

5<sup>th</sup> October 2007

## PATENTS ACT 1977

APPLICANT eSpeed, Inc

ISSUE Whether patent application number GB  
0326276.3 complies with section 1(2)

HEARING OFFICER R C Kennell

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## DECISION

### Introduction

- 1 This application was filed on 11 November 2003, claiming a priority of 27 November 2002 from an earlier US application. It was published under serial no. GB 2 395 819 A on 2 June 2004.
- 2 Despite amendment of the claims during substantive examination, the applicant has been unable to persuade the examiner that this is a patentable invention within the meaning of section 1(2) of the Act. A hearing was arranged, but the applicant wrote on 17 August 2007 saying that it did not now wish to attend. I am therefore deciding the matter on the basis of the papers on file.
- 3 An objection of lack of inventive step originally raised by the examiner has been withdrawn and I do not need to consider this matter further.

### The invention

- 4 The invention relates to an electronic trading system which provides an interactive graphical representation of a market from which a user can place a trade directly. The claims as amended comprise independent claims 1, 9, 17, 30 and 43. Claims 1 and 9 read:
  1. A method for providing an interactive graphical representation of a market, the method comprising:
    - displaying a graph having a first axis and a second axis on display of a workstation, wherein the graph includes a curve corresponding to a range of values of a financial instrument;
    - allowing a user to select a portion of the graph; and
    - in response to the user selection of the portion of the graph, displaying an interactive trading dialog box on the display of the workstation, the interactive

trading dialog box being configured to receive an instruction from the user, the instruction comprising a selection of at least one of a bid, offer, hit and list.

9. An apparatus for providing an interactive graphical representation of a market, the apparatus comprising:  
a server storage device;  
a server processor connected to the server storage device, the server storage device storing a server program for controlling the server processor; and  
the server processor operative with the server program to:  
display a graph .. [as claim 1]  
allow a user ... [as claim 1]  
in response to the user selection ... [as claim 1], display an interactive trading dialog box ... [as claim 1].

5 Claims 17 and 30 are similarly drafted in terms of method and apparatus, but differ from claims 1 and 9 in that the graph comprises pluralities of first and second symbols corresponding to bids and offers for particular financial instruments. Claim 43 is to a computer system, and I shall discuss this in greater detail below.

### **The law and its interpretation**

6 Section 1(2) reads (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 –

- (a) a discovery, scientific theory or mathematical method;
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;
- (d) the presentation of information;

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.”

7 Much of the correspondence between the applicant and the examiner predated the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd and Macrossan’s Application* [2006] EWCA Civ 1371, [2007] RPC 7 (hereinafter “*Aerotel/Macrossan*”), but it is not disputed that this case now governs the interpretation of section 1(2). In *Aerotel/Macrossan* the court reviewed the existing case law 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.

### Argument and analysis

- 8 On 1 May 2007 the examiner re-formulated the outstanding patentability objection on the basis of the basis of the four-step *Aerotel/Macrossan* test, but maintained that the invention of claims 1-42 was excluded as relating solely to a computer program. The applicant disputed this but added the above-mentioned claim 43 for consideration by the hearing officer with a view to demonstrating that, as required by *Aerotel/Macrossan*, the contribution of the invention did not lie solely in the excluded areas and was technical. Claim 43 reads:

A computer system comprising:

(a) a communications network;

(b) a plurality of workstations each comprising first computer apparatus connected to said communication network, display means, and user operable input means for controlling the respective first computer apparatus, each said first computer apparatus being arranged

(i) for receiving from said communication network data having values which vary with time, said data representing a financial instrument,

(ii) for causing said display means to display a graph having first and second axes representing respectively first and second related parameters and a curve which plots said first and second related parameters, said curve being based upon said received data values so that said graph is representative of said financial instrument,

(iii) for updating said graph based upon changes in said values of said received data,

(iv) for selecting of a portion of said graph utilising said user operable input means,

(v) for outputting an interactive user interface which displays data relating to the selected portion of said graph,

(vi) for generating a command in response to an action of said user operable input means in relation to said interactive user interface, said command representing a trading command which relates to the selected portion of the graph,

(vii) for transmitting said command to said communication network;

and

(c) second computer apparatus connected to said communication network for receiving said commands from said communication network, said second computer apparatus being operable for executing each said received command for effecting a trade in relation to said financial instrument as represented by said command.

9 I shall consider these arguments in the light of the *Aerotel/Macrossan* test.

The first and second steps

10 The construction of the claims in the first step does not to my mind raise any problems and is not in issue.

11 For the second step, it is necessary to identify the contribution made by the invention. Paragraph 43 of *Aerotel/Macrossan* explains that this is to be determined by asking what it is - as a matter of substance not form - that the invention has really added to human knowledge having regard to the problem to be solved, how the invention works and what its advantages are.

12 On the basis of claims 1, 9, 17 and 30 the examiner considered the contribution to be the displaying of an interactive trading dialog box in response to user selection of a portion of a graph, the graph including the curve of a financial instrument, the dialog box being configured to receive an instruction comprising a bid, offer, hit or lift. In assessing the contribution, the examiner believed the server storage device and server processor of the apparatus claims to be entirely conventional items of hardware.

13 The applicant however urged me to focus on claim 43, directed to a computer system comprising first computer apparatus (workstations) for generating commands, a communications network to which the commands are transmitted, and a second computer apparatus (a trading system) which executes the commands received via the network. The applicant said that the invention concerned the features of the workstations by means of which a user could cause the workstation to generate and transmit the commands, namely a combination of display features and user operable means which interacted to generate the commands.

14 On this basis, and even though the other independent claims defined the invention differently, the applicant considered the contribution to be a more efficient device comprising in combination a physical user operable input means (typically keyboard and mouse) and electronic means, in practice software controlled, for generating the graph on the display and responding to the physical operation of the user operable means.

15 I do not accept the applicant's argument. To my mind there is nothing new in the hardware aspects of the invention. I agree with the examiner that the server storage device and server processor of claims 9 and 30 are conventional items of hardware. Likewise, in regard to claim 43, the combination of a plurality of workstations controllable by user operated input means such as a keyboard and mouse to send commands via a communication network to a computer for executing the commands is also conventional. It seems to me that if, as *Aerotel/Macrossan* requires, I ask what it is that the invention adds to human knowledge, the answer lies in what the apparatus is arranged to do. In relation to claim 43 that is to be found in the specific features in integer (b) of claim 43.

16 I therefore consider that the examiner has correctly identified the contribution of

the invention. (For the avoidance of doubt given the wording of claims 17 and 30 I interpret the term “curve” to include any form of plot on a graph.) In the light of the prior art cited to show lack of inventive step, I consider this to be the actual contribution.

### The third step

- 17 Having identified the contribution, I must now decide whether it falls solely within the matter excluded by section 1(2). The examiner was of the view that it was part and parcel of a computer program, and was not saved by the provision of a trading dialog box, the representation of a curve of a financial instrument, or the configuration to receive an instruction in the form of a bid, offer, hit or list, as these were aspects of a business method, also excluded under section 1(2).
- 18 Although the applicant in its submissions argued that the invention concerned features of the workstations, I do not think that is right. As I have explained above, the contribution lies not in the workstations themselves but in what they are arranged to do. That arrangement lies in what the applicant describes (see paragraph 14 above) as the “electronic means” for generating the graph and responding to user input, which it accepts will in practice be controlled by software. In my view this is nothing more than a sequence of operations intended to be executed on a computer, in other words a computer program.
- 19 As noted above, the examiner has also drawn attention to aspects of the contribution which relate to a business method. I note that although claims 1, 9, 17 and 30 are directed to the provision of an interactive graphical representation of a market, the Court of Appeal held in *Aerotel/Macrossan* at paragraphs 67 – 71 that there was no reason to limit the business method exclusion to abstract matters or to completed transactions. With this in mind, I think that the contribution can fairly be said to relate wholly to a trading method, in other words to a business method.
- 20 However, before finding against the applicant, I must consider whether, as the applicant argued, the invention is analogous with the *Aerotel* patent (GB 2171877) which was allowed in *Aerotel/Macrossan*. *Aerotel*’s invention avoided the need to pre-pay for telephone calls (eg in a call box) by providing a “special exchange” in the routing of the call via a number public exchanges. The caller had a coded account with this exchange for the deposition of credit. To make a call he entered the number of the exchange and his code, and then the callee’s number: so long as there was sufficient credit in his account the call would be put through. The Court of Appeal held in paragraph 53 of its judgment that the system as a whole was new, and was new in itself and not merely because it was to be used for the business of selling telephone calls; even though the system could be implemented using conventional computers the contribution of the invention was a “new physical combination of hardware” which could not be excluded solely as a method of doing business. The computer program exclusion was not specifically in issue in the *Aerotel* appeal.
- 21 The applicant argued that the court explicitly acknowledged that the system claim under consideration defined (as the applicant put it) “a system which can be

*implemented by means of conventional computers, which would accordingly differ from other computers only in the software programs with which they were loaded*". Therefore, in the applicant's view, the item defined as a "special exchange" was nothing more than a conventional computer programmed in a manner which enabled telephone calls to be sold on the basis of the business method underlying the Aerotel invention. Accordingly, the applicant argued that the workstations in the present claim 43 likewise constituted new equipment and the fact that conventional computers were employed in implementing the invention was not a ground for refusal of the application.

- 22 I do not think that this analogy is valid. The applicant is putting a gloss on the finding of the Court of Appeal which in my view goes beyond what it actually decided. Whilst the court stated that the system could be implemented using conventional computers, it did not go so far as saying that it differed from other computers only in the software with which it was loaded. Ultimately, the court rested its findings on there being a new physical combination of hardware. In the present case, as I have found above, there is nothing new in the hardware and that to my mind distinguishes it from the Aerotel invention.
- 23 I can therefore find nothing in the contribution, considered as a matter of substance and irrespective of whether the invention is claimed as a method or as apparatus, which is not within the computer program and business method exclusions of section 1(2). The applicant's attempt in claim 43 to recast the invention as a computer system and to argue the patentability of the invention on the basis of that claim does not in my view avoid the exclusions.

#### Fourth step

- 24 Paragraph 46 of *Aerotel/Macrossan* explains that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point. I understand this to mean (and I do not think it is disputed) that the fourth step is to make sure that inventions which pass the third step are in fact technical in nature - not to rescue an invention which fails the third step. Therefore, having found the contribution of the present invention to lie solely in excluded areas, I do not need to go on and consider whether it is technical in nature.

#### **Conclusion**

- 25 In the light of my findings above I conclude that the invention is excluded under section 1(2). Having read the specification I do not think that any saving amendment is possible. 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 KENNEL**

Deputy Director acting for the Comptroller