

OPINION UNDER SECTION 74A

Patent	GB 2380033
Proprietor(s)	Mr Bruce H.D. Reeves Mr Derek Lillie Miss Catherine Rita Davies
Exclusive Licensee	
Requester	Mr Bruce H.D. Reeves Mr Derek Lillie Miss Catherine Rita Davies, on 21 November 2006
Observer(s)	Mr Paul Docker
Date Opinion issued	20 February 2007

The request

1. This opinion relates to a request made by the proprietors as to whether the patent in question:
 - a. involves an inventive step having regard to alleged prior art in
 - MSF trade union Consultative Poll document dated 23 October 2000 – discussed in document “Alleged Prior Art Cited Document One”
 - Novotny, E J, “Democracy by computer: design, operation, and implementation of a civic communication system”, American Institutes for Research, Washington DC, 19742000 – discussed in document “Alleged Prior Art Cited Document Two”
 - “Technology and the Voting Process” final report prepared by KPMG/Sussex Circle for Elections Canada, 15 June 1998, published 4 February 2000 – discussed in document “Alleged Prior Art Cited Document Three”
 - b. has sufficiency of disclosure, for which a Statutory Declaration from IT expert P J Ryan was supplied.

Observations

2. Observations in response to the request were received from the Department of Constitutional Affairs (henceforward "DCA"), who had provided the proprietors with the above inventive step documents during discussions over licensing the patent.
3. In their observations, the observer raised the issue of lack of novelty in addition to lack of inventive step and cited the following documents, in addition to those already mentioned above, in support of their argument:
 - AU 5477496 (Rea) published 19.12.1996*
 - US 6081793 (Challener) published 27.06.2000*
 - CA 2086488 (Fardeen) published 04.05.1994*
 - Storer, I, Duncan, T, "Electronic Voting in the UK: Current Trends in Deployment, Requirements and Technologies", University of St Andrews, published October 2005
 - WO 00/57976 (Scimarc LLC) published 05.10.2000
 - Letter from Electoral Reform Services 14 December 2006 to N Matheson, Intellectual Property Rights Group of the MOD with regard to the MSF trade union Consultative Poll
 - Letter from Barclays Bank (Legal and Compliance) 19 December 2006 to N Matheson as above with regard to automated banking services prior to year 2000
4. I note at this point that the first three patent documents – those marked * above – were also cited against the patent application. I shall come to these later.
5. The observer commented on the issue of sufficiency, but recognised that this is not a matter on which the Patent Office provides opinions.

Observations in reply

6. In their reply to the observations, the proprietors refute the arguments presented by the observer in summary and in detail. They also have provided a number of appendices:
 - A Copy of the Statutory Declaration from P J Ryan already supplied in the original request submission
 - B Page 11 of DCA May 2007 (sic) Electoral Pilots Prospectus regarding secrecy and confirmation
 - C Page 10 of UK OGC e-Voting Technical Specification

Requirements, November 2002

- D D1 Schematic solution architecture applicable to the proprietors' invention
- D2 e-banking schematic (for comparison)
- E Schematic outlining the differences between e-banking and the proprietors' invention
- F A set of proposed amended claims
- G Points of difference between the patent claim 1 and e-banking

The Patent

- 7. Application GB 2380033 was published on 26 March 2003, is in force and is derived from international patent application PCT/NZ2001/000238 filed 26 October 2001. This itself was based on three New Zealand priority documents :

NZ 508465 – 27.11.2000

NZ 511392 – 27.04.2001

NZ 512918 – 11.07.2001

The international application was published as WO2002/042974 on 30 May 2002. The notice of grant for the GB patent was published on 23 July 2003.

- 8. Claims 1 and 2 are independent claims. Claims 3-20 are dependent directly or indirectly on those claims and there is an omnibus claim 21.
- 9. Claim 1 is the broadest claim and reads:

A data collection and collation system for collecting and collating participant data received from a plurality of different access devices operatively connected to one or more specified addresses, the system comprising:

- a) *means for transmitting participant data received at the one or more specified addresses to a data processing system for data collection and collation*
- b) *means for providing each participant with an option or question selection where each option or question has a unique transmittable*

signal or code;

- c) *means for assigning each participant with a unique transmittable signal or code;*
- d) *means for assigning each participant a said specified address, which address is to be used to receive information to be transmitted by the participant via any means, or any means for the transmitting and/or receiving of any signal or code;*
- e) *means for instructing the participant to connect to the said specified address or addresses and enter the respective unique transmittable signal or code and signal or code or signals or codes for the selected options or questions thereby providing said data; and*
- f) *means for processing and/or collating some or all of the participant data whereby a participant may input data from any location at any time and by any access device that can be connected to said specified address or addresses; and*

wherein the system provides each participant with a plurality of choices for transmitting said data independent of circumstances or location.

In the patent, there are two part d)'s in the claim, but I've used the notation employed in the statement of invention on page 4 of the specification, replacing the second d) with e) and the following e) with f).

10. Claim 2 is similar, but narrower in scope. I've repeated it here to highlight the differences from claim 1 (passages underlined):

An electronic voting system for collecting and collating voter data received from a plurality of different access types of devices operatively connected to one or more specified addresses, the system comprising:

- a) *means for transmitting votes or other voter data received at the one or more specified addresses to a data processing system for data collection and collation;*
- b) *means for providing each voter with an option or question selection wherein each option or question has a unique transmittable signal or code;*
- c) *means for assigning each voter with a unique transmittable signal or code;*
- d) *means for assigning each voter a said specified address, which address is to be used to receive information to be transmitted by the voter via any means for the transmitting and/or receiving of any signal or code;*
- e) *means for instructing the voter to connect to said specified address or addresses and enter the respective unique transmittable signal or*

code and signal or code or signals or codes for the selected options or questions thereby providing said data; and

- f) *means for processing and/or collating some or all of the voter data whereby a voter may input data from any location at any time and by any access device that can be connected to said specified address or addresses; and*

wherein the system provides each participant with a plurality of choices for transmitting said data independent of circumstances or location.

11. Five documents were cited against the international application, WO2002/042974, of which US 6081793 (Challener), referred to in the observations, was one.
12. The UK examiner cited a further five documents in the national phase, of which two, AU 5477496 (Rea) and CA 2086488 (Fardeen), were referred to in the observations.
13. In the Patents Rules 1995, as amended 1 October 2005, rule 77D(1)(b) states that an opinion shall not be issued if the question upon which the opinion is sought appears to have been sufficiently considered in any proceedings. This includes all pre-grant proceedings. Accordingly, I shall not give an opinion on the relevance of the three documents cited pre-grant if I feel they have been sufficiently considered at that stage.
14. It also appears that the document "Technology and the Voting Process" final report prepared by KPMG/Sussex Circle for Elections Canada, 15 June 1998, published 4 February 2000 was previously cited, according to "Alleged Prior Art Cited Document Three" in the proprietors' submission. I have no knowledge of that or what proceedings took place, therefore I shall consider this document afresh.

Discussion

15. This discussion will first look at how the claims are to be construed. I will then look at the issue of novelty, which was introduced by the observer, followed by inventive step - the main component of the request - and finally a brief note about sufficiency and any other issues that emerged in the observation stages.

Claim construction

16. It is clear in the submissions and observations from the interested parties that there is considerable dispute over the extent of protection conferred by the patent.

17. To resolve the matter one must turn to section 125 of the Act. Sub section 125(1) states:

“For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.”

18. Sub section 125(3) enlarges on this by saying that the Protocol on the Interpretation of Article 69 of the EPC (which Article corresponds to s 125(1)) applies. The Protocol reads:

"Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties".

19. Case law refines this basic guideline. One principle that has flowed from it is that of purposive construction. This is touched upon in the observations in reply¹. In general, what has to be considered is what the person skilled in the art would have understood the patentee to be using the language of the claim to mean at the time of filing. This is not necessarily the same as what the proprietors consider it to mean now.
20. The main matters in dispute are what is meant by “different access devices” in claim 1 and how many channels of communication are made available in the conduct of the invention. DCA in their observations², argue that the specification as a whole encompasses a system using only one form of telecommunication. A passage in the patent³, indicates this possibility and the described example⁴ only relates to one method of communication, ie telephonic. Moreover claim 19 allows the participant to select from a plurality of different transmitting means, indicating in DCA’s view, that the other claims should be construed as directed to one telecommunication means.

¹ Observations in reply, paragraph 17

² Observations, paragraphs 8-10

³ Patent, page 9, lines 19-21

⁴ Patent, page 9 line 30 to page 13 line 2

21. The proprietors, on the other hand, contend⁵ that the patentee is entitled to convey what his invention is in the specification and what the monopoly he has chosen to obtain is in the claims and that these need not necessarily be the same. While I think this is generally true - for example where the description discloses an invention in detail with alternatives, while the claims are directed to broader concepts – if there are doubts about what monopoly is being claimed, then one has to turn to the description and drawings for clarification.
22. Tied in with this argument is the interpretation of the expression “different access devices” in claim 1. DCA argue⁶ that this is not a requirement for different types of access device, eg phone and email, rather it is a requirement for multiple instances of device, eg many different phones. In response, the proprietors argue that this belies the definitions of terms on page 3 of the patent and as previously stated. I must say that I do not find this response very helpful and must take my own view on the matter.
23. There is another issue that has been raised by DCA⁷ and that is why claims 1 and 2 are independent and referred to as first and second “aspects” of the invention given that the only difference is that the participant in claim 2 is a voter. The proprietors argue⁸ that the claims are of different scope, claim 1 being broader, and if claim 1 was deemed invalid for whatever reason, claim 2 could take its place. I think the differences are greater than DCA suggest – see para 10 above - and take the proprietors’ line as being perfectly acceptable so I will consider this matter no further.
24. Coming to the claims themselves in detail, claim 1 is directed to a *data collection and collation system for collecting participant data received from a plurality of different access devices operatively connected to one or more specified addresses*. From this I may construe that the system does not include the access devices and that these devices could be of the same type, eg they could all be mobile phones supplied by different manufacturers. Considering what is described in the specification as a whole, however, I take a different view. I think the purpose of including the word “different” is to indicate that the devices are of different types (as in claim 2), otherwise the word is superfluous and redundant. I do take the point raised by DCA, however, that different types of access device could include different types of telephones, such as mobile phones and landline phones.

⁵ Observations in reply, paragraph 11

⁶ Observations, paragraph 20

⁷ Observations, paragraphs 6, 7, 18

⁸ Observations in reply, paragraphs 9, 10

25. Component a) of the system is defined as *means for transmitting participant data received at the one or more specified addresses to a data processing system for data collection and collation*. As worded, this does not necessarily indicate that the data processing system is part of the system of the invention. I will return to this point when I consider component f).
26. Component b) is defined as *means for providing each participant with an option or question selection where each option or question has a unique transmittable signal or code*. This broad statement can be interpreted to mean, for example, an electronically transmitted message containing the signals or codes, or even a piece of paper with the codes printed on it. Indeed, in the embodiments of Figures 1-3 and Figure 4 of the patent, a 'mail out' or ballot paper is envisaged.
27. Component c) is defined as *means for assigning each participant with a unique transmittable signal or code*. This causes me no difficulty.
28. Component d) is defined as *means for assigning each participant a said specified address, which address is to be used to receive information to be transmitted by the participant via any means, or any means for the transmitting and/or receiving of any signal or code*. My difficulty with this is that it appears to be saying that a single address is used for any type of transmission, so that a single participant would use the same address for communication by phone, internet web site etc. I do not think this would be possible, let alone practicable, so I am assuming that the address is designated according to the mode of transmission and that different access devices can be used to employ that mode of transmission. I have in mind here a telephone number which can be accessed via a landline phone, a mobile phone and an internet phone.
29. Component e) is defined as *means for instructing the participant to connect to the said specified address or addresses and enter the respective unique transmittable signal or code and signal or code or signals or codes for the selected options or questions thereby providing said data*. This is not wholly clear as it refers to the said specified address or addresses. Component d) assigns a single address as mentioned above, so there is some confusion here. I shall take the same view as I did regarding d), that a variety of addresses is provided depending on the types of communication. Moreover, it may also be the case that multiple addresses are provided for each type of communication and are assigned on a shared basis to participants in order to spread the load. It does call into question though the preamble to the claim wherein a plurality of different access devices are operatively connected to *one or more specified addresses*. This could

be taken to mean that all participants communicate with one address regardless of the method of communication.

30. Component f) is defined as *means for processing and/or collating some or all of the participant data whereby a participant may input data from any location at any time and by any access device that can be connected to said specified address or addresses*. It is not clear how this relates to the data processing system specified in the definition of component a). I shall take it to be one and the same, to remove the doubt introduced in component a) that the data processing system is not part of the overall system. There is also the optionality expressed in “means for processing and/or collating some or all of the participant data” which is somewhat at odds with the title of the invention and the preamble to the claim which are directed to a data collection and collation system. I shall assume that collating always takes place.
31. On another point, the use of the word ‘whereby’ in component f) suggests that what follows is a consequence of the processing and/or collating operation, but they seem to me to be unrelated. This being the case, I shall not regard the input of data from any location etc as being a qualifying feature of the collating means. I also consider the feature of inputting data “from any location” as sweeping and speculative and highly unlikely to be the case, for instance, in the described example. I think the common sense approach to this is to take it to mean within the range of the transmitting means.
32. The final, rounding up feature of the claim: *wherein the system provides each participant with a plurality of choices for transmitting said data independent of circumstances or location* again is rather sweeping with regard to the circumstances and location. The circumstances are undefined and there are other factors which would prevent transmission in many locations. I shall therefore take this aspect with a pinch of salt, safe in the view that it does not have too much bearing on the issues being considered.

Novelty

33. I shall now consider the novelty issues raised by the observer, DCA.
34. DCA alleges that the patent claims 1 and 2 at least are anticipated by the MSF trade union Consultative Poll document⁹. The document is a ballot paper and gives instructions on how to use the electronic system used for the poll, from which the reader can derive some idea of how the system works. The detail of the methods used are backed up by the letter from Electoral Reform Services dated 14 December 2006,

⁹ Observations, paragraphs 45b, 54.

which states that “The existence of the ballot methods was made widely known and was reported in the media at the time so as to achieve the broadest possible participation”, but this is not established as fact. The proprietors in their original submission¹⁰ and their observations in reply¹¹ argue that the document was not in the public domain as it was only issued to voters, so does not form part of the state of the art and does not give clear and unmistakable directions to do what the patentee claims to have invented. I, too, have sufficient doubts in my mind in these respects to believe this document is non-anticipatory and shall not consider it further.

35. DCA also contend¹² that the Novotny document anticipates claim 1. I agree that the means of communication in the operational system TELEVOTE are telephone landlines, but I do not think there is anything in the document to substantiate that other communication means are envisaged¹³ In 1974, only landline telephone communication was a viable means of communication for public use and the reference to television is in the context of displaying the results.¹⁴
36. Nevertheless, in their tabulated breakdown of claim 1,¹⁵ DCA refer to different phones satisfying the requirement for different access devices (item 1.1). I think this is a valid point. Novotny outlines a pilot implementation of the main elements of TELEVOTE which took place in 1973¹⁶. In that pilot it was recorded that “Each registered Televoter coulddial a seven digit number, dial his identification number and the issue number [relating to the issue that was being voted upon], then dial his choice. Initial problems were encountered with the data processing equipment during the demonstration period. From certain dial telephones the inputs were not accurately recorded, but no problems arose with touch phones”. From this small passage, many of the features of claims 1 and 2 of the patent are identified.
37. Firstly the different types of access device – dial phones and touch tone phones. Secondly, the specified address – the seven figure number. Thirdly, the participant unique signal or code – the identification number. Fourthly a unique signal or code for each option or selection – the choice to be dialled. In addition to these, Novotny discloses the means for transmitting the participant data to a data processing system for data collection and collation. In this case, in a

¹⁰ Alleged Prior Art Cited Document One

¹¹ Observations in reply, paragraphs 30, 31, 40(ii), (iii)

¹² Observations, paragraphs 29-42

¹³ Observations, paragraph 30

¹⁴ Novotny, last paragraph page E.2.1

¹⁵ Observations, paragraph 33

¹⁶ Novotny, page E.2.6

description of the system operation¹⁷, the inputs were stored on magnetic tape, the dialled and touch tone inputs merged to digital codes and transmitted to tabulating routines.

38. Novotny, therefore in my opinion, anticipates claims 1 and 2.
39. It does not, however, anticipate claim 3, in that a second unique participant number is not employed. It does anticipate claim 4, since a telephone number is one of the options for the specified address; claim 5 too, as a computer data processing system is used.
40. Novotny describes the provision of feedback to the participant verifying the dialled inputs, although this was not implemented due to the high cost of maintaining on-line connections. Claim 6 is therefore considered to be anticipated. Claim 7 doesn't clearly require that all the different modes of transmission listed as alternatives are available for transmission of the responses, so it is anticipated by Novotny where a landline telephone is used - as is claim 12 which only requires a telephone. On the other hand, claim 13, in requiring the use of the internet, is not anticipated.
41. There appears to be no disclosure of the subject matter of claims 8-10, which relate to interactive voice responses, incorrect matching of input identifier signals and repeated voting. The summary of input data specified in claim 11 is provided for in Novotny by the tabulation process, so this is not new.
42. I am not sure what distinguishes a "network-enabled" phone system from a standard landline one and particularly one that existed in the USA at the time of the Novotny report, but if they are the same, then claim 14 is anticipated.
43. Novotny does not disclose the voice activation features of claims 15 and 16, the card features of claim 17, the association with other voting systems of claim 18, nor the choice from different transmitting means of claim 19, so none of these claims is anticipated by that document.
44. Claim 20 is a little difficult to follow in that it appears to suggest that the data processing system is not part of the data collection and collation system, which itself includes a means for processing and collating the participant data in parts f) of claims 1 and 2. Nevertheless, it does not appear to introduce anything that is not disclosed in Novotny and therefore, as far as it can be understood, is considered to be anticipated by it.

¹⁷ Novotny, pages E 2.2 to E 2.4

45. Claim 21 is an omnibus claim and covers the system substantially as described with reference to the drawings, i.e. the example of Figures 1-4, as described from line 30 on page 9 to line 2 on page 13. Without delving too deeply into what this comprises, I note that it includes the features of claim 3, the requirement to enter two unique identifiers for the participant and is therefore novel.
46. I note from the proprietors' observations in reply¹⁸, that they argue in an underlined passage, that "the paper in no way attempts to address the problem of allowing data to be collected and collated via any number of different devices able to communicate with a specified address or addresses such as a telephone number internet address, web page, e-mail address, radio or microwave frequency, infra-red frequency or satellite location and , wherein the system provides each participant with a plurality of choices for transmitting data independent of circumstances or location". I find this argument difficult to follow in the light of my findings above. The patented system is not defined as one providing all means of access and transmission; these are given as options for implementation in the claims, not options for the participant to select from. This is reinforced by the example system described with reference to Figures 1-3 where the specified address is a telephone number only, so the participant cannot communicate by email, or via a webpage for example.
47. With regard to "Technology and the Voting Process" final report prepared by KPMG/Sussex Circle for Elections Canada, referred to as "the CANADA report", DCA argue that this discloses claim 1¹⁹ in that in section VII E – Electronic Voting Model – the system proposed has all the integers of claim 1. This is a persuasive argument. In reply, the proprietors do not go into any detail why they think the CANADA report is not relevant in this respect and assert that "this scoping paper restricted itself to technologies available as at 1998 and importantly makes no reference to the integration, collection and collation of participant data including the integration of 3rd party complementary databases such as voter registration, authentication and counting"²⁰. I do not find this convincing. There is no mention in claims 1 and 2 of the integration with complementary 3rd party databases; that does not appear until claim 20. Further, the CANADA report discusses in detail what was available at that time²¹ and what was possible in the form of a voting model with three communication methods: telephone, kiosk

¹⁸ Observations in reply, paragraph 21

¹⁹ Observations, paragraphs 55, 56

²⁰ Observations in reply, paragraph 35

²¹ CANADA, section IV 4, section V, section VII

and internet²². Indeed, it comes to the conclusion²³ that a combination of all three should be considered for future elections.

48. The proprietors make two points on numerous occasions: firstly that DCA analysed the features of the invention individually and in isolation rather than considering the invention as a whole²⁴ and secondly that an essential feature of the system is the collection and collation of data which seems to have been ignored by DCA²⁵. Be that as it may, it is clear to me that the CANADA report considers the system as a whole from start to finish rather than concentrating on specifics²⁶ and the central tabulation of the results is one component of that²⁷.
49. Thus, it appears to me that the features of claims 1 and 2 are disclosed in the CANADA report. It is a matter of patent law that the anticipation test is strict as indicated by the proprietors²⁸, but I think the CANADA report meets that test. The whole of the system of claims 1 and 2 is disclosed therein. In so far as these claims define the invention only in terms of what the system does rather than how to do it, the CANADA report provides clear and unmistakable directions which will inevitably result in the system as claimed. In both instances the technology is said to be known.
50. Regarding the subordinate claims, claim 3 is not disclosed in CANADA as it only requires one unique security identifier to be input not two. For the same reason omnibus claim 21 is not anticipated.
51. Claim 4 is anticipated as some of the options for the specified address are disclosed, eg telephone number, internet address.
52. Computer data processing of the voter's selections is disclosed, so claim 5 is known.
53. Feedback to the voter for verification is a feature of the modelled system in CANADA, but there is no mention of it confirming that the voter may disconnect. Claim 6 is therefore not anticipated.
54. Claims 7 and 8 are dependent on claim 6, so are not anticipated.
55. Claim 9 relates to matching two unique security identifiers, so like claim 3, is not anticipated.

²² CANADA, section VII E

²³ CANADA, section VII F

²⁴ Observations in reply, paragraphs 2, 3, 23, 47

²⁵ Observations in reply, paragraphs 9, 13, 20, 23, 29, 35, 37(ii)

²⁶ CANADA, section VII E

²⁷ CANADA, section VII E 6, section VIII 5, 13, 15

²⁸ Observations in reply, paragraphs 26-29

56. Blocking of attempts to vote twice is a feature in CANADA²⁹, so claim 10 is anticipated.
57. The provision of a summary of the processed data is a feature of all systems of this sort, so claim 11 would not appear to be new.
58. Telephone, internet access is disclosed, so claims 12-14 are anticipated.
59. Voice activated messages are disclosed³⁰, so claim 15 is anticipated, but multi-lingual response appears not to be, so claim 16 is novel.
60. The use of smart cards is disclosed³¹, but is not in the manner of claim 17, so this claim is novel.
61. The combination of electronic voting with the existing manual system is disclosed³² so claim 18 is not new.
62. The selection from different transmitting means is an inherent feature of the system disclosed in CANADA, so claim 19 is anticipated.
63. As far as it can be understood, the integration of the data processing system of the invention to complement third party databases appears not to be disclosed in CANADA, even though the other features of the claim appear to be, so claim 20 is new.
64. Turning to the documents cited by DCA in their observations, AU 5477496 (Rea), US 6081793 (Challener) and CA 2086488 (Fardeen) were all considered for novelty by the examiner in the pre-grant proceedings, so as advised in paragraph 13 above, I shall not consider them for novelty again.
65. The next document on the observer's list is Storer, I, Duncan, T, "Electronic Voting in the UK: Current Trends in Deployment, Requirements and Technologies." This was published in October 2005, so can not be considered as anticipatory. DCA do not say that it is, as they only refer to it as providing evidence in its bibliography of an indication of lack of inventive step³³. The proprietors reject it totally;³⁴ I am content to follow the proprietors' line.
66. The next document on DCA's list is WO 00/57976 (Scimarc LLC) published 05.10.2000 – referred to for some reason in the submissions

²⁹ CANADA, section VII B

³⁰ CANADA, section VII B, page 42

³¹ CANADA, section VII E 1, kiosk - page 42

³² CANADA, section VII F

³³ Observations, paragraph 104

³⁴ Observations in reply, paragraph 40(iv)

as the “NZ document”. This was published before the priority date of the patent.

67. DCA allege that NZ anticipates claim 1 by identifying passages in the document which match the features of the claim³⁵. The system in NZ is used for marketing surveys so is well within the field of the invention identified in the patent³⁶ and within the even broader scope of claim 1. In this system the survey participant is sent a project identifier and a personal respondent identifier automatically, eg by fax or email from a system server. In one embodiment, the participant may respond by computer by means of a browser using an online form or, in another embodiment, by telephone touch tones. In each case the participant makes contact with the address of the server and enters his or her identifier to verify access. The participant then responds to questions associated with the survey from the server by entering codes according to their choice of answer. The interaction is monitored and data stored on the server. Statistical reports may be generated at the server and transmitted to the client company or the raw data may be sent by the server to the client company for further processing. The server communicates with various devices at both the client location and the participants’ locations. As described “The telecommunications link 20 may be established across any suitable network such as the Public Switched Network (PSN), the Internet, a proprietary network or combinations thereof”³⁷. There are no observations in reply from the proprietors on this subject to refute DCA’s allegations. Anticipation by the prior art is only generally dismissed. I take the view that DCA have made a good case for anticipation of claim 1. They have not looked beyond that claim, but it is clear that claim 2, by relating to a voting system, is not anticipated.

68. I consider the other claims listed below to be anticipated by the evidence identified in the designated footnotes:

Claim 4 – the participant phones the system server telephone number as the specified address³⁸

Claim 5 – the participant’s selections (answers) are processed by the system server³⁹

Claim 7 and 19 – the participant can select from a plurality of different

³⁵ Observations, paragraph 59

³⁶ Patent, page 1, lines 5-9

³⁷ NZ, page 10, lines 19-25

³⁸ NZ, page 14, lines 23-25

³⁹ NZ, page 22, line 26, to page 23, line 10

means for transmitting signals, in this case telephone and internet⁴⁰

Claims 8 and 15 – question messages and the participant's answers can be voice commands⁴¹

Claim 11 – statistical reports of the answers are produced⁴²

Claims 12 -14 – communication is via the internet or telephone, including network-enabled phone⁴³

69. Claims 3, 6, 9, 10, 16-18, 20 and 21 contain features that do not appear to be disclosed in NZ so are not considered to be anticipated.
70. There is much discussion in DCA's observations and in the proprietors' reply over whether the scope of claim 1 embraces e-banking. DCA use as evidence the letter from Barclays bank to confirm that access to e-banking by kiosk, telephone and the internet was available before the priority date of the patent and also the CANADA report which referred to public confidence in the security of e-banking⁴⁴. They go on further to consider all the features of claim 1 in turn and suggest that all of them are met by the common general knowledge of remote electronic banking⁴⁵ arguing that the letter from Barclays bank itemises the steps in the process⁴⁶. While I agree that the methods used to connect the customer to the system and transmit the details securely are very similar to those disclosed in the patent, I am not convinced about the collating step. The patent, unfortunately, does not define "collating" in its definitions of terms on page 3 and so I have to determine for myself what it means. It has a number of different dictionary definitions depending on context, but the one I think is the most appropriate for the current purposes is "to compare carefully in order to verify, and often to integrate or arrange in order". In the context of processing results from a census, a survey, a referendum, an election or the like⁴⁷, selections from multiple participants are compared and sorted into particular groups or categories. This is unlike e-banking where selections from multiple participants are not compared, integrated or arranged in order. Only the selections from individual participants are processed in the context of each participant's account(s). This is a significant difference in my view and the patent represents a new approach compared to e-banking.

⁴⁰ NZ, page 10, lines 19-25 for example

⁴¹ NZ, page 15, lines 5-9

⁴² NZ, page 6, lines 23-27, page 7 lines 13-16

⁴³ NZ, page 10, lines 7-25

⁴⁴ Observations, paragraph 45d, e

⁴⁵ Observations, paragraph 7, 45d-e, 52, 53, 80, 92, 95, 100, 106, 111, 114, 132

⁴⁶ See paragraph 3 above

⁴⁷ Patent, page 1 lines 6-9

71. In their reply, the proprietors made similar points⁴⁸ and also argued that, in e-banking, transactions made by telephone and internet are linear processes that do not interact to provide a common result. They use graphical definitions of the way that the invention and e-banking operate and how they differ⁴⁹, of which I find Appendix E the more enlightening.
72. I therefore judge that the common general knowledge of e-banking does not anticipate the invention.

Inventive step

73. The structured approach for assessing whether a claim involves an inventive step is the *Windsurfing*⁵⁰ test which has been accepted as a standard in case law. It consists of four steps:
- 1) identify the claimed inventive concept
 - 2) identify the common general knowledge known to a skilled but unimaginative addressee in the art at the priority date
 - 3) identify the differences, if any, between the matters cited as being "known or used" and the alleged invention
 - 4) decide "whether, viewed without any knowledge of the alleged invention, those differences constitute steps which would have been obvious to the skilled man or whether they require any degree of invention"
74. Applying the first step, I have had to make up my own mind what the scope of the claims, particularly claim 1, is. Differing views have been given by both parties, as discussed under claim construction and novelty above. I have also come to the conclusion that many of the claims are not novel. This makes identifying the claimed inventive concept more difficult, but I have decided that, in case my assessment of novelty is wrong, I shall consider all the claims for inventive step taking my interpretation of their meaning as determined above.
75. When it comes to applying the second step, I have to determine who the skilled addressee would be at the priority date of the patent and what common general knowledge that person would have had. The patent itself gives some background of what was around at the time in the way of collecting information for surveys, censuses, referenda and elections. It refers in particular to voting at polling stations, postal voting and voting at kiosks⁵¹. It is also clear to me from the cited prior

⁴⁸ Observation in reply, paragraphs 9, 32-34

⁴⁹ Observations in reply, Appendices D, E

⁵⁰ *Windsurfing International Inc. v Tabur Marine (Great Britain) Ltd* [1985] RPC 59

⁵¹ Patent, page 20 lines 20,21

art, that electronic systems were already in place – the CANADA document for example having investigated to a significant degree what was available. Some of these involve telephone voting, conducting surveys and voting via the internet etc. I therefore believe that the skilled addressee would be a person working in the field of electronic voting, surveys, censuses etc. and be aware of the requirements of such systems, such as security of data, confidentiality, control of access and input and the methods used to collate and store the data. Many, if not all of these would have been developed over time with the paper balloting systems and would have to be carried over in their entirety to the electronic versions.

76. Regarding the unimaginative nature of the skilled addressee, I have commented earlier that the patent discloses what the system does rather than how it does it. The skilled addressee would therefore not have to use his or her imagination in order to produce the system claimed. This is borne out by the passage in the patent “It will further be appreciated that the hardware and software for this kind of electronic processing does exist, and can be readily assembled by personnel skilled in this area of computing”.⁵²
77. With regard to the third and fourth steps and considering claims 1 and 2 in particular, in the CANADA report, KPMG et al conclude, when assessing technologies current at the time firstly that “all three of the new voting technologies (telephone, kiosk and internet) are sufficiently evolved to support testing in a fully functional pilot” and secondly that “none of the technologies examined or options available in the near future present a universal solution. It is our view that in addition to the present manual vote, vote processes consisting of a combination of telephone, kiosk/terminal and internet should be considered for future elections”.⁵³ This indicates to me that the technology for the various means of telecommunication was not new and that the concept of combining the different types was not new. It is a clear steer in my mind that a combination of the various technologies available at the time was the next logical step in the development of electronic voting systems. This would be readily apparent to a person skilled in the art at the priority date and when faced with it being specified in the broad terms that it is in the patent would simply regard the alleged invention as obvious. It is the next thing to try.
78. Moreover, it seems that the problems that existed at the time of the CANADA report and were to be overcome were much more to do with concerns over security and applicability⁵⁴, social acceptability and

⁵² Patent, page 11 lines 1-3

⁵³ CANADA, section VII F

⁵⁴ CANADA, section VI, page 34 1st paragraph

political ramifications⁵⁵ and finally, cost. With regard to security, the various technological systems had differing levels of success in maintaining security of personal identifiers for example. This is still a problem today. On applicability, it had to be determined which technology should be used: telephone systems had greater coverage and accessibility, and internet use was on the increase, but there were concerns over citizens who could not use these services and were in danger of being disenfranchised. On the social acceptability side, different sectors of society viewed the application of technology to everyday events with varying degrees of acceptance ranging from welcoming with open arms to complete deep-rooted suspicion. The political effects ranged from having to change the statute to allow the new technology in, to concerns over whether the increased accessibility would actually result in apathy on the part of the voter and a decrease in the voter turnout rather than the opposite which was the main purpose of the exercise. Clearly, when looking at the considerable cost that the introduction of the integrated voting systems would entail, organisations and governments would have to be very careful in balancing their costs and benefits, given that in many cases the systems would not be used day-to-day, but only periodically, sometimes with four-yearly intervals

79. Overall therefore, it seems to me that the reasons why such integrated voting systems, or for that matter, other polling systems for market surveys etc, have not been generally implemented as far as we are aware before the priority date of the patent are because of these other commercial, social and political obstacles rather than limitations in the available technology. Only now, when technology is cheaper, more accepted as being commonplace and on the political agenda, do such proposals become attractive. Claims 1 and 2 therefore are not believed to involve an inventive step.
80. I have concentrated so far in this respect on the CANADA document, because of its assessment of the technologies that were available at the time it was written: what they were, how effective they were and what the potential was for combining them in a multiple access voting system. Further evidence of remote access systems that were disclosed in detail before the priority date is provided in the other documents submitted by the DCA. NZ, as covered under novelty above, discloses a multi-access system for conducting market surveys and for similar reasons to those for CANADA shows that claim 1 lacks an inventive step. Furthermore, to the unimaginative person skilled in the art there is no inventive conceptual leap from a market survey to a voting system: the technical considerations of telecommunication, security, confidentiality, individual codes for choices are all the same,

⁵⁵ CANADA, section VI, page 34

the only difference is the purpose. For this reason, I consider claim 2 to lack an inventive step in the light of NZ.

81. I see no need to assess the appendent claims in turn where I have already consider them clearly lacking in novelty earlier. In the main they relate to features that are either refinements of those expressed in claims 1 and 2, or features that are commonly known in the field of remote voting, marketing surveys or the like. I shall, however, assess those claims that I did consider to be novel.
82. Increasing the level of security, by requiring a further identifier is a standard technique which has been employed over the years for accessing systems. It would be an obvious step to use it here if added security were needed – note the discussion on security in paragraph 79 above. I therefore believe claim 3 lacks an inventive step. Furthermore if the two identifiers do not match then it is the usual practice to require re-entry of one or the other, sometimes both. Claim 9 therefore also lacks an inventive step.
83. Another standard technique used in telecommunication systems, computer systems and indeed personal communications is replying to confirm that the message has been received and understood. This is often known as a “handshake” in computing terms. Its use in a communication system such as this to verify that the process has been completed successfully and that the connection can be terminated could be regarded as essential. It is therefore not seen to be inventive and claim 6 is considered to be obvious.
84. In any country where a number of languages are spoken, it would not be politically sensible to deny sectors of the community their voting rights by limiting their voice-activated communication system to one language only, so this feature as claimed in claim 16 is considered to be obvious.
85. Claim 17 proposes the use of a card, chip or transponder in the data transmission process. The data stored thereon consists of four items: the participant’s unique code or signal, the option or question selections and their unique codes or signals, the specified address and instructions for the participant on what to do. While DCA argue⁵⁶ that this is disclosed in REA alone, I am not convinced. To my reading REA does not describe a card carrying instructions for using the system and its reference to the card incorporating “a number allocated for the voters specific electorate” is nothing to do with storing voting choices, but identifies which group of electors the participant belongs to. These differences, which dictate how the card, chip or transponder are used in

⁵⁶ Observations, paragraph 124

the system of the patent, are significant enough in my mind to render claim 17 non-obvious. DCA also attempt to combine the MSF and CHALLENGER documents to argue lack of inventive step in claim 17, but since I regard MSF as inadmissible, I shall investigate no further.

86. Claim 18 is believed to be obvious for the same reasons as I considered it not to be new in the light of the CANADA report. In any case any voting system offering telecommunication access to voters would even now and for the foreseeable future have to carry on offering, at the same time, paper voting at polling stations and postal voting if they already existed.
87. Even though I considered claim 20 not to be novel in the light of Novotny, I think it requires further study under inventive step. It defines an association of the system “with a data processing system which is electronically networked and integrated to complement third party databases, authentication software, registration software and vote counting software”. While I am not totally clear what is meant here with regard to where the boundaries of the various systems reside, it would seem common sense to me to use existing data processing techniques or proprietary application software to implement the system rather than design and program the system from scratch. Thus I find this claim is lacking in inventive step from common general knowledge.
88. With regard to e-banking, my assessment of novelty in that respect concluded that e-voting had different considerations that couldn't be assumed to be carried across from e-banking, particularly in the data collection and collation aspects. Even though many of the communication challenges were the same: different access devices, different communication channels, security and confidentiality issues, their differences are too significant in my view to argue lack of inventive step. I therefore regard it unnecessary to explore the differences explained with reference to the Appendices provided by the proprietors.

Sufficiency and other issues

89. In their request the proprietors have asked for an opinion on the sufficiency of the disclosure in the patent while, in paragraph 4 of their observations, DCA assert that the patent is invalid under both section 1(2) patentability and insufficiency. As observed, neither of these issues are matters on which the Patent Office can give an opinion under section 74A. I would make the point, however, that both these issues were considered at pre-grant and the requirements found to be met. I therefore decline to investigate this further.

90. In their observations in reply⁵⁷, the proprietors have supplied amended claims, in case I find in this opinion that claims 1 and 2 lack an inventive step. This, of course is a matter for proceedings under sections 27 and 75 and not for section 74A and I shall not consider it further, other than make a brief comment upon the new claim 1. This is a modified form of the original claim 2. It relates solely to an electronic voting system, clarifies the point about collating to the extent that it agrees with my construction of that feature and incorporates the features of the original claim 20. Without assessing the claim in detail, I do not think it contains enough to make a good case for inventive step.

Opinion

91. I conclude that:
- claims 1, 2, 4-8, 10-15, 18-20 of the patent lack novelty having regard to what was known at the time of the priority date from the Novotny and CANADA reports and from WO 00/57976 (“NZ”);
 - claims 1-16, 18-20 would have been obvious to an unimaginative person skilled in the art when faced with the documents Novotny and CANADA reports and WO 00/57976 and others at the priority date of the patent;
 - claim 17 is novel and possesses an inventive step;
 - it would not appear that claims 1 and 2 of the amended claims supplied by the proprietors in Appendix F of their observations in reply involve an inventive step, but a proper assessment has not been made;
 - an opinion on sufficiency may not be made under section 74A;
 - an opinion on patentability under section 1(2) may not be made under section 74A.

Application for review

1. Under section 74B and rule 77H, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion.

⁵⁷ Observations in reply, Appendix F

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Patent Office.

Mike Prescott
Examiner