Intellectual Property Office

BL O/1208/24

20 December 2024

PATENTS ACT 1977

APPLICANT	VIVID SEATS LLC
ISSUE	Whether patent application GB2213766.5 complies with S1(2) of the Patents Act 1977 (As Amended)
HEARING OFFICER	DR STEPHEN BROWN

DECISION

Background

1 Application GB2213766.5 was filed on 21st September 2022 in the name of Vivid Seats LLC of Chicago, Illinois, USA. It claims priority from US17/480980 which was filed on 21st September 2021. Combined search and examination of the application was requested, but the examiner instead issued an Abbreviated Examination Report on 6th March 2023 raising an objection to the application under S1(2) of the Patents Act 1977 (as Amended), hereinafter referred to as "the Act", noting that a search would serve no useful purpose.

2 Amended claims were filed on 4th May 2023 and an examination report was issued on 4th October 2023, offering a Hearing. Further amendments were filed on 31st October 2023. However, the examiner did not feel that the amendments progressed the application and an EL36 letter was issued on 17th July 2024 notifying the applicant that the application would be sent to a Hearing. Further amendments were filed on 26th July 2024 along with a request for a Hearing.

3 The case thus came before me on 23rd September 2024 with the hearing based on the amended claims filed on 26th July 2024. I shall, however, consider the previously filed claims and the contents of the application as whole when assessing the application. I note that this is application is one of two applications GB2213766.5 and GB2214494.3 which relate to very similar subject matter. Both cases came before me on the same day and the arguments provided for GB2213766.5 are also relevant to GB2214494.3. The applicants were represented by Mr Ben Lincoln and Mr Andrew Pearson of Potter Clarkson LLP, and I thank them for their skeleton arguments.

The invention

4 The context of the invention is provided in the Background of the application as filed, which states:

"Electronic ledgers, such as blockchain, are used to record ownership of electronic assets and enable entities to carry out transactions using the asset. For example, a token, which is a type of electronic asset, can be transferred among entities by issuing transactions recorded on a blockchain. In many blockchain-based systems, there is a delay between when a transaction is issued and when the transaction is incorporated into a blockchain."

5 Claim 1 is the only independent claim in the application as amended on 26th July 2024. It reads as follows:

"A computer-implemented method comprising:

receiving by an admission system, an indication to exchange a demand token with an admission token, the indication being authorised by a first entity,

the demand token issued by an issuing system, separate from the admission system, in response to the issuing system writing the demand token on a block of an electronic ledger platform,

the demand token associated with ownership information and comprising activity information, the ownership information indicating that the demand token is owned by the first entity and the activity information indicating a first activity associated with admission of a holder of the admission token to an event, and

wherein the ownership of the demand token is transferable from the first entity to other entities over the electronic ledger platform in accordance with a first protocol for verifying the ownership information and validating a corresponding transaction for the transfer of the demand token on the electronic ledger platform;

generating the admission token in compliance with one or more rules, in response to the receiving of the indication,

the admission token associated with the ownership information and comprising admission information for the holder of the admission token, the ownership information indicating that the admission token is owned by the first entity and the admission information indicating admission to the first activity, and

committing the generation of the admission token to one or more records on at least one of the admission system or an electronic ledger in the electronic ledger platform,

wherein the first protocol requires a first level of scrutiny at a higher level of confidence than a second protocol used for redeeming the admission token and admitting the holder of the admission token to the event."

6 Ownership of the demand token is transferable over the electronic ledger system using a first protocol, such as blockchain, for verifying ownership information and for validating a transaction for the transfer of the demand token. When the demand token is exchanged for the admission token, the generation of the admission token is recorded on at least one of the admission system or the electronic ledger of the

electronic ledger system. The admission token is then used to gain admission to the event.

The law

7 The examiner has deferred the search and consideration of novelty and inventive step at this time. The only matter that I need to decide upon is whether or not the invention meets the requirements of S1(2)(c) of the Act.

8 Section 1(2) of the Act reads as follows:

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

…

(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 the that thing as such.

9 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 *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.

10 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.

[1] Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1 [2007] RPC 7
[2] Symbian Ltd's Application [2009] RPC 1

11 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*. 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 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

12 The first of these signposts was considered by Birss J in *Lenovo*[5] where he noted that "*a different physical interaction with the world outside of the computer*" would indicate that the invention may have a technical effect on a process which is carried on outside the computer.

Application of the Aerotel test

Properly construe the claim

13 I do not believe that there are any issues in construing the scope of the independent claim. However, I note that the admission system is a system that is used to control admission to an area, event, activity or similar, such as a music concert. As such it represents a physical, real-world piece of apparatus and the area, event, or activity is likewise located in the real-world.

14 In their letter of 4th May 2023, the attorneys argue that a demand token should be construed as *"a token representing the right to demand an asset from another party. In this context, a demand token may represent ownership rights and more particularly the right to demand a ticket, ticket token, or admission token from one or more parties or entities participating in a token exchange"*.

[3] AT&T Knowledge Ventures/Cvon Innovations v Comptroller General of Patents [2009] EWHC 343 (Pat)
[4] HTC Europe Co Ltd v Apple Inc [2013] RPC 30
[5] Lenovo (Singapore) PTE Ltd v Comptroller General of Patents [2020] EWHC 1706 (Pat)

15 Furthermore, they state that the admission token is *"a token that represents the right to attend an event. An admission token essentially can be a printed ticket, or the digital equivalent to a printed ticket."*

16 From the description, the particular use case of the invention is admission to an event using an electronic ticket or e-ticket, although the use of a physical ticket as the admission token is also within the scope of the claim. In simple terms, amended claim 1 requires an admission system, a demand token and a corresponding admission token where the demand token may be exchanged for the admission token.

17 The demand token includes ownership information and activity information. The activity information indicates an activity associated with the admission of a holder of the admission token to an event. The demand token is issued by an issuing system at which point the demand token is written on a block of an electronic ledger system. Ownership of the demand token is transferable over the electronic ledger system using a first protocol, such as blockchain, for verifying ownership information and for validating a transaction for the transfer of the demand token.

18 When the demand token is exchanged for the admission token, the generation of the admission token is recorded on at least one of the admission system or the electronic ledger of the electronic ledger system. The admission token is then used to gain admission to the event. The first protocol, which is used to transfer ownership of the demand token, operates at a higher level of security than a second protocol which is used for redeeming the admission token and admitting the holder of the admission token to the event.

Identify the actual contribution

19 The initial arguments provided by Mr Pearson at the Hearing related to the contribution provided by the invention. Mr Pearson stressed that the problem addressed was technical and it was *"how to provide an electronic ticketing system that maintains security whilst being efficient when verifying, admitting and recording the use of a ticket/token"*. Mr Pearson noted that the existing technologies at the time of the application were *"technically limited in ways that have a negative effect on a real world process"*. In particular, he highlighted the passages at paragraphs [0022] and [0023] of the application:

"Of particular concern is also the notion that electronic ticketing systems and digital tickets can be susceptible to manipulation by unscrupulous actors or resellers, where fraudulently issued or sold tickets can result in unlawful or duplicate admission to an event" (paragraph [0022])

"[C]urrently available block-chain-based admission and verification technologies are slow and inefficient when verifying, admitting and recording the use of a ticket in that significant delays may be experienced during the admission or verification process. Certain venues have thousands of attendees. Using the conventional technologies, admission to a large venue can be hindered by a computational bottleneck effect due to, for example, a lengthy e-ticket verification process" (paragraph [0023])

20 Thus paragraph [0022] notes that security is a known problem and paragraph [0023] indicates that whilst blockchain technology, a form of distributed ledger technology, is an existing solution to this problem, the verification process used by blockchain is slow. I note that the use of blockchain and similar technologies is a choice. One may either use a method which makes use of distributed ledger technology such as blockchain, which is slow but secure, or use another existing method which is quicker but not as secure. I also note that the *"negative effect"* referred to in the arguments above is a bottleneck in admission to an event caused by the speed at which people may gain admission to the event when a blockchain-based e-ticket system is used at the point of admission. I further note that this problem arises from the business decision to use blockchain-based e-tickets as a means for gaining admission to an event rather than an existing quicker method, with blockchain being used because blockchain-based e-tickets are regarded as more secure.

21 With all these points in mind, I decide that the contribution is:

"An electronic ticketing system that maintains security whilst being efficient by using a secure, but computationally more intense, protocol to control and record ownership and use of an e-ticket and using a less secure, and faster, protocol to allow access to the corresponding event."

Ask whether the contribution falls solely within excluded subject matter

22 Mr Pearson argued that the solution provided by the invention is to take a *"two-tier approach"* to validating demand tokens and redeeming admission tokens. As discussed above, the transfer of the demand token uses a first protocol which is secure, but slow. A second protocol, which is fast but not as secure, is then used for redeeming the admission token and admitting the holder of the admission token to the event. Specifically:

"[The] admission token may be processed faster than the demand token because the processing of the admission token does not require verifying and committing the transaction over the blockchain…" (paragraph [0017] of the description).

23 It can therefore be seen that the first protocol is intended to be a distributed ledger system such as blockchain, whereas the second protocol specifically does not require this. Indeed, Mr Pearson went on to highlight that the process of validating a demand token and redeeming an admission token as described at paragraphs [0017] and [0036] of the application use respective protocols which require different levels of scrutiny. Specifically, it was stated that *"higher scrutiny (more computational resources) is applied only when necessary to validate a demand token to avoid fraudulent or duplicate transfer… The same level of scrutiny is not applied to [redeem] the admission token and [admit] the holder of the admission token to the event"*.

24 It was argued that this provided a *"credible effect on the computational resources needed to process admission to an event, without losing the high security provided by the ledger based, first protocol steps"*. Also, that this was done whilst *"maintaining a secure system"*.

25 In particular paragraphs [0017] and [0064] and pending claim 3 of the application were noted:

"An admission token may be processed faster than the demand token because the processing of the admission token does not require verifying and committing the transaction over the blockchain as provided in further detail herein and below" (paragraph [0017])

"As suggested earlier, in embodiments in which redeeming the admission ticket does not require a proof of transaction on the blockchain, the admission process can be streamlined efficiently and quickly, obviating the need for a relatively lengthy wait time associated with blockchain transactions" (paragraph [0064])

"wherein the ownership of the demand token becomes non-transferable, in response to generating the admission token." (pending claim 3)

26 Thus, the admission system allows the exchange and redemption of admission tokens to be managed efficiently specifically because it does not require the use of blockchain and so the admission token can be validated faster than existing blockchain-based methods.

27 It can therefore be seen that the above identified contribution is realised by providing a software system that swaps between a token using a first known (software) protocol which is slow but secure, to a different token using a second (software) protocol which is fast but not as secure. The means of swapping between the two tokens and their associated protocols is itself embodied in software. Each protocol is being used to make use of the benefits inherent to that protocol and so the slow, secure protocol may be used to allow transfer of ownership of the demand token in a robust and secure way and the system then swaps to the admission token which uses a second protocol which allows faster processing once the user has decided to attend the event. The system therefore relates to software which uses different known protocols at different times to obtain the known benefits of the known protocols at those times.

28 As the contribution is clearly embodied as software, I shall now move on to consider the *AT&T* signposts.

29 At the hearing, Mr Pearson argued that the first *AT&T* signpost was met since the invention achieves increased efficiency in processing an admission token, whilst maintaining token security, to provide admission to an event since that admission is a process which takes place outside of the computer.

30 I'm afraid I am not convinced by this line of reasoning. Firstly, the speed at which people may gain access to an event using the invention defined in the application has not actually changed. The invention simply swaps from a known slow, but secure, protocol to a known faster, but less secure, protocol before a user seeks to gain admission. I can see no real-world effect that is any different to the prior art approach of simply using the less secure protocol throughout. The key part of the contribution, identified above, is the step of switching between the two known protocols, so as to provide increased security *and* faster access at *different* points of the e-ticketing process. As this switch happens entirely within a computer network, I

can see no technical effect on a process outside of the computer. I thus conclude that the first *AT&T* signpost is not met.

31 I note that this reasoning also indicates that the decision in *Lenovo* is not relevant since there is no technical effect at the point of admission, which is the only point of interaction with the real-world.

32 Mr Pearson also argued that the fourth *AT&T* signpost was met because the invention makes the computer run more efficiently and effectively at the time of handling event admissions.

33 Again, I am not convinced. Once the admission token is in use, the system operates in exactly the same way as a computer running a conventional non-blockchain e-ticket system. The software protocol used at this point is simply quicker than a blockchain based protocol. There is no impact on the operation of the computer controlling the admission system *itself*. It remains unaltered and so I conclude that the fourth *AT&T* signpost is not met.

34 Regarding the fifth *AT&T* signpost, Mr Pearson argued that the invention *"overcomes the perceived problem as opposed to merely circumventing it, because a two-tier approach to validating and redeeming tokens changes the way in which the tokens are processed, rather than, say, reducing the volume of tokens processed."* He noted that this can be contrasted with the approach taken in *Direct TV PTY's Application*[6] at, for example, paragraphs 32-33 and *Apple Inc's Application*[7] at, for example, paragraphs 38-39.

35 These applications both related to reducing the amount of data transmitted to address a problem in bandwidth limitation and were seen by their respective Hearing Officers to merely circumvent their problems. While I agree that the current application does not seek to reduce the amount of data used, I am not convinced that the opposite conclusion, i.e. that the 5th signpost *is* met, must result.

36 The two-part approach of the current invention simply swaps from a known slow and secure protocol to a faster, less secure protocol at an appropriate time. The problem of slow entry is therefore overcome by not letting it arise in the first place. The current invention does not offer a faster blockchain protocol. Neither does it propose a more secure non-blockchain protocol. It merely switches from one to the other. If anything, this would appear to be circumventing the problems of the two protocols rather than overcoming them. I thus decide that the fifth *AT&T* signpost is also not met.

37 For the sake of completeness, I will note that Mr Pearson did not offer any arguments in relation to the 2nd or the 3rd signposts. For my part, I do not see any evidence of the contribution operating at the level of computer architecture. Nor do I believe that the computer itself is operating in a new way. Thus, I conclude that these two signpost are also not met.

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[6] BL O/150/11
[7] BL O/244/13

38 Finally, Mr Pearson argued that the Hearing Officer's decision in *January Patents Limited Application*[8] was relevant. Here an invention which provided a solution for addressing transaction delays was found to be patentable and Mr Pearson argued that the current invention achieved a similar result. However, as noted above, in the case of the current application the solution to the problem of slow admission caused by transaction delays is solved by switching to a known, faster, protocol. No new solution to the problem is proposed, rather an existing solution is used at the appropriate time.

39 Overall, I conclude that the contribution relates entirely to a program for a computer as such. The application thus fails the third Aerotel step.

Check whether the contribution is actually technical in nature

40 As reasoned above, the contribution does not have a technical effect beyond that of a program running on a computer. Thus, the application also fails the fourth Aerotel step.

Conclusion

41 I have decided that the invention defined in the independent claim falls solely within matter excluded under Section 1(2) as a program for a computer as such. I have considered the contents of the description, associated drawings and current claims of the application as well as the previously filed claims and do not believe that any saving amendment is possible. I therefore refuse the application under section 18(3).

Appeal

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

DR STEPHEN BROWN

Divisional Director, acting for the Comptroller

[8] BL O/312/08