Intellectual Property Office

BL O/0554/23

14 June 2023

PATENTS ACT 1977

APPLICANT	IAA, Inc.
ISSUE	Whether patent application GB2106819.2 complies with the requirements of section 1(2) of the Patents Act 1977
HEARING OFFICER	B Micklewright

DECISION

Introduction

1 This decision relates to whether patent application GB2106819.2 complies with the requirements of section 1(2)(c) of the Patents Act 1977 ("the Act").

2 The application was filed on 13 May 2021 in the name of IAA, Inc. with a priority date of 18 May 2020. It was subsequently published as GB 2596899 A on 12 January 2022.

3 An abbreviated examination report was issued on 8 November 2021 in which all claims were considered by the examiner to relate to a method for doing business and a program for a computer as such. All other aspects of the examination were deferred and no search was performed.

4 There followed several rounds of correspondence between the applicant and the examiner, but the examiner maintained that the claims are excluded from patentability under section 1(2). At the examiner's invitation, the applicant requested a hearing. The examiner issued a pre-hearing report on 8 February 2023 and skeleton arguments accompanied by amended claims were subsequently filed by the applicant on 16 March 2023. The matter came before me at a video hearing held on 23 March 2023. The applicant was represented by Dr Ceili Williams of Stevens Hewlett & Perkins.

5 At the hearing, I pointed out that there is no basis for filing amendments not in response to an examination report at this stage. I suggested I would treat the amended claims as an auxiliary request, and Dr Williams was happy for me to proceed on this basis. I confirmed I would consider the arguments on the basis of this auxiliary request. This decision is therefore based on the form of the claims as set out in the auxiliary request although, due to the nature of the proposed amendments, considerations apply equally to the claims of the auxiliary request and to the amended claims filed on

30 August 2022, except for one or two specific considerations in relation to claim 17 of the auxiliary request.

6 In their final examination report, dated 28 October 2022, the examiner raised an added matter objection to the amendments to independent claim 8 that were filed with the agent's letter of 30 August 2022. The examiner noted in the pre-hearing report of 8 February 2023 that the issue of added matter in claim 8 is highly unlikely to make any difference to the assessment of excluded matter. At the hearing, Dr Williams agreed that the question of added matter was not critical to the excluded matter assessment and that it could be dealt with as a separate issue. I will consider this myself when assessing the claims for excluded matter, but if I agree with the examiner and Dr Williams that the amendment to claim 8 is irrelevant to my assessment, I will only go on to consider the question of added matter if I find that the claims are not excluded under section 1(2).

The invention

7 The invention relates to automatically dispatching work assignments to tow service providers. A tow truck driver sends a work assignment request from their mobile phone to an automatic dispatch system implemented by a server of a car auction enterprise, the enterprise partnering with insurance providers to facilitate pickup of damaged vehicles that may be declared as non-repair vehicles by the insurance providers.

8 The system selects an initial pool of tow request stocks from an inventory of tow request stocks. Tow request stocks for which the tow truck driver does not meet at least one fulfilment requirement are filtered out to leave a refined pool of tow request stocks (for example, tow request stocks beyond a certain distance from the tow truck driver may be excluded).

9 An optimised pool of tow request stocks is then generated from the refined pool according to one or more optimisation criteria, based on one or more of the current and maximum load of the particular tow truck, destinations of the vehicles in the current load of the particular tow truck, and destinations of vehicles in the refined pool of tow request stocks.

10 The automatic dispatch system then sends a response to the work assignment request including the optimised pool of tow request stocks to the tow truck driver's mobile phone. The tow truck driver can then accept or reject the tow request stocks and fulfil the accepted work assignments.

11 The stated advantage of this system (at paragraph [0021]) is that it allows for efficient assignment of work assignments to tow truck drivers and may expedite fulfilment of the work assignments by the tow truck drivers. This purportedly reduces delays in pickups, allowing for efficient and quick clearing of roadways, parking spaces, etc. that may be blocked by the damaged vehicles and may also expedite processing of insurance claims.

12 The final set of claims considered by the examiner (filed 30 August 2022) included three independent claims: claim 1 to a method, claim 8 to a computer readable medium storing machine-readable instructions that performs the method of claim 1, and claim 15 to a system that performs the method of claim 1.

13 The auxiliary claims filed with the skeleton arguments of 16 March 2023 include four independent claims. Claims 1, 8 and 15 are the same as those of 30 August 2022 but for a minor amendment to claim 1. Claim 17 is a new independent claim based on claim 1. Claim 1 (with amendments marked up), claim 8 (with the amendments of 30 August 2022 marked up), and claim 17 (with differences to claim 1 marked up) of the auxiliary request are as follows:

> *1. A method for dispatching work assignments to tow service providers, the method comprising:*
>
> *receiving, at a processor of an enterprise server device, a work assignment request message from a user device, the work assignment request message having been generated by the user device based on input provided by a tow service provider via the user device;*
>
> *selecting, with the processor from a set of pending tow request stocks, an initial pool of tow request stocks for potential fulfillment by the tow service provider;*
>
> *generating, with the processor based on the initial pool of tow request stocks, a refined pool of tow request stocks, the refined pool of tow request stocks being generated to exclude, from the initial pool of tow request stocks, tow request stocks for which the tow service provider does not meet at least one fulfillment requirement, thereby excluding tow request stocks that require physical pickup capabilities not offered by the requesting tow service provider;*
>
> *generating, with the processor based on the refined pool of tow request stocks, an optimized pool of tow request stocks to include one or more tow request stocks selected, according to one or more optimization criteria, from the refined pool of tow request stocks, based on one or more of i) a current load of a tow truck of the tow service provider, ii) a maximum load of the tow truck of the tow service provider, iii) a current location of the tow service provider, iv) destinations of vehicles in the current load of the tow truck of the tow service provider, and v) destinations of vehicles in the refined pool of tow request stocks;*
>
> *generating, with the processor, one or more work assignment response messages to include information assigning tow request stocks in the optimized pool to the tow service provider; ~~and~~*
>
> *causing, with the processor, the one or more work assignment response messages to be transmitted from the enterprise server device to the user device; and*
>
> *receiving the one or more work assignment response messages at the user device, thereby providing ~~to provide~~ the information assigning the tow request stocks in the optimized pool of tow request stocks to the user device.*
>
> *8. A tangible, non-transitory computer readable medium, or media, storing machine readable instructions that, when executed by one or more processors, cause the one or more processors to:*
>
> *receive a work assignment request message from a user device, the work assignment request message having been generated by the user device based on input provided by a tow service provider via the user device;*
>
> *select, from a set of pending tow request stocks, an initial pool of tow request stocks for potential fulfillment by the tow service provider;*
>
> *generate, based on the initial pool of tow request stocks and while a first at least one criterion is met, a refined pool of tow request stocks, the refined pool of tow request stocks being generated to exclude, from the initial pool of tow request stocks,*

tow request stocks for which the tow service provider does not meet at least one fulfillment requirement, thereby excluding tow request stocks that require physical pickup capabilities not offered by the requesting tow service provider;

generate, based on the refined pool of tow request stocks and while a second at least one criterion is met, an optimized pool of tow request stocks to include one or more tow request stocks selected, according to one or more optimization criteria, from the refined pool of tow request stocks, based on one or more of i) a current load of a tow truck of the tow service provider, ii) a maximum load of the tow truck of the tow service provider, iii) a current location of the tow service provider, iv) destinations of vehicles in the current load of the tow truck of the tow service provider, and v) destinations of vehicles in the refined pool of tow request stocks;

generate one or more work assignment response messages to include information assigning tow request stocks in the optimized pool to the tow service provider; and

cause the one or more work assignment response messages to be transmitted from the enterprise server device to the user device to provide the information assigning the tow request stocks in the optimized pool of tow request stocks to the user device.

17. A method ~~for dispatching work assignments to~~ of relocating of multiple tow request stocks by one or more tow service providers, each tow request stock being initially located at a respective first location, the method comprising:

receiving, at a processor of an enterprise server device, a work assignment request message from a user device, the work assignment request message having been generated by the user device based on input provided by ~~a~~ one of the one or more tow service providers via the user device;

selecting, with the processor from a set of pending tow request stocks, an initial pool of tow request stocks for potential fulfillment by the tow service provider;

generating, with the processor based on the initial pool of tow request stocks, a refined pool of tow request stocks, the refined pool of tow request stocks being generated to exclude, from the initial pool of tow request stocks, tow request stocks for which the tow service provider does not meet at least one fulfillment requirement, thereby excluding tow request stocks that require physical pickup capabilities not offered by the requesting tow service provider;

generating, with the processor based on the refined pool of tow request stocks, an optimized pool of tow request stocks to include one or more tow request stocks selected, according to one or more optimization criteria, from the refined pool of tow request stocks, based on one or more of i) a current load of a tow truck of the tow service provider, ii) a maximum load of the tow truck of the tow service provider, iii) a current location of the tow service provider, iv) destinations of vehicles in the current load of the tow truck of the tow service provider, and v) destinations of vehicles in the refined pool of tow request stocks;

generating, with the processor, one or more work assignment response messages to include information assigning tow request stocks in the optimized pool to the tow service provider;

causing, with the processor, the one or more work assignment response messages to be transmitted from the enterprise server device to the user device;

receiving the one or more work assignment response messages at the user device, thereby providing the information assigning the tow request stocks in the optimized pool of tow request stocks to the user device; and

transporting the assigned tow request stocks from their respective first locations to one or more respective destinations, the transporting step being carried out by the tow service provider following acceptance of the work assignment response messages as received at the user device.

The law

14 The Examiner raised an objection under section 1(2) of the Act that the invention is not patentable because it relates to a method for doing business and a program for a computer as such. The relevant provisions of this section of the Act are shown below:

> *1(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of—*
> *…*
> *(c) A scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
> *…*
> *but the foregoing provision shall prevent anything from being treated as an invention for the purposes of this Act only to the extent that a patent or application for a patent relates to that thing as such.*

15 The provisions of Section 1(2) were considered by the Court of Appeal in *Aerotel*[1] where a four-step test was set out to decide whether a claimed invention was excluded from patent protection:

> *(1) Properly construe the claim;*
>
> *(2) Identify the actual contribution;*
>
> *(3) Ask whether it falls solely within the excluded subject matter;*
>
> *(4) Check whether the actual or alleged contribution is actually technical in nature.*

16 It was stated by Jacob LJ in *Aerotel* that the test is a re-formulation of and is consistent with the previous 'technical effect approach with rider' test established in previous UK case law. Kitchin LJ noted in *HTC v Apple*[2] that the *Aerotel* test is followed in order to address whether the invention makes a technical contribution to the art, with the rider that novel or inventive purely excluded matter does not count as a 'technical contribution'.

17 Lewison J in *AT&T/CVON*[3] set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. Lewison LJ

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[1] *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371
[2] *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451
[3] *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

reformulated the signposts in *HTC v Apple* in light of the decision in *Gemstar*[4]. The signposts are:

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

18 The examiner raised an objection that the amendments to claim 8 filed on 30 August 2022 contained added subject matter. Section 76 of the Act states:

> *76(2) No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.*

Assessment

19 To determine whether the claimed invention can be considered to be more than a program for a computer and/or a method for doing business as such, I am required to follow the approach set out by the Courts in *Aerotel*.

(1) Properly construe the claim

20 The examiner and Dr Williams are in agreement that the construction of claims 1, 8 and 15 present no particular challenges. I agree. Claim 17 is also straightforward to construe.

21 As described above, these claims relate to dispatching work assignments to tow service providers. A work assignment request is received from a tow service provider at an enterprise server device. The enterprise server device selects an initial pool of tow request stocks which is then refined to exclude requests that cannot be fulfilled by the tow service provider. An optimised pool of tow request stocks is then generated from the refined pool according to one or more criteria. The tow request stocks in the optimised pool are assigned to the tow service provider and a message is generated and transmitted to the tow service provider including this information.

22 There was some prior discussion between the examiner and applicant of the meaning of “tow request stocks”, where it was agreed that this term referenced the vehicles for which a towing service request has been made, rather than the requests themselves. I find it difficult to reconcile this with paragraph [0029], which states that a tow request stock may include tow request information, such as the particular insurance provider

[4] *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

requesting pickup, a geographical location of the pickup, licence requirements for the pickup, type of vehicle to be picked up, payment types that may be provided for the pickup, etc. Nevertheless, I agree with the examiner that there appears to be little difference in such a distinction because data concerning the vehicles that require a tow will be the same as the data concerning the tow requests. Indeed, paragraph [0029] states that the tow request stocks correspond to the tow requests.

23 A "tow service provider" may be tow company personnel such as a tow truck driver (paragraph [0026]). The "user device" is a device associated with the tow service provider, such as a mobile phone (paragraph [0018]), on which they can provide input to generate the work assignment requests.

24 An "enterprise server device" is a server of an automotive marketplace enterprise, such as a car auction enterprise that may partner with insurance providers and may facilitate pickup of damaged vehicles that, for example, may be declared as non-repair vehicles by the insurance providers (paragraph [0018]).

25 I note that claim 8 is potentially unclear in that it refers to "the enterprise server device" without previously mentioning such a device. In light of the description and the other independent claims, I have construed the "one of more processors" of claim 8 to be said enterprise service device.

26 Claims 1, 8, and 15 relate solely to the generating and sending of work assignments to a user device of a tow provider in response to a work assignment request. The tow service provider is free to accept or reject tow request stocks assigned to them, as is clear from paragraph [0020]. The accepted work assignments may be fulfilled by the tow service provider, though it is also clear from the description (at paragraph [0038]) that the tow service provider may subsequently reject tow request stocks that they initially accepted.

27 Claim 17 is based on claim 1 but includes the additional step of transporting the assigned tow request stocks from their first locations to one or more respective destinations following acceptance of the work assignments. Claim 17 is framed as "a method of relocating tow request stocks by one or more tow service providers" in contrast to claim 1 which is framed as "a method for dispatching of work assignments to tow service providers".

(2) Identify the actual contribution

28 Identifying the contribution in the second step of this test is critical and I refer to paragraph 43 of *Aerotel* for guidance:

> *"The second step – identifying 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 judgement 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 the substance not form – which is surely what the legislator intended."*

29 In the pre-hearing report the examiner identified that the problem being addressed by the invention is that manual work assignment procedures for tow service providers are often inefficient and time consuming. This may result in delayed pickups and subsequently road blockages or greater expense to owners of damaged vehicles. The advantages of the invention were identified as the automation of a selection process which may increase the efficiency of assigning work and lead to the quicker dispatch of tow service vehicles.

30 The examiner went on to identify the contribution of claims 1, 8 and 15 to be:

> *A method for assigning work to a tow service provider that has requested work, comprising: selecting progressively smaller pools of tow requests out of a set of pending requests based on the request/stock details, tow service provider capability and optimisation criteria; assigning the final selection of requests to the tow service provider; generating a message confirming this assignment.*

31 In her skeleton arguments, Dr Williams disagrees with the examiner's assessment of the problem solved by the invention. She argues it is not that manual work assignment procedures for tow service providers are often inefficient and time consuming, but rather it is in a scenario with multiple vehicle stocks to be recovered that the recovery procedures initiated following manual work assignment are inefficient and so lead to increased likelihood of delayed pickups, longer road blockages and increased costs.

32 At the hearing, Dr Williams further explained that the optimisation process allows the distribution of stocks to be assigned more efficiently than if it was done manually. It is that multiple stocks are moved more efficiently in the shortest amount of time due to the better assignment of tow request stocks to the tow service provider, rather than necessarily a single tow request stock being moved faster or more efficiently.

33 The contribution put forward by Dr Williams in her skeleton arguments for claims 1, 8 and 15 is therefore:

> *A method of enabling faster completion of multiple pickups by better assignment of tow request stocks via the work assignment response message dispatched by the server and received at the user device. The better assignment of tow request stocks is achieved by: selecting progressively smaller pools of tow request stocks out of a set of pending tow request stocks based on the stock details, tow service provider capability and optimisation criteria; assigning the final selection of requests to the tow service provider; generating a message confirming the assignment.*

34 At the hearing Dr Williams stated that, while claims 1, 8 and 15 *enabled* the movement of the tow request stocks from one place to another, claim 17 explicitly did so. The contribution put forward in the skeleton arguments for claim 17 is:

> *an overall faster method of relocating multiple tow request stocks from a respective first location to one or more destinations.*

35 Before going on to consider these points, I must first decide if the alleged added matter in claim 8 has any bearing on the assessment. The alleged added matter in claim 8 teaches that the refined pool and optimised pool of tow request stocks are generated

only while first and second criteria are met, respectively. I do not see how this amendment limits the claim in any meaningful way, at least insofar as the assessment of excluded subject matter is concerned. The claim still requires the generation of a refined pool and optimised pool in order to generate the work assignment response message, as the claim specifies that the work assignment response message includes information assigning tow request stocks *in the optimised pool*. I therefore consider the contribution of claim 8 is the same as that of claims 1 and 15 regardless of the alleged added matter. I therefore agree with Dr Williams that the question of added matter in claim 8 can be dealt with as a separate issue if I find that the claims are not excluded by section 1(2).

36 During the hearing I pressed Dr Williams on where there is basis in the specification for claim 17. Specifically, I asked where there was anything pointing to the actual relocation of the tow request stocks forming part of the contribution. At my invitation, Dr Williams provided reference to paragraphs [0003], [0020], [0021] and [0039] after the hearing. These paragraphs mention that the tow truck driver may complete the assignments by picking up the tow request stocks. Paragraph [0039] further states that a tow truck driver may inform the system, via the user device, that the vehicle has been transported to the desired location. Dr Williams argues that it is therefore clear that at least one vehicle is picked up and transported to a destination as a result of an accepted assignment.

37 It is certainly true that the tow truck driver may fulfil the accepted work assignments such that vehicles are transported from one location to another. However, the actual relocation of the tow request stocks is not part of what has been invented here. The invention is evidently the generation of optimised work assignments for tow service providers by sequentially refining the pool of pending tow request stocks based on fulfilment and optimisation criteria. This is what the inventor has added to human knowledge. I cannot see that the invention has an effect on the physical towing process or relocation of the vehicles. Once a tow truck driver has been assigned their tow request stocks, they then carry out the pickup and relocation of those vehicles in the same way as they would have done using previous work assignment methods.

38 As acknowledged by Dr Williams at the hearing, the physical towing process has not been made quicker or more efficient. Instead, it is the assignment of work that has been improved such that the totality of the tow request stocks is moved in the most efficient way. It is therefore my opinion that the contribution of claim 17 is, in substance, the method for refining and optimising tow request stocks for assigning to a tow service provider. This is the same contribution as claims 1, 8 and 15.

39 The contribution put forward by Dr Williams for claims 1, 8 and 15 is the same as the examiner's but for the emphasis on the result of enabling faster completion of multiple pickups by better assignment of the tow request stocks. As I have stated above with respect to claim 17, I do not believe the actual completion of the pickups by the tow truck driver forms part of the contribution. As such, I believe the examiner's assessment of the contribution is more appropriate. I therefore consider the contribution of independent claims 1, 8, 15 and 17 to be:

> *A method for assigning work to a tow service provider that has requested work, comprising: selecting progressively smaller pools of tow request stocks out of a set of pending tow request stocks based on the stock details, tow service provider*

capability and optimisation criteria; assigning the final selection of request stocks to the tow service provider; and generating a message to the tow service provider confirming the assignment.

(3) Ask whether it falls solely within the excluded subject matter;
(4) Check whether the actual or alleged contribution is actually technical in nature

40 The third and fourth steps of the *Aerotel* test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.

41 The examiner identifies the contribution as a computer program carrying out a method for doing business, but as the examiner correctly points out, just because the contribution is implemented using a computer program it is not immediately excluded as a computer program as such. In *Symbian*[5], the Court of Appeal stated that a computer program may not be excluded if it makes a technical contribution. In order to determine if the contribution is technical in nature, I will make use of the *AT&T* signposts.

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

42 The examiner argued there is no effect on any process outside the computer, and that there is no external effect whatsoever, as the dispatching of work assignments is conducted entirely inside the computer.

43 Dr Williams argues that the contribution enables faster completion of multiple pickups and therefore facilitates an improvement to a physical process carried on outside the computer. At the hearing, she highlighted two recent Office decisions that she had referred to in her skeleton arguments.

44 Office decision BL O/0007/23 relates to using a neural network for image identification and classification. The claim was directed to training a neural network for object detection, but it lacked the step of actually conducting the object detection. However, the hearing officer determined that the contribution should include that it was for object detection, highlighting that it performed a specific task external to the computer. Dr Williams argues that this is analogous to the present case in that the contribution may not extend to the actual movement of the vehicles, but the assignment of tow request stocks gives the service providers in general the capability to improve the process of moving the stocks. She argues that the invention is tied to recovery work carried out by tow service providers which is a technical effect carried on outside the computer.

45 Office decision BL O/938/22 relates to a computer simulation for selecting the most suitable athletic garments to improve the aerodynamic efficiency of a cyclist. It was found to fall outside of the computer program exclusion by the Hearing Officer on the basis that the simulation produced a technical solution applicable outside of the computer and that which fell outside any other category of excluded matter. Dr

[5] *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

Williams argues that directing the cyclist to what garments to wear to improve performance is similar to the present case where the tow service provider is directed to which tow request stocks to recover in order to improve the overall recovery performance.

46 As I said at the hearing, I struggle to understand the relevance of these decisions. One relates to training a neural network for object detection and the other to a computer simulation for optimising aerodynamic efficiency of an athlete. In contrast, the present invention relates to optimising work assignments to a tow service provider. The technologies are quite different in nature and I do not see how the reasoning of either case can be applied to the present case. Even if there was some generalised category which could be constructed to include the present invention and these previous decisions, it does not mean the outcome would be the same as I must decide this case on its own merits. I also note that, in any case, I am not bound by office decisions.

47 Dr Williams further argued that the program in the present case takes into account physical factors in assigning tow request stocks to the tow service provider. At the hearing, Dr Williams confirmed the physical factors she refers to are those listed in the claims, namely tow truck capabilities the current load of the tow truck, a maximum load of the tow truck, a current location of the tow service provider, and destinations of the vehicles in the current load and in the refined pool.

48 In my view there is no effect on any process conducted outside the computer, so the first signpost does not assist the applicant. As I have determined above, the contribution relates to assigning the work and not to the actual movement of the vehicles. The program takes into account physical factors relating to the real world in the form of data related to the pickup truck and tow request stocks, but the first signpost requires there to be a technical effect on a process outside of the computer rather than merely using data from outside the computer. In this case the data is simply used in the administrative task of assigning tow request stocks to tow service providers. Processing data to facilitate an administrative task is not technical.

49 Although it was not mentioned at the hearing, a further argument in relation to the first signpost was raised by Dr Williams in the skeleton arguments which I will note here for completeness. As claims 1 and 15 require the physical transfer of data from one device to another (the work assignment response message is sent to the user device of the tow service provider), it is argued that there is a physical effect analogous to the ‘transfer patent’ of *Gemstar*. However, this is not a persuasive argument. There is no effect outside the entirely conventional network of devices which I consider to be “the computer” of this signpost.

Signpost 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;

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

Signpost iv) Whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

50 For convenience I will consider signposts ii)- iv) together as they all relate to there being an effect on the computer itself.

51 The applicant previously argued that the distribution of the selection process over a plurality of rounds reduces the computational load on the processor which therefore reduces the computer hardware requirements. This was reiterated in the skeleton arguments, where it was argued that the improvement reduces hardware demands on the system on which the program is implemented. At the hearing, however, Dr Williams acknowledged that this was not a particularly strong argument as there was no effect at the architectural level.

52 I agree there is no architectural effect. Furthermore, I agree with the examiner's assertions in their pre-hearing report that there is no change to how the computer itself operates; it is simply running a new program, and there is no improvement in the efficiency or effectiveness of the computer itself. The program may well make better use of the computing resources, but this is an effect at the program level rather than at the level of the computer itself. Signposts ii)-iv) are not therefore relevant.

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

53 While it wasn't framed as such, an argument raised by Dr Williams at the hearing speaks to this signpost and so I will discuss it here. Dr Williams argued that the physical movement of the tow request stocks is achieved more efficiently and that this demonstrates the solving of a technical problem in a technical sense. It takes into account technical considerations of technical objects and works out which assignments it can send to a particular service provider in order to enable it to manoeuvre these more efficiently. She acknowledged that the process of towing the vehicles is not sped up, but multiple stocks are moved more efficiently in the shortest amount of time due to the better assignment of tow request stocks to the tow service provider.

54 As I have already mentioned above, there is some disagreement between the examiner and Dr Williams as to what the problem being addressed is.

55 The problem identified by the examiner is that manual work assignment procedures for tow service providers are often inefficient and time consuming. This may result in delayed pickups and subsequently road blockages or greater expense to owners of damaged vehicles.

56 Dr Williams characterises the problem as relating to a scenario with multiple vehicle stocks to be recovered where the recovery procedures initiated following manual work

assignment are inefficient and so lead to increased likelihood of delayed pickups, longer road blockages and increased costs.

57 Turning to the description, it is stated (at paragraph [0003]) that manual work assignments are inefficient and time consuming and often result in significant delays in vehicle pickups. Such delays can result in prolonged blockages of roads by the damaged vehicles, for example, and may cause overpayment to storage yards and delays in insurance payments to the owners of the damaged vehicles. At paragraph [0021] it is stated that the advantages of automatic work assignment involve reducing delays in pickups of damaged vehicles, allowing for efficient and quick clearing of spaces that may be blocked by the damaged vehicles, and may also expedite processing of insurance claims and provision of payments by insurance providers to the owners of the damaged vehicles.

58 The problem identified by the examiner is therefore in line with the problem discussed in the description. This appears to me to be an appropriate determination of the problem being addressed.

59 I do not consider the problem put forward by Dr Williams to be inconsistent with this, as recovery procedures being inefficient following manual work assignment is ultimately as a result of the problem of manual work assignments being inefficient. In any case, the problem is clearly one of assigning work to the tow service providers rather than in the physical movement of the tow request stocks. As I have already stated above, I cannot see that the invention has an effect on the physical towing process. I agree with the examiner that this is an administrative/organisational problem which lacks any technical nature. Since the problem is not a technical problem, the solution cannot take technical character from the problem and so this signpost does not assist the applicant.

60 I therefore conclude that none of the signposts point to the present invention making a technical contribution.

61 Taking a step back and considering the contribution more generally, it relates to the task of assigning work to a tow service provider. The assignment is determined by a suitably programmed computer selecting progressively smaller pools of tow request stocks out of a set of pending tow request stocks based on the stock details, tow service provider capability and optimisation criteria. This is an administrative task in relation to assigning suitable jobs to tow truck drivers, and as such is nothing more than a method for doing business. Once a tow service provider is assigned their work assignments, they fulfil the tow requests in a conventional manner. The contribution is in the optimisation of an administrative process rather than any optimisation of anything to do with the physical aspects of the towing service. The contribution simply relates to a computer program carrying out a business activity. I therefore conclude that the identified contribution is excluded as a program for a computer and method for doing business as such.

62 I note the examiner draws comparisons to the High Court judgment of *Cappellini*[6], though this point was not addressed by Dr Williams in her skeleton arguments or during the hearing. Cappellini's application related to determining the routes to be

[6] *Cappellini and Bloomberg LP* [2007] EWHC 476 (Pat)

taken by a carrier when delivering packages. The judge determined that there is no technical effect in merely moving vehicles and their cargos around according to a routing algorithm. The examiner acknowledges that the subject matter contains substantial differences to the present invention, though I note it is significantly more relevant than the hearing decisions referenced by Dr Williams. After all, the invention here is concerned with calculating the optimal use of vehicles to carry out tasks. As the examiner puts it, there is no more technical effect in using an algorithm to determine the optimal tasks for a tow service provider than there is for using an algorithm to determine the optimal route for a package carrier. In any case I have reached my conclusion independently of this decision.

Added matter

63 As I have found the invention is excluded under section 1(2), I do not need to go on to determine if claim 8 contains added matter.

Conclusion

64 Independent claims 1, 8, 15 and 17 of the auxiliary request fail to comply with section 1(2)(c) of the Act because they relate to a program for a computer and method for doing business as such. There is nothing in the dependent claims which would lead me to reach a different conclusion as to their allowability. The difference between the auxiliary claims and the claims as presently on file has no material effect on the decision. I therefore refuse the application under section 18(3) of the Act.

Appeal

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

B Micklewright

Deputy Director, acting for the Comptroller