BL O/1161/23
06 December 2023

Intellectual Property Office

PATENTS ACT 1977

APPLICANT	PAG Financial International LLC
ISSUE	Whether patent application GB2015603.0 is excluded under section 1(2)(c)
HEARING OFFICER	H Jones

DECISION

Background

1 A PCT application entitled “Systems and methods for generating a dynamically adjustable dial pad” was filed on 7 February 2019 in the name of PAG Financial International LLC, and claims a priority date of 1 March 2018. The application entered the GB national phase on 1 October 2020 and was subsequently republished as GB2586923.

2 Despite a number of rounds of correspondence and a series of amendments to the main claims, the applicant has been unable to persuade the examiner that the application relates to anything more than a computer program or a method of doing business.

3 The normal unextended compliance date for putting the application in order was 17 February 2023. On 17 April 2023, the applicant filed the necessary form along with the relevant fee to extend the compliance period by two months as-of-right in accordance with rule 108(2), taking the compliance date to 17 April 2023.

4 The examiner’s final examination report, issued on 17 July 2023, offered a hearing. The applicant requested the hearing on 31 July 2023, and at the same time filed five sets of auxiliary claims for me to consider should I determine that the claims on file were unallowable.

5 The matter came before me at a videoconference hearing on 25 August 2023. Mr Alastair Jones of Barker Brettell appeared for the applicant. I am grateful for the comprehensive skeleton arguments provided in advance of the hearing.

The invention

6 The application relates to a dynamically adjustable dial pad for an electronic device, particularly a smart phone. Information gathered from applications used by the electronic device, for example browsing history, location information, time information and audio information, is used to predict which functionalities of the various applications a user may wish to deploy next. Those functionalities are ranked, and the ranking is used to modify the array of icons displayed on the dial pad.

7 The current claim set includes two independent claims directed towards an electronic device (claims 1 and 14), and another relating to a computer-implemented method (claim 7). In substance there is little to distinguish the claims, and at the hearing Mr Jones was content to base all his arguments on claim 1, which reads as follows:

> 1. An electronic device for generating a dynamically adjustable dial pad, the electronic device comprising:
>
> a display adapted to present a dial pad comprising an array of icons, wherein the array of icons is responsive to user input received via the display, wherein the user input comprises a selection and holding of the icon configured to initiate a set of functionalities associated with the icon;
>
> a transceiver adapted to send and receive communication signals via one or more communication media;
>
> circuitry adapted to gather information from one or more applications supported by the electronic device, wherein the circuitry is coupled to the display and the transceiver; and
>
> a non-transitory computer-readable medium operatively coupled to the circuitry and storing instructions that, when executed, cause the circuitry to:
>
> present the dial pad comprising the array of icons using the display wherein an icon of the array of icons is selectable such that selecting the icon of the array of icons initiates interaction with a first functionality;
>
> gather information from the one or more applications supported by the electronic device;
>
> use the transceiver to send the information gathered from the one or more applications to a remote server;
>
> use the transceiver to receive, from the remote server, ranking information for the set of functionalities that are executable by the one or more applications, wherein the ranking information is determined at the remote server using the information gathered from the one or more applications, and wherein, for each functionality in the set of functionalities, the ranking information represents an estimated relevance to a user;
>
> generate a modified array of icons using the ranking information for the set of functionalities; and
>
> cause the display to present the dial pad comprising the modified array of icons, such that at least one functionality in the set of functionalities that is estimated to be relevant to the user is selectable using the modified array of icons via the display, and
>
> wherein an icon of the modified array of icons is selectable such that selecting and holding the icon for a first duration of time or with a first pressure on the display initiates a first option for interaction with the at least one functionality, and selecting and holding the icon for a second duration of time or with a second pressure on the display initiates a second option for interaction with

the at least one functionality, wherein the first pressure is different from the second pressure; and

wherein the first option for interaction comprises a phone number and the second option for interaction comprises a website; and

wherein the first icon is configured to represent a person.

The law

8 Section 1(2) of the Act lists certain categories of subject-matter which are excluded from patent protection.

> *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 of method for…doing business, or a program for a computer;*
>
> *(d) …*
>
> *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.*

9 The test for establishing whether a patent application relates to one of these excluded categories is set out in the Court of Appeal's judgment in *Aerotel*[1]. The steps of the test are as follows:

> 1) construe the claim;
> 2) identify the actual (or alleged) 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 In *Symbian*[2]*,* the Court made clear that the question of whether a computer-implemented invention is patentable has to be resolved by asking whether it reveals a technical contribution to the state of the art.

11 In *AT&T/CVON*[3]*,* Lewison J set out five signposts that he considered helpful when considering whether a computer program makes a technical contribution. In *HTC/Apple*[4]*,* the signposts were reformulated slightly considering 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;

---

[1] Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application [2006] EWCA Civ 1371
[2] Symbian Ltd. V Comptroller -General or Patents [2008] EWCA Civ 1066
[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] Gemstar-TV Guide International Inc v Virgin Media Ltd [2010] RPC 10

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.

Arguments and analysis

Step 1 – properly construe the claims

12 It is common ground that there is no difficulty in construing the claims.

Step 2 – identify the actual contribution

13 The examiner's assessment of the contribution is as follows:

> An electronic device (e.g. a smart phone) programmed to present a dial pad comprising an array of icons – where functionalities of applications on the device are sent to a remote server, and this remote server then ranks the functionalities according to their relevance to a user, and sends this back to the device, which then uses these rankings to generate a modified array of icons to be displayed by the dial pad. The selection of a ranked icon then can present different options, depending on the pressure that is detected on the relevant icon.

14 Mr Jones' view is that this does not truly reflect the actual contribution of the invention.

15 To assist with identifying the actual contribution, it can be helpful to consider the differences between the claimed invention and the prior art, though of course the contribution is not necessarily defined merely by what is new and inventive as one may need to place that in its proper context to see what the effects of the invention are. With this in mind, Mr Jones took me through the closest identified prior art (US2017277424) in some detail to point out what he considered to be several key differences. For instance, in US '424, in order to establish a communication session with a particular contact, the user drags a contact icon from one side of the screen and drops it onto an application icon on the other side. In contrast, in the invention a user selects and holds an icon to access a functionality of an application. More importantly, perhaps, US '424 discloses assembling a prioritised list of contact information based on analysis of information gathered from applications installed on the user device, but it does not rank functionalities that can be carried out by applications in this way, and consequently it does not modify a display on the device to present such ranked functionalities to the user.

16 Mr Jones argued that the contribution should relate to the central idea embodied in the claims. He analogised this to the task of identifying the inventive concept of a claim when assessing obviousness using the 4-step *Windsurfing/Pozzoli* approach. That does not mean, and nor did I take Mr Jones to suggest, that the contribution for the purposes of the *Aerotel/Macrossan* approach and the inventive concept for the *Windsurfing/Pozzoli* approach are one and the same. I think his point was merely that when identifying the contribution, it may be helpful to look beyond the literal wording of the claim, to take a somewhat broad view and not get distracted by

features in the claim that are immaterial to the central idea of the invention. One such feature that Mr Jones considers not to relate to the central idea is using different pressures on the icon to choose between two different functionalities. Mr Jones admitted that this was quite a well-established idea in the prior art, and that in any case nothing hinged on this anyway, and I tend to agree.

17 He also pointed out a minor discrepancy between the claim and the examiner's contribution; it is information from applications that is gathered and sent to the remote server, not functionalities of the applications.

18 With all that in mind, the applicant submits that the actual contribution is:

> An electronic device (e.g. a smart phone) programmed to present a dial pad comprising an array of icons, where information gathered from one or more application supported by the device is sent to a remote server which ranks functionalities executable by the one or more applications in terms of estimated relevance to a user, the ranking information sent back to the device which generates a modified array of icons to be displayed from which one of the relevant functionalities is selectable.

19 I am perfectly content to accept this assessment of the contribution, which to my mind does not differ greatly from that proposed by the examiner.

Steps 3 and 4 – does the contribution fall solely within the excluded fields; is it technical?

20 The key issue, as Mr Jones sees it, is that the examiner has not properly identified the contribution and, as a result, has reached the wrong conclusion on the excluded matter issue. With that in mind, Mr Jones took me through the *AT&T/HTC* signposts in relation to the computer program exclusion.

Signpost 1 – is there a technical effect on a process carried on outside the computer?

21 Mr Jones argued that by making the relevant functionalities more readily available to the user in the modified array of icons, the invention provides for a reduction in the number of physical steps required for a user to select relevant functionalities executable by one of the applications. This, in Mr Jones' view, is a technical effect carried out on a process outside the computer.

22 In support of his argument, Mr Jones asserted that the contribution is akin to that considered by the Patents Court in *Lenovo*[6]. That judgment concerned a process for overcoming the problem of card clash when a user presents several contactless payment cards simultaneously at an electronic card reader. The contribution lay in allowing payment to be made automatically across more than one account, and the key question was whether that contribution involved a different physical interaction with the world outside the computer. The problem in *Lenovo* was solved in an automated fashion by splitting payment across multiple cards in accordance with a user preference set prior to the transaction. This meant that at the point of payment, the user did not have to take any extra physical steps. There was held to be an effect

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

of the invention outside of a computer, and so the invention was technical in character.

23 Making a physical interaction unnecessary or even just reducing the number of physical steps may well be capable of giving rise to a technical effect, but as Birss J said in *Lenovo,* it is important to consider the detail. The current application is certainly distinguished from *Lenovo* in that it does not make the physical interaction obsolete; the electronic device does not automatically initiate any functionality provided by the various installed applications. Assuming that the ranked list of icons correctly anticipates what functionality the user may wish to employ next then I accept that the user will be saved some pressing or holding of icons, though of course there will be no saving of effort at all if the user actually wishes to access some other functionality. Either way, the user still interacts with the dial pad in an identical manner, i.e. they have to select and hold an icon to initiate the functionality of their choosing. The difference is merely in the icons that are presented to the user for selection on the dial pad. In contrast to the judge's view in *Lenovo*, I do not consider the current invention to involve a different physical interaction with the world outside the computer.

Signpost 2 – is there a technical effect at the level of the architecture of the computer?

24 Regarding signpost 2, Mr Jones pointed out that the invention provides its advantage regardless of which applications are used to provide the information used for ranking, and which functionalities of the applications are displayed in the modified array of icons. To give an example, the invention works just the same whether the information is gathered from an e-mail app or a weather app, or whether the modified icon display shows an icon for a person or for a restaurant.

25 Mr Jones submits that what happens in this invention is consistent with that in *HTC v Apple*[7] in which the court held that the invention operated at the level of the operating system of the device, and thus met the second signpost.

26 Mr Jones' argument homes in on the second phrase in the signpost, i.e. "the effect is produced irrespective of the data being processed or the applications being run", but overlooks the first, i.e. "whether the claimed technical effect operates at the level of the architecture of the computer". It is true that the invention is application-agnostic in the sense I have explained above, but the reference to an effect irrespective of the data being processed and the applications being run in the second signpost is there to help explain what is meant by "level of architecture"; it is not itself a signpost.

27 The current application does not meet the second signpost; quite the opposite in fact. It operates only upon a very specific set of data (data from applications which can be used to predict a user's intentions) and the effect is produced in only one application (the dial pad). There is plainly nothing in the current application that involves any effect at the level of the operating system of the device, and nor is there anything that affects the operation of the internal workings of the computer which might equally be an effect at an architectural level.

[7] [2013] EWCA Civ 451

Signpost 3 – does the computer operate in a new way?

28 Mr Jones did not offer any argument in respect of this signpost, and I need not say any more than I do not consider that the computer operates in a new way.

Signpost 4 – is the computer a better computer in the sense or running more efficiently and effectively?

29 Mr Jones argued that the invention provides an improved user interface in the sense that the user can more quickly and easily access the functionality that is of most relevant to them. His view is that improved user interfaces make a computer run more efficiently and effectively. As such, he submitted, the fourth signpost points towards a technical contribution.

30 In support of this argument, Mr Jones referred me to the decision of the hearing officer in *Lenovo*[8], and in particular to paragraphs 37 and 39 in which the hearing officer characterises the invention as an improved user interface and comments that user interaction and control of computers *per se* is not excluded. Mr Jones submits that the consequence of *Lenovo* is that an improved user input device, however achieved, is necessarily technical.

31 There is a clear distinction between the facts of *Lenovo* and the present application, something which Mr Jones was prepared to acknowledge at the hearing. I need not explain *Lenovo* in detail here, but in simple terms it relates to a method of disambiguating user handwriting strokes in order to provide text input to an application on an electronic device. Clearly that represents an improvement in a user input interface, and the hearing officer recognised that. But I do not think it reasonable to suggest that the hearing officer was making a sweeping statement about user interfaces. To do so is to deprive his comments in paragraphs 37 and 39 of their proper context. The context in *Lenovo* is solving the problem of how to interpret a user input. In that respect it shares something with *HTC v Apple* (which Mr Jones also considered to support his submission), which addressed the problem of how to handle the input from a multi-touch device. In the case of *Lenovo*, the improvement to the user interface that the hearing officer was referring to was that it improved the accuracy and reliability of the input to the user application. There is no such advantage here.

32 I do not dispute that the present invention provides an improved user interface in the sense that it presents to the user a prioritised set of icons which allows them to access functionalities of the various applications installed on the device with less button pressing and/or swiping. However, the improvement resides only in the options that are presented to the user. There is, in my view, no improvement to the user interface *per se* in any functional sense.

33 I am not persuaded that anticipating which functionalities a user may wish to access next and modifying a user interface to display appropriate icons really makes for a better computer in the sense of running more efficiently and effectively as a computer, as required by the 4th signpost.

[8] BL O/017/20

Signpost 5 – has a perceived problem been overcome, or simply circumvented?

34 Mr Jones characterised the problem that the invention addresses to be providing a dynamically adjustable dial pad which improves the utility of the device by estimating the functionalities a user is likely to deploy next. He argued that the problem was overcome by providing a better, easier to use device, and pointed towards his arguments on the earlier signposts to demonstrate that the invention was indeed such a device. Of course, I have already determined that it is not.

35 The applicant has clearly identified a problem – conventional dial pads only provide a limited selection of buttons/icons, and if the user wants to do something other than make a call then they need to access some other interface on the device, and that may involve a lot of button-pressing. There is no denying that the invention can provide quicker, more direct access to certain functionalities provided by the applications installed on the electronic device (provided of course that the ranking correctly anticipates the user's intention). However, the fifth signpost plainly requires more than the solution of a problem. The key point here is that there is no technical problem with the electronic device, and, as such, I am not certain how helpful the fifth signpost is. Of course, the solution to a non-technical problem could be technical in nature, but in this case the solution involves no more than providing an alternative dial pad with some additional icons which provide context-sensitive functions as options for the user. So, a problem has been overcome, but that problem is not technical and the solution is equally non-technical.

36 The signposts are useful, but not determinative, as Kitchen LJ pointed out at paragraph 51 of *HTC v Apple*. As it happens, in this case, none of the signposts point towards a technical contribution. More generally, the applicant has not persuaded me that the contribution, as set out above, extends beyond a computer program as such. On the contrary, the contribution, in my view, resides solely in the programming which makes a conventional electronic device display a modified set of context-relevant icons on a user interface which operates in an entirely conventional manner.

Method of doing business

37 The examiner objected that the claims relate not only to a computer program but also to a business method. Mr Jones did not provide any specific arguments on this point at the hearing, and nor are there any submissions in the skeleton arguments. Having already concluded that the claims are excluded as relating to a computer program as such, I see no value in considering whether they might also be excluded as a method of doing business.

The auxiliary sets of claims

38 The applicant has submitted several sets of auxiliary amended claims for me to consider in the event that I find the invention as set out above to be excluded. At the hearing I made it clear that I did not consider the filing of the auxiliary claims to be allowable and briefly explained my reasoning, but I will set out that reasoning in more detail.

39 Section 20(1) of the Patents Act says:

> *If it is not determined that an application for a patent complies before the end of the prescribed period with all the requirements of this Act and the rules, the application shall*

> *be treated as having been refused by the comptroller at the end of that period, and section 97 below shall apply accordingly.*

The prescribed period referred to here, commonly known as the compliance period, is defined in rule 30, which is appropriately entitled “Period for putting the application in order”.

40 If an examiner reports that the application does not comply with the requirements then the applicant may provide amendments to overcome the objections raised, as section 18(3) makes clear:

> *If the examiner reports that any of those requirements are not complied with, the comptroller shall give the applicant an opportunity within a specified period to make observations on the report and to amend the application so as to comply with those requirements (subject, however, to section 76 below), and if the applicant fails to satisfy the comptroller that those requirements are complied with, or to amend the application so as to comply with them, the comptroller may refuse the application.*

41 That is evidently the case here. The examiner has objected, the applicant has had numerous opportunities to make observations and amendments, and as I have decided above, the application did not comply with the requirements of the Act at the compliance date.

42 Mr Jones acknowledged that the auxiliary claim sets were submitted late, that is after the end of the compliance period. The applicant’s primary submission as to why I should accept these late-filed claims is based on paragraph 19.22 of the Manual of Patent Practice, which reads as follows:

> If, however, a request to amend is received after the end of the compliance period (at which time the application must have been reported as complying with the Act and Rules, otherwise it would have been treated as having been refused) the amendment should be allowed only if it does not necessitate substantial re-examination or further search and would not unduly delay grant; a request to restrict the claims to avoid late-found prior art should, if effective for this purpose, be allowed.

43 It is important to read this paragraph in its proper context. It relates to a circumstance in which the consent of the comptroller is required to allow the filing of an amendment under section 19(1), which says:

> *At any time before a patent is granted in pursuance of an application the applicant may, in accordance with the prescribed conditions and subject to section 76 below, amend the application of his own volition.*

44 The five sets of auxiliary claims are not, in my view, amendments of the applicant’s own volition, i.e. for reasons of their own. Rather, they are amendments made with the intent to overcome an official objection. They are the sort of amendments that one expects under section 18(3), but the period for filing such amendments had expired when the auxiliary claims were submitted. Section 19(1) and thus paragraph 19.22 of the Manual simply have no relevance.

45 Of course, had I concluded that the claims on file at the compliance date were allowable, then the auxiliary claims may conceivably be within the territory of section 19(1), but that is not the case.

46 Even if I were to consider the auxiliary claims to constitute a voluntary amendment falling within the scope of section 19(1), then paragraph 19.22 still does not assist the applicant. That paragraph gives an example of a specific circumstance in which it may be reasonable for the comptroller to exercise their discretion to accept a voluntary amendment after the end of the compliance period, namely that the application has already been reported as complying with the requirements of the Act and Rules and that late-found prior has come to light for which an amendment to distinguish the claimed invention is needed. Neither aspect applies in this case, but particularly the first.

47 The applicant has further argued that there is a public interest in granting patents where they can be granted and that there should be an overriding aim to avoid rejecting patentable inventions on formal matters alone if a patent could otherwise be granted. I have no disagreement with the general principle of striving to grant patents where it is possible, but the applicant has had ample opportunity to submit amendments in an attempt to overcome substantive objections. To provide further such opportunities after the compliance period would be to drive a coach and horses through section 20(1) and to deprive the compliance period of any meaning. There are good reasons why section 20(1) and rule 30 define a prescribed period for putting the application in order, not the least of which is providing certainty for third parties.

48 On reviewing the correspondence on file, I have noted that the agent's letter of 17 April 2023 refers to a request for a discretionary extension of the compliance period. I take this to mean a further extension in addition to the as-of-right extension that was formally requested on the same day. However, no form or fee was submitted to formalise this request for a discretionary extension. Whether the examiner would have agreed to such an extension, had it been properly requested, is unclear, but yet another extension would have been required in order for the auxiliary claims to have been filed on time. The point is this – there is a well-established process to request one or more discretionary further extensions of the compliance period, but in this case the applicant has not availed themselves of this facility.

49 With all that said, a cursory glance at the auxiliary claims does not suggest to me any likelihood that I would have reached a different decision.

Conclusion

50 Having considered the arguments, I have found that the application relates to subject-matter excluded from patentability under section 1(2)(c) and that therefore it should be refused under section 18(3).

Appeal

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

Huw Jones
Deputy Director, acting for the Comptroller