



## PATENTS ACT 1977

APPLICANT	truRating Limited
ISSUE	Whether patent application GB1419547.3 complies with section 1(1)(b) and section 1(2) of the Patents Act 1977
HEARING OFFICER	Phil Thorpe

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## DECISION

### Introduction

1. Patent application GB1419547.3 has a filing date of 3<sup>rd</sup> November 2014 and was published as GB 2534116 A on 20<sup>th</sup> July 2016. Although the application has not been searched, a document acknowledged by the applicant as prior art has been formally cited by the examiner.
2. Despite amendments to the application, the applicant has been unable to satisfy the examiner that the application has met all the requirements of the Act. In particular, the examiner remains of the opinion that the claimed invention lacks an inventive step and is excluded from patentability as a scheme, rule or method for doing business, as a program for a computer and as the presentation of information.
3. As such, the matter came before me in a hearing which took place on 15<sup>th</sup> June 2022. At the hearing the applicant was represented by Mr Malcolm Elkin of Boulton, Wade, Tennant LLP. In advance of the hearing Mr Elkin provided a skeleton argument for which I am grateful.

### The Invention

4. The invention relates to obtaining feedback in the service industry from customers at the point of sale, which is considered to be preferable to contacting the customer at a later date for reasons such as ease of obtaining feedback and its reliability. In particular, the invention relates to obtaining feedback using PIN entry devices and seeks to address the problem of these devices being vulnerable to the fraudulent acquisition of the customer's PIN by a hacker.
5. PIN entry devices have numeric keys and a number of function keys, such as "Enter", "Cancel" and "Clear" for entry of information by a user. The application

describes how the devices are typically configured to follow rules governing permitted keypad entries, depending on the nature of the text displayed preceding the keypad entry. In the application, text is defined as "approved" or "unapproved". Following the display of approved text, such as "Enter PIN", data may be entered using both the numeric keys and the function keys. Only the function keys may be used following the display of unapproved text. A problem encountered when collecting feedback using prior art devices is that questions aimed at gaining rating information from customers, which require the entry of a value between "0" and "9", fall into the category of unapproved text. The use of the numeric keys in response is therefore not possible.

6. The application seeks to provide a PIN entry device and method of operation for obtaining feedback from a user using the numeric keypad, in which the user's PIN remains secure. The solution proposed by the invention, as depicted in the figure below, allows for a single numeric key press to be accepted following the display of unapproved text. This is referred to in the description as "one arbitrary question, one key response" or abbreviated to "AQ1KR". A second (and subsequent) single numeric key press is only accepted in response to a second (and subsequent) display of unapproved text after a time delay following display of the text. A possible time delay of 30 seconds is referred to. This allows a user to rate a service on a scale of "0" to "9" in response to a question displayed using unapproved text. The time delay seeks to avoid the potential misuse of the device by a hacker, who might attempt to obtain the PIN by arranging for the device to repeatedly display the unapproved text "provide PIN", resulting in a user perceiving the repeated identical text as a single instance and being tricked into disclosing their PIN. The method is implemented using computer program instructions stored on a computer memory of the PIN entry device.

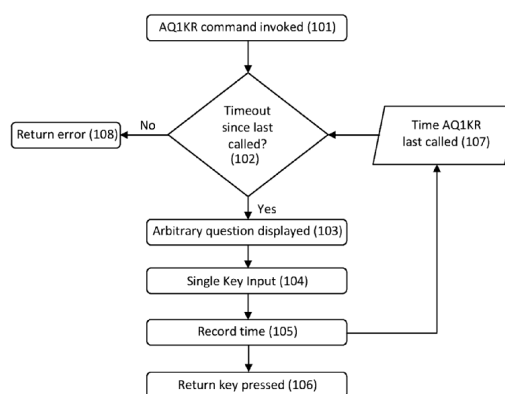


Fig. 2

7. In addition to the main claim set, the latest version of which was filed on 18<sup>th</sup> January 2022, the applicant filed an auxiliary request on 29<sup>th</sup> March 2022 for consideration if the main claims are not found to be allowable.
8. Claim 1 of the main claim set reads as follows:

*A PIN entry device comprising an alphanumeric display for displaying text to a user, a numeric keypad and one or more function keys, and wherein the PIN entry device is configured to operate to display text to the user on the alphanumeric display to prompt a response from the user,*

*wherein the text corresponds to approved text and unapproved text, and*

*wherein the PIN entry device is configured to accept responses entered on the numeric keypad or one or more function keys in response to approved text, and to accept only a single key press response entered on the numeric keypad when prompted by a display of unapproved text,*

*wherein the PIN entry device is configured to:*

*display a second instance of unapproved text, and to accept a second single key press response to the second instance of unapproved text only after a time delay has expired from displaying the second instance of unapproved text,*

*generate an error code and/or report if the second single key response is made before the time delay has expired, wherein the error code and/or report is provided for monitoring for fraudulent use of the PIN entry device.*

9. There is also an independent claim to a method of operating a PIN entry device comprising an alphanumeric display for displaying text to a user, a numeric keypad and one or more function keys. I am satisfied that this claim stands or falls with claim 1.

## **Inventive Step**

### **The Law**

10. Section 1(1) states (with added emphasis): A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –
- (a) the invention is new;
  - (b) it involves an inventive step;**
  - (c) it is capable of industrial application;
  - (d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;
11. Section 3 then sets out how the presence of an inventive step is determined. It says:

An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

12. It is well-established that the approach to adopt when assessing whether an invention involves an inventive step is to work through the steps set out by the Court of Appeal in *Windsurfing*<sup>1</sup> and restated by that Court in *Pozzoli*<sup>2</sup>. These steps are:

(1)(a) Identify the notional “person skilled in the art”;

(1)(b) Identify the relevant common general knowledge of that person;

(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;

(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;

(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

*(1)(a) Identify the notional “person skilled in the art”*

13. The examiner considers the person skilled in the art to be 'someone working in the field of PIN entry devices'. The applicant appears to be in agreement with this assessment, which I also consider to be reasonable.

*(1)(b) Identify the relevant common general knowledge of that person*

14. The examiner considers the relevant common general knowledge of the skilled person as 'including the industry standards for such devices, as well as common features and functionality of PIN entry devices and other similar electronics for receiving user inputs'. Whilst the applicant appears generally to be in agreement, Mr Elkin indicated his disagreement with the common general knowledge extending to 'other similar electronics for receiving user inputs'. Mr Elkin also does not consider the concept of 'authorised' and 'unauthorised' text to be common general knowledge. In my view, the common general knowledge includes an understanding of the operation of PIN entry devices, including relevant industry standards and common features and functionality of such devices.

*(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it*

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<sup>1</sup> *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd*, [1985] RPC 59

<sup>2</sup> *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588

15. There is some disagreement between the applicant and the examiner with regard to the inventive concept. They appear to agree that the inventive concept includes the PIN entry device being configured to display approved text and at least two instances of unapproved text to a user, and the device being configured to accept only a single key press on its numeric keypad in response to the display of each instance of unapproved text and also being configured to only accept the response to the second instance of unapproved text after a time delay.
16. The applicant and examiner differ in their interpretation of the statement in claim 1 that 'the error code and/or report is provided for monitoring for fraudulent use of the PIN entry device'. The applicant considers, when taking into account the description, that this step implicitly discloses the error code or report being displayed to the user, as 'the provision of this error code and/or report enables some level of detection of fraudulent use to be made' and 'the current application is focussed on the PIN entry device and its interaction with a user'. In support of this interpretation, Mr Elkin pointed to page 6 of the description which reads

“Optionally an attempt to enter the second single key press response may cause an error code to be generated and/or may cause the attempt to be reported, for example to allow fraudulent use of the PIN entry device to be monitored”
17. He asserted that, as the user is pressing the key, they are also the person to which the attempt is being reported.
18. I am not persuaded. Firstly, I would observe that there is nothing explicit in the description as to who any error code or report is directed. In respect of the error code, this is presented as a stop in the flow process for both specific embodiments. The program does not go on to display the arbitrary question if either the delay period has not expired, or an approved text has not been displayed in the meantime. There is no suggestion in the description that the error code results in anything being presented to the user of the system.
19. The report is slightly different. It is clearly presented as something different to the error code and more clearly tied to the monitoring of possible fraudulent use of the PIN entry device in the passage from the description referred to by Mr Elkin. However again it is far from clear as to who the report is directed. I believe however that the skilled person seeking to make sense of the application would more likely infer that the report is sent to the party seeking the feedback or collating the responses which will be the vendor of the product or service or the ratings service provider. It is they who have more interest into the possible fraudulent use of the device. The individual user is safeguarded by the specific steps put in place by the invention namely not accepting a response if the time delay has not expired.
20. Hence, I do not believe the description discloses explicitly or implicitly sending error codes or reports to the user of the system and the claim should therefore be construed accordingly.

21. Given that the purpose of the invention is to keep a customer's PIN secure when obtaining their feedback on a service during payment using a PIN entry device, I consider the inventive concept to lie in the steps taken to avoid disclosure of the PIN to a fraudster or hacker. These steps include accepting the single keypress following display of a second instance of unapproved text only after a time delay has expired and generating an error code or report suitable for monitoring fraudulent use. I note however that claim 1 currently only specifies asking two questions using unapproved text. If no further questions are asked, this in itself could prevent fraudulent acquisition of a user's PIN.
22. The inventive concept can therefore be defined as a PIN entry device and method of operation, wherein the device is configured to display text and receive responses and wherein a distinction is made between approved and unapproved text, the device accepting only a single key press response on the numeric keypad to each display of unapproved text, accepting the single key press following display of a second instance of unapproved text only after a time delay has expired, and generating an error code or report suitable for monitoring fraudulent use of the PIN entry device if the key press following display of the second instance of unapproved text is made before the time delay has expired.

*(3) Identify what, if any, differences exist between the matter cited as forming part of the "state of the art" and the inventive concept of the claim or the claim as construed*

23. Document US 8510193 B2 (LEVY et al.) was cited by the examiner. LEVY is concerned with methods and apparatus for acquiring the opinion of a user on a service or purchase at the time of a card payment being made using a PIN entry device (referred to in LEVY as a payment terminal). The information is obtained by providing a data acquisition request on a screen of the payment terminal after closure of the payment transaction.
24. LEVY states that the payment terminal conforms to the most recent EMV (Eurocard/Mastercard/Visa) standard and is 'for example, a secure server managed by a banking or financial organization'. The examiner notes that this standard 'sets out the steps of the transaction process and displayed standard messages', which they consider to be 'approved text'. This seems to me to be a reasonable assertion.
25. LEVY teaches that a consolidation server 'enables the preparation of question campaigns, the collection and the statistical consolidation of answers' and 'is used, for example, by a marketing service company, specializing in satisfaction analysis campaigns, or by a vendor continuously seeking information on customer satisfaction with the service provided'. A selected question or subset of questions is transmitted from the consolidation server to the payment terminal. In my view, it is implicit that the questions stored in the consolidation server are akin to unapproved text.
26. The applicant appears to concede that LEVY teaches the entry of responses to unapproved text using a single key press but asserts that restriction to use of

the numeric keypad only for this single key press is not disclosed. In support of this position, Mr Elkin highlighted the disclosure in LEVY of the collection of 'a single datum', which comprises 'only one digit or character'. I note however that the document does describe questions being asked of customers that result in an average numerical rating such as "3" or "5". In my view, the implication is that responses using the numeric keypad only may be required for this particular type of question at least.

27. Mr Elkin pointed out that the patent application does not require the "Enter" key to be pressed after pressing the single numeric key response, which he asserts forms a difference between the application and the teaching of LEVY. Although LEVY does not explicitly state that the "Enter" key is not pressed, I could not identify any suggestion that pressing the "Enter" key is required and so do not accept that this forms a difference.
28. LEVY teaches the imposition of a maximum time period for the key press response to a question for the purposes of preventing the terminal from being blocked in entry standby mode and preventing the vendor from taking over the terminal and answering the question themselves. So, although LEVY mentions a time restriction, this is a maximum time period rather than a minimum time delay.
29. Mr Elkin accepts that an error report is produced in LEVY, but under different circumstances. LEVY teaches producing a failure message if a key is not pressed within the maximum time period.
30. Mr Elkin also highlighted that LEVY does not treat the first and second questions differently as the invention here does.
31. The examiner considers the sole difference between the disclosure of LEVY and the inventive concept to be that LEVY 'fails to disclose that a second key press response is accepted only after a time delay, and consequently that this is used as the validation criterion to generate the error code/report'. I consider this assessment in principle to be reasonable but would restate the difference as being only accepting the single keypress following display of the second instance of unapproved text after a minimum time delay has expired, rather than within a maximum time period, and generating an error code or report if an attempt to enter the second instance is made before the minimum time delay has expired.  
  
*(4) Viewed without any knowledge of the alleged invention as claimed, do those differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?*
32. As discussed, LEVY imposes a maximum time period for response to prevent the terminal from being blocked in entry standby mode and the vendor from taking over the terminal and answering the question themselves, with data being invalid if acquired after this time period has elapsed. The examiner points to the statement in LEVY that 'a maximum time period of several seconds...is a good compromise for enabling the question to be read and

understood and the answer to be entered almost spontaneously', asserting that, to ensure 'the user has sufficiently read and understood the question before answering, the skilled person would have considered enforcing a minimum time delay to be the obvious solution'.

33. It seems to me that the compromise referred to in LEVY is aimed at allowing the user sufficient time to read and understand the question and enter their response before the maximum time limit expires. There does not appear to be any suggestion that LEVY considers it necessary to impose measures to force the user to take a minimum amount of time to read and understand the question properly before responding. Consequently, it would not seem to be obvious to the skilled person to impose a minimum time delay. It follows that generating an error code or report if a response is entered before a minimum time delay has expired is also not obvious to the skilled person.
34. For completeness, I note that the problem presented by the patent application of unauthorised disclosure of a user's PIN is addressed in LEVY by prohibiting, in response to a question transmitted from the consolidation server to the payment terminal, of the entry of more than N - P data, where N is the number of digits forming the PIN and P is a number greater than or equal to 1. I do not believe that the skilled person would be motivated to address this problem by an alternative method.
35. I conclude that, when viewed without any knowledge of the alleged invention as claimed, the differences would not have been obvious to the person skilled in the art. Consequently, claim 1 involves an inventive step over LEVY.

## Excluded Matter

### The Law

36. The examiner has raised an objection under section 1(2) of the Patents Act 1977 that the invention is not patentable because it relates to categories of excluded matter. The relevant provisions of this section of the Act are shown with added emphasis below:

*1(2) It is hereby declared that the following (amongst other things) are not inventions for the purpose of the Act, that is to say, anything which consists of...*

**(c) ...a scheme, rule or method for...doing business, or a program for a computer;**

**(d) the presentation of information;**

*but the foregoing provisions shall prevent anything from being treated as an invention for the purposes of the Act only to the extent that a patent or application for a patent relates to that thing as such.*

37. As explained in the notice published by the IPO on the 8<sup>th</sup> December 2008<sup>3</sup>, the starting point for determining whether an invention falls within the

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<sup>3</sup> <http://www.ipo.gov.uk/pro-types/pro-patent/p-law/p-pn/p-pn-computer.htm>



exclusions of section 1(2) is the judgment of the Court of Appeal in *Aerotel/Macrossan*<sup>4</sup>.

38. The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian*<sup>5</sup>. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel* the Court gave general guidance on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions, particularly *Merrill Lynch*<sup>6</sup> which rested on whether the contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case.

39. Subject to the clarification provided by *Symbian*, it is therefore appropriate to proceed on the basis of the four-step approach explained at paragraphs 40–48 of *Aerotel* namely:

- (1) *Properly construe the claim.*
- (2) *Identify the actual contribution.*
- (3) *Ask whether it falls solely within the excluded matter.*
- (4) *If the third step has not covered it, check whether the actual or alleged contribution is actually technical.*

### **Applying the Aerotel test**

#### **Step 1 – Properly construe the claim**

40. The applicant and examiner seem to agree that the first part of the claim is clear, only disagreeing on the meaning of the latter part of the claim, which I have construed as the generation of an error code or report suitable for monitoring fraudulent use of the PIN entry device.

#### **Step 2 – Identify the actual contribution**

41. Jacob LJ addressed this step in *Aerotel/Macrossan* where he noted:

*“43. The second step — identify the contribution — is said to be more problematical. How do you assess the contribution? Mr Birss submits the test is workable — it is an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise.”*

42. The examiner considers that the contribution may relate to 'Computer software running on known PIN entry device hardware to accept a user's response to

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<sup>4</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371; [2007] RPC 7

<sup>5</sup> *Symbian Ltd v Comptroller-General of Patents*, [2009] RPC 1

<sup>6</sup> *Merrill Lynch's Appn.* [1989] RPC 561

an unauthorised text (e.g. a survey question) only after a minimum time delay (as opposed to before a maximum time delay as known in the prior art) has expired with the intent of encouraging more accurate business service feedback from a greater number of customers without increasing fraudulent use of the PIN entry device (such as business owners rating their own business, or posing questions which trick a user into entering their PIN).'

43. The applicant asserts that the contribution is 'how to maintain security when multiple questions are presented to the user' and the contribution may be that 'when a second instance of unapproved text is displayed, the PIN entry device is configured to receive a second single key press response to the second instance of unapproved text only after a time delay has expired from displaying the second instance of unapproved text'. The applicant asserts that generation of the error code and/or report for monitoring for fraudulent use of the PIN entry device is important and forms part of the contribution, further noting that 'The specific contribution is the use of a time delay and error code when multiple questions are asked to a user.'

44. I agree that central to the contribution is the time delay. Having regard to the claim as currently drafted I consider the contribution to be:

*A PIN entry device running a computer-implemented method for collecting feedback from a customer at the point of sale using unapproved questions, wherein the device is configured to display a second unapproved text and to accept a second single key press response to the second instance of unapproved text only after a time delay has expired from displaying the second instance of unapproved text, and if the second single key response is made before the time delay has expired, to generate an error code and/or report for monitoring for fraudulent use of the PIN entry device.*

Steps 3 and 4 – Ask whether it falls solely within the excluded matter and check whether the actual or alleged contribution is actually technical

45. I will consider steps 3 and 4 together.

46. The examiner asserts that 'Collecting customer feedback is an administrative and commercial business activity which falls solely within the excluded subject matter as a scheme, rule or method for doing business as such.' They also consider that 'Being implemented as computer software, the contribution also falls solely within the excluded subject matter as a program for a computer as such' and 'insofar as any contribution relates to exactly when the user is presented with the unapproved text as part of the transaction flow when using a PIN entry device, the contribution also falls within the presentation of information exclusion'.

47. The applicant believes that 'Security of a PIN and therefore security of user's finances are in themselves not considered to fall into the excluded matter of business methods'. I do not consider that the mere fact that the invention falls in the field of security necessarily takes it outside of the exclusions. Devising an improved padlock could lead to a patentable invention whereas increasing

the frequency of police patrols in an area, even though it might be considered to improve the security of that area, would not. It is necessary to more closely look at the purpose of the invention and what it does as a matter of practical reality.

48. I have no doubt that the act of collecting feedback from a customer relates to a method of doing business, as the purpose of collecting feedback is presumably to act on the information obtained to alter aspects of the way in which the business operates. I also note that the requirement for the customer's PIN to be protected arises directly from the fact that the feedback is being obtained during a business transaction. However, I do not consider protection of the PIN to be a business method *per se* and so, in my view, the contribution does not fall solely within a method of doing business.
49. The applicant asserts that 'the contribution is not solely in software because it relies at least on interactions with a user, a keypad on the PIN entry device, a display on the PIN entry device and the provision of an error code'. The applicant further asserts that 'the block on multiple inputs in response to unapproved text could be implemented mechanically or in electronic circuitry' which 'would avoid the computer programs exclusion at least'. I will deal with the last argument first by noting that there does not appear to be any disclosure in the application that the invention is implemented other by software. That the invention relies on interactions with the user and involves a display and keypad is in itself not enough to demonstrate a technical contribution. Indeed, if it were then the computer program exception would be very narrow indeed.
50. Mr Elkin referred to the judgment of PKTWO<sup>7</sup> in which, in order to prevent children from viewing inappropriate material on the internet, the content of electronic communications is monitored by sampling data packets, assigning an alert level, and generating and sending an alert notification to an administrator, i.e. a parent or carer of the child accessing the material. The administrator is then able to respond by requesting an action to be taken by the computer, which could be terminating the electronic communication or shutting down the computer. Floyd J considered that claim 33 of PKTWO did not reside wholly within the computer program exclusion due to an improved alarm being part of the contribution, noting that:

*"I am unable to accept these submissions. I start with the proposition that the generation and transmission of an alert notification to the user/administrator is not a relevant technical process. I accept that in many cases this may be correct. Plainly it was correct in the case of two out of the three patents considered by Mann J in Gemstar, where information was simply displayed on a screen. But what is in play in the present case, namely an alarm alerting the user, at a remote terminal such as a mobile device, to the fact that inappropriate content is being processed within the computer, is in my judgment qualitatively different. First of all, the concept, although relating to the content of electronic communications, is undoubtedly a physical one rather than an abstract one. In that respect it was more akin to the third of the three patents considered by Mann J in Gemstar. Secondly, the contribution of claim 33 does not simply produce a different display, or merely rely on the output of the*

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<sup>7</sup> *Protecting Kids the World Over (PKTWO) Ltd v Comptroller General of Patents [2011] EWHC 2720 (Pat); [2012] RPC 13*

*computer and its effect on the user. The effect here, viewed as a whole, is an improved monitoring of the content electronic communications. The monitoring is said to be technically superior to that produced by the prior art. That seems to me to have the necessary characteristics of a technical contribution outside the computer itself."*

51. Mr Elkin sought to draw parallels with the invention here in that both provided alarms or alerts in response to an undesirable event. However, in PKTWO the improvement to the monitoring lies in part in the rapid transmission of the alarm signal to the parent or carer to enable them to take appropriate action quickly, whilst in the present invention the error code or report is merely generated, with the application being silent with regard to further steps to be taken. Further the contribution in PKTWO, as made clear in the above extract, was found to involve a monitoring method that was technically superior.

52. In contrast the monitoring here involves determining if a response has been entered on the PED before the expiration of the time delay. This does not have the same level of technicality as the monitoring in PKTWO. Further the contribution here is closer to producing simply a different display (a report) which then relies on the user to do something. Hence, I do not consider that PKTWO helps in this case.

53. I will instead consider the five signposts set out by Lewison J (as he then was) *AT&T/CVON*<sup>8</sup> that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC*<sup>9</sup> the signposts were reformulated slightly in light of the decision in *Gemstar*. 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.*

54. The applicant asserts that signpost i) is met as the technical effect is 'the maintenance of the security of a user's PIN in the same way that a padlock maintains security'. I have already touched on this above. The effect that the invention has outside the PIN device is essentially that the user will at best receive an error code or report if they seek to enter a response before the time period has expired. This is not a technical effect.

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<sup>8</sup> *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat); [2009] FSR 19

<sup>9</sup> *HTC v Apple* [2013] EWCA Civ 451

55. The applicant also suggests that signpost iii) is of assistance. This together with signposts ii) and iv) are sometimes referred to as the “better computer” signposts. Mr Elkin contends that signpost iii) is met because the time delay and error code allow for multiple questions to be asked without being concerned if the number of inputs has met or exceeded the number of digits in a user's PIN. This allows greater freedom of operation than is provided by the confines of Levy et al. and so the device is considered to operate in a new way. That may be the case however any new way of operation flows from the new program rather than a change to the device at a technical level. The program does not for example solve any technical problem within the device. It is also directed to the handling of particular types of information namely inputs and outputs to secure customer feedback securely rather than to the operation of the device as a whole.

56. I would add that no assistance is provided by signpost v). Whilst the perceived problem of preventing a user inadvertently disclosing their pin number if the device is hacked is addressed, the problem is not considered a technical problem. At a higher level the problem is really the ability of hackers to hack the device and that is not prevented. The invention rather circumvents that problem by providing for a time delay with the hope that that discourages the user from revealing their pin code. Hence, I do not believe any of the signposts point to the contribution being other than excluded as a program for a computer.

57. Mr Elkin in his skeleton also refers to other recent applications by the same applicant including GB1314713.7 which has been granted. He does not go on to identify how close that application is to the application in issue here. I have had a cursory look at that application and am satisfied that the claimed invention differs from the invention here to an extent that nothing can be gleaned from its allowance in respect of my decision here.

58. Mr Elkin also refers in his skeleton to the *Suunto OY* Office decision<sup>10</sup> and the recent decision of the patents court in *Lenovo*<sup>11</sup> however he did not press these to any extent at the hearing and hence I will say no more.

59. Taking a step back and looking at the invention as a whole, I am satisfied that the contribution falls solely within the computer program exclusion. The addition of a time delay in a PIN device configured to generate authorised and unauthorised text is not technical in nature.

#### Auxiliary claims

60. The applicant has also provided an auxiliary claim set for consideration should I determine the current claims unacceptable. The auxiliary claim 1 reads as follows:

*A PIN entry device comprising an alphanumeric display for displaying text to a user, a numeric keypad and one or more function keys, and*

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<sup>10</sup> *Suunto OY* BL O/748/18

<sup>11</sup> *Lenovo (Singapore) Pte Ltd* [2020] EWHC 1706 (Pat)

*wherein the PIN entry device is configured to operate to display text to the user on the alphanumeric display to prompt a response from the user,*

*wherein the text corresponds to approved text and unapproved text, and*

*wherein the PIN entry device is configured to accept responses entered on the numeric keypad or one or more function keys in response to approved text, and to accept only a single key press response entered on the numeric keypad when prompted by a display of unapproved text,*

*wherein the PIN entry device is configured to:*

*display a second instance of unapproved text, and to accept a second single key press response to the second instance of unapproved text only after a time delay has expired from displaying the second instance of unapproved text,*

*generate an error code and/or report if the second single key response is made before the time delay has expired, wherein the error code and/or report is provided for monitoring for fraudulent use of the PIN entry device.*

*wherein the PIN entry device is configured to:*

*display a second instance of unapproved text following a single key press response to a first instance of unapproved text, wherein*

*the second instance of unapproved text is displayed only if a payment card insertion status has changed since a first instance of unapproved text was displayed,*

*and if the payment card insertion status has not changed since a first instance of unapproved text was displayed generating an error code and/or report, wherein the error code and/or report is provided for monitoring for fraudulent use of the PIN entry device.*

61. This claim reflects an alternative embodiment of the invention where in place of the time delay as currently claimed, the second instance of unapproved text is only displayed if the card insertion state has changed. This embodiment is similar to a further embodiment where the second instance of unapproved text is only displayed if there has been a display of approved text between the first and second unapproved text.

62. The discussion on this auxiliary claim set was relatively brief at the hearing. I will consider first whether the auxiliary claim 1 is also excluded as a computer program and then if it is not, go on to consider its inventiveness over LEVY. The contribution of the auxiliary claim can be considered as:

*A PIN entry device running a computer-implemented method for collecting feedback from a customer at the point of sale using unapproved questions, wherein the device is configured to display a second unapproved text only if a payment card insertion status has changed since a first instance of unapproved text was displayed,*

*and if the payment card insertion status has not changed since a first instance of unapproved text was displayed generating an error code and/or report, wherein the error code and/or report is provided for monitoring for fraudulent use of the PIN entry device.*

63. There is nothing before me to suggest that linking the display of questions to the insertion state of the card solves any particular technical problem. It is also noted that LEVY includes a validation step based on the presence of the card. Mr Elkin has again sought to rely on signpost iii) arguing the PIN device according to the auxiliary claim operates in a new way. However as with the main claim 1, any change in the operation of the device is simply a result of how the programmer has chosen to program it. It does not operate in a new way in a technical sense. Hence the auxiliary claim is also excluded as a program for a computer. Having found the claim to be excluded I do not need to go on and consider whether it involves an inventive step.

### **Conclusion**

64. Having carefully considered the arguments, I am of the view that the invention set out in the main claim is inventive over LEVY. However the contribution as set out in the main claim and the auxiliary claim set falls solely within the matter excluded under section 1(2) as a program for a computer. I can see nothing in the specification as a whole that could be reasonably be expected to form the basis of a valid claim. I therefore refuse this application under section 18(3)

### **Appeal**

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

**Phil Thorpe**

Deputy Director, acting for the Comptroller