



11 August 2011

PATENTS ACT 1977

APPLICANT	Compurants Ltd
ISSUE	Whether patent application number GB 0917357.6 complies with section 1(2)
HEARING OFFICER	Mrs S E Chalmers

DECISION

Introduction

- 1 Patent application GB 0917357.6 entitled “Interactive food and/or drink ordering system” was lodged on 5 October 2009 and is divided from GB 0724312.4 filed on 13 December 2007 with an earliest priority date of 13 December 2006. The divisional application was published as GB 2464199 on 14 April 2010.
- 2 Despite amendment of the claims, the examiner has maintained that the invention claimed is excluded from patentability under section 1(2) of the Patents Act, on the grounds that it relates to a computer program as such and a method for doing business. The applicant disagreed and a hearing was held before me on 23 June 2011 via a video link to resolve the issue. The applicant was represented by Dr David Bottomley of Origin Limited. Mr Mark Thwaites was in attendance as hearing assistant.
- 3 Before the hearing Dr Bottomley submitted skeleton arguments which have been helpful in coming to my decision. At his request, I have also taken account of arguments in his letter dated 15 December 2010 in response to an earlier examination report. Prior to the hearing, I viewed a short video provided by the applicant that is said to show the technology of this application in operation at a restaurant in central London. At the applicant’s request, I have also viewed the website¹ of that restaurant to gain a better understanding of the context of the invention.

¹ <http://www.inamo-restaurant.com/>

The application

- 4 The application relates to a computer-controlled interactive food and/or drink ordering system for direct use by a customer where the prices are varied according to demand. It is known for restaurants and bars to vary the prices of food and/or drink according to the day of the week or time of day and for those prices to be displayed to customers on a menu or blackboard. For example, the application refers to a “happy hour” as a time when prices would be varied.
- 5 The invention provides a system which includes a computer controlled projector that projects prices for food and/or drink items onto the surface of a table, that, when selected by a customer operating an interface device, leads to selected items being ordered at the displayed prices. The prices are varied automatically according to demand.

Claims

- 6 I have made my decision on the basis of the amended claims filed on 16 May 2011 and repeated in the skeleton arguments. These claims are supported by the disclosure in the parent application. There are 21 claims including 2 independent claims which relate to the same inventive concept as each other. They comprise an interactive ordering system (claim 1), and a method of ordering and delivering items to a customer (claim 21).

- 7 Claim 1 reads:

An interactive food and/or drink ordering system including an interface device, a computer that controls a projector, and a projector controlled by the computer, the projector operable to project selection options of the ordering system, the interface device operable by a customer to select selection options of the ordering system, wherein the system is operable to display prices for food and drink, and wherein the system is operable to

- (a) automatically vary those prices depending on demand;*
- (b) cause those prices to be displayed to the customer and*
- (c) enable the customer to order food and/or drink at those displayed prices by interacting with the system and not by interacting with a person.*

- 8 Claim 21 reads:

A method of ordering and delivering food and/or drink items to a customer at a table or bar, the customer ordering the food and/or drink items using an ordering system, the ordering system including the table or bar, an interface device, a computer that controls a projector and the projector controlled by the computer, the method comprising the steps of:

- (i) the projector projecting displayed prices for food and/or drink items onto a surface of the table or bar;*
- (ii) a computer automatically varying prices for food and/or drink items depending on demand;*
- (iii) the projector projecting updated displayed prices for food and/or drink items onto the surface of the table or bar;*
- (iv) the projector projecting options onto the surface of the table or bar selectable by the customer using the user interface device for ordering food and/or drink items at the displayed prices using the ordering system, and*

(v) *delivering ordered food and/or drink items to the customer at the table or bar.*

The law

9 The relevant parts of section 1(2) read as follows:

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

10 It is not disputed that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in its judgment in *Aerotel/Macrossan*². In this case the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of patentability, namely:

- 1) Properly construe the claim;
- 2) Identify the actual contribution;
- 3) Ask whether it falls solely within the excluded matter;
- 4) Check whether the contribution is actually technical in nature.

11 The operation of the 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 47 adds that a contribution which consists solely of excluded matter will not count as a technical contribution.

12 The interpretation of section 1(2) has been considered by the Court of Appeal in *Symbian Ltd's Application*³. *Symbian* arose under the computer program exclusion, but as with its previous decision in *Aerotel/Macrossan*, the Court gave general guidance on section 1(2). Although the Court approached the question of excluded matter primarily on the basis of whether there was a technical contribution, it nevertheless (at paragraph 59) considered its conclusion in the light of the *Aerotel* approach. The Court was quite clear (see paragraphs 8-15) that the structured four-step approach to the question in *Aerotel/Macrossan* was never intended to be a new departure in domestic law; that it remained bound by its previous decisions, particularly *Merrill Lynch*⁴ which rested on whether the

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371

³ *Symbian Ltd's Application* [2008] EWCA Civ 1066

⁴ *Merrill Lynch's Application* [1989] R.P.C. 561

contribution was technical; and that any differences in the two approaches should affect neither the applicable principles nor the outcome in any particular case. But the *Symbian* judgment does make it clear, that in deciding whether an invention is excluded, one must ask does it make a technical contribution? It does not matter whether it is asked at step 3 or step 4. If it does, then the invention is not excluded.

Application of the Aerotel test

Step 1: Properly construe the claims

- 13 I do not think this presents any problems. There are no difficulties of construction: the claims are clear and there has been no dispute regarding their meaning.

Step 2: Identify the actual contribution

- 14 Paragraph 43 of Aerotel explains the contribution is to be determined by asking what it is – as a matter of substance not form – that the invention has really added to the stock of human knowledge having regard to the problem to be solved, how the invention works and what its advantages are.
- 15 The applicant's position is that the contribution is the provision of an interactive food and/or drink ordering system including an interface device, a computer that controls a projector, and a projector controlled by the computer, the projector operable to project selection options of the ordering system, the interface device operable by a customer to select selection options of the ordering system, wherein the system is operable to display prices for food and drink, and wherein the system is operable to (a) automatically vary those prices depending on demand; (b) cause those prices to be displayed to the customer and (c) enable the customer to order food and/or drink at those displayed prices by interacting with the system and not by interacting with a person. In summary, the applicant's view of the contribution is that all of the integers of claim 1 are necessary for identification of the context of the invention and hence form the contribution of the invention. With regard to claim 21, which refers to a "table or bar", the applicant states that the contribution includes the further step of delivering ordered food and/or drink items to the customer at the table or bar.
- 16 Although no search under section 17 has been carried out for the present application, US2005/185825A1 (HOSHINO) represents close prior art and was cited in the prosecution of the parent application GB0724312.4. The document was also acknowledged by Dr Bottomley during the hearing. HOSHINO shows an information display terminal comprising a table on to which surface is projected images comprising a menu of options. The table is touch-sensitive and the user can select the desired option by pointing a fingertip. HOSHINO differs from the current system there is no disclosure that the terminal displays prices or any values which are changed according to demand.
- 17 Interactive ordering systems are also known. For example, in the description of the prior art provided in the present application, a system is described as follows:

Description of the Prior Art

There is considerable pressure on restaurants to increase the speed and reliability with which orders are taken and also the speed at which a bill ("check" in US English) is presented to a customer after requesting. One approach to addressing this problem is to provide a large touch screen monitor plus PC embedded into each table top. The monitors are connected to the menu point of sale system that provides orders to the kitchen. But the tables are very costly and the combined screens/tables can be damaged if the table is knocked. The glass (or acrylic) tops of these tables also have to be thick, making the tables very heavy and hence difficult to move – a problem in many restaurant environments, especially for cleaning.

Another problem with touch screen displays with very thick glass is that the actual display surface can be several mm away from the top surface – introducing a barrier and related parallax effects, which can make the process of using them seem unnatural. A further problem is that providing power and data cabling to tables in a restaurant can be very costly.

- 18 So what *in substance* has been added to the stock of human knowledge? Both the computer hardware and the software used in the claimed system appear conventional as do the other elements such as the projector. In particular, it is well known to project images or icons on to a surface and for a user to use an interactive device to select an icon to cause a message to be sent to another computer-based application. A typical example might be a speaker in the course of a presentation using a mouse pointer to click on an icon projected on to a screen to open another application. It is also known that many restaurants vary prices as a matter of course, increasing them routinely for times when demand is usually high, for example on weekends, or reducing them to stimulate demand, for example, in the early evenings on weekdays. Within a wider business perspective, live updating of price displays is also well known.
- 19 I must confess that I am therefore struggling to identify exactly where the contribution lies. However, as far as I can see, the contribution appears to lie in the computer program which causes the prices to be displayed and to be used for ordering (claim 1). With regard to claim 21, I cannot agree that any contribution lies in the delivery of items to the customer since it is clear from the application that the food and/or drink is delivered in a conventional manner. I therefore find that the contributions for claims 1 and 21 are the same.

Steps 3 and 4: Ask whether the contribution relates solely to excluded matter and check whether it is technical

- 20 So, does the contribution fall solely within the excluded subject matter? In considering the nature of this contribution, I am mindful of paragraph 22 of *Aerotel/Macrossan*, which reminds me that just because a computer is used in an invention, it does not necessarily mean that the invention is excluded from patentability. The Court of Appeal in *Symbian* gave useful guidance at paragraphs 52-58 as to when a program might make a technical contribution sufficient to avoid the exclusion. It particularly emphasised (see paragraph 56) the need to look at the practical reality of what the program achieved and to ask whether there was something more than just a "better program". At paragraph 58 the Court stated that a technical innovation, whether within or outside the computer, would normally suffice to ensure patentability.

- 21 With regard to claim 1, the applicant states that the contribution “does not fall solely within excluded matter as it relates to the provision of an interactive food and/or drink ordering and system “operable to (a) automatically vary those prices depending on demand; (b) cause those prices to be displayed to the customer and (c) enable the customer to order food and/or drink at those displayed prices by interacting with the system and not by interacting with a person”. This, he argues, takes the contribution beyond excluded matter as such as it is technical in nature. Likewise, he argues that the contribution made by claim 21 does not fall solely within excluded matter as it “includes the provision of a method of ordering and delivering food and/or drink items to a customer at a table or bar, using an ordering system as described”. Specifically, Dr Bottomley said that the contribution was technical because it involves the use of technical equipment including a projector, a table or bar surface and an interface device, and the ordering and delivering of items which was also technical.
- 22 Whilst I agree that the invention is technical in the broadest sense in that it involves a computer, the enquiry is whether the contribution relates solely to excluded matter and whether it is technical or not. On this occasion however, I am clear that the contribution made by the invention does relate to excluded matter as such and does not have a relevant technical effect. Furthermore, I do not believe that the present invention provides a technical contribution of the type found in *Symbian*. In particular, a computer with the program of the present application does not provide, as a matter of practical reality, a “faster and more reliable computer”.
- 23 Having reached this conclusion I derive further reassurance from looking at the five “signposts” that may indicate that there is a relevant technical contribution, as set out by Lewison J in *AT&T/CVON*⁵:

It seems to me, therefore, that Lord Neuberger's reconciliation of the approach in Aerotel (by which the Court of Appeal in Symbian held itself bound, and by which I am undoubtedly bound) continues to require our courts to exclude as an irrelevant "technical effect" a technical effect that lies solely in excluded matter.

As Lord Neuberger pointed out, it is impossible to define the meaning of "technical effect" in this context, but it seems to me that useful signposts to a relevant technical effect are

(i) whether the claimed technical effect has a technical effect on a process which is carried on outside the computer;

(ii) whether the claimed technical effect operates at the level of the architecture of the computer, that is to say whether the effect is produced irrespective of the data being processed or the applications being run;

(iii) whether the claimed technical effect results in the computer being made to operate in a new way;

(iv) whether there is an increase in the speed or reliability of the computer;

⁵ AT&T Knowledge Ventures LP and CVON Innovations Limited [2009] EWHC 343

(v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.

- 24 With reference to the first signpost, Dr Bottomley argued that displaying prices and enabling customers to order items at those prices, are processes carried on outside the computer. He also stated that the display of prices to the customer is technical in that photons come from a projector onto a table surface and up into the eye of a viewer. As made clear in paragraph 43 of *Gemstar*⁶, the mere display of information or the presence of an interface is not considered sufficient to provide a technical contribution. The inclusion of conventional display equipment or an additional conventional step such as the food and/or drink being delivered to the customer would not influence this conclusion. Therefore, the first signpost of technical effect is not satisfied.
- 25 Secondly, the applicant argued that the invention operates irrespective of the customer identity data. However, I conclude that this argument ignores the fact that the effect of the invention is entirely related to the application being run and also depends on the data being run, namely price data and user selections. In view of this and the application as a whole, there is no indication that the contribution is operating at the level of the architecture of the computer.
- 26 With reference to the third signpost, the applicant noted that previously the computer part of the system was not operable to contribute to the price variation and to the display of the price for enabling ordering. However, computers commonly enable the display of variable and selectable information, it is clear to me that the invention does not involve providing a better computer; the computer merely operates in a standard way implementing an interface and processing user inputs to it.
- 27 Fourthly, the applicant argued that the system eliminates the need for certain data inputs to be made by service staff, and that hence the computer is more reliable. However, it is clearly evident that the contribution does not produce a more reliable computer, it merely provides a convenient display of selectable items and means of varying prices with no effect on the reliability or otherwise of the computer implementing the interface.
- 28 With reference to the fifth signpost, Dr Bottomley argued that the invention overcame the problem of “providing display output prices for food and drink, and (a) automatically varying those prices depending on demand; (b) causing those prices to be displayed to customers and (c) enabling the customers to order food and/or drink at those displayed prices by interacting with the system and not by interacting with a person. It is commonplace for restaurants and bars to vary the prices of food and/or drink at times where there is a recognizably non-standard level of demand and for those prices to be displayed to customers. Indeed, the application recites a “happy hour” as a time when prices would be varied. In my view, the contribution merely facilitates the variation of prices, in that it is done via the computer rather than by manually changing prices in chalk on a blackboard or by bringing out a special menu. Although it may enable this action to be done

⁶ *Gemstar –TV Guide International Inc v Virgin Media Limited* [2010] RPC 10

more quickly, I cannot see that computerising it overcomes any technical problem. Indeed, price setting according to demand is a method of doing business. Therefore I conclude that in a technical sense, a problem is not overcome by the contribution.

- 29 I conclude that none of the signposts indicate that the computer program provides a technical contribution. It therefore it falls at the third and fourth steps of the test.

Conclusion

- 30 I find that the invention is excluded under section 1(2)(c) because it relates to a program for a computer as such and a method for doing business. I have carefully reviewed the specification but do not think that any saving amendment is possible. I therefore refuse the application under section 18(3).

Appeal

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

MRS S E CHALMERS

Deputy Director acting for the Comptroller