



BL O/147/06

12th June 2006

PATENTS ACT 1977

APPLICANT Hewlett-Packard Company

ISSUE Whether patent application
GB0219019.7 complies with section 1(2)

HEARING OFFICER H Jones

DECISION

Introduction

- 1 Patent application GB0219019.7 entitled "System and method for facilitating image retrieval" was filed in the name of Hewlett-Packard Company on 15th August 2002. The application claims priority from US application US09938256 filed on 23rd August and was published as GB2381615 on 7th May 2003.
- 2 During substantive examination, the examiner raised objection in his first report as regards both excluded matter and novelty. The excluded matter objection used the "technical contribution" test current at that time, the examiner considering that the invention related essentially to a mental act and a computer program as such.
- 3 In his subsequent reports the examiner concentrated on novelty and inventive step, this being resolved by amendments accompanying the agent's letter dated 7th April 2006.
- 4 The examiner's latest report dated 24th March 2006 then reaffirmed the objection that the claims related to excluded matter, but now on the basis of the *CFPH*¹ test then used and which is still current practice.
- 5 Although a further agent's letter dated 7th April 2006 filed amendments, particularly to claim 1, to attempt to meet the objection as regards patentability, resolution of the question of excluded matter was not found to be possible. Initial arrangements were made for the matter to be heard but the applicant's agent asked for the matter to be decided on the papers and the matter therefore comes before me to do so.

The Application

- 6 The application relates to a method for facilitating retrieval of image data from a database and how a user interacts with the database. In particular the user is interrogated as to attributes of the image data and the system selects images based on metadata already stored with the image, there being facility to update that metadata following identification by the user.

¹ *CFPH LLC's Application [2005] EWHC 1589 (Pat)*

- 7 The application starts by discussing the various conventional ways by which users can identify image data, that is, by filename, filing in an appropriate directory, or by associating key words with the image. I consider keywords as a form of metadata and therefore that the specification explicitly acknowledges that association of metadata with image data is known.
- 8 The application has two independent claims, claim 1 which relates to a method for facilitating image retrieval and claim 5 which relates to an image data retrieval system. I only need to consider claim 1 for the purposes of this decision as claim 5 is analogous:

“A method for facilitating retrieval of image data from a database, said method comprising the steps of:

displaying a series of explicit questions to a user as to attributes of image data the user wishes to retrieve;

receiving first user input comprising responses to the displayed questions;
selecting image data corresponding to one or more images from the stored image data, based on the responses and metadata relating to the stored image data;

displaying the selected image data to the user;

prompting the user to directly identify at least one first recognizable image attribute contained in the displayed selected image data;

receiving user input directly identifying the first recognizable image attribute in the displayed selected image data;

analyzing the stored image data for the first recognizable image attribute; and
updating the image metadata with first attribute associations based upon the analyzing of the image data for the first recognizable image attribute.”

The Law

- 9 The examiner has argued that the claimed invention relates to subject matter excluded from patentability under section 1(2) of the Act, in particular to a method for performing a mental act and a program for a computer under section 1(2)(c). The relevant parts of this section read:

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 purpose of this Act only to the extent that a patent or application for a patent relates to that thing as such.

- 10 These provisions are designated in section 130(7) as being so framed as to have, as nearly as practicable, the same effect as the corresponding provisions of the European Patent Convention (EPC), i.e. Article 52.

Interpretation

- 11 In July 2005, shortly after the application had been re-examined following a first set of amendments submitted by the applicant's patent agent, Peter Prescott QC, sitting as a Deputy Judge of the High Court, handed down judgment in *CFPH* which raised questions regarding the UK Patent Office's practice in dealing with applications considered to relate to matter excluded by section 1(2).
- 12 In response to this judgment, the UK Patent Office issued a practice notice dated 29th July 2005 announcing an immediate change in the way that it examines applications for patentability. The submissions in the agent's letter dated 7th April 2006 refers to the *CFPH* test, therefore I think tacitly accepting that the *CFPH* approach subsequently adopted by the examiner was correct in deciding the matter in issue, the appropriate test being set out as follows:

Identify what is the advance in the art that is said to be new and not obvious (and susceptible of industrial application).

Determine whether it is both new and not obvious (and susceptible of industrial application) under the description "an invention" in the sense of Article 52 of the European Patent Convention (EPC) - broadly corresponding to section 1 of the Patents Act 1977.

- 13 Once the new and non-obvious advance has been identified, Mr Prescott suggests that it would often be possible to determine whether this was an advance under the description of an invention by asking "Is this a new and non-obvious advance in technology". However, because of the difficulty sometimes associated in determining what is meant by technology, Mr Prescott says that if there is any doubt in this regard then it will be necessary to have recourse to the terms of Article 52 of the EPC. Subsequent judgments issued by the High Court (*Halliburton*², *Shoppalotto*³, *Crawford*⁴, *RIM v Inpro*⁵ and *Macrossan*⁶) all point to a similar requirement for a technical advance in order to pass the test for patentability.

Arguments

- 14 I should point out here again that the examiner's arguments I refer to here are based on the amendments, particularly the amended claims, filed with the agent's letter dated 15th March 2006, these arguments being expressed in the examiner's examination report dated 24th March 2006. The agent's arguments are however based on further amendments filed with the agent's letter dated 7th April 2006. The examiner did not apparently consider that these amendments materially altered the question of whether the invention relates to excluded matter and has not reported on them.
- 15 Because of the slightly differing basis for argument and also because the agent has submitted a consolidated argument against exclusion on the basis of both mental act and computer program, I will deal with the examiner's arguments separately from

² *Halliburton Energy Services Inc v Smith International (North Sea) Ltd and others* [2006] RPC 25

³ *Shopalotto.com's Application* [2005] EWHC 2416 (Pat)

⁴ *Cecil Lloyd Crawford's Application* [2005] EWHC 2417 (Pat)

⁵ *Research In Motion UK Ltd v Inpro Licensing* [2006] EWHC 70 (Pat)

⁶ *Neil William acrossan's Application* [2006] EWHC 705 (Pat)

those of the agent's.

Examiner's Arguments

- 16 The examiner argues that the image analysis algorithm used by the invention is conventional, as evidenced both by the description and by the previously cited US5802361. I note that the agent's letter does not contradict this and does not argue that the algorithm is new. I therefore consider that the algorithm cannot form part of the advance.

Mental Act

- 17 The examiner then goes on to conclude that the advance therefore must relate to data search and retrieval. He elaborates that the advance said to be new and not obvious is in prompting the user to select an image attribute or in selecting an image containing an attribute. He concludes that identifying images is a mental process and therefore that the advance does not occur in a non-excluded area.

Computer Program

- 18 The examiner refers to the Hearing Officer's decisions in *Overture*⁷ and *Fair Isaac*⁸ which both refer back to the *CFPH* judgment, referring to the intention of the legislation that the use of computer programs should not generally be foreclosed.
- 19 He refers again to *Overture*, this time to illustrate that computer programs controlling something tangible could be allowable. It is clear to me that the invention in suit does not result in any tangible physical product.
- 20 The examiner then presents some of the detail of *Overture* as a close analogy with the invention in suit. It is clearly true that both applications involve data search systems and therefore there is an analogy there to be made. The invention in suit relates to a method for facilitating retrieval of image data, which will clearly involve searching, the intervention of the user helping with the searching process.

Agent's Arguments

- 21 The applicant's agent in his letter dated 7th April 2006 argues in respect of mental act and computer program jointly, particularly as regards the recent Office decisions of *ARM Limited*⁹ and *Sun Microsystems*¹⁰. The agent then goes on particularly to refer to *ARM*. I shall summarise the agent's argument in relation to *ARM* as being that the compiler of *ARM* was considered to provide a technical contribution because of the "technical advantages" of "providing a faster, more accurate compiler, able to adapt and improve in an iterative manner each time the computer is used" so that advance is "of a technical nature".
- 22 With reference to the application in suit, the agent then emphasises new features inserted into claim 1 relating to steps/features relating to the reception of user input directly identifying the recognizable image attribute in the displayed selected image data, analysis of the stored image data for the first recognizable image attribute, and the updating of the image data for the first recognizable image attribute.

⁷ BL O/331/05

⁸ BL O/329/05

⁹ BL O/066/06

¹⁰ BL O/057/06

- 23 The new steps are stated to refer to the “prompting” step which was previously present in the claims which allows the user to refine the image metadata. This results in a “training” of the system providing an iterative improvement in the performance of the system. This is because each time the user interacts with the system they will provide new metadata which will enrich the system as a whole.
- 24 It is then said in relation to *ARM* that the improvement in the efficiency and accuracy of the image retrieval process each time the system is used is a technical advantage, in the same way as *ARM* improves the operation of a computer each time it is used by improving the efficiency of the compilation process.

Discussion of the Arguments

- 25 Since the amendments filed with the agents letter dated 7th April 2006 introduce new features which have not been reported on by the examiner, I must first reassess the advance specified by the examiner in his letter dated 24th March 2006, as the distinction between the prior art and the invention has been refined to emphasise features which the agent alleges are technical and therefore worthy of patent protection.
- 26 The advance identified by the examiner was the prompting of the user to select an image attribute or select an image containing an attribute. Claim 1 now further includes receiving the user input identifying the first recognizable image, analyzing the stored image data, and updating the image metadata based upon the analysis.
- 27 As previously discussed, image analysis per se is known, but the step of updating the image metadata based upon the analysis would clearly be nonsense without prior analysis. I also note that US5802361 includes reference to the option of modifying metadata in certain circumstances (column 17, l.62 to column18, l.21) but this does not appear to be in response to analysis so I do not think it affects the advance.
- 28 I am unable to discern any statement in the agent’s letters of what he considers the advance to be, so I am not guided by the agent in assessing the advance. In the specification as originally filed, the section titled “Summary of the Invention” suggests that the advance lies in “querying the user as to at least one attribute of an image the user wishes to retrieve, receiving user responses, and presenting at least one image to the user based upon the user response(s)”. This has clearly been superseded by amendments to the claims in response to the prior art cited by the examiner.
- 29 I therefore consider the advance now to be prompting the user to select an image attribute or in selecting an image containing an attribute, receiving the user input identifying the first recognizable image, analyzing the stored image data, and updating the image metadata based upon the analysis.
- 30 As the system is concerned with searching a database, I can appreciate the examiner’s contention that *Overture* is a very relevant reference but on the other hand I note that the advance of the application in suit is more concerned with the interaction of the user with the system to refine the image database, rather than to searching per se.
- 31 The agent, however, proposes a close analogy with *ARM*. While I also appreciate the similarities of the concept of iteration by gradual improvement to gain a better, more efficient result, the system of *ARM* is more of an automatic storage of parameters, while the application in suit relies on interrogation of the user by the system to provide more appropriate metadata than that already available. Furthermore, although the

invention in suit is undoubtedly complex in practice and took time to develop, I consider compilation as in *ARM* to be on a different level of technical complexity.

- 32 If I have identified the advance correctly in paragraph 29 above, then the advance clearly relates mainly to the interaction of the system and the user. In my view the user actually does a lot of the work in this interaction. In claim 1 the user has first to answer some questions, on the basis of which image data is selected, and then the user further has to identify an image attribute which results in updating of the metadata.
- 33 The system would have no effect if the user did not respond to this interrogation and the "training" that results in iterative improvements in data retrieval is largely dictated by those user responses. The system essentially mimics the administrator of a store of paper records as that administrator would ask an enquirer about a file, find it and then, if the administrator is a zealous one, would ask if the file was stored in a logical place. If not they may move it to a different place or apply different attributes to it.
- 34 It is noticeable that of all the features recited in claim 1, the only one that really requires a computer to be used is that of image analysis and even that could be performed visually. The remaining features could clearly all be performed manually or mentally.
- 35 I will also now consider whether the advance relates to a computer program. There is no doubt that the system as a whole will be embodied by a computer program, as evidenced for example by the flow charts in figures 4, 6A and 6B, in order to use image analysis, but I reiterate that such image analysis is clearly known as exemplified for example by US5802361. The advance set out in paragraph 29 above is all to do with the input of the user and how the system reacts to that. To me that advance involves steps of a program and therefore is a computer program as such.

Conclusion

- 36 I have decided that the advance in the art that is said in this application to be new and not obvious (and susceptible of industrial application) does not satisfy these criteria under the description "an invention". I have read the whole application carefully, and I cannot see any amendment that would overcome this deficiency. Consequently I refuse this application under section 18 on the grounds that the advance it describes and claims as an invention does not satisfy the requirements of section 1.

Appeal

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

H Jones

Deputy Director acting for the Comptroller