



PATENTS ACT 1977

APPLICANT	Nextiva, Inc.,
ISSUE	Whether patent application GB2118756.2 complies with section 1(2) of the Act
HEARING OFFICER	Dr L Cullen

DECISION

- 1 This decision concerns patent application GB2118756.2, (“the application”), entitled “*System and Method of Creating and Organizing Private Chat Messages*” in the name of Nextiva Inc.
- 2 The issue to be decided is whether the invention as claimed in this application is excluded from patentability under section 1(2)(c) of the Patents Act 1977 (hereafter “the Act”) as a program for a computer.

Introduction

- 3 The application was filed under the provisions of the Patent Cooperation Treaty (PCT) on 11 June 2020, claiming an earliest priority date of 12 June 2019, and was initially published as WO2020/252140 A1 on 17 December 2020. On entering the national phase in UK, it was subsequently re-published as GB2599821 A on 13 April 2022.
- 4 Initially, the rounds of correspondence concerning substantive examination under section 18(3) of the Act focussed upon inventive step, however the examiner also warned the applicant that they would need to consider whether the application concerned excluded matter once the issue of inventive step had been resolved. Subsequently, the examiner has raised an objection that the invention, as claimed, relates to a program for a computer which is excluded under section 1(2)(c) of the Act. This objection was maintained over successive amendment rounds, and having reached an impasse, the applicant was offered a hearing.
- 5 A pre-hearing report, prepared by the examiner, was issued on 14 December 2023 and, there being no request for a hearing within the time period set, the application was forwarded to me as the Hearing Officer allocated to this case to prepare a decision based on the papers on file. I was assisted in this task by Senior Examiner, Dr Graham Feeney, acting as hearing assistant.

The Invention

- 6 The invention concerns the organisation of chat-based communication systems which enable the establishment of private chat threads, or conversations, between a range of devices, such as computers, tablets and smart phones.

The Claims

- 7 There are seventeen claims in total including three independent claims sharing the same inventive concept concerning the generation, storage and management of chat spaces: Claim 1 defines a system, claim 7 defines a computer implemented method and claim 13 defines a non-transitory computer-readable storage medium with software. For the sake of simplicity, I will assess the patentability of claim 1, however my decision applies equally to the other independent claims.
- 8 Claim 1, as amended on 6 December 2023, reads as follows (my bullets added to show the steps):

“A system, comprising:

two or more communication devices; and

a computer coupled with a database and comprising a processor and memory, the computer configured to generate a chat space in which the two or more communication devices participate by:

- generating a chat space;*
- transmitting requests to join the chat space to the two or more communication devices;*
- storing in the computer memory identification information for each of the two or more communication devices;*
- storing in the computer memory one or more public chat messages transmitted between the two or more communication devices in the chat space, wherein the one or more chat messages comprise a text-based message, image and/or file;*
- monitoring for one or more requests, transmitted from one of the two or more communication devices to the computer, to generate a private thread;*
- generating a private thread, wherein the private thread is configured using thread parameters associated with a thread template, wherein the thread template is comprised in a thread settings interface display, wherein the thread settings interface display allows configuration of whether a sub-thread can be created;*

- *storing in the computer memory one or more private thread messages transmitted between two or more communication devices in the private thread;*
- *generating one or more sub-threads within the private thread;*
- *storing in the computer memory one or more private sub-thread messages transmitted between two or more communication devices in the private sub-thread; and*
- *identifying and tracking each of the communication devices using the stored identification information for each of the two or more communication devices.”*

The Issue to be decided

- 9 The only issue to be decided is whether the invention is excluded from patentability under section 1(2)(c) of the Patents Act 1977, specifically as a program for a computer.
- 10 The period for putting this application in order under section 20(1) of the Act and rule 30 of the Patents Rules 2007, as amended, (hereafter the rules) expired on 17 January 2024. As a consequence, my decision below will determine whether the application met the requirements of the Act and Rules at the compliance date.

Excluded Matter – Section 1(2)

The Law

- 11 Section 1(2) of the Act sets out certain categories of subject-matter which are not considered to be inventions. These categories are often referred to as ‘excluded subject-matter’.
- 12 The relevant provisions of section 1(2) of the Act read as follows (my emphasis added in bold):

*“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.”

- 13 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel/Macrossan*¹, as further interpreted by that court in *Symbian*². In *Aerotel/Macrossan*, 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. These steps are:
- (1) Properly construe the claim;
 - (2) Identify the actual contribution;
 - (3) Ask whether it falls solely within the excluded matter;
 - (4) Check whether the contribution is actually technical in nature.
- 14 Operation of this test is explained in paragraphs 40-48 of the *Aerotel/Macrossan* judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is that the inventor has really added to human knowledge and involves looking at the substance of the invention claimed, rather than the form of the claim. According to paragraph 46 of *Aerotel/Macrossan*, applying the fourth step may not be necessary because the third step should have covered the question. This is because a contribution which consists solely of excluded matter will not count as being a "*technical contribution*" and thus will not, as the fourth step puts it, be "*technical in nature*".
- 15 Subsequently, the Court of Appeal in the case of *Symbian*³ confirmed that this structured approach is one means of answering the question whether or not the invention reveals a technical contribution to the state of the art. The four-step test in *Aerotel/Macrossan* was not intended to be a new departure in domestic law. In other words, *Symbian* confirmed that the four-step test is equivalent to the prior case law test of '*technical contribution*', as discussed in *Merrill Lynch*⁴, *Gale*⁵ and *Fujitsu*⁶. The key question is what does the '*technical contribution*' amount to and not whether it happens to be implemented by a computer.

Computer programme as such

- 16 Lewison J (as he then was) in *AT&T/CVON Innovations* (hereafter *AT&T*)⁷ set out five factors or signposts that he considered to be helpful when considering whether a

¹ *Aerotel Ltd vs Telco Holdings Ltd & Macrossan's Patent Application* [2007] RPC 7

² *Symbian Ltd's Application* [2009] RPC 1

³ *Symbian* [2009] RPC 1

⁴ *Merrill Lynch's application* [1989] RPC 561.

⁵ *Gale's application* [1991] RPC 305.

⁶ *Fujitsu Limited's application* [1997] RPC 608.

⁷ *AT&T Knowledge Ventures/Cvon Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat).

computer program makes a technical contribution. These signposts were modified slightly in *HTC*⁸. The five signposts are:

- (i) Whether the claimed technical effect has a technical effect on a process which is carried on outside of 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.

17 I note that there is no disagreement between the applicant and the examiner over the applicable and relevant law.

Analysis

18 The first step in *Aerotel* is to construe the relevant independent claim - claim 1.

Step (1): Properly construe the claim.

19 The examiner construed claim 1, as it was then amended, in his report dated 4 July 2023 and this was updated in the pre-hearing report to account for the latest amendments dated 6 December 2023. I note that the attorney has not disputed any of the points on construction made by the examiner.

20 I consider that the construction of the claims is relatively straightforward. In the invention as currently defined by claim 1, the terms ‘chat’, ‘thread’, ‘public’ and ‘private’ have their ordinary meaning within the context of computer network-based chat of the sort that will be familiar to users of internet discussion forums and chatrooms.

21 Claim 1 defines a computer system comprising hardware: two or more communications devices (i.e. phones, computers, very broadly a “personal communications device”), and thus, with reference to Fig. 1⁹, I consider that the ‘system’ of this claim refers to a chat system 100 which comprises a plurality of communication systems 120a-n and a computer 110 having a processor and memory which is coupled with a database 114 and configured, i.e. programmed, to generate a chat space to which the “*personal communications devices*” may join for text and image based chat and the sharing of files.

⁸ *HTC Europe Co Ltd V Apple Inc [2012] EWHC 1789.*

⁹ *The application as filed uses the term ‘Fig. 1’ to identify the relevant figure (in this example, figure 1) from the formal drawings filed on 22/12/2021 (as part of the application as filed). I have adopted the same approach in the present decision using the term ‘Fig.’ to refer to ‘figure’.*

- 22 The chat space is generated in a series of steps whereby participants are invited to join the chat. The identifiers of each participant's communications device (e.g. the MAC address) and the content of messages (text, images, files) are all saved to the computer memory. Upon request from an individual chat participant, a private chat thread may be generated presumably among a sub-group of participants, with the corresponding device identifiers of the sub-group members' communications devices and any private messages being saved to the computer memory.
- 23 The invention is further characterised in that the private threads may be further subdivided into sub-threads having a more select group of participants (i.e. a hierarchical structure which the attorney describes as 'nested'). This is subject to permissive settings within the first private chat space allowing sub-threads to be established (see below). Again device identifiers and the messages are saved to the computer memory.
- 24 With reference to Fig. 7, it is a requirement in claim 1 that a private thread may be configured "*wherein the thread settings interface display allows configuration of whether a sub-thread can be created*", which, with reference to Fig. 5, I have taken to mean that the creators of a private thread can decide whether to configure that private thread to allow or prevent the creation of sub-threads.
- 25 According to the attorney's arguments, a seemingly critical feature of the invention is that it further involves the use of the stored identification data to subsequently track each of the communications devices. Whilst it is not clear whether this requirement encompasses all of the communication devices within the chat space or merely the subset of devices to be found within the private threads, I do not believe, however, that the question of patentability turns on this uncertainty.

Step (2): Identify the actual contribution.

- 26 In paragraphs 43 and 44 of *Aerotel*, Jacob LJ outlined some factors to consider when identifying the contribution made by the claims as follows:

"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."

- 27 Paragraph 44 goes on to state that, at the application stage, the contribution may be taken to be that alleged by the inventor, although this cannot be conclusive; as Jacob LJ states:

"[i]n the end the test must be what contribution has actually been made, not what the inventor says he has made".

- 28 In the present application, we have the benefit of being able to assess the contribution when compared to the proposed closest prior art, US2005/0078613 A1, cited by the examiner. However in making such a consideration one must be particularly careful

to consider the invention in its proper context and ensure that all the effects of the invention are taken into account. As Birss J (as he then was) said, in *Lenovo*¹⁰ (at paragraph 16):

“invention can lie in a new combination of old features and so, while identifying an individual feature as disclosed in prior art is a relevant thing to do, it will always be necessary to consider it in the context of the invention as a whole before reaching a conclusion.”

- 29 The document cited, US 2005/078613 A1, discloses a system for establishing multiple communications threads, for example, within the context of collaborative meeting, wherein parallel conversational threads may comprise one or more of audio, video or text communications. With reference to Fig. 2, multiple additional parallel communications paths 130 may be established within the context of a main line of discussion (e.g., a chat thread) 125 between two remote locations 210 and 220 and one of more of these additional communications paths may be private such that each might be described as being a sub-thread of the main discussion. I further note that a computing system ‘managing entity’ 120 coordinates the communications threads, including holding a list of the connected communications devices and a database of registered participants.
- 30 In contrast, at least as far as the purpose of the invention is concerned, the present invention appears to concern what I would take to be a very much more text- or image-based chatroom or chat-space. A main public thread is hosted by a computer is established and within this a private sub-thread restricted to a sub-group of participants is established. Subject to the settings of the private thread, further sub-threads restricted to a smaller subset of users within the private thread are then established such that there is a hierarchy of ‘nested’ private threads. Within this system, the computer system is configured to track the communications devices used by the chat participants by, for example, tracing MAC addresses.
- 31 In his letter dated 6 December 2023, the attorney argues that the actual contribution is thus:

“[The] claimed system identifies and tracks each participating communication device, which can transmit files as well as text- and image-based messages to other participating communication devices within a public, private or private sub-threaded (i.e. nested) messaging structure”.

- 32 The attorney then argues that the identification and tracking features improve security because a host organisation may track down the unauthorised sharers of private information and identify other access by other unauthorised communication devices. However, as the examiner rightly points out in his pre-hearing report, the application that I am considering only briefly discloses that the communication systems data may be used to identify and track individual communications devices (see paragraph [0040]) and does not explicitly disclose any security benefits, particularly in tracing unauthorised file sharers. I’ve carefully considered the features of device identification and tracking as defined by claim 1, and their associated benefits, when assessing the actual contribution, however, I agree with the examiner that the identification and

¹⁰ *Lenovo (Singapore) PTE Ltd v Comptroller General of Patents [2020] EWHC 1706*

tracking insofar as it is actually disclosed in the application as filed could ordinarily be expected to be inherent to a chat system between communications devices such that I consider it to be wholly conventional in the art.

33 In the pre-hearing report dated 14 December 2023 (mentioned above), the examiner assessed the actual contribution thus:

“A chat system comprising two or more communication devices and a computer which generates the chat space in which the two or more devices participate wherein the system comprises three tiers of chat space – a general public chat space, a private thread/space within the public space and a private sub-thread space within the private thread/space, wherein a private thread is generated using a template comprised in a thread settings interface display wherein the settings interface allows configuration of whether a sub-thread is allowed to be created or not from the private thread.”

Having carefully considered the prior art, I agree with the examiner’s assessment of the actual contribution, which is wholly consistent with claim 1 and with the disclosure when taken as a whole.

Step (3): Ask whether the contribution falls solely within the excluded matter.

34 Having established his view of the actual contribution, the examiner went on to determine that the contribution does not solve a technical problem within the computer or have a technical effect on a technical process outside the computer with reference to the signposts discussed in *AT&T*⁷ and *HTC*⁸. I will also adopt this approach and consider each of these in turn:

(i) Whether the claimed technical effect has a technical effect on a process which is carried on outside of the computer.

35 No argument has been made that this signpost is satisfied, and the invention clearly concerns a chat-system within a computer system.

(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.

36 The technical effect operates at the application, software level such that signpost two is not satisfied.

(iii) Whether the claimed technical effect results in the computer being made to operate in a new way.

37 The computer system itself does not 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.

38 The computer does not run more efficiently and effectively as a computer.

(v) *Whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

- 39 The fifth signpost which originates from the EPO Boards of Appeal decision in *Hitachi T-0258/03*¹¹, which concerned a business method, looks at the technical character of an alleged invention by means of the problem addressed. The fifth signpost is the only signpost which the attorney has argued is satisfied. However, his assessment rests firmly on his view of the actual contribution, with which (as I have already said above) I do not agree. In my assessment, the invention concerns the organisation of private chat spaces and achieves this using a program for a computer to provide additional 'nested' layers of chat space. This is not a technical solution to overcome a technical problem and when assessing the contribution that I identified under Step 2 above, it is my assessment that the fifth signpost is not satisfied.
- 40 I further note that even if the problem was one of security, as asserted by the attorney, then clearly the tracking and identification of communications devices with a view to the later identification those having unauthorised access to files does not render the communications system more secure. The security problem is not overcome, but merely circumvented by providing potential remediation should a security breach occur.

Step (4): Check whether the contribution is actually technical in nature.

- 41 I do not consider that any of the five signposts have been satisfied and, to that extent, there are no indications that the actual contribution from the claimed invention is anything other than a computer program as such¹². It is clear to me that the contribution made by the present invention falls wholly within the ambit of excluded subject matter relating to a program for a computer.

Conclusion

- 42 I find that the invention as claimed in patent application GB2118756.2 does not provide a technical contribution and defines subject matter that is excluded from patentability by section 1(2)(c) of the Act as a computer program as such.
- 43 As I am unable to identify any possible way in which the claims might be amended to overcome this exclusion.
- 44 I therefore refuse the application under Section 18(3) for failure to meet the requirements of the Act.

¹¹ *T-0258/03 Hitachi/Auction Method*

¹² *Really Virtual Co Ltd v UK Intellectual Property Office [2013] RPC 3*

Appeal

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

Dr L Cullen

Deputy Director, acting for the Comptroller