

a long-term nominal maturity for which interest rates are regularly reset through a Dutch-type auction. In the invention, the platform projects, for each of a plurality of impending auctions, a final clearing rate that would result from each transaction. The clearing rate is displayed along with any submitted bids to enable more transparent and expedient auctions.

5 The current claims were filed on 10 May 2019 and comprise a single independent claim, claim 1, and three dependent claims. Claim 1 reads as follows:

1. A computer system configured to host an investor software interface, the computer comprising a display and one or more processors configured to:
cause the display to present a virtual table comprising a first row mapping to a first impending auction of a first financial instrument and a second row mapping to a second impending auction of a second financial instrument;
receive from a remote server, a dynamically updated compilation of each bid active in the first and second impending auctions and project, based on the dynamically updated active bid compilations, an ultimate rate of the first and second impending auctions;
transmit, to the remote server, a first bid comprising a first price and a first quantity and a second bid comprising a second price and a second quantity;
cause the display to simultaneously present, in the first row of the virtual table, the dynamically updated projected ultimate rate of the first impending auction and the first price of the first bid; and
cause the display to simultaneously present in the second row of the virtual table, the dynamically updated projected ultimate rate of the second impending auction and the second price of the second bid.

The law

6 The section of the Act concerning inventions excluded from patentability is Section 1(2), which reads:

“1(2) 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) -

(b) -

(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 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*¹, as further interpreted by the Court of Appeal in

¹ *Aerotel Ltd v Telco Holdings Ltd & Ors* Rev 1 [2007] RPC 7

*Symbian*². In *Aerotel* the court reviewed the case law on the interpretation of Section 1(2) and set out a four-step test to decide whether a claimed invention is patentable:

- (1) *Properly construe the claim;*
- (2) *identify the actual contribution;*
- (3) *ask whether it falls solely within the excluded subject matter;*
- (4) *check whether the actual or alleged contribution is actually technical in nature.*

- 8 The Court of Appeal in *Symbian* made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it was confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “technical contribution”. Paragraph 46 of *Aerotel* states that applying the fourth step of the test may not be necessary because the third step should have covered the question of whether the contribution is technical in nature. It was further confirmed in *Symbian* that the question of whether the invention makes a technical contribution can take place at step 3 or 4.
- 9 Lewison J (as he then was) in *AT&T/CVON*³ set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC/Apple*⁴ the signposts were reformulated slightly in light of the decision in *Gemstar*⁵. The signposts are:

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

Application of the *Aerotel* approach

Step 1: Properly construe the claim

- 10 Claim 1 is directed to a computer system configured to host an investor software interface. More particularly the examiner explains that claim 1 defines a computer system configured to display a virtual table with respective rows mapped to first and second impending auctions of financial instruments. The computer system is in communication with a remote server from which it receives information on the active bids in each auction and projects an ultimate rate (i.e. final clearing rate) of the auctions. First and second bids are submitted to the server (from the system) and

² *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

³ *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁴ *HTC v Apple* [2013] EWCA Civ 451

⁵ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

the respective rows of the virtual table are updated to display the updated projected ultimate rates for each auction alongside information about the price of the submitted bids.

- 11 The applicant's attorney in his most recent letter of 10 May 2019 submits that it is clear from claim 1 that the invention is primarily directed to a system configured to display a set of controllable attributes based on a context. He explains that the 'context' from the claim comprises an increase or decrease in a bid. The examiner broadly agrees but explains further that the claim relates to displaying an updated ultimate rate ("controllable attribute") based on submitted bids and/or on updated active bids ("increase or decrease in a bid"). I agree with this interpretation of claim 1.

Step 2: Identify the actual contribution

- 12 The examiner has identified the contribution as:

"a computer-implemented financial trading system which projects final clearing rates for the impending auctions of financial instruments based on dynamically updated information on active bids in the auctions. The projected clearing rates are displayed in a virtual table along with information about submitted bids to provide a more transparent financial trading system and enable a user to make better bidding decisions."

- 13 In paragraph 43 of the *Aerotel/Macrossan* judgment, Jacob LJ sets out that identification of the contribution 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"

- 14 The applicant's attorney has considered these factors in his letter of 10 May 2019. It is useful to review these factors here. I note firstly that the original claims of the application have been searched during the international phase. The examiner also brought to the applicant's attention a further document cited against the US family member of the application. However, I do not consider that an assessment of these documents would help the discussion here.

- 15 According to the applicant's attorney, the problem solved by the invention is that,

"it is difficult to determine whether a newly entered trade offer replaces or supplements an existing position and also does not inform a user when a trade is likely to be rejected."

In his previous letter of 12 February 2019, the applicant's attorney states that the problem can be interpreted as:

"how to dynamically update and expedite the exchange of information relating to a financial instrument in an open and transparent manner."

- 16 I am willing to accept that the invention addresses both these issues, at least in part.
- 17 Regarding how the invention works, the applicant's attorney explains in his letter of 10 May 2019 that the invention provides:

“an arrangement for determining whether a newly entered bid voids or supplements an existing position by automatically generating a secondary bid equal to the existing position in response to determining that the newly entered bid is supplementary”.

- 16 He goes on to explain that:

“The present invention also accumulates active bids and projects a final price in an upcoming financial auction by calculating a clearing rate for each biddable financial instrument. The software interface then displays the projected final price in the same row as a price offered by the user, enabling the user to quickly determine whether the offered price is likely/unlikely to be successful.”

- 17 The applicant's attorney has brought in additional features defined in dependent claims 3 and 4 regarding determining if a new bid voids or supplements an existing position. I agree, however, that this appears to be a reasonable assessment of how the invention works.
- 18 The applicant's attorney explains that the advantage of the invention is the improved display of an online competitive bidding platform that allows the market to directly signal a clear value of liquidity and allows for electronic data collection to improve opportunity risk management, standardise and electronically manage the tender notification process through the biddable platform, and offer an accurate and immediate reflection of the market to users. He contends further that the display provides a real time view of owned positions, informing users if the metered bid is *“out of the money”* (i.e. other lower interest rates are entered to such a value that upon predictions, the entered bid would not be fulfilled). This, he explains, allows the user to amend the bid in order to secure the transaction. I am willing to accept that the invention provides these advantages.
- 19 In his letter dated 10 May 2019, the applicant's attorney summarizes the contribution as:

“An improved computer system for determining if a new bid voids or supplements an existing bid and displays a set of controllable attributes including a final clearing rate on a user interface used for determining whether the new bid will be successful.”

- 20 As mentioned above, determining if a new bid voids or supplements an existing bid is not introduced until the dependent claims. For the purposes of this decision, I am willing to include this feature in my consideration of the contribution.
- 21 It is well established that the use of networked computer(s) in communication with a server is commonplace in the art of financial trading. Moreover, the computing devices and transmission means used in the invention are entirely standard.

22 From all of these factors, I consider the contribution to be:

A computer-implemented virtual table for displaying projected clearing rates for the impending auctions of financial instruments along with information on submitted bids; and further providing via a user interface a determination of whether a new bid voids or supplements an existing bid; thus providing an indication of whether a new bid is likely to be successful.

Steps 3 and 4: Ask whether the contribution falls solely within the excluded subject matter and whether it is technical in nature

- 23 The third and fourth steps of the *Aerotel* test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.
- 24 The applicant's attorney in his letter of 10 May 2019 refers to the decision of the Patents Court in *Gemstar*⁵ to support his arguments. He also appears to be referring to the arguments (quoted in places verbatim) presented in previous IPO decision *Arris Enterprises, Inc*, BL O/128/19.
- 25 In *Gemstar* the invention is concerned with displaying TV programme information and more particularly switching from a grid format to a single channel format by highlighting and clicking on a particular cell. Mann J concluded that the starting point and end point (i.e. grid format and single channel format) are plainly presentation of information; the middle factor, selecting material on screen and clicking on it, does not involve a new technical step as it was part of the common general knowledge by the relevant time. In BL O/128/19, the invention relates to a user interface used for controlling a thermostat. A temperature increase or decrease is detected and this information is used to determine in which order the controllable attributes heat set and cool set are displayed. The hearing officer found that the middle factor, the detection of temperature increase or decrease, involves the detection of a physical parameter which is clearly a technical process. The hearing officer considered the contribution to be technical in nature and to fall outside the excluded matter of the presentation of information.
- 26 The applicant's attorney follows closely the arguments presented in BL O/128/19 to submit that in the present invention the middle factor is the input detection of a new bid to either supplement or void an existing bid. He submits further that this middle factor involves "*the detection of an actual parameter which is clearly a technical process*". He asserts that this middle factor involves a new technical step because the use of this context in this way to produce a clearing rate is one of the features that distinguishes the invention over the prior art. He concludes that using a detection of a new bid and determining if it supplements or voids an existing bid to generate a clearing rate for securing a transaction provides a real world technical achievement outside the information itself.
- 27 In response, although I am not bound by earlier IPO patent decisions, I do not see many similarities between the situation in BL O/128/19 and that encountered here. In BL O/128/19, the middle factor is the detection of temperature increase or decrease

which involves the detection of a physical parameter and is therefore a physical process. In the invention here, the middle factor is alleged to be the input detection of a new bid to either supplement or void an existing bid. This factor does not involve any physical parameters and does not involve a physical process. The 'actual parameter' detected here represents finance-related data with no technical relevance. Even if this feature serves to distinguish the invention over the prior art, this is not enough to convey a technical effect. I cannot see that using a detection of a new bid and determining if it supplements or voids an existing bid to generate a clearing rate for securing a transaction provides any real world technical achievement outside the information itself. The virtual table of the invention may represent a better or new user interface, but this is not a technical description.

- 28 The attorney provides further arguments in his previous letter of 12 February 2019. He submits that the invention lies in a technical field. In particular he argues that:

“the encoding/decoding, transmitting/receiving, storage and processing are realised in physical properties of the communication and server network, the routing entities and the driver computing devices, which properties are to be detected by a technical device and to be decoded and displayed by electronic means”.

He explains further that:

“the distribution and retrieval cannot be performed by a human and stored data cannot be accessed directly via their senses”.

- 29 He asserts that encoding and decoding, transmitting and receiving are considered industrial activities. I am not convinced by any of these arguments. The invention involves the transmission, storage and manipulation of financial data using conventional computer hardware and transmission means; none of these features is able to convey the required technical effect.
- 30 Having carefully considered all aspects of the invention, I do not consider the contribution to be technical in nature. Instead, I consider the contribution to relate to the presentation of information as such.
- 31 The examiner also asserts that the contribution lies within the excluded fields of a computer program and a method for doing business. Regarding the computer program exclusion, the examiner refers to the *AT&T* signposts listed above. However, the applicant has not provided any counter arguments regarding the signposts for this latest set of claims. I do not consider it useful, in any case, to consider the signposts here. I note that the invention is implemented by software running on an entirely conventional computing arrangement. I agree with the examiner that in the absence of a technical effect the invention relates to a computer program as such. The contribution relates to improvements in the trading of financial instruments which has a clear business objective. I cannot identify a technical effect and therefore I consider the invention to also relate to a method for doing business as such.

Decision

- 32 I find the invention claimed in GB1322615.4 to fall solely within matter excluded under Section 1(2) as the presentation of information, a program for a computer and a method for doing business as such. I can find no amendment in the specification that will render the claims patentable. I therefore refuse the application under Section 18(3).

Appeal

- 33 Any appeal must be lodged within 28 days after the date of this decision.

P Mason

Deputy Director, acting for the Comptroller