



syntax defining a structure of the electronic document, the document being related to a broadcasting program and being stored in a client, the method comprising:  
supplying said client with a document including a notification of invalid content to enable the client to delete the invalid content in a corresponding previously supplied document,  
wherein said notification of invalid content is defined by the syntax defining the structure of the electronic document.”

## The law and the Office’s practice

4 The relevant parts of section 1(2) read (emphasis added):

“It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of –

....

(c) a scheme, rule or method for performing a mental act, playing a game or doing business, or **a program for a computer**;

....

but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act **only to the extent that a patent or application for a patent relates to that thing as such.**”

5 On 27 October 2006, the Court of Appeal delivered its judgment in the matters of *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan’s Application* [2006] EWCA Civ 1371, [2007] RPC 7 (hereinafter “*Aerotel/Macrossan*”). In this case the court reviewed the case law on the interpretation of section 1(2) and approved a new four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim
- 2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution)
- 3) Ask whether it falls solely within the excluded matter
- 4) Check whether the actual or alleged contribution is actually technical in nature.

6 In a notice published on 2 November 2006<sup>1</sup>, the Office said that this test would be applied by examiners with immediate effect. The Office regarded *Aerotel/Macrossan* as a definitive statement of how the law on patentability was now to be applied in the UK, so that it should rarely be necessary to refer back to previous case law. It did not expect that this would fundamentally change the boundary between what was and was not patentable in the UK, except possibly for the odd borderline case. Although the approach differed from that currently adopted by the European Patent Office in *Hitachi* (T 0258/03), it was expected that the result would be the same in nearly every case.

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<sup>1</sup> <http://www.patent.gov.uk/patent/p-decisionmaking/p-law/p-law-notice/p-law-notice-subjectmatter.htm>

## Argument and analysis

- 7 Applying the *Aerotel/Macrossan* test, the examiner maintained that the contribution of the invention related solely to a computer program and was not in any case technical in nature since it merely updated electronically stored data.

### **General principles**

- 8 In a skeleton argument, on which he expanded at the hearing, Mr Dallimore sought to clarify some general principles concerning the application of the *Aerotel/Macrossan* test in relation to earlier case law. I will consider these general arguments before going on to apply the test in the present case.
- 9 As Mr Dallimore rightly pointed out, the new test separates the question of whether the contribution consists of excluded matter as such from the question of whether the contribution is technical in nature. He regarded the former as a less stringent requirement, and the fourth step therefore became an essential backstop. Bearing in mind that the new test was a restructuring of the previous test in *CFPH LLC's Application* [2005] EWHC 1589 (Pat), [2006] RPC 5 not a rewriting of it, he thought that the change of practice on the part of the Office did not mean that the previous case law of the Court of Appeal could be overlooked. There might still be situations where that case law would be helpful to interpret or supplement *Aerotel/Macrossan*, and if it was overlooked decisions could be made which conflicted with it and with the intent of the new test. A middle way therefore had to be steered between mistakenly using old practices when applying the new test and ignoring the previous case law entirely. Mr Dallimore therefore considered it appropriate to refer to earlier case law of the Court of Appeal, the EPO Boards of Appeal and the Office where appropriate to confirm or explain reasoning based on *Aerotel/Macrossan*.
- 10 I think it is important to be clear about precisely what *Aerotel/Macrossan* is saying. Paragraph 48, to which Mr Dallimore referred, does not actually say that *Aerotel/Macrossan* is a re-formulation of the *CFPH* test, rather that it is a structured way of re-formulating the statutory test. However, paragraphs 41 and 45 – 47 explain that this re-formulation is considered to be consistent with the Court's earlier approach in *Merrill Lynch's Application* [1989] RPC 561 and *Fujitsu Ltd's Application* [1997] RPC 608, asking the same questions albeit in a different order and emphasising that a contribution which consists solely of excluded matter will not count as a technical contribution. The fourth step of checking whether the contribution was technical, although necessary if *Merrill Lynch* was to be followed, might not need to be carried out because the third step – asking whether the contribution is solely of excluded matter – should have covered the point.
- 11 I would therefore agree with Mr Dallimore that the technical contribution test is a backstop, but not that it is an essential one if that is intended to mean that it has to be gone through in all cases. It seems clear to me (notwithstanding the reference in *Merrill Lynch* to the EPO decision in *Vicom* (T 208/84) stressing the importance of a technical contribution) that the presence of a technical

contribution is now no more than a subsidiary factor, and need be considered as a fourth step only where the invention passes the first three *Aerotel/Macrossan* steps. The hearing officer reached the same conclusion in *NEC Corporation* (BL O/050/07) at paragraphs 34 – 37 (one of the decisions to which Mr Dallimore referred me), and I agree entirely with the hearing officer's reasoning.

- 12 Mr Dallimore suggested that in the light of the recent judgment of the Patents Court in *Cappellini's Application and Bloomberg LP's Application* [2007] EWHC 476 (Pat), it would still be a useful check because if the invention produced a relevant technical effect, there might be a part of the contribution which did not consist solely of excluded matter. However, it seems to me that this is really a question about how the contribution is defined, and whether a narrower formulation of the claim might involve a contribution which extended beyond excluded matter. I refer below in more detail to this judgment (as "*Cappellini/Bloomberg*").
- 13 Although I would agree with Mr Dallimore that there may still be some circumstances in which it will be helpful to refer to earlier case law for guidance, I do not think this means that I should subvert the clear guidance in the above paragraphs of *Aerotel/Macrossan* about how the test is to be applied in the light of earlier case law. Also, notwithstanding that, by virtue of section 130(7) of the Act, section 1(2) is so framed as to have, as nearly as practicable, the same effects as the corresponding provisions of the European Patent Convention, I do not believe that I should be overly influenced by the decisions of the Boards of Appeal of the EPO under Article 52 of the EPC. These do not bind me, and their persuasive effect must now be limited in view of the contradictions in the Boards' decisions highlighted by the Court of Appeal in *Aerotel/Macrossan* and its express refusal to follow EPO practice.

### ***The present case***

#### First step

- 14 I can now turn to the application of the *Aerotel/Macrossan* test to the case in hand. The first step of the test, the construction of the claims, is not in issue and I do not need to consider it further.

#### Second step

- 15 The second step, the identification of the contribution made by the invention, is a little more problematic. Mr Dallimore and the examiner agreed that the novel and inventive features of the claims as they now stand are those which as far as I can see are defined in claim 8, but Mr Dallimore argued that this was not a complete definition of the contribution, drawing my attention to paragraph 43 of *Aerotel/Macrossan*:

".... 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.”

and to the references to a “new system” in the *Aerotel* part of the appeal (paragraph 53) which suggested that the word “new” might serve as a shorthand for what was required without it having the same meaning as in section 2 of the Act. He therefore thought that the contribution could not be assessed without reference to the new result or the advantages obtained.

- 16 In his skeleton argument, Mr Dallimore suggested that the advantages were a reduction in the amount of processing that the client needed to perform because translation between syntaxes was not required, and an increase in the speed with which the updates were processed. However, as I understood it at the hearing, Mr Dallimore accepted that the specification did not really say much about this, and indeed accepted the examiner’s argument that there might be cases where the invention prevented the use of a simple syntax for notification and so did not actually reduce the amount of processing. Accordingly, Mr Dallimore fell back on the advantages mentioned in paragraphs 42 and 61 of the specification, namely (i) that it was not necessary to learn a new syntax in order to update the document, and especially (ii) that that a broadcasting device, such as a television, would need only a single apparatus, a single chip, or a single algorithm in order both to provide basic information (such as a programme guide) and update it. On (ii) Mr Dallimore explained that it was important not to push a broadcasting system of this sort beyond its capabilities.
- 17 I agree with the general thrust of Mr Dallimore’s reasoning, although I do not think it will be very helpful for me to try and put a gloss on the definition of the contribution, such as it is, in paragraph 43. I therefore consider the contribution of the invention, as a matter of substance, to be the updating of the content of an XML-based electronic document relating to a broadcast program by sending a notification of invalid content for the client to delete, the structure of the notification being defined by the same syntax as the structure of the document, whereby it is not necessary to learn a new syntax in order to carry out the updating and the broadcasting system needs only a single apparatus, chip or algorithm in order to process the initial document and to update it.

### Third step

- 18 It is this which has caused the greatest difficulty. Does the contribution above relate solely to excluded matter, in this case a computer program? One hurdle can be quickly cleared out of the way. I entirely accept what is said in paragraph 22 of *Aerotel/Macrossan* that merely because the claimed invention involves the use of a computer program does not mean that it must be excluded. I do not think there was any disagreement between Mr Dallimore and the examiner on this at the hearing, although some misunderstanding may have arisen during the correspondence.
- 19 Although in his skeleton argument and at the hearing Mr Dallimore argued his case on the basis of earlier case law such as *Merrill Lynch and Gale’s Application* [1991] RPC 305), I understood him to accept that if the contribution was a new effect which was not solely excluded matter (such as a business method, a

mathematical method, presentation of information or just a computer program up and running) then the third step would be cleared. Mr Dallimore illustrated his argument by a number of hypothetical examples designed to show how his argument might work for contributions consisting of processes involving the use of computer programs. Thus far I think that Mr Dallimore's argument accords with *Aerotel/Macrossan* (although as I stated at the hearing it is not for me to give decisions in respect of hypothetical and generalized situations divorced from the facts of a particular case).

- 20 However, I am uneasy about a rather different summary of the position which Mr Dallimore also put forward – that if there was a new effect which resulted from a computer program, that new effect could not be a computer program itself. I think that is fine if the new effect is a part of the contribution and is something distinct from the program, but all new computer programs are likely to have some new effect. As the hearing officer emphasised in *Canon KK's Application* (BL O/039/07), which Mr Dallimore acknowledged, an invention does not become patentable because it is claimed in terms of what a computer program does rather than how it is structured or written: if it were otherwise all computer programs could be made patentable by setting out a series of method steps rather than data structures. What I have to decide is whether the contribution of the invention which I have identified above is, as a matter of substance, anything more than a program for a computer up and running.
- 21 The skeleton argument, as I read it, was put on the basis that the process of updating was part of the contribution and did not fall into any category of excluded matter. However, Mr Dallimore did not pursue that line at the hearing, and I do not think it is necessary for me to consider it further. Instead he suggested that at least the second of the two advantages which he had specifically identified – that only a single apparatus, chip or algorithm was necessary to enable the broadcasting system both to process the electronic document and update it – produced a new effect which went beyond a computer program as such. (As regards the first advantage – avoiding the need to learn a new syntax - Mr Dallimore accepted that this might be regarded as a contribution in an area which was excluded, eg as a mental act, or which was not technical).
- 22 I have considered this point very carefully, mindful that the claims have been restricted to the updating of documents which are related to broadcasting programmes and of the observations made by Pumfrey J in the recent *Cappellini/Bloomberg* judgment (at paragraph 8) that the question of patentable subject-matter is essentially a question of the scope of the claims, that objections under section 1(2) (at least in respect of mental acts) might be avoided by “tethering” the claim to a physical result to be achieved, and that there could be no contribution lying outside of excluded matter until the claim covered that physical result. However, I do not think it follows that all inventions relating to computer programs can be made patentable simply by including a physical application or result. I do not regard Pumfrey J as saying anything which militates against the long-established principle of UK law, confirmed in *Aerotel/Macrossan*, that the contribution is to be assessed as a matter of substance as opposed to the form of the claims. Pumfrey J opines at paragraph 5 that the question to be asked is whether there is a technical effect over and

above that to be expected from the mere loading of a program into a computer. However, this is a quotation from his earlier judgment in *Shopalotto.com Ltd's Application* [2006] EWHC 2416 (Pat), [2006] RPC 7 which predates *Aerotel/Macrossan*, and, as I have explained above, I think the fundamental question is now whether the contribution of the invention includes something of a technical nature beyond the program itself.

- 23 It seems to me that irrespective of whether it is claimed as a process, system or apparatus, the contribution of the invention results solely because a set of procedures has been devised which enables a computer to accept the notification of invalid data in a broadcasting document in the same syntax as the document to be updated. In my view, as with the Bloomberg appeal in *Cappellini/Bloomberg*, the contribution is achieved only by a computer program and the results to be achieved are entirely specified by the program. Even if there is an advantage in that only one program, rather than two separate programs, has to be written to allow a broadcasting device or system both to process and to update an electronic document, I do not think that this can be translated into any hardware features of the device or system. However clever or beneficial the program is, and even if it can be tethered to a physical result by the limitation of the claims to broadcasting documents, there is to my mind no contribution beyond the program up and running.

#### Fourth step

- 24 The invention therefore fails the third step of the *Aerotel/Macrossan* test. I do not therefore think it is necessary for me to go on to the fourth step and consider whether the contribution is technical in nature. In his skeleton argument Mr Dallimore argued that there was an improved technical operation of the system, but he did not press this at the hearing and I do not think I need consider it further.

#### **Conclusion**

- 25 I therefore find that the invention relates to a computer program as such and is therefore excluded from patentability under section 1(2). I do not think that any saving amendment is possible and I therefore refuse the application under section 18(3).

#### **Appeal**

- 26 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

**R C KENNELL**

Deputy Director acting for the Comptroller