



PATENTS ACT 1977

APPLICANT Beijing Didi Infinity Technology and Development
Co Ltd

ISSUE Whether GB 1802295.4 complies with Section 1(2)
of the Patents Act 1977

HEARING OFFICER Peter Mason

DECISION

Introduction

- 1 Patent Application GB 1802295.4 is the national phase of a PCT application published as WO 2018/120565 claiming a priority date of 30th December 2016. It was subsequently republished as GB 2564922 on 30th January 2019. Despite several rounds of correspondence, the applicant has been unable to convince the Examiner that the application is allowable under Section 1(2) of the Act. As a consequence, the applicant has requested a hearing to resolve these matters
- 2 The hearing took place by video on 31st August 2022. The applicant was represented by Mr Richard Able of Barker Brettell. I would like to thank Mr. Able for his skeleton arguments provided prior to the hearing. I would also like to thank Mr Abel for agreeing to Patent Examiner Rachel Morgans to attend as an observer. I was assisted by Mr Nigel Hanley.

The Application

- 3 The application is concerned with amending a journey in an online transportation platform. The application allows a user to amend the start or destination of a journey. The system can then generate an updated route relating to the changes for the transport provider, allowing them to pick up the user or drop them in the modified location. By way of example, the user having already arranged a journey to meet some friends at location A can use this system to change their journey to meet them at new location B instead.

The Claims

- 4 For the avoidance of doubt the current claims are those filed on 23rd May 2022. They consist of three independent claims, claim 1 to a system, claim 15 to a method and claim 20 to a computer program on a media. The claims are all coterminous and any

decision I make on claim 1 will apply to Claims 15 and 20 mutatis mutandis. For that purpose, I have only reproduced claim 1:

A system configured to operate an online transportation platform comprising:

A bus;

At least one storage media electronically connected to the bus, comprising a set of instructions; and

Logic circuits to communicate with the at least one storage media via the bus, wherein executing the set of instructions, the logic circuits are directed to:

Receive, from a first user terminal associated with a service requester, first electronic signals including at least one modification of a request for transportation service, wherein the at least one modification comprises at least one of a modified pick up location or a modified destination:

Identify a service provider associated with the request for transportation service; Generate updated information related to the request for transportation service based on the at least one modification of the request for transportation service, wherein to generate the updated information related to the request for the transportation service the logic circuits are directed to:

Obtain a location of the service provider, the location being determined using positioning technology by a second user terminal associated with the service provider:

Determine an update route based on the location of the service provider; and the modified pick up location and/or modified destination; and

Send, to the second user terminal associated with the service provider, second electronic signals including the updated information related to the request for transportation service, wherein the updated information includes the updated route that is displayed on the second user terminal to navigate the service provider to the at least one of the modified pickup location or the modified destination.

The Law – Section 1(2)

- 5 The section of the Act concerning inventions excluded from patentability is Section 1(2). This 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 –

...

(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 that thing as such.”

**My emphasis.*

6 In order to decide whether an invention relates to subject matter excluded by Section 1(2), the Court of Appeal has said that the issue must be decided by answering the question of whether the invention reveals a technical contribution to the state of the art. The Court of Appeal in *Aerotel/Macrossan*¹ set out the following four-step approach to help decide the issue:

- 1) Properly 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.

7 The operation of the approach is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraph 47 adds that a contribution which consists solely of excluded matter will not count as a technical contribution.

8 The case law on computer implemented inventions has been further elaborated in *AT&T/CVON*² which provided five helpful signposts to apply when considering whether a computer program makes a relevant technical contribution. In *HTC v Apple*³, Lewison LJ reconsidered the fourth of these signposts and felt that it had been expressed too restrictively. The revised signposts are:

- i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

¹ *Aerotel Ltd v Telco Holdings Ltd (and others) and Macrossan's Application* [2006] EWCA Civ 1371

² *AT&T Knowledge Ventures LP and CVON Innovations Limited v Comptroller General of Patents* [2009] EWHC 343

³ *HTC v Apple* [2013] EWCA Civ 451

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

Analysis

- 9 The first step of the Aerotel test is to construe the claim. In this case this is not difficult, but it does help to define several features of the claim for the purposes of clarity.
- 10 Firstly, what is meant by an online transportation platform. Paragraph 0036 of the description is helpful in this respect, providing details of various vehicle that form the transportation system that includes private vehicles, spaceships and hot air balloons amongst others. The online aspect of the system is concerned with the use of the system through webpages, plugins and terminals amongst others (0042-0045). Put simply, it is a computer system that allows users to access many modes of transport operated by service providers for the purposes of completing a journey.
- 11 Secondly, the claim refers to a bus, a storage media and logic circuits. I would also note at this point the observations of the court at paragraph 44 of Aerotel, where it was stated:
- “If an inventor claims a computer when programmed with his new program, it will not assist him if he alleges wrongly that he has invented the computer itself, even if he specifies all the detailed elements of a computer in his claim”*
- 12 I think, in this instance, I can safely say that I can construe this as a computer. Indeed, when I raised this at the hearing, Mr Able confirmed that this is a computer.
- 13 I would also like to clarify the meaning of “first user terminal associated with a service requestor”. Paragraph 0037 of the specification provides further details. A user is a person who requests (or one who offers) a service within the transport system. To do so they use a device which as set out in paragraph 0046 may include a mobile device, tablet computer, laptop computer or a device built into a vehicle.
- 14 A service provider is someone who provides a transportation service. In the simplest form this could be the driver of a vehicle. They have a second user terminal. In the context of the application this is a device that may have positioning technology, a navigation module and an app that can accept a transport request. As a matter of practical reality, this is also a mobile device, tablet computer, laptop computer or a device built into a vehicle.

- 15 The latter part of the claim is concerned with the arrangements of providing updated information to the service provider identified with the service request. To do so they must obtain the location of the service provider. Paragraph 0039 makes clear that this can be done by using global positioning system (GPS) associated with a second terminal. In reality, this is the navigation device operated by the provider.
- 16 The system then updates the route based on the modifications made by the user and the location of the provider and then sends these for display to the provider.
- 17 In summary the claim is to a transportation system managed by a computer where a user of the system can amend a journey using an app or program on a device. The system then obtains the location of the provider, updates a route for the provider and sends this to their own device.
- 18 The second step of the Aerotel test is to identify the contribution. In this application, I have already made clear that the computing apparatus is a standard computer and as such it cannot form part of the contribution in my opinion. This is reflected in the assessment of the contribution of both the Examiner and Mr Able.
- 19 The examiner has set out the contribution as:

Receiving a modified pickup and or destination location from a customer who has made a transportation request to a service provider; determining relevant distances between the original/modified pickup location, the original /modified destination location, and location of the service provider; calculating an updated route and associated cost based on the modified location/destination; and providing updated information to the service provider.

- 20 Mr Able sees the contribution somewhat differently. He sees the invention as:

solving technical problems arising from the input of unfamiliar location information into the transportation platform which would result from information being inputted by the service provider being given by the service requestor. The contribution of present invention is to reduce computer resource usage that would otherwise result in the entry of unfamiliar data by the service provider.

- 21 In support of this view, he drew my attention to three paragraphs of the description:

0005

If the passenger wants to modify the destination, the passenger has to inform the driver of the modified destination face to face. If the passenger is unfamiliar with modified destination, it is hard for the passenger to describe the modified destination clearly. Online transportation service, however, obtains the modified origin/modified destination from the passenger and automatically send the modified origin and/or destination to the driver in real-time

0041

An online transportation service system may enable users to order a request for a transportation service. To modify, a pickup location or destination or a request using existing online transportation systems, a passenger may have to communicate with the driver face to face or by telephone. This may have detrimental effects to the user experience. Accordingly, it is desirable to provide new mechanisms for modifying location information, or requests for transportation services to improve user experience.

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The service provider may not need to input the modified pickup location and/or the modified destination in the second user terminal to generate the second navigation instruction, which improves the efficiency and the user experience.

- 22 There is clearly a disagreement about the contribution though both agree that the contribution lies in the modification of the origin or destination of a transportation request within an online transport system.
- 23 The Examiner's point of view is that it is a process that is carried out on a computer whereas Mr Able sees it as one akin to data entry. As such, I will need to come to my own view of the contribution.
- 24 I have already made clear that the fact it is on a computer is not part of the contribution. Furthermore, the fact that the user and the service provider access the system though what is essentially a mobile phone is not part of the contribution. So, what actually happens in the system?
- 25 The first user requests a modification of the origin or destination of a journey. The system then identifies a service provider associated with the journey and generates updated information for them to navigate to the modified location.
- 26 Notably, there is no detail on the calculation of the updated route as part of the modified transport request. There is no meaningful discussion as to how this is done in a technical sense merely a reference to calculated routes having a distance. There is a discussion of how this is done in an economic sense in the specification which is why I believe the Examiner has included a reference to "cost" in their assessment of the contribution. However, the claim does not refer to cost, and it cannot be part of the contribution.
- 27 Does the system deal with the issue of "technical problems arising from the input of an unfamiliar location" or "computer usage that would otherwise result in the entry of unfamiliar data by the service provider"? I think the answer here, is a categorical no. There is no improved interface or data entry in the claim or the system for that matter. Put bluntly, allowing the user to input a modified destination or origin on a user device in place of a talking to the driver is not part of the contribution.
- 28 My assessment of the contribution is therefore:

An online system for modifying a journey in an online transport system where in the requester updates the origin or destination on a first device, they

system identifying the service provider associated with the journey and their location and providing an updated route to their device.

- 29 The third step of the Aerotel test is to ask whether this contribution lies in an excluded area. There is clearly a computer program involved and for that reason alone it would appear to be excluded under Section 1(2)(c). I note the examiner raises a consideration of whether it is also a method of doing business which would further exclude the application. My approach here will be to consider the computer program exclusion first and then, if necessary, consider the business method exclusion.
- 30 In determining, whether the application is excluded as a computer program it is useful to consider the AT&T signposts. The first of these is to consider if there is a technical effect outside the system.. In this case, it is important to consider the boundaries of the system. Specifically, the first and second user terminals and the central server are all part of the system. A consequence of this is that there is no technical effect outside the system and signpost 1 does not help the applicant.
- 31 The second signpost asks whether there is a technical effect at the level of the architecture of the system or the effect is entirely reliant on the data being processed. This is not a difficult question to answer in the circumstances. The application by its own admission is an online transport system and the fact that it is about amending an already existing journey in the system makes it clear that there is nothing here at an architectural level. Moreover, it emphasises the fact that it is all about very specific data viz a modified origin or destination. As a consequence, the second signpost does not help the applicant.
- 32 The third and fourth signposts can often be taken together and that is the case here. The underlying computing apparatus in the claim acts as any computer – it does not operate differently. Furthermore, the system is a collection of programs running on know apparatus and in that regard, it is not more efficient or effective as a computer. The third and fourth signposts offer no solace for the applicant.
- 33 The fifth signpost is often the most difficult to apply and that is no different here. Mr Able has made it clear that he sees the system as solving the technical problem of updating the system with an unfamiliar location. Indeed, at the hearing he made it clear that this may be a case of either the user not being able to convey the new information to a provider, the provider not understanding the information or the provider not entering the information correctly into their terminal. These are all problems that many of us have faced when using transport systems, but they are not technical ones as such. As a result, the fifth signpost does not help the applicant either.
- 34 As I have been unable to identify a technical contribution, I am of the opinion that the application is to a computer program and as such is excluded under Section 1(2)(c) of The Act.
- 35 Having decided that the application is excluded as a computer program there is no need to consider the business method exclusion. However, I will make an observation.

- 36 Claim 3 and several of the later claims refer to an “updated cost based on the comparison” of the difference between the original distance of the route and a modified distance.
- 37 In, and of itself, that is a financial consideration which is made clear by the specification which talks of a price per kilometre and time coefficient as its main components. These give rise to the view that at the heart of the claimed invention is a business method although this is not present in the independent claims.

Auxiliary Claims

- 38 Mr Able filed auxiliary claims as part of his skeleton argument. These consisted only of amendments to the dependent claims and as such do not alter my views on the allowability of claims 1, 15 and 20

Conclusion

- 39 I have decided that the inventions defined in the independent claims fall solely within matter excluded under Section 1(2) as programs for a computer as such. Having reviewed the application, I do not consider that any saving amendments are possible. I therefore refuse the application under section 18(3).

Appeal

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

Peter Mason

Deputy Director, acting for the Comptroller