Intellectual Property Office

BL O/038/15

26 January 2015.

PATENTS ACT 1977

APPLICANT BlueCava Inc

ISSUE Whether patent application GB1113425.1 complies with section 1(2) of the Act

HEARING OFFICER Dr J Houlihan

DECISION

1 The application was filed on 4 August 2011 claiming priority from an American patent application US 61/504,122, filed on 1 July 2011. It is published as GB2492604 and currently entitled "*Serving user behaviour data corresponding to a human user of a device without authenticating the user*".

2 The issue for me to decide on the papers on file is whether the claims submitted on 7 October 2014, with claim 1 as amended on 24 November 2014, are excluded from being patentable under section 1(2) because they relate to a computer program, as such and/or a business method, as such.

3 In his first examination report the examiner had objected that the main claim and some dependant claims lacked novelty and that some dependant claims lacked inventive step, although these objections were not pursued after the applicant amended the claims. However, in two rounds of correspondence with the applicant's attorney, Dr Robin Browne of Hepworth Browne, the examiner maintained his objection that the claims related solely to a business method and also to a computer program as such.

4 As the applicant and examiner were not able to agree, the applicant initially requested a hearing. Subsequently, in a 26 page letter dated 7 October 2014 the applicant requested that I decide the matter on the papers on file and at the same time submitted an amended version of claim 1 together with arguments (hereinafter referred to as 'A/L') in support of their contention that the amended claims were not excluded from patentability by section 1(2). The examiner considered that some of the amendments to claim 1 were not supported, as required by Section 14(5)(c). The applicant then filed a further amendment to claim 1 on 24 November 2014 together with further arguments.

The invention

5 The alleged invention (for convenience hereinafter referred to simply as "the invention") concerns the issue of user identification in Internet technology. The application says that in order to provide users with a customised or tailored experience when interfacing with networked computer services they normally have to disclose personally identifiable information (PII). This raises concerns over privacy as PII data may typically be held in a separate data aggregator, so called "off-line aggregator", configured to safeguard user identity. In the applicant's words users tend to find this "a bit creepy". As well as being susceptible to suspicion, the requirements for these aggregators to maintain compliance with current privacy laws can incur significant overhead costs. The description indicates that the purpose of the invention is to enable a networked based business model which is able to benefit from the value of PII but without aggregating the PII data and assuming liability for it.

Claims

6 There are eight claims, a main claim, five dependant claims and three omnibus claims.

7 The current version of claim 1 submitted on 24 November 2014 reads:

> *A method for serving user behavior data corresponding to a human user of a device in the absence of prior authentication of the user of the device, the method comprising:*
> *at a device-indexed data server, receiving a request through a computer network for the user behavior data, the request sent by a server providing a network-based service to the user, wherein the user behavior data is earlier recorded prior behavior of the user on the device and wherein the request includes a device identifier of the device that is a digital fingerprint unique to the device;*
> *for a registered user, in response to the request from the server, retrieving all device-indexed user data that are associated with the device identifier and that are stored persistently in memory at the device-indexed data server, the device-indexed user data including non-PII data representing historical and statistical behavior of the user;*
> *at the device-indexed data server, requesting additional non-PII data relating to the registered user by sending to an off-line data aggregator at least one of the registered user's PII hash and the registered user's unique encrypted user identity;*
> *at the aggregator, in response to the request for additional non-PII data, assembling additional non-PII data associated with the registered user's PII hash or the registered user's unique encrypted user identity and relating at least to behavior of the user, and sending the assembled additional non-PII data to the device-indexed data server over the computer network;*
> *at device-indexed data server, appending said received additional non-PII data to said all retrieved device-indexed user data associated with the device identifier to generate a complete updated record of user behavior data;*

and sending the complete updated record of user behavior data through the computer network to the server to permit the server to provide customized interaction between the user of the device and the network-based service prior to authentication or identification of the user;
wherein the device-indexed data server never receives PII data from the data aggregator and the data aggregator never receives an indication of the device identifier from the server.

8 Claim 4 relates to a computer readable medium arranged to execute the procedure of claims 1-3 and claim 5 relates to a computer system comprising the computer readable medium of claim 4.

The law

9 This decision concerns section 1(2)(c) of the Patents Act. It reads:

> *"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 of performing a mental act, playing a game or 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."*

10 There is a large volume of case law on the subject of excluded inventions. In *Aerotel/Macrossan*[1] the Court of Appeal set out a four step test to approach the issue of excluded matter. In *Aerotel* the issue was a computer program; *Macrossan* concerned a method of doing business.

11 The four step test proposed in *Aerotel* is as follows:

I. Properly construe the claims

II. Identify the actual (or alleged) contribution

[1] Aerotel Ltd v Telco Holdings Ltd; Macrossan's Application, Court of Appeal [2007] RPC 7 (hereinafter referred to as "Aerotel")

III. Ask whether it falls solely within the excluded subject matter

IV. Check whether the actual or alleged contribution is actually technical in nature

12 In *Symbian*[2] the Court of Appeal confirmed that the *Aerotel* test is equivalent to the previous case law test of "technical contribution". The same court confirmed this approach in *HTC v Apple*[3] and also, with some modification, the five signposts established in *AT&T*[4] for interpreting whether a computer program makes a technical contribution. *Aerotel* thus codifies the approach to the law on excluded matter but does not depart from the principles in domestic law which were established before it. In particular, the law regarding the business method exclusion established in *Merrill Lynch*[5] remains relevant.

13 In many places the applicant argues that the UK precedents are wrong and that I should follow EPO case law instead. For example, the applicant says (A/L paragraph 5.6) "*until the UKIPO get (sic) to grips with both the underlying intent and irreconcilable frailties of Aerotel, the system of effective patent law is compromised...".*

14 In another instance the applicant (A/L paragraph 4.4) says *"The Symbian decision points to this "real world" interaction as being core to any consideration, but fails to propose an adequate test. In contrast, the Aerotel decision is a shambles that remains inconsistent with the EPC and thus in contravention to section 130(7) of the Act".*

15 In their most recent letter (24 November 2014 paragraph 2.10) the applicant refers to the recent decision of the Court of Appeal in *Re Lantana*[6] saying "*The reasoning of Lantana is therefore wrong and brings the effective operation of section 130(7) into dispute*".

16 As a hearing officer I am bound to follow UK precedents. In some judgements the UK Courts, for example in the Court of Appeal in *Symbian*, discuss certain circumstances in which a Court may depart from its own judgements in relation to EP decisions. The fact that the UK Courts may have the freedom to depart from their own decisions does not allow me as a hearing officer to do the same. In all, I find a majority of the applicant's comments on the legal precedents quite unhelpful.

17 Section 130(7) of the Act essentially provides that UK patent law was framed to have "*...as nearly as practicable, the same effects in the United Kingdom as the*

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[2]Symbian Ltd v Comptroller-General of Patents, Court of Appeal, [2008] EWCA Civ 1066, [2009] RPC 1 (hereinafter referred to as "Symbian")

[3] HTC Europe CO Ltd v Apple Inc [2013] EWCA Civ 451

[4] AT&T Knowledge Ventures LP Application and CVON Innovations Ltd's Application v Comptroller-General of Patents [2009] EWHC 343 (Pat) High Court (hereinafter referred to as "AT&T")

[5] Merrill Lynch's Application [1989] RPC 19

[6] Lantana Ltd v The Comptroller General of Patents, Design and Trade Marks [2014] EWCA Civ 1463 (13 November 2014)

corresponding provisions of the European Patent Convention.....". The UK authorities have established that EPO decisions are not binding but can be persuasive.

18 I do not propose to discuss the EPO decisions which the applicant cites where they have not pointed to similarities on the facts in the cases to which those decisions relate and the alleged invention in the present case. For the record, these EPO decisions are: T0154/04 (Duns Licensing); T1543/06 (GameAccount); T258/03 (Hitachi); T1173/97 (IBM); T641/00 (Comvik) and T533/09 (Schiller); G03/08.

19 I will therefore apply the *Aerotel* test and bear in mind what light EPO decisions may shed in applying that test and the principles laid out in other UK authorities.

Step 1 - construe the claims

20 Although claim 1 is long, I consider its stepwise structure presents no problems of construction.

Step 2 - identify the actual contribution

21 Having construed the main claim I now need to identify what actual contribution it makes to the sum of human knowledge, minded of the well known comments of Jacob J in *Aerotel* which reads:

> [43] "*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*".

22 The examiner identifies the actual contribution in his letter of 14 July 2014 (paragraph 13) as:

> *"A computer program which, when executed, performs a method of serving user behaviour data of a human user comprising: receiving a request for user behaviour data at a "device-indexed" server, from a server that provides services to a user, the request containing an identifier of a user's device; and in response to the request, at the device-indexed server: retrieving user behaviour data associated with the identifier from the server's memory and updating the user behaviour data by retrieving additional user behaviour data from an "off-line" aggregator using a further piece of information not identifying the user; and sending the updated user behaviour data to the server that provides services to a user"*

23 The applicant does not refute the examiner's construction of the actual contribution but seeks to expand it. The applicant (A/L paragraph 3.2) refers to the examiner's passage recited above and says:

> "*The applicant would add, however, that the contribution of the independent claim sees a reduction in access time and improved system responsiveness*

through a customised user interaction with the networked-based computer service. Additionally, the contribution results in improved protection of PII information whilst still achieving a customised interactive user experience with a remote server application that protects PII information by eliminating unnecessary communication of PII information to unsecured server locations".

24 The applicant does not make any further comments about the actual contribution in relation to the amended claim 1.

25 I do not see that the amendments to claim 1 change the position of either the examiner's or applicant's view about the actual contribution.

26 Broadly speaking, amended claim 1 comprises seven integers. Having considered these, the applicant's points and the examiner's points above, in my view, the actual contribution lies in: at a device-indexed data server, a request for user behaviour data is received which contains an identifier of a user's device, where user behaviour data which includes non-PII data associated with the identifier is retrieved and is combined with previous user non-PII data behaviour assembled by an 'off-line' aggregator, where a complete record of non-PII user behaviour data is generated and sent to a server that provides services to the user in question, where the device-indexed server never receives PII data from the data aggregator and the data aggregator never receives an indication of the device identifier from the server. I recognise the applicant's point that this reduces the time to access data, improves the response of the computer service in customising the user interaction and improves the protection of PII data in a customised service.

Step 3 - does the actual contribution fall solely within an excluded field

27 The question of how the contribution of an invention in the field of computer programs should be considered can be found in the oft quoted phrase in *Symbian* which reads:

> "[37] *What is decisive is the technical contribution which the invention described in the claim when considered as a whole makes to the known art".*

28 Having read the applicant's submissions I can identify two consistent lines of argument. Firstly, that I should consider the question of the "real world" impact or the "practical reality" of the invention and secondly "how" the invention works. I think these points can be addressed under the AT&T signposts.

29 I will therefore now look at the applicant's submissions under each of the *AT&T* signposts, with the fourth signpost as modified by Lewison LJ in *HTC v Apple.*

Signpost 1. Does the claimed technical effect have a technical effect on a process which is carried on outside of the computer?

30 Specifically in relation to signpost 1 the applicant says (A/L paragraph 4.34.2) "*The claimed method within a system selectively delivers a customized interface to the user based on limited, protected information communicated between the device [used by the user] and the server and then also between the server and other*

infrastructure components. The positive technical upshot to this technical implementation is that the system maintains secrecy in PII by limiting access to user-specific information. *The effect 'on' the outside is actually 'negative' data access, so functionally the system delivers a predicted customization without revealing information that can be leverage (sic) through hacking*".

31 In my view, the effect outside the computer, namely the customisation of the user experience, limiting access to user-specific information, and maintaining secrecy, is a business effect, not a technical one. I think one has to assume that computers and the programs they inevitably contain are necessarily technical things which ultimately have an impact in the "real world" and provide advantages of "practical reality". However, patent law was specifically configured to exclude computers programs as such from being patentable. To my mind the question "real world" and "practical reality" is too broad. Rather, UK case law teaches us that the decisive question is whether there is a technical contribution.

32 I cannot see a technical effect of the applicant's invention outside the computer network. Thus, in my view the answer to signpost 1 is "No it does not".

Signpost 2. Does the claimed technical effect operate at the level of the architecture of the computer; that is to say is the effect produced irrespective of the data being processed or the application being run?

33 I think this signpost is relevant to the applicant's point about "how" an invention works. In relation to signpost 2 the applicant says (A/L paragraph 4.34.3) "*the functional effect of the claimed invention is across a system of multiple components, with the result that the system operates in a different technical way from those of the prior art.*"

34 I also note another passage in the applicant's comments which appear to be relevant to signpost 2 (A/L paragraph 4.25). "*The present invention is also not just a succession of computer program steps, but an inter-operative system that pulls and controls the flow of data through a network*".

35 Is there a technical contribution here? I do not think so. In the absence of the identification of particular technical features, I do not agree that the mere flow of data through a system and that the control of that flow amounts to a technical contribution. This is precisely the sort of thing that computer programs do.

36 The applicant discusses *SK-Telecom T1051/07* (A/L paragraph 4.19) in relation to the question of "how" an invention works. The invention at issue in *T1051/07* concerned a system for conducting electronic transactions by means of a mobile device and the objective problem said to be solved is to provide the system with means allowing a user to load money on his account in the host computer (or to release money from his account). I do not see that it aids the applicant's case here as the facts at issue are different.

37 In summary, I cannot see that the system operates in a new way irrespective of the data. Rather, the method is an application with the purpose of manipulating data to meet the needs of both the user and service provider. What is new is the

manipulation of data. That is what a computer program does. Thus, my answer to signpost 2 is “No”.

Signpost 3. Does the claimed technical effect result in the computer being made to operate in a new way?

38 No. The computer network, the server, off-line aggregator and memory all behave in the same way. The point I have made above under signpost 2 applies here too. The applicant does not make any points specifically in relation to signpost 3.

Signpost 4. Does the program make the computer a better computer in the sense of running more efficiently and effectively as a computer?

39 I think the applicant’s following comments are relevant to this signpost (A/L paragraph 4.4) “*It is asserted that the issue of ‘technical contribution’ or ‘technical effect’ is actually the point where the skilled person is able unambiguously to derive the merest scintilla of advantage that causes in practical reality the technical implementation of the claimed arrangement to operate in a better, faster, more secure and/or more reliable fashion”.*

40 I consider that the improvements in efficiency and effectiveness are in the user’s experience of the computer service and the system’s ability to provide users with a customised, less worrying service, *vis-a-vis* their personal data. There are also efficiency gains for the service provider, for example in reducing network time and the limitation of liabilities. However, in my view, these are business gains, not technical gains, and do not make the computer network run more efficiently or effectively as a computer. Thus, my answer to signpost 4 is “No”.

Signpost 5. Is the perceived problem overcome by the claimed invention as opposed to merely being circumvented?

41 The applicant says (A/L paragraph 4.34.4) “*The solution provides a ‘how’ to implement technically an aim to be achieved - per T1769/10*”. *T1769/10* concerned games and was found to be allowable because the identified objective technical problem lay in communications between an arrangement of servers and client devices to enable playing of a game while maintaining confidentiality of the player's data in the player database. There are some similarities with the present case here insofar as the general issue of user confidentiality or privacy is concerned. This led me to consider this decision in more detail to find out whether it may be of assistance here.

42 As the applicant points out in *T1769/10* the EPO Boards of Appeal (BoA) say “*Accordingly, depending on the available prior art and what is claimed, the objective technical problem to be solved may be formulated generally as to implement technically (the constraints as imposed by) the aim to be achieved in the non-technical field*”.

43 On the facts of T1769/10 the BoA decided that the arrangement of servers was inventive over the prior art and that this represented a technical solution involving a technical means. I think this is different to the issue here. In the present case it is the manipulation of data, rather than a particular arrangement of computer devices that

forms the actual contribution of claim 1. I should also say that *T1769/10* is a single decision of the EPO BoA which I would be cautious about applying too readily, in the absence of a clear indication from the UK authorities.

44 Returning to the question posed by signpost 5. I consider that the problem, avoiding using PII data, is not a technical problem. The problem of keeping data secret and protected is circumvented, rather than overcome, by the alleged invention - the invention uses non-PII data in situations where PII could have been used. To my mind, the substitution of one type of data for another overcomes a business problem not a technical one. Consequently, my answer to signpost 5 is "No".

45 The examiner cites the UK case of *Really Virtual*[7] in his letter of 14 July 2014 (paragraph 21-22) which the applicant dismisses (A/L paragraphs 4.35 and 4.36). This case concerned an arrangement in which users retain anonymity in accessing services from the Internet. In his judgement Baldwin J said in relation to *Really Virtual's* invention:

> "*....what is said to be new is the provision of tailored services to the anonymised user. Those services are provided by the intervention of the trusted broker....which uses clustering (to group and therefore anonymise the user) in order to present an anonymised request for tailored services to a service provider. In my judgement there is nothing technical in that contribution". [37-38]*

46 I believe the facts in question in *Really Virtual* are significantly similar to those at issue in the present case and therefore I regard it as very relevant. As it is a judgement of the UK High Court, I should no doubt follow it in coming to my conclusions about whether the applicant's invention involves a technical contribution.

47 In summary, having applied the *AT&T* signposts I cannot see that the actual contribution the applicant's invention makes is a technical contribution. Rather, what I can see is that the actual contribution lies in mechanisms for processing and moving data and information around. In other words, processes which are necessarily entirely underpinned by a computer program.

48 Thus, I find that the applicant's invention relates entirely to a computer program, as such.

49 Next, I will consider whether the actual contribution also relates to a business method, as such. In *Halliburton*[8] Birss J discussed the interplay of business methods and computer programs and said in a now well known passage (paragraphs 34-36 of *Halliburton)* that the *Aerotel* approach helps in "*cutting through*" the apparent dilemma presented of the computerisation of business methods and also emphasised the generic nature of the business method exclusion established by *Merrill Lynch*. Simply because a business method is run by a computer, which naturally could be viewed as a technical "thing", does not lift it out of the exclusion.

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[7] Really Virtual Co Ltd v UK Intellectual Property Office, [2012] EWHC 1086 (Ch)
[8] Halliburton Energy Services Inc's Application [2011] EWHC 2508 (Pat), RPC 12

50 Is the actual contribution here a business method? To me, it plainly is. The advantages of the invention that I have identified under the *AT&T* signposts above are business advantages.

51 To my mind, the actual contribution that involves using non-PII device identifiers' and customising the experience of the user in interacting with a networked computer service, based on the user's non-PII behavioural data is a method of doing business.

52 The advantages which the applicant highlights in reducing access time, improving the response of the computer service in customising the user interaction while protecting of user anonymity by not transmitting PII data are entirely business advantages brought about by computer software.

53 Thus, I also find that claim 1 relates to nothing more than a business method, implemented by a computer program.

Step 4 - check whether the alleged contribution is technical

54 I have already considered the issue of technical contribution under step 3.

Conclusions

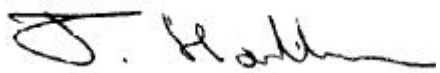
55 I find that claim 1 relates entirely to a method of doing business, as such, and also to a computer program, as such.

56 I note that the applicant has not made any submissions about features in the specification over above those made in relation to the main claim. I cannot see any saving features in the dependant claims or in the specification as a whole.

57 This application is therefore refused under section 18(3).

Appeal

58 Any appeal must be lodged within 28 days.



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