

13 September  
2007

## PATENTS ACT 1977

APPLICANT                      Immersion Corporation

ISSUE                          Whether patent application number GB  
   0514055.3 complies with section 1(2)

HEARING OFFICER              R C Kennell

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## DECISION

- 1 This application was filed as an international application on 8 December 2003, claiming a priority of 8 December 2002 from an earlier US application. It was published as number WO 2004/052193 A1 on 24 June 2004, and reprinted under number GB 2 414 319 A upon entry to the UK national phase.
- 2 Despite amendment of the claims during substantive examination which overcame an objection of lack of inventive step, the applicant has been unable to persuade the examiner that the invention is patentable within the meaning of section 1(2) of the Act. This matter therefore came before me at a hearing on 1 August 2007. The applicant was represented by Mr Richard Davis of counsel, instructed by the patent attorneys J A Kemp & Co. The examiner, Dr Mark Shawcross, assisted by videolink.

### The invention

- 3 The invention relates to the customisation of haptic effects to provide information to users of handheld communication devices. The specification explains that although vibratory alerts have been used to alert users of such devices to incoming messages, they cannot be customised or personalised according to application. The applicant submitted amendments to the claims by way of a main and an auxiliary request for my consideration at the hearing. The sole independent claim of the main request reads:

“A handheld communication device comprising:  
information storage means;  
input means for enabling a user to store in the information storage  
means, information representative of a correlation between each of a  
plurality of different haptic effects and a plurality of sources, each haptic

effect being associated with a respective control signal;  
means for deriving information identifying a source from a signal produced by the source;  
automatic selection means effective to use the information identifying the source to automatically select one of the control signals;  
and  
actuator means for using the selected control signal to output the associated haptic effect.”;

whilst that in the auxiliary request reads:

“A handheld communication device for use in a communication system including the handheld communication device and a plurality of sources each capable of transmitting a communication signal, the handheld communication device comprising:

information storage means;

input means for enabling a user to store in the information storage means, information representative of a correlation between each of a plurality of different haptic effects and a said plurality of sources, each haptic effect being associated with a respective control signal;

~~signal receiving means for deriving information identifying a source from a signal produced by the source~~ effective to receive a communication signal from one of the sources and to derive information from the communication signal representative of the source which transmitted the communication signal;

~~automatic selection means effective to use the information identifying the source~~ stored in the information storage means to automatically select one of the control signals dependent on the source which transmitted the control signal; and

actuator means for using the selected control signal to output the associated haptic effect.”,

(wording added to and deleted from the main request being indicated by underlining and strike through respectively).

## **The law and its interpretation**

4 Section 1(2) reads:

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

- (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.”

The examiner maintained against both the main and auxiliary requests his objection under sections 1(2)(c) and (d) that the invention was excluded as relating to a computer program or the presentation of information as such.

5 It was not disputed that the assessment of patentability is now governed by the judgment of the Court of Appeal in *Aerotel Ltd v Telco Holdings Ltd* and *Macrossan’s Application* [2006] EWCA Civ 1371, [2007] RPC 7 (hereinafter “*Aerotel/Macrossan*”). In this case the court reviewed the case law on the interpretation of section 1(2) and approved a new four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim
- 2) Identify the actual contribution (although at the application stage this might have to be the alleged contribution)
- 3) Ask whether it falls solely within the excluded matter
- 4) Check whether the actual or alleged contribution is actually technical in nature.

6 The operation of this test is explained at paragraphs 40-48 of the judgment. Paragraph 43 confirms that identification of the contribution is essentially a matter of determining what it is the inventor has really added to human knowledge, and involves looking at substance, not form. Paragraph 46 explains that the fourth step of checking whether the contribution is technical may not be necessary because the third step should have covered the point.

## **Argument and analysis**

### ***The main request***

#### Construction of the claims

7 Following the four-step approach of *Aerotel/Macrossan*, the construction of the claims in the first step was not in dispute. However, Mr Davis emphasised that the invention was concerned with allowing a user to customise and input relationships between sources and haptic effects, as distinct from the haptic effect being pre-programmed in a way which prevented user input. I accept that this distinction is brought out in the claims.

8 The term “source” is not defined in the claim. However, in his skeleton argument Mr Davis equated this with “a feature of the communicated data”, and distinguished this from information about the status of the communication link as in specification US 6 359 550 (Brisebois) cited by the examiner. He explained further at the hearing that the information derivable from the signal must in some way indicate “what it comes from”. I think this is borne out by the examples at page 4 line 28 – page 5 line 14 of the specification which show a variety of

features that can be relied on to identify and characterise incoming signals. I therefore construe the term “source” in the same way as Mr Davis.

### The contribution of the invention

- 9 In defining the contribution, Mr Davis made two general points. First, he thought that, although assistance was to be gained from the prior art in deciding where the contribution lay, the test in paragraph 43 of *Aerotel/Macrossan* was not an exercise in determining the alleged inventive step. I agree.
- 10 Second, Mr Davis thought that it was important to pitch the definition at the right level of abstraction to avoid incorrectly excluding inventions. Thus, although at one level of abstraction the invention was just presenting information in the form of a haptic effect, it was important to look at how this was being done and the invention did not necessarily fail because its aim was to present information. Mr Davis thought that this was in line with the approach adopted for computer programs in paragraph 22 of *Aerotel/Macrossan*, supporting Pumfrey J’s observations in *Research in Motion v Inpro* [2006] EWHC 70 (Pat), [2006] RPC 20 that an invention was not to be excluded simply because it relied on a computer program. I agree with the broad thrust of this argument, but I would emphasise that, as paragraph 43 makes clear, I must look at what the invention contributes as a matter of substance rather than at the particular form in which the invention is claimed even if the claim is to an apparatus or system.
- 11 With these principles in mind, Mr Davis took me to the judgment of the Patents Court in *Raytheon Co’s Application* [2007] EWHC 1230 (Pat) on appeal from a decision of the comptroller that the invention was excluded as a computer program. Kitchin J accepted a definition of the contribution as consisting of three aspects, one of which was the provision of a method of stock control in which textual representations were replaced by visual ones. Kitchin J held that although the other two aspects did indeed relate to program design, the first aspect could not be so characterized. However he found that this aspect fell within the business method and presentation of information exclusions, with the result that the contribution as a whole fell within excluded matter.
- 12 Mr Davis also took me to the decision of the comptroller in *NEC Corporation’s Application* (BL O/050/07) to which the examiner had drawn attention. The invention concerned a system for processing e-mail dependent on its source and content and generated two kinds of alarm tone, one to indicate that the address was included in a pre- stored list of addresses and the other to indicate that the mail contained one of a number of pre-stored character lines. The hearing officer held (see paragraph 22 of the decision) that the contribution of the invention was not a new communications system or the provision of an audible notify facility in such a system. Rather it was “the specific manner of indicating the source and content of a received e-mail by simultaneous generation of first and second notify tones” and this fell solely within the presentation of information.<sup>1</sup> and the computer program exclusions. I am of course not bound by this decision but I

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<sup>1</sup> In the light of *Townsend’s Application* [2004] EWHC 482 (Pat) the hearing officer considered the exclusion to cover both the way in which information was presented and the content of the information.

agree with the reasoning of the hearing officer.

- 13 Mr Davis conceded in the light of these decisions that if the contribution was simply the use of a haptic effect instead of an audio effect in order to present information, then the invention would not be patentable. However, in his view that was not a complete statement of the contribution of the claims as now proposed to be amended and would assess it at the wrong level of abstraction. Rather the contribution lay in the use of a haptic effect in a communications device to indicate a feature of the communicated data wherein such haptic effect could be customised by the user. At the hearing the examiner did not dispute Mr Davis' assessment.
- 14 Having considered the prior art specifications cited by the examiner, I do not think that any of them show the customisation by the user of haptic effects which indicate a feature of the communicated data and/or identify a source. None of US 2002 / 0194246 A1 (Moskowitz), US 6 018 711 (French - St George) and DE 199 11 416 A1 (Siemens AG) show any form of customisation. US 6 359 550 (Brisebois) refers to customisation, but, as mentioned above, the variation of the haptic effect is to show the status of the communication link rather than anything about the information being communicated. The correlation between the status and the effect does not in any case appear to be customisable by user input beyond adjusting the amplitude of the received signal. WO 02 / 03172 A2 (Immersion Corporation) relates to a chat interface allowing users to exchange haptic messages over a computer network: although the sender of a message can select or customize an appropriate haptic sensation to accompany the message, there is no provision for the recipient to customise the incoming signal to indicate anything about it.
- 15 I therefore accept Mr Davis' assessment of the contribution made by the claims in the main request. I note that although Mr Davis argues that the invention is a physical device (I deal with this below) he has not sought to argue that the contribution includes the communications device being handheld as required by the claims. Devices which are either within the list of examples of handheld devices at page 5 of the specification or are clearly capable of being handheld are mentioned in all the above prior art specifications, and so I agree that this is not part of the substance of the contribution.

Does the contribution relate solely to excluded matter?

- 16 As I have mentioned above, the examiner maintained objection under both the presentation of information and the computer program exclusions. In his view (which Mr Davis did not accept) the prior art showed collectively that it was known to use various haptic effects to vary the information being conveyed, and the invention differed as to the information that was being conveyed, ie the source of the communication. He accepted that none of the prior art documents showed that the haptic effect was customisable by the user in the way required by the claims. However, he thought that this took the invention into the computer programming area since, as he understood it, the customisation arose from the provision of a database and the facility for the user to change the mapping between the source and the haptic effect.

- 17 I think that, similarly to *Raytheon*, the contribution can be regarded as having more than one aspect - in this case both the use of a haptic effect to indicate a feature of the information being communicated and the facility for the user to customise the haptic effect. In view of Mr Davis' concession above, I do not think there is any dispute that the first aspect relates solely to the presentation of information.
- 18 I do not think that the second aspect of the contribution - the customisation of the haptic effect by the user to allow a correlation between haptic effects and information sources - can be regarded as the presentation of information. Does it then relate solely to a computer program as the examiner alleges?
- 19 Mr Davis did not think so. His argument was that although the invention was likely (but not necessarily) to be carried out by a computer program running on the communications device, what it provided was a new system in the form of a physical device consisting of various components having a new functionality, rather than the features of a computer program. If this were not the case, he thought that almost all mobile communications devices would fall foul of the computer program exception – hence the above-mentioned warning given by Pumfrey J in *RiM v Inpro* about not interpreting this exception too widely. Mr Davis saw the invention as something more than the mere loading of a program into a computer such as occurred in the *Macrossan* appeal in *Aerotel/Macrossan*. (As paragraph 63 of the judgment explains, what Mr Macrossan had devised was simply an interactive system to do the job which would otherwise have been done by a solicitor or company formation agent.)
- 20 Mr Davis regarded the invention as analogous to the “special exchange” which was allowed in the *Aerotel* appeal in *Aerotel/Macrossan*. I cannot improve on his encapsulation of his argument at the hearing which I take from pages 6 and 26 of the transcript of the proceedings:

“All that was new in *Aerotel* was the software that caused the hardware to function in a different way. What Jacob LJ did was he drew a distinction. He says ‘Because there is new functionality, even though the hardware is old, effectively what you have got is a new system.’ It is a fairly fine distinction, but we say what we have here is not just a known machine running a program ... . It is an additional functional module which could be embodied in software, could be embodied in hardware, but it does not really matter because the system is new.”

“We have this two-level contribution. We would say it quite clearly has an additional module. That additional module gives additional functionality and therefore is quite clearly over and above just a random set of instructions. It gives you a new system in the same way that *Aerotel* is a new system. It does something different and the thing that it does differently is the customisable aspect, not the fact it is a haptic effect rather than any other sort of presentation of information.”

- 21 I am afraid that I am not convinced by this argument. First, despite Mr Davis'

argument that the invention is not necessarily carried out by a computer program running on the device, I cannot see how in practice the customisation could be provided other than as a sequence of instructions which allows the user to control the operation of the device by inputting the features about the incoming information which are of interest and associating each with a distinct haptic effect. Thus, whilst the present invention may provide a new functionality, it seems to me to be essentially a matter of programming the communications device, and nothing to do with the provision of new hardware. The specification provides no suggestion of how the customisation might be carried out other than by programming. I think that it is important not to overplay the “new functionality” argument, because any new computer program is going to do something different and so provide a different functionality.

22 Second, I do not think that the Aerotel appeal really assists Mr Davis. It is in my view important to be aware of what it actually decided. The Court of Appeal held at paragraphs 53 - 56 of the judgment that Aerotel’s system and method was not excluded as a method for doing business. As Mr Davis accepted, the computer program exception was not in issue, and the Court of Appeal was not asked to consider what would have been the position if the special exchange had been implemented purely in software (assuming that to be possible). Jacob LJ did not in fact say anything about software or programming - he merely stated at paragraph 53 that the invention “could be implemented using conventional computers”, but made clear that the allowance of the appeal rested on there being a new physical combination of hardware, albeit of conventional items. I do not regard this as necessarily justifying a conclusion that there is necessarily a patentable invention where new software causes old hardware to function differently, and I do not think the present invention in fact provides any new physical hardware or combination of hardware.

23 In my view therefore the second aspect of the contribution relates solely to a computer program. Since I have found that the first aspect relates solely to the presentation of information, the overall contribution falls wholly within matter which is excluded under section 1(2). Even if I am wrong to regard the contribution as a combination of different aspects in the same manner as *Raytheon*, I think the overall contribution would still fall wholly within the computer program exclusion.

#### Technical effect

24 Mr Davis believed that the contribution was technical in nature, but provided no argument in support. However, having found that the contribution fails the third *Aerotel/Macrossan* step, it is not necessary for me to go on to the fourth step and consider whether the contribution is technical in nature.

#### ***The auxiliary request***

25 It will be seen that claim 1 of the auxiliary request includes the further requirement that it is for use in a communication system between a plurality of sources and the handheld device and that the relevant signal is indicative of the identity of the source. Mr Davis regarded the contribution in this case as the use

of a haptic effect in a communications device, being used in a system in which a source transmits to the device, to indicate said source of the communicated data wherein such haptic effect can be customised by the user.

- 26 Distinguishing the *NEC* decision, Mr Davis thought that the further restriction of the claim tipped the contribution into the area of an improved communications system because of the haptic effect being indicative of the source of the information. I do not agree. Construing claim 1 of the auxiliary request, I think it merely makes explicit that which was implicit in the main request, given the way in which the terms “source” and “feature” are used (see above). Whilst I accept that Mr Davis’ assessment of the auxiliary contribution is correct, I do not think that the difference from the main contribution makes it essentially different in substance. I do not therefore think that it takes the contribution outside of the excluded areas. Again, therefore, there is no need for me to consider whether the auxiliary contribution is technical in nature.

### **Conclusion**

- 27 Accordingly I conclude that claim 1 in both the main and auxiliary requests relates to matter as such which is excluded from patentability under section 1(2). Having read the specification, I do not think that the dependent claims in these requests, or indeed any other matter in the specification, can form the basis of an allowable claim.

- 28 I therefore refuse the application under section 18(3).

### **Appeal**

- 29 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

**R C KENNEL**

Deputy Director acting for the Comptroller