpful identification of features in the specific embodiment which may help a reader orient himself at the stage when he is trying to work out what the patent is about (*Virgin Atlantic Airways Ltd v Premium Aircraft Interiors UK Ltd* [2010] RPC 8). The only restriction brought about by the inclusion of such reference letters or numerals is that the claim must be interpreted so as to include the specific example (*Rodi and Wienenberger AG v Henry Showell Ltd*, [1966] RPC at page 453). No objection should be raised to the presence of the references. (In contrast applicants for patents under the EPC or the PCT are urged, by Rules 43(7) and 6.2(b) of the respective treaties, to use references in their claims. The PCT rule goes on to say that such references may be removed by a designated Office for the purposes of publication; this is not the practice of the UK Office).

14.136 Although ideally it should be possible to ascertain the scope of any claim of a specification without recourse to other documents, (and certainly without recourse to evidence of what a patentee intended a claim to mean - see *Glaverbel v British Coal Corporation and anr* [1995] RPC 255), the inclusion of a reference to an earlier specification as one of the integers of a claim is not completely precluded. The overriding consideration is the clarity of the claim. A reference to a feature "as described in" an earlier document will not normally be clear in scope. It should also be remembered that if the reference is to a claim of an earlier patent specification, this may subsequently be amended, thereby altering the scope of the claim under consideration. The availability of the other document and inconvenience to a reader should also be borne in mind; in particular, objection should always be raised if the document referred to is in a foreign language. (Whether a reference can be replaced by matter from an earlier specification depends on its date of publication - see 14.85).

14.136.1 Claims defined by an industry standard which could change over time should be objected to under clarity. This was discussed in paragraphs 26-28 of the Hearing Officer's decision in *Bilgrey Samson Ltd's Application*, BL O/577/01.

14.137 Since a trade mark is indicative of the origin of goods rather than of their content or composition, the use of a Trade Mark in a claim should only be permitted where the applicant is able to show that its use is unavoidable and does not introduce ambiguity.

> [If a Trade Mark is used in a claim, RC12 should be added to RC11 (see 14.70-14.71, 19.25-19.26). Senior Examiners may decide to allow a reference to a Trade Mark in a claim without consulting their Deputy Director but Examiners should only allow such references with the concurrence of their senior officer.]

14.138 Claims containing two or more sentences have always been resisted on the grounds of ambiguity. In *Leonard's Application* [1966] RPC 269, it was held that claims consisting of disjunctive sentences would of necessity give rise to uncertainty as to the precise scope of the monopoly sought, but a claim was eventually allowed directed to "an automatic change speed transmission having all the following characteristics in combination ...." followed by numbered paragraphs (each a separate sentence) setting

out the characteristics of the transmission.

CoP 14.139 Claims directed to “Any novel matter ...” or which are similarly directed are unacceptable and should not be filed as they serve no useful purpose: in particular such claims cannot be relied upon to form the sole support for claiming a broad scope of protection in a subsequent divisional application. These claims should be ignored at the search stage and their removal should be required before the application proceeds to grant.

CONCISENESS

CoP 14.140 The requirement that the claims shall be concise refers to the claims in their entirety as well as to the individual claims. The number of claims must be considered in relation to the nature of the invention the applicant seeks to protect. In *Contra Vision Ltd’s Patent* (BL O/079/00) a request to amend the claims was refused partly on the grounds that the proposed amendments would have resulted in sixty-eight independent claims and a four-fold increase in the total number of claims, and thus the claims would not have been concise. A lengthy statement of claim in which the wording of one claim is repeated to an unnecessary extent is open to objection (*Bancroft's Application* 23 RPC 89). It follows that a statement of claim is not allowable if it is framed on the American system to include a long series of claims which are independent of each other yet almost identical in subject-matter. Multiple independent claims of slightly varying but overlapping scope also open up the need for analysis of subject matter common to those independent claims, with the result that plurality of invention may be found (see 14.157-14.168).

14.141 Each claim should cover some area of subject-matter not the subject of another claim, and objection should be raised when two or more claims are coterminous. While the Courts will if possible construe the claims so as to give a different meaning to each one, if little or no difference can be found between two of the claims, this affords no ground for departing from the reasonable and natural meaning of the language.

SUPPORT BY THE DESCRIPTION

14.142 The words “supported by the description” were new in the 1977 Act, replacing the 1949 Act requirement that the claims had to be fairly based on the matter disclosed in the specification. In *Schering Biotech Corp's Application* [1993] RPC 249 Aldous J felt that it was not right to rely on cases decided under the "fairly based" requirement and emphasised the importance of coming to the right decision since a patent, when granted, cannot be attacked on this ground (see 14.152).

14.142.1 The view of the EPO Technical Board of Appeal in *AgrEvo UK Ltd* (T 939/92 OJEPO 6/96) was that "support by the description" means that the technical features stated in the description as being essential features of the described invention must be the same as those used to define the invention in the claims, for otherwise the claims would not be true definitions but mere descriptions. This view that support is purely a drafting matter does not clearly correspond, for example, with the view of Aldous J in *Schering Biotech Corp's Application* [1993] RPC 249 (see 14.149). Thus, until such time as the courts endorse the EPO's interpretation of support in *AgrEvo UK Ltd,* the guidance given below should be followed.

14.143 Most claims are generalisations from one or more particular examples. The extent of generalisation permissible is a matter which must be judged in each particular case in the light of the relevant prior art. Thus an invention which opens up a whole new field is entitled to more generality in the claims than one which is concerned with advances in a known technology. A fair statement of claim is one which is not so broad that it goes beyond the invention nor yet so narrow as to deprive the applicant of a

just reward for the disclosure of his invention. The applicant should be allowed to cover all obvious modifications, equivalents to and uses of that which he has described. In particular, if it is reasonable to predict that all the variants covered by the claims have the properties or uses the applicant ascribes to them in the description he should be allowed to draw his claims accordingly.

14.144 Where there is any serious inconsistency between claims and description, amendments to remove this will be required. For example, the description may state, or may imply, that a certain technical feature not mentioned in the main claim is essential to the performance of the invention. In such a case, the claims should normally be amended to include this feature. If however the applicant can show convincingly that it would be clear to a person skilled in the art that the description was incorrect in suggesting that the feature in question was essential, and if the main claim which implies (by omission) that the feature is not essential was present on the date of filing, amendment of the description may be allowed instead. Another form of inconsistency is that in which the description and/or drawings include one or more embodiments of the invention which appear to fall outside the subject-matter covered by the claim (eg the claims all relate to a control system employing an electric servo-motor and one of the embodiments employs a hydraulic servo-motor as an alternative). Here again either amendment of the claims or of the description and drawings is required to remove the inconsistency and thus avoid any possible uncertainty which could arise later as to the meaning of the claims.

14.145 Where certain subject-matter is clearly disclosed in a claim of the application as filed, but is not mentioned anywhere in the description, it is generally permissible to amend the description so that it includes this subject-matter. When however original claims filed later than the filing date of the application contain matter not present in the description, such matter will need to be deleted. Objection should be raised under s.14(5)(c), rather than under s.76(2) since later-filed original claims do not constitute an amendment of the application (but any subsequently-filed claims do, see 15.54).

14.146 An opening statement or 'consistory clause' setting out the nature of the invention is normally included in the description. The consistory clause may however be omitted if the description indicates explicitly or implicitly and without ambiguity the essential feature of the invention. If, however, the description of the invention contains generalising statements and the specification contains an omnibus claim (see 14.124-14.125) not of the narrow form discussed in *Raleigh Cycle Co Ltd and Anr v Miller and Co Ltd*, 65 RPC 141 then an opening statement defining the invention is necessary. (In the Raleigh Cycle specification the omnibus claim was directed to a generator, "constructed, and arranged substantially as herein described with reference to and as illustrated in the accompanying drawings").

14.147 It is not essential for a statement of invention to be identical in wording with a main claim, but it must not be inconsistent with such a claim. If it becomes necessary for the applicant to restrict the scope of his main claim in order to meet an objection of prior publication any corresponding statement of invention should be similarly restricted as the applicant can then no longer allege the broad statement to be his invention. A claim which is wider in scope than the statement of invention may be open to objection on the grounds that it is not supported by the description.

CoP 14.148 The use of a compact style of consistory clause, which imports a reference to one or more claims into the statement of invention, is to be encouraged since this avoids repetition and removes the necessity for redrafting following amendment of the claims. When the claims are read in their context as part of the description the true scope of the invention should not be in doubt. If such reference includes independent claims care should be taken that they do not import uncertainty into the description of the invention (United Shoe Machinery Application 57 RPC 71).

14.149 In *Glatt's Application* [1983] RPC 122 (see 14.151(a)) it was held that if claims are put forward which cover something which plainly was never within the contemplation of the invention as described in the specification then they lack support. This view was reinforced by Aldous J in *Schering Biotech Corp's Application* (see 14.142) when it was held that the correct approach was to consider the claims in the specification through the eyes of the skilled man in the art, to ascertain what is the invention which is specified in the claims, compare that with the invention described in the specification and thereafter decide whether the invention in the claims is supported by the description. Mere mention in the specification of features appearing in the claim is not necessarily sufficient support. "The word 'support' means more than that and requires the description to be the base which can fairly entitle the patentee to a monopoly of the width claimed." This approach was believed by Aldous J to be consistent with that of the EPO in *Biogen NV v Hoffmann-La Roche & Co. AG* (T301/87 OJEPO 8/90). It is also consistent with the finding of the Court of Appeal in *Biogen v Medeva* [1995] RPC 25 at p 87, regarding the implications of quoting a claim verbatim in the description.

14.150 If it appears that the description is inadequate to support a broad claim, it is possible to argue either that the disclosure is not clear and complete enough or that the claim is not supported by the description. Since however the addition of subject-matter is precluded by s.76(2), the only allowable remedy lies in restriction of the claims, and therefore before grant objection in these circumstances should generally be raised under s.14(5), objection being made under s.14(3) in only the clearest cases. (See also 14.88-14.90).

14.151 The following are examples of cases where the relationship of the claim to the description has been considered:-

- (a) In *Glatt's Application*, [1983] RPC 122, an article for conditioning fabrics in a laundry dryer and comprising a flexible woven or non-woven sheet having on it areas of fabric conditioning composition was described in a way which indicated that it was an essential feature that the material of the sheet be permeable to air. A claim which was silent as to the permeability of the sheet was held by the Patents Court to be not supported by the description (see 14.149).

- (b) In *Universite Rene Descartes* (BL O/147/88) it was decided that to insert into a claim a specific numerical example, not expressly stated in the description, would result in a claim which was not supported by the description. (With regard to the narrowing of a claim to a sub-range not specified before, see 18.69-18.69.1.)

- (c) In *A C Edwards Ltd v Acme Signs & Displays Ltd* [1990] RPC 621 and [1992] RPC 131 it was held that the invention of claim 1 (which was substantially amended pre-grant) was not directed to a different inventive concept than that disclosed in the original application. There was therefore support for the amended claim in the description. (In practice this decision may give support, in certain circumstances, for an intermediate generalisation - the case related to a 7 element digital display in which any required digit could be displayed using flaps which cover/uncover the elements. As described each flap was attached to a baseboard by two studs. The originally filed claim 1 was silent in respect of the studs but the amended claim 1 included, for each flap "a stud". It was held that this limitation to claim 1 "did not disclose use of a single stud any more than did claim 1 of the application". See also 76.15-15.1).

- (d) In *Raychem Ltd's Applications* [1986] RPC 547 the applicant sought to amend claim 1 by deleting the final step in a process and thus claim an intermediate product. It was held that the amended claim would not be supported by the disclosure which clearly disclosed the final step as an essential feature of the invention. It was held that such a claim must also offend against Section 76 (see also 76.17).

Broad or speculative claims

14.152 An applicant does not have to restrict his claims to the specific embodiment described, but the width of the claims must be properly supported by the description of the invention in the specification. A claim can only be supported by an enabling disclosure (*Asahi Kasei Kogyo KK's Application* [1991] RPC 485, at page 536). When claims are broad and speculative, in that their scope extends beyond the description to embrace possibilities the effects of which cannot readily be predetermined or assessed on the basis of what is described, and the description gives merely an indication of the full breadth of scope of the invention but no, or inadequate, directions of how to put it into practice across the range claimed, objection should be raised that such claims are not supported by the description. In *Esau's Application*, 49 RPC 85 a claim for apparatus for influencing substances by means of high frequency electrical energy was refused since it embraced any kind of influence on any kind of substance. Eventually the law officer allowed the claims to be redrafted to cover a process for the aggregation of fine particles from gases or liquids for the purpose of effecting their removal. The law officer's remarks on page 87, lines 42-47 about broad and indeterminate claims are invoked again in *Shell Development Co's Application*, 64 RPC at page 154 and in *General Electric Co Ltd's Application [*1961] RPC at page 24. In *Schering Biotech Corp's Application* (see 14.142), the judge rejected the wider of two alternative claims 1 as unsupported: whereas the invention was the use of a new insert in a vector to produce a polypeptide having a certain activity, passages suggesting that by using that new insert other inserts of unknown code and amino-acid sequence could be found did not provide a description adequate to support a claim to a monopoly covering the other inserts. It was unjustified to claim the use of all vectors producing the required result, where only one vector had been investigated. This followed the judgment in the Court of Appeal in *Genentech Inc's Patent* [1989] RPC 147 concerned with genetic engineering, in which Dillon L J observed (at page 236-7) "the Patent Office ought to have very clearly in mind that it is undesirable to allow claims the object of which is to cover a wide and unexplored field or where there is no disclosure in the specification which is in any way coterminous with the monopoly indicated in the claims." The reasons of the three judges in *Genentech* in finding all claims invalid differed, but they were unanimous that the reason relied on by Whitford J, ie that the claims were not supported by the description, was not a ground for revocation under s.72(1). Mustill L J observed (at page 261) that "grounds of objection have always been prone to overlap, and that the very same factors may lead to an irredeemable flaw in the patentability of the supposed invention, and to an impossibility of framing an application which complies with section 14(5)". Subsequently, in *Chiron Corpn v Organon Teknika* [1994] FSR 202 Aldous J observed that s.72(1)(c) could not provide grounds for attacking a claim where in essence the complaint was one of lack of support; it being important that the effect of s.72(1) should be the same as the equivalent provision applied in many other European countries. In the case of medical inventions having at their heart a medical use (see 4A.16-4A.31), the description should not only identify a condition that may be treated but also demonstrate by reference to tests that the treatment is a reality and not just a possibility (*Hoerrmann's Application* [1996] RPC 341, *Consultant Suppliers Ltd's Application* [1996] RPC 348). However, in *Prendergast's Applications* ([2000] RPC 446) Neuberger J emphasised that rudimentary tests would suffice and that full, detailed and rigorous testing of the drug for the proposed condition is not necessary.

14.153 In *Pottier's Application* [1967] RPC 170 a broad claim to: 'A process for the treatment of hydrated seedlings which comprises subjecting the seedlings to cold shock at a temperature below 0°C for a period sufficiently long to affect the size of the resulting plant', was refused, following *Esau's Application* (see 14.152), because the claim was broad and speculative. The treatment of sugar beet seedlings only was described. Such a claim might be permissible if it were made clear in the description that the conditions set forth in relation to that plant applied to other plants generally; but otherwise the claim would not be regarded as adequately supported unless the description gave a sufficient range of examples, relating to different kinds of plants, to enable a horticulturist to deduce how the process should be applied to virtually any plant. In *Amchem's Products Inc's Patent*, [1978] RPC 271, where claim 1 was directed to a

process for increasing the resistance of any plant to any disease or internal malfunction by treating it with one or other of a number of specified compounds in an amount sufficient to increase the resistance, and the description referred only to protecting tomatoes, cucumbers and potatoes against particular diseases, it was held that the invention claimed had not been sufficiently and fairly described.

14.154 Claims directed to all solutions of a problem are not allowable unless invention lies in the identification of the problem. In *N V de Bataafsche Petroleum Maatschappij's Application*, 57 RPC 65, it was an essential feature of a claim to a process for impermeabilizing and tightening soils etc, that an aqueous dispersion of a bituminous substance forming part of a mixture caused to penetrate the soil and coagulate therein was "suitably stabilized". No general instructions were given in the specification as to how this was to be done and the claim was held to include "every method of achieving that suitable stability by achievement whereof the problem is to be solved" and to be invalid by the same reasoning as that promulgated by Lord Parker in *British United Shoe Machinery Co Ltd v Simon Collier Ltd* 26 RPC pages 48-51. In *Chemische Fabrik auf Aktien's Application*, 45 RPC 403, a claim to a chemical process using "a catalyst" and thus embracing any catalyst which would give the desired result was disallowed. In *David Kahn Inc v Conway Stewart & Co Ltd* [1974] RPC at pages 319-320 it was stated that "A patentee may rightly claim a monopoly wider in extent that what he had invented. If he has discovered a general principle or invented a general method and discloses one way of carrying it out, he may claim all ways of carrying it out, but he is not entitled to claim a monopoly more extensive than is necessary to protect what he has himself said is his invention. He cannot claim all solutions to a problem unless invention lies in identification of the problem".

14.155 A claim in generic form ie relating to a whole class eg of products or machines, may be acceptable even if of broad scope, if there is fair support in the description, and there is no reason to suppose that the invention cannot be worked through the whole of the field claimed. Where the information given appears inadequate to enable the skilled man to extend the teaching of the description to parts of the field claimed, but not explicitly described, by using routine methods of experimentation or analysis, the applicant should be required to show that the invention can in fact be readily applied on the basis of the information given, over the whole field claimed, or, failing this, to restrict the claim to accord with the description. An example of this might be a claim to a specified method of treating "synthetic resin mouldings" to obtain certain changes in physical characteristics. If all of the examples described related to thermoplastic resins and the method was such as to appear inappropriate to thermosetting resins, then restriction of the claims to thermoplastic resins might be necessary.

14.156 A claim may broadly define a feature in terms of its function, even where only one example of the feature has been given in the description, if the skilled reader would appreciate that other means could be used for the same function. For example, "terminal position detecting means" in a claim might be supported by a single example comprising a limit switch, it being obvious to the skilled person that eg a photoelectric cell or a strain gauge could be used instead. In general, however, if the entire contents of the application are such as to convey the impression that a function is to be carried out in a particular way, with no intimation that alternative means are envisaged, and a claim is formulated in such a way as to embrace other means, or all means, of performing the function, then objection arises. Furthermore, it may not be sufficient if the description merely states in vague terms that other means may be adopted, if it is not reasonably clear what they might be or how they might be used.

Reach-through claims

14.156.1 “Reach-through” claims to compounds identified by an assay or screening method with particular properties, and to the downstream uses of such compounds are speculative as the claim covers all compounds possessing these properties when assayed, whether or not they have been specifically identified in the description of the patent. If the relationship between the function of the materials and

their structural features is not defined, identification of all compounds from the assay with the desired properties would require substantial experimentation by trial and error to screen compounds for the desired activity. Therefore “reach-through” claims are both insufficient and unsupported by the description. Furthermore, these claims often give no information about the chemical and physical characteristics of the material possessing the desired activity screened for and will also be unclear.

UNITY OF INVENTION

s.125 14.157 Each claim of a specification defines at least one invention. However the requirements of the Act regarding unity of invention are met if the claims relate to a group of inventions which are so linked as to form a single inventive concept. The question as to whether the inventions are related in this way is not based on rigid rules but rather on broad considerations as to the degree of interdependence between the inventions claimed, and as to the state of the art concerned, as explained in the following paragraphs. The practice to be adopted for dealing with applications considered to lack unity of invention during search or substantive examination is discussed in paragraphs 17.106-17.114 and 18.37-18.41 respectively.

CoP 14.157.1 Multiple inventive concepts should not be included in the same application if they are unrelated to the extent that they will inevitably give rise to a plurality objection.

14.158 When considering unity of invention, regard should be had to the underlying inventive concept of each of the inventions claimed. This concept may be expressed in different ways (see 14.159) and may be implicit rather than explicit. Regard may be had to the purpose and/or result of each invention. One criterion which would be suitable for some sets of claims would be to determine whether the common subject-matter of the claims is novel and involves an inventive step. Other criteria are referred to in the subsequent paragraphs. The lack of novelty or the obviousness of the common subject-matter may be established by citing documentary evidence, but this is not necessary, at least in the first instance, if the common matter is clearly known or obvious. Specifications forming part of the state of the art by virtue of s.2(3) may not be used to demonstrate that common subject-matter is not new.

r.16 14.159 Inventions should be treated as being linked so as to form a single inventive concept where there exists between the inventions a technical relationship which involves the same or corresponding “special technical features”, i.e. features which define a contribution which each of the claimed inventions, when considered as a whole, makes over the prior art. The inclusion of any one of the following combinations of claims of different categories in the same application should be permitted :

- (a) in addition to an independent claim for a product, an independent claim for a process specially adapted for the manufacture of the product, and an independent claim for use of the product; or

- (b) in addition to an independent claim for a process, an independent claim for an apparatus or means specifically designed for carrying out the process; or

- (c) in addition to an independent claim for a product, an independent claim for a process specially adapted for the manufacture of the product and an independent claim for an apparatus or means specifically designed for carrying out the process.

This list of combinations of claims in different categories (process, product, use, apparatus) is not exhaustive, and other combinations should be considered on their merits.

14.159.1 Examiners should use their discretion to determine whether the claims in question share a single inventive concept, any doubt being resolved in favour of the applicant. In *Dow Chemical Company's Application* (BL O/175/83) the hearing officer concurred with the view expressed in EPO Decision T110/82 (OJEPO 7/83) that one of the determining factors is the equitable levying of fees between applicants. However the fact that the subject-matter of two claims cannot be covered by a single search does not necessarily demonstrate that unity of invention is lacking. On the other hand if a single search suffices on a borderline case the benefit of any doubt can be resolved in favour of the applicant.

s.72
s.26

14.160 Plurality of invention is not a ground on which a patent may be revoked, nor may any person, in any proceedings, raise such an objection to the claims of a patent as granted or as amended after grant (see 26.01).

14.161 Claims to separate articles which are inter-related, for example, by being characterised in that they are to be used together, may be regarded as linked to form a single inventive concept. This would be the case with separate claims to two parts of an electrical or other coupling, or to a housing and to contacts to be mounted in the housing, provided they were specifically adapted for one another and have no further obvious application. In particular separate claims may be justified to parts which may be manufactured or sold separately, such as a rupturable container of fuel and a burner adapted to pierce the container when mounted on it; or a container of chemicals to be sprayed which is adapted to be mounted on a carrier, and such a carrier specially adapted for receiving the container; or to a new form of cable and to a sheath stripper particularly adapted to deal with this cable. Another example where there is unity of invention would be a transmitter and receiver which were adapted to be used together, for example by employing a particular novel method of encoding or modulating the signal; however a transmitter and a receiver intended for use with it would be regarded as separate inventions if they could also be used with known receivers or transmitters.

14.162 When a specification discloses a number of distinct surgical, therapeutic or diagnostic uses for a known substance or composition, separate claims to the substance or composition for the respective uses are not, as a general rule, regarded as lacking unity of invention, if there has not been any previous medical use of the substance or composition.

14.163 The fact that the inventions defined in independent claims may be directed to solving the same problem or to implementing the same idea, or that separately claimed processes may lead to the same product, may not be sufficient in itself to confer unity of invention. In particular the fact that a class of chemical intermediates has been prepared solely in order to be converted to particular products may not demonstrate that there is a single inventive concept linking claims to the intermediates and the products. The EPO Technical Board of Appeal held in Decision T35/87 (OJEPO 4/88) that it is necessary for unity of invention between intermediates and end-products that groups of intermediates prepared and oriented towards the end-products be technically closely interconnected with the latter by sharing an essential structural element. Therefore, if intermediate and final products include a common structure which can be considered to be novel and involve an inventive step then claims to the products can relate to a single inventive concept even though separate searches for the products may be necessary.

14.164 There is normally no question of plurality of invention when one claim is within the scope of another, whether by repeating the wording of it or by being dependent on it, even though the additional matter in the narrower claim would have been capable of being claimed as a further invention. Where however a claim is presented as dependent on another but in fact is not limited to the invention of the other claim, for example, by directing a claim to an apparatus as suitable for use in a claimed system, or by stating that one or more integers of the other claim are omitted or are replaced by other features, there is the possibility of plurality of invention. Likewise when alternatives are specified in a single claim, the claim should be mentally rewritten as a series of

independent claims which can then be assessed for unity of invention in the usual way. A plurality objection may also be raised if an independent claim is clearly unduly broad and speculative and not new or inventive, and is apparently merely a device for giving an impression of unity of invention between otherwise unrelated dependent claims (see 17.66 and 17.110).

14.165-167 [deleted]

14.168 Where an applicant has discovered a useful property in a group of chemically related compounds, some of which are known, claims to the new use (subject to the provisions of s.4A(1)), to compositions containing the compounds for such use, and to any of the compounds that are novel per se and to their method of preparation, are considered to form a single inventive concept provided that all of the compounds, whether novel or known, possess the common characterising property giving rise to the use.

Section 14(7)

The purpose of the abstract is to give technical information and on publication it shall not form part of the state of the art by virtue of section 2(3) above, and the comptroller may determine whether the abstract adequately fulfils its purpose and, if it does not, may reframe it so that it does.

s.14(2)(b) and (c)

14.169 The abstract is not part of the specification, and it is clear from s.125(1), which refers to the claims being interpreted by the description and any drawings contained in the specification, that it cannot be used to give assistance in determining the extent of the protection conferred by the claims. The form and content of the abstract are governed by r.15.

s.97(1)(a)
s.15(5)(a)

14.170 If an abstract fails to meet any requirement of r.15 then it may be amended by the examiner, using the power given to the comptroller by s.14(7). Although amendments made by the examiner do not form a part of the application as filed, it is the amended form of the abstract that is included in the published 'A' document, see 16.08. (There is no appeal to the Patents Court from a decision of the comptroller under s.14(7)). If however the abstract as filed clearly fails to meet the dictionary definition of an abstract (ie a brief statement of the chief points of a larger work), for example when it is little more than a title, then objection should be raised that no abstract has been filed and the applicant asked to remedy this. If the time allowed for filing the abstract (see 15.50) has already expired (including any extension allowed under r.108), the application will be taken to have been withdrawn (see 15.55).

[An objection that the applicant has failed to file anything that meets the dictionary definition of an abstract should only be raised in the clearest cases. The desirability of giving every help to private applicants should be borne in mind.]

r.15

14.171 The purpose of the abstract is to provide technical information about the patent application, and so the abstract should reflect the content of the specification. However, in reality, matter is sometimes disclosed in an abstract which is not disclosed in the specification as filed. Following the decision of the Patents Court in *Abbott Laboratories Ltd. v Medinol Ltd* [2010] EWHC 2865 (Pat) it is important to note that the specification **cannot** be amended to incorporate such matter from the abstract into the description or claims, whether or not the abstract was filed on the day of filing. This decision (which overturns previous Office practice as established in *ARMCO Inc's Application* BL O/84/85 – see 76.08.2) has major implications for applications in which the abstract contains significant material not disclosed elsewhere in the application. In *Abbott Laboratories Ltd. v Medinol Ltd*, Arnold J held that s.14(7) should be interpreted as meaning that the purpose of the abstract is to give technical information **only** (by reference to the similar Art.85 EPC and associated EPO case law), and so is irrelevant for the purpose of determining the disclosure of the application as filed. The disclosure of

the abstract, even if filed on the date of filing, cannot therefore be considered for the purpose of determining under s.76 whether an amendment adds matter extending beyond the disclosure of the application as filed. It is not possible to incorporate this material into the description or claims by subsequent amendment, and so it will not be possible for the applicant to claim this matter, or to rely on this disclosure to provide support for the claims or to overcome an objection of insufficiency. The applicant should therefore be informed of this situation and its implications as soon as possible, so that they may have the opportunity to withdraw and re-file the application with the matter in question included in the specification.

In addition, Arnold J said that the purpose of the abstract is to provide a summary of the disclosure of the specification, and so if it does not mean the same thing as the specification then it must be assumed to be an inaccurate summary. Therefore, when re-framing the abstract, the examiner should delete any material which does not appear elsewhere in the application, regardless of whether the abstract was filed on the day of filing or later.

[Inclusion of material in the abstract but not in the specification is most likely in applications from private applicants, and so examiners dealing with applications from private applicants should be particularly alert to this possibility. This problem is most likely to come to light when the search examiner scrutinises and if necessary re-frames the abstract. If the search examiner discovers significant material in the abstract which is not disclosed elsewhere in the application, he should inform the applicant of this problem and its implications as soon as possible. This may be done by including an appropriate warning in the search letter. However, if the matter disclosed solely in the abstract is likely to be critical for the grant of a patent, then it may be more appropriate to issue a letter to the applicant under the ABS or ABCSE procedure as set out in 17.94.5-9 (if this has not already been done by the PAU – see below). This letter should give the applicant the options to withdraw the application and re-file (with a refund of the search fee), or to continue with the application.]

[Applications from private applicants are sent to the Private Applicant Unit (PAU) for consideration before preliminary examination and search. PAU examiners will not routinely scrutinise abstracts to determine whether they contain matter not present elsewhere in the application. However, if the PAU examiner becomes aware that there is a significant disclosure in the abstract which is not present elsewhere in the application, then he may issue an ABS or ABCSE letter to warn the applicant of the problem.]

14.171.1 It appears to follow that a consequence of the decision that the abstract is to be ignored when considering the disclosure of the application is that an applicant cannot rely on matter contained solely in an abstract for the purposes of claiming priority. (See 5.20-5.25)

14.172 It follows from s.14(7) that subject-matter in the abstract but not in the specification can only be cited against an invention which has a priority date later than the date of publication of the application containing the abstract.

CoP r.15(1)

14.173 The abstract must have a title which encapsulates the invention. The abstract title is of considerable importance to a searcher and to the public at large since it is the only title which appears on the front of the A document and it is the title which appears in the Journal in the lists of applications published and which is used in the Names of Applicants Index.

[If there is no abstract title the search examiner should provide one in PROSE for translation into OPTICS without raising objection under r.15(1). It is not necessary to add the abstract title to the page containing the abstract. No other title should be entered, and because of restrictions inherent in OPTICS, the title should not exceed 158 characters (including spaces) (OM(P) 5.2.5) or include

subscripts, such as present in chemical formulae. No abstract title (or anything else in lieu of the title) should be entered in PROSE if an abstract has not been filed (OM(P) 5.2.3, 5.2.5).]

CoP 14.174 The abstract title can be different from the title given to the application on filing. The latter is unlikely to make a suitable abstract title if, as is generally the case, it is expressed in broad terms to avoid disclosure of the invention in the Journal before the application itself is published. If the abstract title is unsuitable (for example if it is too long or too vague) the examiner should amend it. Examples of titles which are regarded as unsuitable are

- (a) any title including such expressions as "improvements in or relating to" or "and the like"
- (b) titles such as "chemical compound" or "control circuit", which give little or no indication of the invention
- (c) over-long titles which are apparently intended merely to indicate that the specification contains claims in certain categories (process, apparatus etc), eg "Gas-permeable seamless pipe structure and method and apparatus for production thereof", or "Method of bleeding a hydraulic system and means therefor"
- (d) over-long titles which contain matter, for example relating to possible fields of application of the invention, more properly to be found in the body of the abstract
- (e) titles including a trademark (see 19.24).

14.174.1 When amending an abstract title to make it an effective search tool, care should be taken to avoid adding matter not in the specification. Before amending an abstract title, the search examiner should read enough of the description to be certain that the alterations are accurate and that the amended title encapsulates the invention.

r.15 14.175 The text of the abstract should comply with r.15(2), (3) and (7), which read:-

(2) The abstract must contain a concise summary of the matter contained in the specification.

(3) That summary must include—

(a) an indication of the technical field to which the invention belongs;

(b) a technical explanation of the invention;

(c) the principal use of the invention.

(7) The abstract must not contain any statement on the merits or value of the invention or its speculative application.

CoP 14.176 The abstract should be primarily directed to that which is new in the art to which the invention pertains. Clearly an abstract which describes only the background or prior art or does not adequately reflect the technical disclosure in the specification is inappropriate. If the invention is in the nature of a modification to a known apparatus, process, product or composition, the abstract should, while making clear the context of the invention, be directed to the technical features of the modification. If the invention is of a basic nature the entire technical disclosure may be new in the art and the abstract should be concerned with the entire disclosure. In either case it should be clear from the abstract where the inventive contribution to the technical field lies by indicating this in the opening sentence(s). The main specifics about the invention and how it can be

practised should then be set out.

CoP 14.177 The abstract should be drafted so that it constitutes an efficient instrument for the purposes of searching and disclosure in the particular technical field, in particular by making it possible to assess whether there is a need to consult the specification itself. The scope of the abstract, and the words used in it, should be selected to ensure that retrieval from electronic databases is likely when searching similar applications at a later date.

14.178 The check list in the "WIPO Codes and Guidelines" provides a useful guide for the writer or reviser of an abstract. It indicates that, provided that the specification contains the information, the abstract should include the following:-

- (a) where the invention is an article, its identity, use, construction, organisation and method of manufacture;
- (b) where the invention is a chemical compound, its identity (structure if appropriate), method of preparation, properties and uses;
- (c) where the invention is a mixture, its nature, properties, use, essential ingredients (identity, function), proportions of ingredients (if significant), and preparation;
- (d) where the invention is a machine, apparatus or system, its nature, use, construction, organisation and operation;
- (e) where the invention is a process or operation, its nature and characterising features, material and conditions employed, product (if significant), and the nature of a relationship between the steps, if more than one.

This checklist is for guidance only. In particular the content of the abstract should be determined by the new technical disclosure of the specification rather than by the nature of the claims.

14.179 Where features are merely preferred or optional, the abstract should avoid any implication that they are essential to the invention. If the disclosure involves alternatives, the abstract should deal with the preferred alternative and identify the others, if this can be done succinctly; if this cannot be done, it should mention that they exist and whether they differ substantially from the preferred alternative. Where the claims relate to more than one invention, the subject matter of the further inventions should be included in the abstract, even though no search may yet have been carried out in respect of these inventions.

14.180 Where the specification contains extensive numerical data or tables, eg relating to physical properties or compositions, the presence of such data, and their nature, should be indicated in the abstract, if this can be done briefly.

14.181 The general nature of a chemical compound or composition should be given as well as the use thereof, eg "the compounds are of the class of alkyl benzene sulfonyl ureas, useful as oral anti-diabetics". For processes, the type of reaction, reagents and process conditions should be stated, generally illustrated by a single example. Wherever applicable, the chemical formula should be given which, among all the formulae contained in the specification, best characterises the invention.

[When a search examiner wishes the abstract to be accompanied by a formula (other than one which can be typeset in normal typescript), he will generally have to provide a copy for use by the printer in preparing the front page of the 'A' print.

For this purpose, the examiner should provide a document on the dossier

containing a copy of the formula in question from a suitable page of the description or claims. This document may be created and imported onto the dossier electronically; or alternatively, created manually and subsequently scanned on to the dossier. A minute should also be imported onto the dossier giving clear instructions to Formalities concerning the document's inclusion in the publication sub-file.

[Deleted]

The quality of the copy of the formula will be checked in Publishing Section for suitability for reproduction by the printer and a fresh copy will be made there if necessary. The above action is of course unnecessary if the abstract already includes an acceptable representation of the formula or a suitable formula drawing (see 15A.09) is available.]

r.15(2) 14.182 An abstract should normally contain not more than 150 words, as it is unlikely to be considered to be concise if it extends beyond 150 words. However, if a longer text is considered essential, there is space on the front page which will accompany the printed specification for approximately 200 words. Abstracts should therefore contain 200 words at the very most (including any reference numerals). Unnecessary phrases such as "the invention relates to" or "and the like" may be deleted, and an unduly long introductory statement which only indicates what is old and well-known may be curtailed or deleted. While the removal of such superfluous matter is of particular importance when the abstract is longer than 150 words, it may also be deleted even if the abstract is short.

14.183 It is not necessary for the abstract to indicate the kind of protection sought by the claims. Thus for example if an apparatus has been described in the abstract and the specification includes claims to a method of using the apparatus and/or to an article produced by the apparatus, there is no need for the abstract to indicate this if the technical features of the method and article are implicit in the description of the apparatus.

CoP 14.184 The legal phraseology or the sentence structure used in patent claims, should be avoided in abstracts. Thus an abstract that is identical to, or closely resembles, an independent claim should not be filed, nor should an abstract use words commonly associated with patent claims such as "said" and "means".

14.185 The search examiner must keep in mind that the abstract is an important search tool and if it is unsatisfactory for that purpose he should amend it. A critical appraisal of the abstract by the search examiner is therefore necessary although this should not involve a rigorous analysis to determine how far r.15 is complied with. He should not attempt extensively to rewrite it for simply stylistic reasons. Thus if an abstract does not reflect the main contribution to the art in an application (eg where the claim is heavily anticipated or badly drafted) the search examiner should amend the abstract to incorporate that contribution. It may also be necessary to add to an otherwise adequate abstract one or two phrases to ensure that it reflects all of the matter in the application which has been classified including any further inventions.

[Any required amendments should made to the copy of the abstract provided on PROSE.]

[Deleted]

14.186 When reframing an abstract to make it an effective search tool, care should be taken to avoid adding matter not in the specification (but see 14.171 for the procedure where the abstract as filed includes matter not present in the specification). Before amending an abstract, the search examiner should read enough of the description to be certain that the alterations are accurate. The minimum to be read depends on what is necessary for the search examiner to obtain a clear understanding of the essential

nature of the invention. Where a statement of the background of the invention is included in the abstract it should not normally be deleted, since it will frequently help to explain the solution provided by the invention.

14.187 The search examiner should resist the temptation to amend an abstract which adequately fulfils its purpose merely because he would have written it differently. Nor should subject-matter be deleted merely because it does not appear to be useful search material in the heading(s) in which the application is classified. In particular, matter relating to the use of the invention may appear to be of no relevance to the s.17 searcher, but may well be useful to other readers.

r.15(4)-(6) 14.188 Drawings particularly for the abstract are not required and should not be filed. The applicant is required to indicate on the abstract which figure, or, exceptionally, figures of any drawings of the specification should accompany the abstract when published. If he has not done so it is up to the search examiner to decide which figure(s) should be used and to record this as outlined in 14.190. The search examiner may decide that one or more figures other than those suggested by the applicant may be used instead or additionally if he considers that they better characterise the invention. Normally not more than one figure should accompany the abstract. Exceptionally two figures may be used provided that, when sufficiently reduced in size to be accommodated on the front page of the application, they, together with the reference characters thereon, would still be readable.

[No objection should be raised under r.15(4) in the event that no figure has been indicated on the abstract. In such circumstances the search examiner should decide upon a suitable figure.]

14.189 It should be clearly apparent from the abstract what the or each accompanying figure represents. To aid identification of features mentioned in the abstract, relevant reference numerals which appear in the selected figure(s) should be freely used in the abstract. Numerals which appear only in other drawings should normally not be used, although exceptionally, a numeral which is considered necessary for an understanding of the abstract but appears only in these other drawings, may be referred to. Such reference should be bracketed, eg (29, Fig 16), without any additional wording such as "see" or "not shown". When this expedient is adopted it should be ensured that reference numerals which do appear in the abstract drawing(s) are without brackets.

14.190 The search examiner should revise or check the abstract and record the number of the figure which is to accompany it (see 14.188) on the abstract itself as well as in the “Fig. Ref.” field on PROSE (see below). If no figure is to accompany it, he should record this.

[The figure number should appear separately on the page to the text of the abstract. It is not necessary to put brackets around either the figure number or the application number, although this may be done to provide additional clarity.

[The figure(s) to accompany the abstract should be recorded using PROSE by entering the figure number(s), the word "FIG" where it is a single unnumbered figure, the abbreviation "RTA" (ie 'refer to the abstract') when special instructions are needed or the word "NONE" when no figure is to accompany the abstract.

In some instances (particularly chemical cases), a figure or formula may be included in the abstract itself, rather than separately within the drawing pages. In these cases, the abbreviation "RTA" should be recorded on PROSE, and no further information need be added to the abstract page itself; in such situations do **not** write “NONE” or “No Figure” either in PROSE or on the abstract text page.

In exceptional cases where part of a figure or a combination of two or more figures is required for the abstract, a document containing a copy of the relevant

figure(s) should be provided on the dossier and annotated appropriately. This document may be created and imported onto the dossier electronically; or alternatively, created manually and subsequently scanned on to the dossier. A minute should also be imported onto the dossier giving clear instructions to Formalities concerning the document's inclusion in the publication sub-file.]

[Deleted]

14.191 Amendments to the abstract submitted before s.16 publication should be taken into account by the search examiner when deciding on the text to be published. Since however when the specification of the patent is published after grant it is not accompanied by an abstract, amendments to the abstract filed after s.16 publication serve no purpose, although of course they remain on the file and are open to public inspection. If however the applicant draws attention to an error in the printed abstract which is such as to render the abstract wrong or misleading in a material respect, an erratum may be issued provided that the error arose during printing or during reframing of the abstract by the search examiner. (See 16.33).

[***Section 14(8)*** *Repealed*.]

14.192 Subsection (8) has been repealed, see 14.91.

[14.193-14.198 Deleted]

Section 14(9)

An application for a patent may be withdrawn at any time before the patent is granted and any withdrawal of such an application may not be revoked.

14.199 An intimation of withdrawal will not be acted on by the Office unless it is clear and unqualified and in writing, and from a person with the authority to make the withdrawal. The withdrawal request may be by paper or electronic communication.

14.199.1 Directions prescribing the form and manner in which email messages withdrawing applications should be delivered to the Office were published in the PDJ No.5946 on 7 May 2003 and came into effect from 8 July 2003. These directions are reprinted in full in the "Relevant Official Notices and Directions" section of this Manual. Email withdrawal requests should be titled "Withdrawal of patent application number GBYYXXXXX.X" and sent to withdraw@ipo.gov.uk and include in the main body of the message a clear statement of withdrawal and indication that the sender is authorised to make the withdrawal. This email address should not be used for other proceedings under the Act or any other correspondence relating to business carried out by the Office. The email should be in plain text (RFC822-compliant); messages in MS-TNEF/RTF or HTML formats and messages that are encrypted or digitally signed will not be accepted. If an email request does not comply with the directions, the Office may treat the message as not having been delivered. The time and date of receipt of the email message will be taken as the time/date stamp the message receives when it enters the Office internal email system, which will not be the exact time/date it was sent. A return email message will be sent by the Office to confirm receipt of the withdrawal request; the request cannot be treated as being delivered unless this acknowledgement has been sent. (See also 14.205)

[When an application has been withdrawn (or has been refused or treated as having been withdrawn or refused) the Formalities manager should add the appropriate label to the cover of the dossier, enter "Fmls comp – Terminated" into the History Action Log, and carry out the appropriate OPTICS action (so that, regardless of whether or not the application has been published under s.16, the

termination is advertised in the Journal).]

[Deleted]

[Where on any application for which a valid notification of withdrawal is received, there is a Form 9 (and fee) already lodged but no copy of the external search report on file and/or a Form 10 (and fee) already lodged but no copy of the first substantive examination report on file, then before taking any other action the formalities examiner should refer the application to the appropriate Deputy Director for any action required in the examining group. The application should then be referred back to the relevant formalities manager for completion of the termination action as set out above and refund of the Form 9 and/or form 10 fee(s) in appropriate circumstances (see 14.207).]

14.200 In *General Motors Corporation (Longhouse's) Application* [1981] RPC 41 a letter withdrawing the application was written, on instructions from the applicant company in the United States, by a technical assistant under the control of the authorised agent (both being employees of the applicant). Subsequently, the applicants having changed their minds, the authorised agent wrote requesting reinstatement of the application. Refusing the request, the hearing officer held that the technical assistant had the implied authority, by virtue of his employment, to make the withdrawal. In *Siemens Medical Systems Inc.'s Application* (BL O/063/00) it was held that withdrawal takes place as of the date on which the withdrawal request is filed, and not on the date that the Register is updated to show the withdrawal.

14.201 When there is more than one applicant a request for withdrawal will not be effective if made by only some of the applicants unless it is clear that the remaining applicants have given them the express authority to do so.

14.202 It is not necessary for a request to use the words "withdrawal" or "withdrawn"; it is sufficient if the statement expresses, in whatever terms (for example by referring to "abandonment") positive intention to terminate the application forthwith. However a statement of intention, such as that the applicant is no longer interested in prosecuting his application, is not sufficient. For example, an applicant may state that he does not intend to file a request for substantive examination; such an indication is not binding on him, and he may change his mind and file the request at any time within the prescribed period. Similarly an applicant may indicate that he does not intend to reply to a report issued under s.18(3). In such cases no specific action should be taken, the application being left to await further action by the applicant or until it is, in due course of time, treated as having been withdrawn or refused.

14.203 If the applicant or agent has indicated that he does not intend to proceed (or some such non-committal wording), but has not unequivocally and in writing withdrawn the application, and some course of action by the Office, such as search, early publication, substantive examination or grant, is pending, he should be asked to indicate in writing his clear intentions. If no clear withdrawal is forthcoming the application will proceed. If the applicant or agent indicates over the telephone that he wishes to withdraw an application, he should be told to express his intention in writing. If no letter or email is received the request will not be acted on.

14.204 If at any time the applicant or agent purports to effect a conditional withdrawal, he should be requested to file an unqualified statement of withdrawal, failing which the application is regarded as still in being.

14.205 If an application is withdrawn before preparations for its publication have been completed it will not be published under s.16(1) (see 16.07). Thus if an applicant wishes to prevent publication of his application he must unequivocally withdraw it before preparations for publication have been completed (see 16.02). The directions prescribing the form and manner of delivery of email messages to the Office to withdraw applications (see 14.199.1) state that if an application is to be withdrawn in time to

prevent publication, the email message must be received by the Office up to 23.59 on the day before preparations for publication are complete; if the email messages is received after that time, it will be too late to prevent publication. If a letter requesting that an application be withdrawn and not published is received too late to prevent publication and it appears likely, even if not explicitly stated, that the applicant intended to withdraw only if publication were not going to take place, he should be asked to state clearly his intentions.

[When a request for withdrawal is received for an application already in the A-publication cycle, the divisional publication liaison officer should be contacted immediately. When a request for withdrawal is received before publication but after preparations for publication are complete (as determined by 16.02), the relevant formalities group will issue an appropriate letter depending on whether or not withdrawal appears to be conditional on prevention of publication. In each case subsequent action will depend on any response from the applicant.]

r.107 14.206 Likewise if he wishes to withdraw his application before grant he must do so before the issue of the letter informing him of the grant. If a written request for withdrawal is received in the Office before the issue of the grant letter but not in time to prevent issue of the letter, then the grant may be rescinded (see 18.89-90).

[When a written request for withdrawal is received for an application already in the grant cycle, the publication liaison officer for your division should be enlisted immediately. The publication liaison officer will call a meeting of all interested parties to decide whether withdrawal is appropriate, and take the necessary steps to effect withdrawal, including communication with the applicant to formally rescind the grant by letter when the grant letter has been sent.]

14.207 If an application in respect of which Form 9A or Form 10 has been filed is withdrawn before the report under s.17 or s.18 respectively is issued, the fee paid may be refunded. Such a refund is however a matter of discretion and not a right.

[The refund is authorised by the appropriate formalities group.]

14.208 A withdrawn application may be used for the purposes of claiming priority for a later application, subject to the provisions of the Act (see 5.04).

Section 14(10)

Subsection (9) above does not affect the power of the comptroller under section 117(1) below to correct an error or mistake in a withdrawal of an application for a patent.

14.209 This subsection was added by the Regulatory Reform (Patents) Order 2004, and establishes that, although section 14(9) provides that a withdrawal may not be revoked, the withdrawal may be corrected under the provisions of section 117. This provision came into force on 1 January 2005 and applies to applications filed both before and after this date. If the application in question had been published under section 16 and the fact of withdrawal had also been published, special provisions apply (sections 117(3), (4) and 117A).