



20 January 2009

PATENTS ACT 1977

APPLICANT Abdul Zarif

ISSUE Whether patent application number
GB 0404016.8 complies with
section 1(1)(b).

HEARING OFFICER John Rowlatt

DECISION

- 1 Patent application GB 0404016.8 was filed on 23 February 2004, without priority, in the name of Abdul Zarif, entitled 'Emergency control system', and has been published as GB 2411275.
- 2 At first the examiner objected that, because of lack of clarity in the claims, the invention might not be new or might be obvious in respect of the seven documents listed in the search report and that two of the claims added matter. Following the appointment of an attorney, clear amended claims resulted in specific objection to lack of novelty, against a new citation, and lack of inventive step in respect of that new citation and those originally cited.
- 3 The examiner maintained his objections over two more examination reports, with the same citations, in response to which only argument was offered, before a further examination report resulted in an amendment overcoming the novelty objection. However, the examiner maintained his objection to lack of inventive step; he used the same set of citations with the addition of one further document. At this point the examiner argued his objection using detailed arguments based on the steps of the Court of Appeal decision in *Pozzoli*¹. In response to the applicant's argued response, the examiner offered a hearing.
- 4 Further rounds of argument by email resulted in the latest set of formally-filed claims (see paragraph 9 below), with a covering letter dated 18 August 2009. However, at no point had the attorney formulated an argument based on the four step test found in *Pozzoli*.

¹ *Pozzoli SpA v BDMO SA* [2007] EWCA Civ 588

- 5 In his final report of 22 August 2008 the examiner maintained only his objection that the invention lacked inventive step, using 21 patents references, 12 of them new (GB2370194 being equivalent to previously cited US2003/0164775), again with detailed arguments based on the steps of *Pozzoli*. In an emailed response prior to hearing, Mr. Zarif's patent attorney, among other arguments, also provided detailed analysis of the invention in relation to those steps.
- 6 One of those arguments was disapproval that the examiner had cited a large number of new documents and that the applicant had been seriously disadvantaged by them not having been cited earlier. I do not feel that the applicant has been so disadvantaged. Although the new citations were raised close to the end of the unextended compliance period, the applicant had been warned of the extensive background art in the area as long ago as the search report of 07 April 2005, which included the specific warning that the documents cited were "*only examples of many that were found*". Further, the new citations were "*some of the extra examples that I am aware of*" and were provided for completeness; the applicant had almost 3 months between the report of 22 August 2008 and the hearing in which to consider them and, being extra examples in the art, they do not add significantly to the examiner's arguments.
- 7 The matter came before me on 20 November 2008. Mr. Zarif appeared in person, without his patent attorney, supported by Mr. Zaid Aslem and Mr. Sajjad Najib. The examiner, Mr. David Maskery, was also in attendance.
- 8 It is fair to say that, at hearing, the applicant made no argument on the prior art except for consideration of a single document, or on the legal test in *Pozzoli*, and was relying on supporting his attorney's arguments filed prior to the hearing and during the course of the prosecution of the application. He did, however, present a model demonstration which was most helpful.

The Application

- 9 The application relates to an emergency vehicle warning system comprising a transmitter unit on an emergency vehicle and a receiver unit on a non-emergency vehicle. The claims have been amended more than once during prosecution and the latest independent claim, filed with a letter dated 18 August 2008, reads:

"1. An emergency vehicle warning system comprising a transmitter unit on an emergency vehicle and a receiver unit on a non-emergency vehicle, the transmitter unit having a stand-by mode and an emergency alert mode, means for manually switching between the stand-by mode and emergency alert mode, and means providing a visual indication of the selected mode, the visual indication being illuminated in each mode and being different in each mode so as to distinguish between the modes, the receiver unit having a stand-by mode and an emergency warning mode, and means providing a visual indication of each mode, the visual indication being illuminated in each mode and being different in each mode so as to distinguish between the modes, wherein the transmitter unit is operable to transmit a signal in the emergency alert mode and to shut-off the signal in the stand-by mode, and the receiver unit includes a controller operable on receipt of the signal from the transmitter unit to switch the receiver unit from the stand-by mode

to the emergency warning mode in which a driver of the non-emergency vehicle is provided with a visual warning of the presence of the emergency vehicle.”

- 10 Shortly prior to hearing, an alternative set of claims was provided for consideration should those on file not be acceptable and which also have a single independent claim, with differences highlighted:

*“1. An emergency vehicle warning system comprising a transmitter unit on an emergency vehicle and a receiver unit on a non-emergency vehicle, the transmitter unit having a stand-by mode and an emergency alert mode, means for manually switching between the stand-by mode and emergency alert mode, and means providing a visual indication of the selected mode, the visual indication being illuminated in each mode and being different in each mode so as to distinguish between the modes, the receiver unit having a stand-by mode and an emergency warning mode, means providing a visual indication of each mode **and means providing an audible indication of emergency warning mode**, the visual indication being illuminated in each mode and being different in each mode so as to distinguish between the modes, wherein the transmitter unit is operable to transmit a signal in the emergency alert mode and to shut-off the signal in the stand-by mode, and the receiver unit includes a controller operable on receipt of the signal from the transmitter unit to switch the receiver unit from the stand-by mode to the emergency warning mode in which a driver of the non-emergency vehicle is provided with a visual **and audible** warning of the presence of the emergency vehicle, **and wherein the receiver unit includes a detachable remote unit.**”*

The law

- 11 As indicated above, the examiner has maintained objection to lack of inventive step. The relevant sections 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) it is capable of industrial application;*
- (d) the grant of a patent for it is not excluded by subsections (2) and (3) or section 4A below;*

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

2(2) The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way.

3 An invention shall be taken to involve an inventive step if it is not obvious to a person skilled in the art, having regard to any matter which forms part of the state of the art by virtue only of section 2(2) above (and disregarding section 2(3) above).

Interpretation

- 12 The assessment of inventive step is based on the well-known *Windsurfing*² approach, as reformulated by Jacob LJ in *Pozzoli*. The four steps of the test are now:
- 1) (a) Identify the notional skilled person in the art, and
(b) Identify the relevant common general knowledge of that person;
 - 2) Identify the inventive concept of the claim in question or, if that cannot readily be done, construe it;
 - 3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
 - 4) Viewed without any knowledge of the invention as claimed, do these differences constitute steps which would have been obvious to the person skilled in the art or do they require any degree of invention?

The arguments

Step 1

- 13 For parts (a) and (b) of the test, there is agreement that the notional skilled person in the art is a technician/engineer in the art of vehicle to vehicle communications technology who would be aware of the application of the technology in emergency warning systems to warn drivers of the presence of emergency vehicles, both emergency vehicle to emergency vehicle and emergency vehicle to non-emergency vehicle.
- 14 In addition, the examiner considered that the skilled person would know about the idea of having a transmitter/receiver unit in the emergency vehicle and just a receiver in the non-emergency vehicle, and that the receiver in the non-emergency vehicle was a dedicated unit. In support, he listed 15 patent documents. It is noted that the applicant’s attorney has accepted, on page 6 of his pre-hearing submission, that the skilled person would be familiar with these concepts. Consequently, although this is formally cited matter it is also being used to demonstrate that it would actually be common general knowledge to the person skilled in the art.
- 15 I tend to agree, but would add more, which is relevant to the final step in the test and to later claims. In a modern world, and certainly at the time of filing of the application, tying particular aspects of the current invention to a narrow field of technology is not, to my mind, a true indication of the common general knowledge of the person skilled in the art.
- 16 For the system of the invention to function at all there must be an alert. It is inevitable that the skilled person would intimately have as common general knowledge the types of alert applicable to devices common across all mainstream consumer devices, such as mobile phones, alarm clocks, radio, fire alarms, burglar alarms, and the like. Such alerts clearly include both visual and audible cues; for example, microwave ovens which display cooking parameters

² *Windsurfing International Inc v Tabur Marine (Great Britain) Ltd* [1985] RPC 59

and instructions which correspond with audible cues, battery chargers with LEDs which turn from red to green once the batteries are charged, and mobile phones which light up, play a tune and vibrate when a text message arrives.

- 17 Further, the skilled person could not be unaware of the use of status displays of all manner of household items such as televisions, video/DVD players and recorders, computer peripherals, and the like. Such displays include lights on the device as well as messages, for example on-screen information displayed on a television screen corresponding to the record or playback status of a video/DVD player, matched to visual indicators (for example, a visual cue such as a red “rec” light) on the device itself.
- 18 Furthermore, many of those status displays have, for very many years, been associated with an electronic device being in standby mode, for example two different colours of LED. Conventionally and very widely, no light on a television set signifies power to the device is off, a red or amber light signifies power to the device but the device is not on (standby), a green or blue light that the device is on. For many devices, the automatic switch into and out of standby mode is triggered by a signal, for example computer monitors switching to power standby after a certain timed period of computer inactivity, to reactivate on use of the mouse or keyboard, laptops entering a sleep mode when detected to be low on battery, to reactivate on resumption of mains power, and mobile phone automatic lock after a period of inactivity, but reactivation on receipt of a call or text message.
- 19 In addition, it has been widely known for the public, and certainly before the priority date, to have detachable consumer devices in vehicles, principally as an anti-theft measure. In particular, mobile phones can be provided with a hardwired mount for power and a link to a sound device but, in the very least, can simply sit in a cradle with a charger lead to vehicle internal power outlet (i.e. cigarette lighter). However, it is also widely known to detachably mount CD players, MP3 players, traffic camera detectors and satellite navigation devices, the latter of course also being receiving devices.
- 20 A skilled person would therefore, inescapably, be continually immersed in all such stimuli in the real world, in addition to those closer to the relevant field of technology, such that their presence, in some form or other, on an electronic device is not only expected but would be regarded as essential.
- 21 Consequently, I would assess the person skilled in the art and the common general knowledge of that person to be as described in paragraphs 13 & 14 above and to also include the typical public thorough awareness and knowledge of conventional audible and visual alarms, such as beeps, tones and different coloured lights, and status indication, including standby status, for consumer household and electronic goods, and the use in vehicles of detachable electronic goods.

Step 2

- 22 In construing the claim, the examiner considers the inventive concept to relate to an emergency warning vehicle system; a transmitter in an emergency vehicle has

a standby mode, an emergency alert mode in which a signal is transmitted, a manual switch and a visual indicator of which mode is operating; a receiver in a non-emergency vehicle has a standby mode and an emergency warning mode, a visual indicator of which mode is operating and a controller switching from standby mode to warning mode on receipt of the transmitted signal. He also considered the standby mode rather to be an 'on' mode in which the receiver was waiting for a signal.

- 23 In his submission the applicant's attorney disagrees that the inventive concept is general to emergency vehicle warning systems but rather is specific to those systems suitable for emergency to non-emergency vehicle systems. In particular, he considers the inventive concept to be based on the visual communication to the driver of a non-emergency vehicle whether the unit is operative (standby mode) or in the presence of an emergency vehicle (warning mode). A controller, responding to a transmitted emergency signal, switches between the modes without action from the driver and without relying on any other equipment in the non-emergency vehicle.
- 24 I do not regard that there is such a distinction to be drawn between emergency vehicle to emergency vehicle communication and emergency vehicle to non-emergency vehicle communication. Underlying both is that, in an emergency situation, an emergency vehicle can warn other vehicles. Emergency vehicle to emergency vehicle and emergency vehicle to non-emergency vehicle communications are not separate branches of the art. In any event, page 1 lines 8 & 9 of the description as filed is clear: "*Each and every emergency vehicle will have a transmitter as well as a receiver installed...*", so that it is considered that a receivers would also be fitted to an emergency vehicle. However, it is acknowledged that the main claim is specifically limited to emergency vehicle to non-emergency vehicle warning.
- 25 I would comment here that the proposed alternative claim adds that there is also an audible indication and that the receiver is a 'detachable remote unit'. Although my decision does not hinge on it, when questioned on this latter point at hearing the applicant made it plain that this was introduced by their attorney. As far as he was concerned, the receiver sits on top of the dashboard and is hardwired to the ignition; he considered that a detachable unit would probably not make sense.
- 26 I consider that the inventive concept is that, in an alert condition, an emergency vehicle device transmits a warning signal and initiates a visual alert to that effect on the device; a dedicated receiver in a non-emergency vehicle detects that signal and initiates a visual alert on the receiver; both transmitting and receiving devices have a visual indication of when they are not in an alert condition, regarded as a standby or on but inactive mode, which is different to that of the alert condition. For the alternative claim 1, the inventive concept would also include an audible alert on both transmitter and receiver.

Step 3

- 27 The examiner has argued that the principal matter forming the state of the art is WO03/030124 in which there is disclosure of an emergency vehicle warning system in which a device in an emergency vehicle can transmit a warning signal

to other vehicles. The device can be manually switched from a standby mode to an alert mode in which the signal is transmitted, the device having visual indication (LEDs) of which mode it is currently in. A dedicated unit in another vehicle has a receiver which detects the transmitted signal and initiates a visual and audible alert. He accepts that the devices in both vehicles are transceivers (i.e. can both transmit and receive) and that the other vehicle is also an emergency vehicle and concludes that the difference between what he views as the inventive concept and this prior art is that the second vehicle is a non-emergency vehicle and that the warning device is a receiver only.

- 28 He then goes on to suggest that the difference between the systems exemplifying the general knowledge, presumably the prior art he listed in step 1, and claim 1 is the use of standby modes and visual indication of the active mode.
- 29 The applicant's attorney also concentrates on WO03/030124 and concludes that the difference between what he views as the inventive concept and the cited matter is the absence of a receiver unit on a non-emergency vehicle, the receiver unit having a stand-by mode and an emergency warning mode, means providing a visual indication of each mode, the visual indication being illuminated in each mode and being different in each mode so as to distinguish between the modes, the receiver unit including a controller operable on receipt of the signal from the transmitter unit to switch the receiver unit from the stand-by mode to the emergency warning mode in which a driver of the non-emergency vehicle is provided with a visual warning of the presence of the emergency vehicle.
- 30 When related to my assessment of inventive concept in paragraph 26, I agree with the examiner's early assessment that, for all practical purposes, the standby mode is effectively an "on" mode in which the receiver is listening but not initiating the alert, that is the alert mode is inactive. Further, when acting as a receiver, there is disclosure in WO03/030124, that when the receiving circuit is on but not receiving a signal one LED is lit and, when receiving a warning signal, visual and audible alerts are triggered. Specifically, there is an Aoff@mode, identified by red LED(13), in which the visual and audible collision detection alarms remain operative, the visual alert preferably being generated on display 100. Consequently, the difference between the inventive concept as assessed in paragraph 26 above and this prior art is that the second vehicle is a non-emergency vehicle and that the warning device is a receiver only.
- 31 There is, however, the examiner's other approach. There is considerable cited prior art, as mentioned above, from which it is clear and accepted that it is well known for an emergency vehicle to transmit a warning signal with a visual cue to that effect on the transmitting device (which could be no more than the switch position), with a dedicated receiver in a non-emergency vehicle detecting that warning signal and controlling a visual alert on the receiver. The difference between the assessed inventive concept of paragraph 26 and this art is that, although there are many types of visual display, including a multi-light unit to acknowledge different types of emergency service transmission (US3233217), there is no explicit disclosure of a visual distinction between inactive and alert modes; that is, there is no visual indication of when transmitter or receiver are not in an alert condition, regarded as a standby or inactive mode, which is different to that of the alert condition.

Step 4

- 32 First, there is no doubt that the idea behind the invention, as outlined by the applicant, of providing a dedicated receiver in a non-emergency vehicle which responds with a visual alert on receipt of a transmitted signal from an emergency vehicle is very well known; that is clearly demonstrated in much of the art cited by the examiner.
- 33 For the examiner's first approach, he considers that the skilled person, when presented with the system of WO03/030124, would know about removing the transmitter from a transceiver to make just a receiver and that such a receiver could then be used in a non-emergency vehicle. He apparently draws this conclusion from the amount of background art which shows such devices and which he had earlier considered would be common general knowledge to the skilled person, and argues that to do so with the system of WO03/030124 would be obvious.
- 34 Oddly, having raised the possibility in step 3, he did not pursue his second approach against the main claim, but rather as a support against appended claims.
- 35 The applicant's attorney, despite accepting that the skilled person would be familiar with both emergency vehicle to emergency vehicle and emergency vehicle to non-emergency vehicle systems, disagrees that the skilled person would look to modify WO03/030124 to provide a system suitable for emergency vehicle to non-emergency vehicle use on the grounds that as this art is designed to alert emergency vehicles of the presence of each other to avoid collision, a skilled person would not consider its usefulness in alerting other vehicles. He also objects that the complexity of the system of WO03/030124 means that the adaptation of the transceiver would be unsuitable for the non-emergency vehicle as there are so many operating modes to change.
- 36 I have a little sympathy with that view. The transceiver of WO03/030124 is indeed complex, to cope with traffic lights as well as collision detection and avoidance of other emergency vehicles. However, in reality the underlying concept behind all these systems is to alert other traffic, whether emergency or non-emergency vehicles, that there is an emergency; consequently, the person skilled in the art would accept both emergency vehicle to emergency vehicle and emergency vehicle to non-emergency vehicle communication as having a common cause. It also presupposes that the skilled person would actually look to adapt the transceiver of WO03/030124 into a receiver only, rather than use a simple receiver based on the breadth of common general knowledge in this area. Bearing in mind the known idea behind the invention, the latter is far more likely and would require no inventive ingenuity; both the emergency vehicle transceiver of WO03/030124 and the non-emergency vehicle receivers of the prior art are known, in the same area of activity doing the job they are designed to do in that area. The general idea of warning traffic in the manner of the invention is thoroughly well known and the use together of both transmitters and receivers to that end would be entirely within the knowledge of the skilled person. Consequently, starting from WO03/030124, there would be no inventive step to the skilled person in linking it with receiver-only devices in non-emergency

vehicles.

- 37 Having raised it earlier, I will now consider the examiner's second approach, on which the applicant's attorney has been silent. For that, as suggested in paragraph 31, everything about the invention is known except that both transmitter and receiver have an additional, different, visual cue to denote non-alert or standby mode. Bearing in mind my comments under paragraphs 16-20 above, I cannot but view such a idea as an entirely obvious and expected thing to do and one which would exercise no inventive ingenuity.
- 38 The alternative main claim filed in the pre-hearing submission includes that the receiver also has an audible alert as well as a visual alert. However, much of the prior art cited explicitly also includes both such alerts.
- 39 Despite the applicant's comments, outlined in paragraph 25 above, on the detachable remote unit of the alternative claim 1, which is also found in claim 15 of the latest claims on file, I need to consider whether such a concept would add an inventive step to the invention. The sole reference of note in the specification as originally filed is on page 4 in relation to figure 3 of the fourth sheet of drawings, that a "*socket is used for interconnection of wires from various parts so that the actual unit will become detachable*". I also note that this feature was included in an amended claim 1 of 13 May 2008 but removed (to claim 15) for the latest set on file. Bearing in mind my comment in paragraph 19 above, again I cannot but view such a idea as an entirely obvious and expected thing to do and one which would exercise no inventive ingenuity.
- 40 Having viewed the prior art it is also clear that the features of the transmitter of claims 2-5, are disclosed in WO03/030124. Even if that were not so, provision of ignition power and connection of an antenna would be part of the common general knowledge of the defined person skilled in the art. This citation also discloses the use of red and green LEDs so that I find nothing inventive in claims 6-8. Claims 9 & 10 are disclosed in the range of prior art cited by the examiner but, even if that were not so, provision of ignition power and connection of an antenna to the receiver would be part of the common general knowledge of the defined person skilled in the art. The art also discloses the use of red and green LEDs, and of audible warning, so that I find nothing inventive in claims 11-14. As indicated in paragraph 39 above, I have already found that the matter of claim 15 lacks an inventive step.
- 41 The alternative appended claims cover the same ground as those on file and, likewise, are not inventive.

Conclusion

- 42 I have found that the invention in the claims on file and in the alternative claims suggested prior to hearing lacks an inventive step. There is nothing in either set of appended claims which is not disclosed or, even if that were not so, would not be familiar concepts to the public let alone a person skilled in the art. I have considered the application in detail, but have been unable to find anything in the application which is not also present in the prior art, for example the use of different radio frequencies and transmission power output to adjust range, and

which could impart an inventive step. I therefore refuse the application under section 18(3).

Appeal

- 43 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