

Section 11: Computer programs

(1) A computer program is not an invention and not a manner of manufacture for the purposes of this Act.

(2) Subsection (1) prevents anything from being an invention or a manner of manufacture for the purposes of this Act only to the extent that a claim in a patent or an application relates to a computer program as such.

(3) A claim in a patent or an application relates to a computer program as such if the actual contribution made by the alleged invention lies solely in it being a computer program.

Examples

A process that may be an invention

A claim in an application provides for a better method of washing clothes when using an existing washing machine. That method is implemented through a computer program on a computer chip that is inserted into the washing machine. The computer program controls the operation of the washing machine. The washing machine is not materially altered in any way to perform the invention.

The Commissioner considers that the actual contribution is a new and improved way of operating a washing machine that gets clothes cleaner and uses less electricity.

While the only thing that is different about the washing machine is the computer program, the actual contribution lies in the way in which the washing machine works (rather than in the computer program per se). The computer program is only the way in which that new method, with its resulting contribution, is implemented.

The actual contribution does not lie solely in it being a computer program. Accordingly, the claim involves an invention that may be patented (namely, the washing machine when using the new method of washing clothes).

A process that is not an invention

An inventor has developed a process for automatically completing the legal documents necessary to register an entity.

The claimed process involves a computer asking questions of a user. The answers are stored in a database and the information is processed using a computer program to produce the required legal documents, which are then sent to the user.

The hardware used is conventional. The only novel aspect is the computer program.

The Commissioner considers that the actual contribution of the claim lies solely in it being a computer program. The mere execution of a method within a computer does not allow the method to be patented. Accordingly, the process is not an invention for the purposes of the Act.

(4) The Commissioner or the court (as the case may be) must, in identifying the actual contribution made by the alleged invention, consider the following:

- (a) the substance of the claim (rather than its form and the contribution alleged by the applicant) and the actual contribution it makes:
- (b) what problem or other issue is to be solved or addressed:
- (c) how the relevant product or process solves or addresses the problem or other issue:
- (d) the advantages or benefits of solving or addressing the problem or other issue in that manner:
- (e) any other matters the Commissioner or the court thinks relevant.

(5) To avoid doubt, a patent must not be granted for anything that is not an invention and not a manner of manufacture under this section.

1. The effect of section 11 is that computer programs “as such” are not an invention and are not a manner of manufacture for the purposes of the Patents Act 2013. On this basis, computer programs “as such” cannot be granted a patent (s11(5)). This applies regardless of whether an alleged invention claimed in a patent application meets the other requirements for grant of a patent.

2. Section 11 will generally apply to any claimed invention that involves or is implemented by a program running on some sort of computer.

3. Section 11 includes examples of processes involving computer programs that are or are not inventions. The status of examples such as these are set out in s5(5) of the Act:

“An example used in this Act has the following status:

- (a) the example is only illustrative of the provision to which it relates and does not limit the provision; and
- (b) if the example and the provision to which it relates are inconsistent, the provision prevails.”

4. The examples are intended to be a guide only, and are not binding. Every patent application is different and each application must be considered in light of the facts of that application.

5. Section 1(2) of the United Kingdom Patents Act 1977 also provides that computer programs ‘as such’ are not an invention. The guidelines relating to section 11 are based on United Kingdom law and practice, and draw heavily from the Manual of Patent Practice published by the United Kingdom Intellectual Property Office, in particular the section on patentable inventions, ~~see~~ <http://www.ipo.gov.uk/practice-sec-001.pdf>.

[Patents: Manual of Patent Practice – Gov.uk](http://www.ipo.gov.uk/practice-sec-001.pdf)

Determining whether an alleged invention relates to a computer program ‘as such’

6. Under s11(3) an alleged invention relates to a computer program ‘as such’ if the ‘actual contribution’ made by the alleged invention lies solely in a computer program. Section 11(4) sets out criteria to be considered when determining the ‘actual contribution’ made by the alleged invention.

7. The criterion set out in s11(3) is based on the test (“the Aerotel test”) set out in paragraph 40 of the judgment of the England and Wales Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd & Ors Rev* [[2006] EWCA Civ 1371] (“*Aerotel/Macrossan*”). This sets out a four step test for determining whether or not a claimed invention falls within the matter excluded from patentability in s1(2) of the United Kingdom Patents Act 1977.

8. The effect of the criterion set out in s11(3) is to codify the first three steps of the Aerotel test in the Patents Act 2013. The four steps of the Aerotel test are as follows:

- i. Properly construe the claim;
- ii. Identify the actual contribution;
- iii. Ask whether it [the actual contribution] falls solely within the excluded subject matter;
and
- iv. Check whether the actual or alleged contribution is actually technical in nature.

9. Although the first step (i) of construing the claimed invention is not explicitly set out in the Act, this is practically inevitable in every case, as it is essential to understand what it is that is claimed and the scope of the monopoly sought.

10. The fourth step (iv) of the Aerotel test requires a ‘check’ to determine whether the contribution identified in step 3 is a “technical” contribution. The terms ‘technical’ and “technical contribution” are taken from UK and EPO jurisprudence. This approach has not been adopted in New Zealand law, so the fourth step of the Aerotel test has no relevance in New Zealand.

Properly construe the claim

11. In order to decide whether an alleged invention relates to a computer program “as such” examiners must first determine the invention for which the applicant is actually seeking a monopoly. This invention is defined by the claims. The rules of claim interpretation to be followed in New Zealand are set out by the New Zealand Supreme Court in *Lucas v Peterson Portable Sawing Systems Ltd* [2006] 3 NZLR 721 (SC) [25] to [28]. The claimed subject matter will be assessed having regard to the content of the patent specification and the approach is based on the approaches set out by the English courts.

Identifying the contribution

12. The factors involved in identifying the actual contribution made by the claims were outlined in paragraph 43 of *Aerotel/Macrossan*:

“The second step – identify the contribution - is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable – it is an exercise in judgment probably involving **the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge** perhaps best sums up the exercise. The formulation involves looking at **substance not form** – which is surely what the legislator intended.”

13. In determining the contribution, the examiner is not bound to accept what the applicant says the contribution is – the test must be what contribution has actually been made, rather than what the inventor says has been made. See paragraph 44 of *Aerotel/Macrossan*. This point is reinforced in paragraphs 23 – 24 of *IGT/Acres Gaming Inc, Re* [2008] EWHC 568 (Pat) which states that the examiner is not bound to accept what the applicant says, and is entitled to determine whether the alleged contribution is known or obvious, typically by performing a search.

14. This means that the examiner’s knowledge of the prior art will play a part in determining what the contribution is. However, it does not follow from this that the contribution will always be defined by the new and inventive features of the claim.

15. When assessing the contribution, examiners should not consider prior art that forms part of the prior art base only by virtue of s8(2).

16. There is, however, no requirement for the examiner to make a formal search when determining the contribution. In *CPFH LLC* [2005] EWHC 1589 (pat) at paragraph 96 it was stated that:

“examiners are “entitled to make use of their specialist knowledge” to identify the contribution and are not bound to rely on prior art searches”

17. Pumfrey J stated in *Shopalotto.com Ltd’s Application* [2006] RPC 7 paragraph 12 that:

“certain features may be “so notorious that a formal search is neither necessary nor desirable”, and that examiners are “entitled to use common sense and experience” to make that determination.”

18. This was reinforced in *WMS Gaming Ltd’s Application* (BL O/260/13), which concluded in paragraph 60 that:

“examiners are able to use their own judgement to determine whether to perform a search, and may accordingly”

19. Section 11(4) of the Act sets out factors the Commissioner must take account of when determining the actual contribution made. These are:

- i. the substance of the claim (rather than its form and the contribution alleged by the applicant) and the actual contribution it makes;
- ii. what problem or other issue is to be solved or addressed

- iii. how the relevant product or process solves or addresses the problem or other issue
- iv. the advantages or benefits of solving or addressing the problem or other issue in that manner
- v. any other matters the Commissioner or the court thinks relevant

20. Factors (ii), (iii) and (iv) are essentially the factors set out in paragraph 43 of *Aerotel/Macrossan*. These were summed up by Jacob LJ as answering the question: 'what has the inventor really added to human knowledge'. Jacob LJ also went on to observe that this involves looking at substance not form – 'which is surely what the legislator intended'.

21. These factors are intended to assist in identifying the contribution, but do not, in themselves, actually define it.

Substance of the claim

22. It is the substance rather than the form (*Virginia-Carolina Chemical Corp's Application* [1958] RPC 35 at 37) of the claimed invention that forms the 'actual contribution'. That is, the actual contribution may not be what is claimed in the sense of the literal words used by the patent applicant/inventor. The substance of the claim generally cannot be changed by changing the form of the claim.

23. For example, an applicant may claim an otherwise conventional computer containing a computer program and argue that what the applicant has invented is a computer. In this case, the 'substance' of the invention is the computer program, not the computer. Similarly, claims to a computer program when contained on a carrier such as an optical disk (so-called "Beauregard" claims) are effectively claims to the computer program, not the carrier. See *Bloomberg LLP and Cappellini's Applications* [2007] EWHC 476 (Pat), where Pumfrey J stated (at paragraph 9) that:

"[a] claim to a programmed computer as a matter of substance is just a claim to the program on a kind of carrier".

24. Under US patent law, a Beauregard claim is a claim to an article of manufacture embodied as instructions on a computer readable medium, from the US Federal Circuit Court decision *in In re Beauregard* 1583 (Fed. Cir. 1995).

25. In a similar vein, Fox LJ said in *Merrill Lynch's Application* [1989] RPC 561 (page 569):

"it cannot be permissible to patent an item excluded by section 1(2) under the guise of an article which contains that item - that is to say, in the case of a computer program, the patenting of a conventional computer containing that program. Something further is necessary."

26. Claims involving computer programs often include otherwise conventional computer hardware. However, the United Kingdom courts have taken the view that, in such cases, the conventional hardware does not form part of the contribution. The provisions of section 11(1) of the Act cannot

be avoided by claiming conventional hardware when programmed in a particular way. See paragraph 44 of *Aerotel/Macrossan*.

27. What is important is the idea or invention that is central to the claims, rather than the nature of a particular embodiment. The claimed invention must be assessed as a whole to see whether or not it makes an advance that is not solely a computer program.

28. However, if some embodiments covered by a claim are computer programs as such, while other embodiments covered by the claim are not, this will not make the claim patentable. See the observation of Floyd J in paragraph 23 of *Kapur v Comptroller-General of Patents* [2008] EWHC 649 (Pat).

The problem or other issue to be solved or addressed

29. An invention is generally intended to solve a problem. The problem and the solution devised by the inventor will usually be relevant in assessing the actual contribution made by the invention. The problem and its solution may be explicitly defined in the patent specification, but this will not always be the case. Sometimes they may be derivable from the nature of the invention.

How the product or process solves or addresses the problem

30. In some cases, this can be determined from the features of the claim. However, in most cases, it will require consideration of what the features of the claim, when taken together, actually do, and how this deals with the problem the invention is intended to solve.

The advantages or benefits of solving or addressing the problem or other issue in that manner

31. These will usually be related to the problem to be solved. The advantages or benefits are not confined to solving the problem, but also to the advantages or benefits of the particular solution devised by the inventor.

Any other matters the Commissioner or the court thinks relevant

32. Other matters which may be relevant allows the Commissioner or court a measure of flexibility in considering the invention, rather than constraining any such consideration to the words of a specific test. Other matters may include for example the commercial environment that the invention is intended to be used, for example a solely online environment.

Is the contribution a computer program 'as such'?

33. Having identified the contribution, the next step is to determine whether the contribution is a computer program 'as such'. In assessing whether the contribution made by a claimed invention falls within an excluded area, the United Kingdom courts have applied a so-called 'technical contribution' test. This test is based on the principle that, under the United Kingdom Patents Act 1977, only contributions which are 'technical' in nature are eligible for the grant of a patent.

34. In the context of the computer program exclusion in the United Kingdom Patents Act 1977, the approach is taken that if a computer when programmed to perform a task which makes a technical contribution, it is more than a computer program, and therefore eligible for the grant of a patent.

35. The Patents Act 2013 does not require subject matter to be 'technical', or to make a 'technical contribution' in order to be patentable subject matter. Although, the 'manner of manufacture' test prohibits patenting of subject matter which relates to the fine arts, rather than the applied art e.g. *Virginia-Carolina's Application* [1958] RPC 35, which required the invention to make a 'technical contribution'. In light of this, examiners should be careful when applying United Kingdom decisions to patent applications made under the Patents Act 2013.

36. Notwithstanding this, some United Kingdom decisions can provide guidance in determining whether or not the contribution made by a claimed invention relates to a computer program 'as such' which may be useful in the context of the Patents Act 2013. Once such decision is *AT&T KnowledgeVentures v Comptroller General of Patents* [2009] EWHC 343 (Pat) ('AT&T').

37. Paragraph 40 of *AT&T* sets out five 'signposts' to assist in determining whether a claimed invention involving a computer program relates to a computer program 'as such'. Of these, the fourth signpost was reframed in *HTC v Apple* [2013] EWCA Civ 451, where Lewison LJ felt that the original signpost had been expressed too restrictively. Although these 'signposts' are framed in terms of 'technical effect', they are re-framed below in terms more applicable to the Patents Act 2013:

- i. Whether the computer program, when run, has an effect on a process which is carried on outside the computer;
- ii. Whether the program, when run, operates at the level of the architecture of the computer; that is to say whether the effect produced by the program is produced irrespective of the data being processed or the applications being run;
- iii. Whether the program, when run, results in the computer being made to operate in a new way;
- iv. Whether the program, when run, makes the computer a better computer in the sense of running more efficiently and effectively as a computer;
- v. Whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

38. These 'signposts' are intended only as guidelines – they are not intended to be used as a definitive list (see, for example, the comments at paragraphs 49 and 51 and 149 of *HTC v Apple* [2013] EWCA

Civ 451). Nevertheless, if a claimed invention fails all five 'signposts', that is a good indication that it may be no more than a computer program as such.

How should the 'signposts' be interpreted?

39. If the first 'signpost' is to be satisfied, the program must affect, or operate on something that is outside the computer that the program is running on. If the process carried out by the program would be eligible for a patent if it was not carried out under the control of a computer program, then the claimed invention does not relate to a computer program 'as such' as the contribution is the external process.

40. The washing machine described in the first example set out in s11 of the Patents Act 2013 is an example of a patent eligible computer controlled process. In that example, the process is a method of operating a washing machine, which would be patent eligible regardless of the method used to control it.

41. Note that the term 'computer' is not necessarily confined to a single computing device. A network of computers could be considered as a 'computer' for the purposes of this 'signpost'. See paragraph 30 of *Lantana v Comptroller-General of Patents* [2013] ('Lantana').

42. In this context, a program running on two or more computers connected by a network such as the Internet could count as a single computer. A program running on one of the computers, and communicating with one of the others would not then be considered to be affecting a process external to the computer.

43. The second 'signpost' looks at whether the program has any effect on the internal operations of the computer it is running on. These may include the operation of the central processing unit, the random access memory or a hard disk drive. The key to whether the second 'signpost' is met is whether the effect produced by the program is the same for any other program also running on the computer. If it is, the contribution is more than just a computer program and the signpost may well be met.

44. If the effect on the internal operation of the computer is specific to particular data or type of data, or only benefits some applications, the program will probably fail to meet the second 'signpost', and the contribution is likely to be no more than a computer program.

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45. To meet the third 'signpost', the effect on the computer must go beyond the normal interactions between a program and a general purpose computer. The program must cause the computer to operate in a different way.

46. The fourth 'signpost' (as reworded in *HTC v Apple*) relates to whether the program causes the computer to operate more efficiently and effectively. In this case the contribution is the improved operation of the computer. It must be the computer as a whole that is affected, not the program itself.

47. A program that requires less processing power than previous programs, or runs faster will not meet the 'signpost' as the computer operates in much the same way, the program doing no more than making more efficient use of the hardware. See *Q Software Global Ltd's Application* (BL O/[150120/11](#))¹, and *JDA Software Group's Application* (BL O/386/12).

48. The fifth 'signpost' was considered in *Lantana*. The discussion was in terms of the 'technical' problem to be solved, and may not be directly applicable to consideration under the Patents Act 2013.

49. However, some guidance may be provided in *Direct TV Pty's Application* (BL O/150/11, paragraphs 32 – 33) and *Apple Inc's Application* (BL O/244/13, paragraphs 38 – 39), where a problem involving bandwidth limitations in transmitting data was dealt with by reducing the amount of data transmitted. This was considered to be circumventing the problem rather than solving it, as the way in which the data was transmitted did not change. That is, the contribution was no more than a computer program.

Patent eligibility where the contribution is not a computer program 'as such'

50. If a claimed invention involves a computer program, and the contribution made by the claimed invention is determined to be something other than a computer program 'as such', this does not necessarily mean that the invention is eligible for a patent. The invention must still meet the other criteria set out in s14 of the Patents Act 2013. In particular, the invention must be a 'manner of manufacture'.

51. Effectively, if the contribution is not a computer program, but is something else that does not constitute a 'manner of manufacture', the claimed invention may not be eligible for a patent.