

- 4 The invention seeks to overcome these deficiencies by providing direction identifier indicia that selectively indicate the direction of movement of a cursor on the display for either the delete or backspace function in accordance with the current operating language of the keyboard. The specification describes how the invention can be embodied in a virtual keyboard comprising a touch-sensitive graphical user interface (figure 2) or in a physical push-button keyboard (figure 3). In the case of the virtual keyboard, the direction of the delete or backspace function for the current language is shown on the image of the key, whereas for a physical push-button keyboard, the direction of the delete or backspace function can be indicated by selectively illuminating the relevant indicia on the face of the key.
- 5 The most recent set of claims were filed on 18 February 2014 and they consist of 3 independent claims (claims 1, 12 and 21). Claim 1 relates to a virtual keyboard rendered on an electronic device, claim 12 to a method performed on an electronic device having a virtual keyboard and claim 21 to an electronic device comprising a virtual keyboard. For the purpose of this decision it is only necessary for me to consider the invention as defined by claim 1:

1. A virtual keyboard rendered on a touch-sensitive display of an electronic device, the keyboard comprising:

a plurality of keys including a first key having associated therewith a backspace function to delete characters in a first direction of a position indicator and a delete function to delete characters in a second direction of a position indicator; and direction identifier indicia associated with the first key, the direction identifier indicia configured to selectively indicate the first direction of the position indicator for the backspace function, and the second direction of the position indicator for the delete function,

wherein the direction identifier indicia is configured to indicate between the first direction and the second direction responsive to a selection of the backspace function and the delete function and is in accordance with a current operating language of the keyboard.

The law

- 6 The examiner has raised an objection under section 1(2) of the Act that the invention is not patentable because it relates to the presentation of information. Section 1(2) reads as follows:

1(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -

- (a) a discovery, scientific theory or mathematical method;*
- (b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;*
- (c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;*
- (d) the presentation of information;*

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

7 The starting point for determining whether an invention falls within the exclusions set out in section 1(2) is to use the structured approach set out by the Court of Appeal in its judgement in *Aerotel*¹. The structured approach comprises four steps:

- 1) *construe the claim;*
- 2) *identify the actual (or alleged) contribution;*
- 3) *ask whether it falls solely within the excluded subject matter;*
- 4) *check whether the actual or alleged contribution is actually technical in nature.*

8 In deciding whether the claims pass the third and fourth steps, I will also consider the guidance set out in the Court of Appeal's judgment in *Symbian*² which confirmed that the structured approach is one means of answering the question of whether the invention reveals a technical contribution to the state of the art (as per *Merrill Lynch, Gale and Fujitsu*). In addition, since section 1(2) is designated in section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention (EPC), I must also take into account decisions of the Boards of Appeal of the European Patent Office (EPO) that have been issued under this Article in deciding whether the present invention is patentable.

9 Mr Moore agreed with this approach.

Arguments and analysis

10 Mr Moore argued that the scope of the exclusions under section 1(2) should be construed narrowly and that this was consistent with judgments on excluded matter handed down by the Court (for example *Halliburton Energy Services Inc's Applications*³ with respect to mental acts). He also referred to Mr Peter Prescott QC's judgment in *CFPH*⁴ which sets out the policy considerations for the exclusions set out in section 1(2) and the rationale for preventing patents for mere presentation of information. At paragraph 40 of his judgment, Mr Prescott says that "*..it does not prevent the patenting of a useful way of presenting information divorced from the particular information as such. The classic illustration is the theatre ticket which is so printed that, no matter how it is torn in half by the usher, retains, the essential information on each half. The exclusion overlaps with aesthetic creations..*". Mr Moore expanded upon this with reference to the legislative history of Articles 52(2)(d) and (3) of the EPC and the adoption of the phrase "presentation of information" from rule 39.1(v) of the Patent Cooperation Treaty (PCT), which was considered by the EPO Board of Appeal in its decision in *Philips*⁵ and concluded that the "presentation of information" exclusion related to subject-matter which conveyed cognitive or aesthetic content to a human.

11 I agree with Mr Moore that the presentation of information exclusion is to be construed narrowly; it is to do with the content of information and how it is conveyed

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

² *Symbian Ltd. v Comptroller-General of Patents* [2008] EWCA Civ 1066

³ *Halliburton Energy Services Inc's Applications* [2011] EWHC 2508 (Pat)

⁴ *CFPH LLC's Application* [2005] EWHC 1589 (Pat)

⁵ T1194/97

and nothing else. I agreed with his further argument at the hearing that it is necessary to take into account the prior art when assessing the contribution.

12 The first step in the *Aerotel* approach is to properly construe the claim. Mr Moore argues that it can be understood from the amended claims that the invention is directed to a virtual keyboard used in touch-sensitive displays using a single key for the delete and backspace functions, in which a change in the operating language of the keyboard results in a change in the direction of the delete and backspace functions and an associated change in the indicia displayed.

13 It is not clear to me that this limitation is imposed by the wording used. Claim 1 does not clearly require the keyboard to be useable in more than one language having different directions of delete and backspace nor does it require the direction of the delete and backspace functions to change in accordance with language of the keyboard. Mr Moore accepted these points at the hearing and confirmed that the applicant would be happy to amend the claims so as to be more closely directed to the understanding of the invention set out above. For the present purpose of assessing whether the invention is excluded from patentability, I shall construe the claim in the manner proposed by Mr Moore.

14 The second step is to identify the actual or alleged contribution made by the invention, and guidance on how to approach this is provided at paragraph 43 of the Court of Appeal's judgment:

"How do you assess the contribution? Mr Birss submits the test is workable - it is an exercise in judgment probably involving the problem to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps sums up the exercise. The formulation involves looking at substance not form - which is surely what the legislator intended."

15 In his final examination report of 22 October 2013, the examiner noted that the reassignment of keys on a virtual keyboard to perform different functions was part of the common general knowledge. He then identified the contribution as being a direction identifier associated with a single key of a virtual keyboard to indicate the direction of movement of the cursor when the delete/backspace key is pressed. This assessment was made on the basis of the claims as they stood before the present set were submitted on 18 February 2014.

16 Subject to clarification of the claims as set out above, Mr Moore argues that that contribution is a single virtual key having both delete and backspace functions and direction identifier indicia indicating two different directions whereby the function of the single key and the direction identifier change in accordance with the operating language of the keyboard. The advantages of such an invention are set out at paragraph [0017] of the description, namely an improved user interface which optimises real estate and automatically changes the delete and backspace function (and the associated indicia) depending on the language chosen.

17 At the hearing, Mr Moore suggested that the contribution can be broken down into two distinct contributions: a) that the display changes to match the direction of deletion (the contribution identified by the examiner), and b) that the function of the

key and associated indicia change in accordance with the operating language of the keyboard (introduced by most recent amendments).

- 18 I agree that this is a fair summary of the contribution and that breaking it down in this way is helpful.
- 19 Moving on to the third step, does the contribution fall solely within the excluded matter, i.e. does it relate solely to the presentation of information? In my view the contribution at a) is clearly wholly within the presentation of information exclusion. It relates only to the giving of information to the user as to the function of a key.
- 20 Mr Moore's argument is that the contribution at b) does not fall wholly within the presentation of information exclusion nor within any of the others. He refers to two decisions of the EPO Boards of Appeal as being especially relevant to this case. In *IBM/Text processing (T115/85)*, which relates to a text processing program that causes a computer to give automatic visual indications about conditions within the computer, the Board of Appeal held that this was a technical effect and said that "*giving visual indications automatically about conditions prevailing in an apparatus or system is basically a technical problem.*" In *RIM (T1629/08)*, which relates to a keyboard for a mobile device having a spacebar key which also functions as a numeric zero value, the Board of Appeal held that this "*provide[s] technical effects contributing to the solution of this problem and thus cannot be ignored when assessing inventive step*" (cf paras. 4.3-4.5).
- 21 I find *T1629/08* to be more persuasive on this point, especially as it relates to analogous subject matter and provides similar benefits in terms of reduced keyboard real estate. In my view, the contribution at b) whereby the function of the key and associated indicia change in accordance with the operating language of the keyboard does not fall within the meaning of presentation of information. I do not consider that it falls under any of the other exclusions either: the contribution at b) is technical in the sense that it provides additional functionality to the keyboard by reducing the number of keys and by changing the functionality of the key (and what is displayed on it) depending on the operating language. I offer no view as to whether the invention set out in the amended claims is obvious in light of the prior art – the examiner will have to consider this when amendments to the claims as volunteered by Mr Moore are filed and put into effect.

Conclusion

- 22 I find that the application does include a patentable invention but that it is not clearly brought out in the wording of the independent claims. The applicant has agreed to amend the claims in order to remedy this. Subject to these amendments being made, the application will be remitted to the examiner for further substantive examination. I shall give the applicant four months from the date of this decision to file amendments. If no such amendments are filed, the application will be refused under section 18(3) for failure to comply with section 1(2)(d).

Appeal

23 Any appeal must be lodged within 28 days.

H JONES

Deputy Director, acting for the Comptroller