



BL O/228/06

14<sup>th</sup> August 2006

## PATENTS ACT 1977

APPLICANT Sun Microsystems, Inc.

ISSUE Whether patent application number  
GB0419735.6 complies with section 1

HEARING OFFICER John Rowlatt

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## DECISION

### Introduction

- 1 Patent application GB 0419735.6 was filed on 21 March 2003 in the name of Sun Microsystems, Inc. The application is entitled "Mobile download system"; it is in the national phase under section 89 of a PCT application published as WO 2003/083688, which has an international filing date of 22 March 2002.
- 2 In his first substantive examination report, on 27 January 2005, the examiner objected that he considered that the invention related to a method for performing a mental act and/or to it being a program for a computer, to there being more than one invention and to a lack of clarity such that novelty and inventive step were in doubt.
- 3 The objection to more than one invention was easily overcome and, at the time of the hearing, one divisional application had already been filed with another imminent. The examiner pursued his objection that the invention represented excluded matter, which was contested by the applicant.
- 4 However, at this point in the examination process the Patent Office adopted a new approach for assessing whether an invention relates to unpatentable subject matter. It reflects the approach adopted by Peter Prescott QC, sitting as a Deputy Judge, in his judgment in *CFPH*<sup>1</sup>, and is explained in the Practice Notice<sup>2</sup> issued on 29 July 2005. The examiner applied the relevant test and considered that the advance was a computer program operating on a computer program to produce a computer program, that is, a computer program as such.

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<sup>1</sup> *CFPH LLC's Application* [2005] EWHC 1589 Pat

<sup>2</sup> "Patent Office Practice Notice: Patent Act 1977: Examining for patentability" – see <http://www.patent.gov.uk/patent/notices/examforpat.htm>

- 5 Despite further rounds of argument no agreement could be reached and the matter therefore came before me at a hearing on 20 June 2006, where Mr. Ian Harris, assisted by Dr. Simon Davies (both of D. Young & Co.), appeared for the applicant. The examiner, Mark Shawcross, also attended.

### **The application**

- 6 The application relates to a method for producing an application program to be executed on a target mobile device. The claims have been amended during prosecution and the main claim, as of 13 January 2006, reads:

“A method for producing an application to be executed on a target mobile device, the method comprising a server:

scanning an application file for script code;

extracting the script code from the application file;

inserting a code reference tag in the application file in place of the extracted script code;

defining application parameters for the type of target mobile device;

compiling the extracted script code to produce compiled code in the form of bytecodes; and

combining the compiled code and the application file, wherein the compiled code forms a first data group and the application file with the code reference tag and application parameters form a second data group, the first and second data groups being separate groups that may be combined into a single file for compilation and execution on the target mobile device.”

- 7 Amended claims were presented to me at the hearing, in which the main claim now reads:

“A computer implemented method for producing an application to be executed on one or more types of target mobile device, respective application parameters being defined for each type of target mobile device; the method comprising a server:

scanning an application file to identify script code;

generating a stripped file by

extracting each identified script code from the application file,

and;

inserting a respective code reference tag in the application file in place of each extracted script code for referencing the extracted script code;

compiling the extracted script code to produce compiled code in the form of bytecodes;

for each type of target mobile device, processing the stripped file using the respective application parameters to generate a respective processed file containing only elements for that type of target mobile device; and

for each type of target mobile device, combining the compiled code and the respective processed file, wherein the compiled code forms a first

data group and the processed file forms a second data group, the first and second data groups being separate groups that are combined into a single file that is downloaded to and executed on the target mobile device.”

- 8 The invention is intended to produce an application, that is a program, to be executed on one or more types of mobile device. As explained to me at the hearing, a cascading style sheet (CSS) file defines particular physical characteristics of a particular mobile device, for example numbers of pixels, memory and the like; these characteristics are “real world” parameters which are therefore defined in advance, either by a developer or derived from a template provided by the target device itself, or the mobile service provider. The application file is in XHTML and includes elements of script code, or references to other script code.
- 9 In general, an application file, produced by a programmer, is scanned to identify the script code, which is removed and compiled, the remainder of the application file forming a stripped file with reference tags to mark where the script code was removed. The stripped file, without its script code, is then processed to include the parameter file corresponding to a target device so that the resulting processed file is adapted for that individual target device. The final step is to combine the compiled code and the processed file for transmission to the target device. This was defined as, effectively, a compiled executable file within an XML wrapper.
- 10 In one embodiment, for example, the application is in the form of an XHTML file and the parameters for the target device are in the form of a CSS file. ECMAScript code is extracted from the XHTML file, typically contained within a <script> tag, and the removed code is then compiled into bytecode. The XHTML file, stripped of its ECMAScript, is then processed with the appropriate CSS parameters to form a new XHTML file, customized for the particular target device. This results in two separate data groups, one the compiled ECMAScript, the other the processed XHTML/CSS. The two groups are then combined for transmission to the target device.

### **The law**

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

- 1(1) A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say -
  - (a) the invention is new;
  - (b) it involves an inventive step;
  - (c) .....
  - (d) the grant of a patent for it is not excluded by subsections (2) and (3) below;

and references in this Act to a patentable invention shall be construed

accordingly.

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) .....

(b) .....

(c) a scheme, rule or method for performing a mental act, playing a game or doing business, or a program for a computer;

(d) ....

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

- 12 As near as is practicable, these provisions have the same effect as Article 52 of the European Patent Convention (EPC) to which they correspond by virtue of being so designated in Section 130(7). I must therefore also have regard to Boards of Appeal decisions from the European Patent Office (EPO) under this article.

### Interpretation

- 13 In his judgment in the *CFPH* case, Peter Prescott QC provided a new two-part test for determining unpatentable subject matter:

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

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

- 14 In coming to this test, Mr. Prescott had considered differences in practice between the EPO and the UK Patent Office and came to the conclusion that their respective approaches would usually come to the same results on the same set of facts. He suggests<sup>3</sup> that it would 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?” Often, of course, there is difficulty in determining what is meant by technology and any doubt should be resolved by recourse to Article 52 of the EPC. Judgments issued by the High Court subsequent to *CFPH* (*Halliburton*<sup>4</sup>, *Shopalotto*<sup>5</sup>, *Crawford*<sup>6</sup> and *RIM v Inpro*<sup>7</sup>) have all pointed to a similar technical advance requirement to pass the patentability test.

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<sup>3</sup> *CFPH*, paragraph 97.

<sup>4</sup> *Halliburton Energy Services, Inc. v Smith International* [2005] EWHC 1623 (Pat).

<sup>5</sup> *Shopalotto.com Ltd.’s Application* [2005] EWHC 2416 (Pat).

<sup>6</sup> *Cecil Lloyd Crawford’s Application* [2005] EWHC 2417 (Pat).

<sup>7</sup> *Research in Motion UK Limited v Inpro Licensing SARL* [2006] EWHC 70 (Pat).

- 15 During the examination process, in addition to those noted immediately above, the examiner referred to *Wang*<sup>8</sup> and *Macrossan*<sup>9</sup>. The applicant additionally referred to *Merrill Lynch*<sup>10</sup>, *Vicom*<sup>11</sup>, *ARM*<sup>12</sup> and *Sun*<sup>13</sup>. At the hearing, in addition to those noted in the previous paragraph, Mr. Harris also referred to *Fujitsu*<sup>14</sup> and *Hitachi*<sup>15</sup> (which had been considered by Mr. Prescott), *IBM-1*<sup>16</sup>, *IBM-2*<sup>17</sup> and *Comvik*<sup>18</sup> board of appeal decisions, and an article in the magazine *The Lawyer*<sup>19</sup>.

### The arguments

- 16 Mr. Harris outlined his case in the form of a computer presentation, which took me through his view of the basis in law, EPO Board decisions, UK precedents and finally the facts of the present case.
- 17 The arguments on the basis in law reflected exactly the position set out in paragraphs 13 and 14 above, with an accepted emphasis placed on the final paragraph of section 1(2) that the application for a patent relates to that thing *as such*. The only further point was consideration of TRIPS article 27 and a link to the future section 52 of EPC 2000.
- 18 However, Mr. Harris accepted that TRIPS is only a treaty. Any effect on what is patentable in the UK due to the TRIPS agreement has been set out clearly in *Franks*<sup>20</sup> application, at paragraphs 13-15, and I have no reason to depart from that view.
- 19 Mr. Harris then led me through what he considered to be the differences between EPO and UK practice to non-patentable matter, particularly in the light of Technical Board decisions and UK precedents; however, as indicated in paragraph 14 above, those differences have previously been considered extensively in *CFPH*, which Mr. Harris considered to be a good summary, with the conclusion that, in practice, the two systems should produce identical results if properly applied.
- 20 It is clear that Mr. Harris was not concerned with a direct comparison between any of the precedent cases and the current application, nor do I think that would have been possible, so that detailed discussion is not necessary here;

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<sup>8</sup> Wang Laboratories Inc.'s Application [1991] RPC 463.

<sup>9</sup> N. W. Macrossan's Application [2006] EWHC 705 (Ch).

<sup>10</sup> Merrill Lynch Inc.'s Application [1989] RPC 569.

<sup>11</sup> Vicom T0208/84, EPO Board of Appeal.

<sup>12</sup> Arm Limited's Application BL O/066/06

<sup>13</sup> Sun Microsystems Inc. BL O/057/06

<sup>14</sup> Fujitsu Limited's Application [1997] EWCA Civ 1174 [1997] RPC 608.

<sup>15</sup> Hitachi T258/03, EPO Board of Appeal.

<sup>16</sup> IBM-1 T0935/97, EPO Board of Appeal.

<sup>17</sup> IBM-2 T1173/97, EPO Board of Appeal.

<sup>18</sup> Comvik T0641/00, EPO Board of Appeal.

<sup>19</sup> The Lawyer, 12 June 2006, "Jacob LJ seeks challenge to Patent Act exclusions", Ben Moshinsky.

<sup>20</sup> Robert Benjamin Franks' Application BL O/027/05.

rather, he was arguing that for an invention to be patentable there should be, in paraphrasing him and the hearing officers in *ARM* and *Sun*, an advance in technology which must involve a consideration of whether the advance involves a technical effect. Having regard to recent judgments I agree that is the right approach.

- 21 Mr. Harris also brought to my attention the opening of paragraph 187 of *RIM* in which Pumfrey J was anxious that exclusions under section 1(2) are not given too wide a scope, which I note reflects the earlier *IBM-1*, at paragraph 5.4(c), that Article 52(3) does not allow a broad interpretation of the scope of the exclusion. Again, with regard to recent judgments I agree that is right.
- 22 Mr. Harris' subsequent discussion concentrated on what he considered to be a solution to a technical problem, and to the extensive technical operation, technical contribution and technical effect of the various elements, and the whole, of the invention. Clearly, there is much of a technical nature, but the test is whether the advance involves a technical effect. Moreover, there is clearly an inevitable technical *character* to a method which is implemented on and by a computer, but the courts have made it clear on numerous occasions that that in itself does not make an invention patentable.
- 23 The examiner considered that the advance is the extraction, compilation and linking of code. He argued that the code already exists, so the advance must lie in the replacement of one piece of code with another, analogous to a programmer's role. Indeed, the end product of this manipulation would appear to be known – the acknowledged series of programs designed to run on different devices – with the implication that the extraction, compilation and linking was already being done manually.
- 24 It has been acknowledged within the current application that it is well known to provide different versions of a program, tailored for a target mobile device. The concept of adapting a source file to accommodate the restricted parameters of a target mobile device is also known, as discussed within cited US 6341316 B1, using parameters such as memory limitation, screen size, colour depth etc., to tailor the program. The earlier prior art discussed within *RIM* shows that it is known for a (proxy) server to accommodate the deficiencies of a mobile device by using a preferences file of hardware capabilities to change the files sent to the mobile device. A resulting processed file, adapted for a target mobile device and transmitted to the device is known.
- 25 Mr. Harris argued that the idea, the methodology, of extracting the script code, compiling it, modifying what's left of the source file and recombining the modified file and the compiled code was new since there was no evidence that it had been done. By that, I took his argument to mean that the files or code do not represent any new structures in themselves, but the invention is to a different method structure of taking the source file apart, modifying and reconstructing it. Specifically, the whole file does not need to be pushed through the compiler. As I understand it, he regarded the method as a new technical process for generating multiple versions of application files.

- 26 Yet the starting point for the method is known, the source application program being conventional and previously used; the individual data structures are known and conventional; specific data concerning the parameters of target devices is known and published, and accessible via standard CSS files; it has not been suggested that the particular final structure, a compiled executable file within a wrapper, is unknown; the end point of the method, the customized file which is transmitted to target devices, is known; so what is the advance over the prior art and is that advance regarded as an invention under the Act?
- 27 It was not argued before me that any particular programming structure itself was the new advance, for example the use and manipulation of XHTML, ECMAScript, & CSS. Indeed, using different script for different targets is thoroughly well known and used extensively in web page design. It is well known for programmers to select sections of code from a generic program and use individual fragments of XHTML, CSS, JavaScript<sup>®</sup> and the like to create a tailored program; indeed, web sites have existed for very many years where such code fragments are freely available and such tailored programs have been used for many years to provide compatibility between new and older versions of web browsers, as well as different browsers and platforms.
- 28 There was no argument that the concept of an compiled executable code within an XML wrapper was novel, only that the particular method of producing it was not known. However, Mr. Harris accepted at the hearing that the process may be done by manually altering the files and that, in his words, previously, programmers were involved in doing that; with a vast range of mobile devices there was a lot of work in doing that and the method avoids it by automating it.
- 29 Mr. Harris suggested that although the method can be implemented by a computer program (and is so in the described embodiments), it could also be implemented by special purpose hardware. I see no distinction in that, as the specific hardware would itself require software control.
- 30 The question in the broadest terms then remains whether there is enough over what is already known (step 1 of *CFPH*) for the invention to be regarded as a new and non-obvious advance in a non-excluded field (step 2 of *CFPH*)? In my view there is not.
- 31 Bearing in mind all that is known, the advance at the heart of the invention lies solely in the concept of using a computer program to adapt a pre-defined generic computer program, using pre-defined data, of a standard structure, relating to a specific target mobile device, using standard programming techniques to output a computer program tailored to that specific device, in a form which is a known data structure. The resulting program is one which would previously have been generated by a programmer. I have, therefore, come to the conclusion that the invention must be regarded as a computer program as such. The advance is not a technical one, albeit one that automates the process and one which, by operating at the server, might make the overall process more efficient, but a computer program nevertheless which is excluded from patentability.

## **Conclusion**

- 32 I have found that the invention relates to a program for a computer as such. It is therefore not new and non-obvious (and susceptible of industrial application) under the description of “an invention” in the sense of Article 52 and is not patentable. I have been unable to find anything which could form the basis of a patentable invention in the amended application. I therefore refuse the application under section 18(3) as failing to meet the patentability requirements of Section 1.

## **Appeal**

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

**John Rowlatt**

Deputy Director acting for the Comptroller