

0172/94

IN THE MATTER OF

Patent Application 9022251.4

in the name of Toyota Jidosha KK

DECISION

Application 9022251 was filed on 12 October 1990 and was subsequently published under the number 2237423A on 1 May 1991. During the course of substantive examination the examiner objected under section 1(2)(c) that the invention claimed could not be patented because it was no more than a computer program or a method for performing a mental act and, in the absence of agreement with the applicant's agent, the matter came before me at a hearing on 24 February 1994 when the applicant was represented by Mr L.A. Ben-Nathan of Urquhart-Dykes & Lord.

The present application concerns a 'parts supply instruction apparatus' which combines three different parts-ordering strategies for ordering parts for supply to a factory or other production plant. The specification describes these strategies in relation to a car production plant, and acknowledges that providing a computer system to implement each of the three strategies is well known in the prior art. To put the invention into its proper context, it is necessary briefly to outline the three known strategies, or systems as they are referred to in the specification.

Under the first, called a "Production Schedule System", a list of the parts required is compiled on the basis of a forecast monthly car production schedule. The list can be sent to the supply factory (or warehouse) well in advance, even though delivery of the parts may be spread over the month according to production requirements. In the second, called a "Parts Information System" (or KANBAN), the production plant holds a small stock of parts, and a parts supply order is generated by the assembly factory on the basis of the actual consumption of parts. This system generally uses a card (called a Kanban) to order the parts from the supply factory (or warehouse). The system ensures that the same number of parts

as those that are consumed are delivered to the assembly factory 'just-in-time' for assembly into a car on the production line. A bar-code reader is used to record the number of parts used/remaining. In the final system, called a "Car Information System", a sensor (eg. a bar-code reader) detects the model type and trim level of a car as it is brought onto the assembly line, and the system then orders the right quantity of each part for that particular vehicle so that the ordered parts are supplied to the assembly line before the car is conveyed to the respective positions on the assembly line where the parts are required.

The present invention addresses the problem of providing more than one of the three parts supply systems to a factory so that someone, eg. the production manager, may select whichever supply system is the most appropriate at any given time. However, instead of using three separate computers, each with a copy of the master parts list and each executing a different program for the respective systems, the invention teaches combining more than one of the systems on a single computer sharing a single master parts list. The sensor used by the "parts information system" and the sensor used by the "car information system" are both plugged into this single computer. An extra column in the master parts list is used to show which supply system is being applied to each of the parts on the list.

At the hearing, Mr Ben-Nathan addressed his arguments to the subject matter disclosed at large and not to any individual claim. It is however necessary to consider the invention claimed and to this end it is convenient to quote the four, main, independent claims which relate respectively to a system which will provide any selected one of the three known strategies, and three systems each providing a choice between a different two of the three known strategies, as follows :

1. Apparatus for control instructions for the supply of parts from at least one parts supply factory to at least one assembly factory, the apparatus comprising:

a production schedule system for providing a parts supply schedule for an object assembly factory on the basis of a presumed car production schedule;

a parts information system, provided at the assembly factory, for providing information about the consumption of parts at the assembly factory, the parts information system including a first sensor for detecting the consumption of parts at the assembly factory;

a car information system, provided at the assembly factory, for providing information about each car brought onto an assembly line of the assembly factory, the car information system including a second sensor for detecting the type of car passing the second sensor;

an order issue managing system adapted to scan a parts master file to extract required data therefrom relating to parts to be ordered on the basis of information fed to the order issue managing system selectively from the production schedule system or the parts information system or the car information system, said order issue management system including:

a common computer for controlling the production schedule system, the parts information system and the car information system,

a common parts master file standardized for the production schedule system, the parts information system and the car information system, the common parts master file having a column in which an order type designation parameter corresponding to the production schedule system, the parts information system or the car information system is stored for each entry, and

a setting device for changing a present order type designation parameter to a different order type designation parameter, thereby changing a present parts supply system to another parts supply system corresponding to said different order type designation parameter; and

a received order managing system, provided at an object parts supply factory, for receiving orders for parts issued by the order issue managing system and

transmitted via a communication network and for printing out the required data relating to the ordered parts.

2. A parts supply control apparatus, comprising:

a production schedule system for providing a parts supply schedule for an object assembly factory on the basis of a presumed car production schedule;

a parts information system, provided at the assembly factory, for providing information about the consumption of parts at the assembly factory, the parts information system including a first sensor for detecting the consumption of parts at the assembly factory;

an order issue managing system adapted to scan a parts master file to extract required data therefrom relating to parts to be ordered on the basis of information fed to the order issue managing system selectively from the production schedule system or the parts information system, said order issue management system including:

a common computer for controlling the production schedule system and the parts information system,

a common parts master file standardized for the production schedule system and the parts information system, the common parts master file having a column in which an order type designation parameter corresponding to the production schedule system or the parts information system is stored for each entry, and

a setting device for changing a present order type designation parameter to a different order type designation parameter, thereby changing a present parts supply system to another parts supply system corresponding to said different order type designation parameter; and

a received order managing system, provided at an object parts supply factory,

for receiving orders for parts issued by the order issue managing system and transmitted via a communication network and for printing out the required data relating to the ordered parts.

3. A parts supply control apparatus, comprising:

a production schedule system for providing a parts supply schedule for an object assembly factory on the basis of a presumed car production schedule;

a car information system, provided at the assembly factory, for providing information about each car brought onto an assembly line of the assembly factory, the car information system including a second sensor for detecting the type of car passing the second sensor;

an order issue managing system adapted to scan a parts master file to extract required data therefrom relating to parts to be ordered on the basis of information fed to the order issue managing system selectively from the production schedule system or the car information system, said order issue management system including:

a common computer for controlling the production schedule system and the car information system,

a common parts master file standardized for the production schedule system and the car information system, the common parts master file having a column in which an order type designation parameter corresponding to the production schedule system or the car information system is stored for each entry, and

a setting device for changing a present order type designation parameter to a different order type designation parameter, thereby changing a present parts supply system to another parts supply system corresponding to said different order type designation parameter; and

a received order managing system, provided at an object parts supply factory, for receiving orders for parts issued by the order issue managing system and transmitted via a communication network and for printing out the required data relating to the ordered parts.

4. A parts supply control apparatus, comprising:

a parts information system, provided at the assembly factory, for providing information about the consumption of parts at the assembly factory, the parts information system including a first sensor for detecting the consumption of parts at the assembly factory;

a car information system, provided at the assembly factory, for providing information about each car brought onto an assembly line of the assembly factory, the car information system including a second sensor for detecting the type of car passing the second sensor;

an order issue managing system adapted to scan a parts master file to extract required data therefrom relating to parts to be ordered on the basis of information fed to the order issue managing system selectively from the parts information system or the car information system, said order issue management system including;

a common computer for controlling the parts information system and the car information system,

a common parts master file standardized for the parts information system and the car information system, the common parts master file having a column in which an order type designation parameter corresponding to the parts information system or the car information system is stored for each entry, and

a setting device for changing a present order type designation parameter to a different order type designation parameter, thereby changing a present parts supply

system to another parts supply system corresponding to said different order type designation parameter; and

a received order managing system, provided at an object parts supply factory, for receiving orders for parts issued by the order issue managing system and transmitted via a communication network and for printing out the required data relating to the ordered parts.

Briefly stated, the examiner's objections were that the specification does not suggest that anything other than a conventional computer, suitably programmed, is involved and that it therefore follows from the judgments in Merrill Lynch's Application [1989] RPC at page 569 and in Gale's Application [1991] RPC at page 315 that to avoid exclusion under section 1(2)(c) as a program for a computer, there must be a technical advance on the prior art in the form of a new result. It is however the examiner's view that all that is disclosed in the present application is the use of a conventional computer programmed to compile a list of parts to be ordered from a supply depot, and that this does not represent a technical advance. Moreover, the examiner also took the view that the invention should also be excluded under section 1(2)(c) as no more than a scheme, rule or method for performing a mental act because stock controllers could use their own mental ability to write out orders for parts in accordance with the invention by looking at the master parts list, the production schedule, the Kanbans *etc.*

Mr Ben-Nathan began by arguing that the authorities, and in this connection he cited Gale's Application [1991] RPC at pages 321 and 323 and Koch & Sterzel T26/86 1988 EPOR 72, clearly indicated that inventions should not be excluded because they consisted of a mix of technical and non-technical elements which can both contribute to an invention. Thus, no weighting of the individual elements should be attempted. As I indicated at the hearing, I fully accept that one should approach the issue of excluded matter by looking at the whole of the claimed invention without regard for its separate parts and deciding whether or not the totality which is claimed amounts to more than excluded matter. Although at this level there was no dispute, the examiner and Mr Ben-Nathan took a different view of the result of this process.

In arguing his case, Mr Ben-Nathan did not distinguish between the two objections raised by the examiner, namely that the invention should be excluded because it amounts to no more than a program for a computer as such, and because it amounts to no more than a method for performing a mental act as such. Rather, he argued that both of these objections fell on the basis that the invention did not amount to any of the items excluded by section 1(2) but to what he argued was a technical combination, namely a hardware and software combination which is new and which provides an improved, rationalized arrangement relative to the separate, prior art systems. However, as I indicated at the hearing, the point at issue is not whether the claimed combination is new but whether the combination is excluded by section 1(2) and in this connection the judgment in Merrill Lynch, to which the examiner had referred, is relevant. In giving the judgment of the Court, Fox LJ said at page 569 :

"The position seems to me to be this. Genentech decides that the reasoning of Falconer J is wrong. On the other hand, it seems to me to be clear, for the reasons indicated by Dillon L J, that it cannot be permissible to patent an item excluded by Section 1(2) under the guise of an article which contains that item - that is to say, in the case of a computer program, the patenting of a conventional computer containing that program. Something further is necessary. The nature of that addition is, I think, to be found in the Vicom case where it is stated: "Decisive is what technical contribution the invention makes to the known art". There must, I think, be some technical advance on the prior art in the form of a new result (eg., a substantial increase in processing speed as in Vicom)."

The Vicom case referred to by Fox L J is Vicom Systems Inc T208/84 [1987] EPOR 74 in which the European Patent Office Technical Board of Appeal decided that even if the idea underlying an invention may be considered to reside in a mathematical method, a claim directed to a technical process in which the method is used, which in Vicom was a technical process involving image processing, does not seek protection for the mathematical method as such.

I take these judgments to mean that for a conventional computer containing a novel program to be patentable, a technical advance on the prior art in the form of a new result must be

present (because otherwise, the claim amounts to no more than the program as such.) Mr Ben-Nathan however did not accept that the Merrill Lynch judgment applied. It was his view that the combination now claimed does not amount to a conventional computer with a program but rather to a novel combination (of hardware and software) which provides technical advantages over the prior art and which is therefore inherently patentable. Although these two approaches might at first sight seem rather different, it seems to me that in essence they both hinge on the same basic question, namely is the combination now claimed different technically from the prior art?

The answer to this question will of course depend upon the facts and on this Mr Ben-Nathan was arguing, as I understood him, that the combination of the present invention provided a solution to what was the technical problem of rationalizing the known systems to produce a single system which would selectively carry out more than one of the three known parts ordering strategies. He argued that rationalizations of this kind can have a technical advantage but, as I indicated at the hearing, while I readily accept that rationalizations can indeed involve technical changes and advances, the issue here is not whether this is possible, but whether or not the particular rationalizations which are the subject of the claims do or do not provide such a change or advance.

In this connection, Mr Ben-Nathan pointed to the advantages of the present rationalisations as set out on page 3 of the present specification: these included the fact that the three known systems were independent of each other so that none of their features could be used in conjunction with the other two systems; the fact that in order to change from one system to the other, the "master parts list" of one system would need extensive, expensive and error prone changes before it could be applied on another of the systems; and that the provision of the three entirely separate systems of the prior art in one factory would be prohibitively expensive. He also referred me to Lux Traffic Controls v Pike Signals Ltd and Faronwise Ltd [1993] RPC No 6 which related to a traffic light control system and in which it was decided that the particular combination of hardware, which included traffic lights and a control mechanism, and the control strategy implemented by that control mechanism to control the lights, provided a technical contribution and was thus not excluded by section 1(2). Two patents were involved in this judgment but at the hearing Mr Ben-Nathan referred

me specifically to parts of the judgment concerning only one of them where the object was to provide a simplified system which allowed for variations in the safety period, called the "inter-green period", provided between changes of the lights so as to avoid conflicting traffic movements. Instead of having to use many knobs to set up a traffic controller, a single knob per set of traffic lights is used to control the inter-green timing period for any sequence of light changes. Mr Ben-Nathan argued that the present invention, where one computer replaces three used in the prior art, is on all fours with Lux Traffic Controls and is distinguished from Merrill Lynch in that the combination claimed is not merely a conventional computer with a program but a new rationalized hardware combination which is technically different and provides the necessary technical contribution to the art.

While I am quite prepared to accept for the purposes of this decision that the system of the invention is a rationalization in that it will do the same job using less hardware, I do not see that that of itself is relevant. Many of the operations performed in modern computer systems can be done by providing either permanently connected, hardware elements, or general purpose hardware elements controlled by appropriate software programs, and the choice between the hardware and software content of any particular system will generally be determined by practical and economic considerations which have no bearing on the substance of the invention which is what I believe I must consider. Thus, what this comes down to is the question of whether the substance of the present invention, which to my mind is the provision of a combination which will operate in accordance with more than one of the prior art parts ordering strategies, amounts to no more than a technically conventional computer programmed to operate in a new way, or whether it provides a technical contribution as in Lux Traffic Controls.

Having read the specification of the present application very carefully, it seems clear to me that no technical contribution is involved. The particular combination of hardware and software presently claimed is undoubtedly different from the prior art, for example in at least some of the combinations claimed in the independent claims there will be two sensors providing information to the computer about the usage of parts or the cars being produced whereas, in the prior art, no system has more than one input sensor. However, I do not regard this as providing a technical contribution; in the case of the two input sensors, each

is independent of the other and each is performing precisely the same function as in the prior art. As to the advantages of the present invention set out in the present specification, these do not seem to me to point to there being any technical contribution or advance. The fact that the present system can operate any one of the three known strategies, and apparently can change between them without the need of any changes to the single master parts list, seems to me to be no more than a natural consequence of changes made to the master parts list which lie wholly in the realm of computer programming and not in any technical field. Moreover, the reduction in costs of using the present invention rather than all three of the prior art systems together seems to me to be a wholly economic, and not a technical, advantage.

Thus, I can see no technical, as opposed to programming, contribution provided by the combination now claimed. In my view, the combination claimed in Lux Traffic Controls is clearly distinguished from that of the present invention in that the combination claimed in Lux operated a completely new control strategy using a new controller, whereas the combination claimed in the present specification is merely a technically conventional combination in the form of a conventional computer programmed to operate in a new way where it will perform more than one of the known strategies in the known way. Consequently, it follows that the present invention amounts to no more than a conventional computer with a program which does not involve a technical advance or contribution and which, following the judgment in Merrill Lynch, should be excluded as no more than a program for a computer under section 1(2)(c).

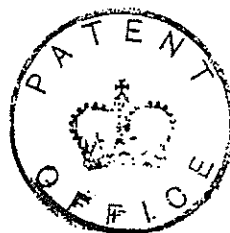
Turning to the examiner's objection that the invention amounts to no more than a method for performing a mental act, while I accept that the systems claimed can be regarded as no more than systems arranged to perform exactly the sort of operations that production managers would perform mentally when ordering parts, I do not feel able to say confidently that the present invention amounts to nothing more than a method for performing a mental act. Consequently, I need say no more than I am not persuaded that the present invention should be excluded as a method for performing a mental act.

Nevertheless, I have found that claims 1 to 4 amount to no more than a program for a

computer and consequently, should be excluded as such under section 1(2)(c). As for the remaining claims, and the overall disclosure in the specification, I have also considered these very carefully but I can see nothing which adds anything of substance to what is set out in claims 1 to 4 and which would amount to anything more than a program for a computer. Accordingly, I hereby refuse the application under section 18(3).

Any appeal from this decision should be filed within a period of six weeks from the date of this decision as set out below.

Dated the 31 day of March 1994.



D M HASELDEN

Principal Examiner, acting for the Comptroller.

THE PATENT OFFICE