



4 The application relates to a computer implemented system for sharing intellectual property between individuals involved in designing semiconductor products. It is probably worth me saying at the outset that the term “intellectual property” as used in the application is not limited to the formal rights with which the Patent Office is normally concerned ie patents, trade marks, designs and copyright. Rather the expression is used to convey a much broader meaning of information and knowledge in general. The aim of the invention is to facilitate the sharing of design information and thereby to reduce duplication of effort in organisations or communities. In a nutshell, the system permits registered users to upload design information relating to semiconductor products onto a server and to access design information registered by others. Each piece of design information is structured in a specific way to aid the retrieval process and it is this that is at the heart of the invention.

5 The claims as they currently stand comprise independent claims 1, 17, 36 and 37, dependent claims 2-16, 18-35 and 38 and omnibus claims 39-42. However, at the hearing Mr Hitching focussed his attention on addressing me in relation to his newly submitted claims 1 and 36 which read as follows:

1. Semiconductor product designing apparatus comprising a server having:

registration means in which users and services available for the users are registered, and in which a plurality of pieces of intellectual property are registered, each piece relating to a reusable hardware or software element of a semiconductor product and each piece comprising:

a design data portion including circuit design data defining the circuit design of the reusable element of the piece concerned;

a catalog portion including piece selection information defining functions and/or specifications of the reusable element of the piece concerned; and

a contents portion including update information relating to the reusable element of the piece concerned;

execution means, connected operatively to the registration means, for providing a user with a service allowed for the user, the registered intellectual property being processed according to the service so that the user uses the intellectual property;

retrieval means operable to retrieve the piece selection information included in the catalog portions of the registered pieces and to select at least one said piece of intellectual property appropriate for a user from among the pieces registered in the registration means based on the retrieved piece selection information; and

distribution means, connected operatively to the execution means and to the retrieval means, for distributing the design data and/or content portions of the selected piece(s) of intellectual property to the user.

36. A semiconductor product designing method comprising:

registering in a memory portion of a server users and services available for the users;

registering in the memory portion a plurality of pieces of intellectual property, each piece relating to a reusable hardware or software element of a semiconductor product and each piece comprising:

a design data portion including circuit design data defining the circuit design of the reusable element of the piece concerned;

a catalog portion including piece selection information defining functions and/or specifications of the reusable element of the piece concerned; and  
a contents portion including update information relating to the reusable element of the piece concerned;  
employing a processing portion of the server to provide a user with a service allowed for the user, the registered intellectual property being processed according to the service so that the user uses the intellectual property;  
employing the processing portion to retrieve the piece selection information included in the catalog portions of the registered pieces and to select at least one said piece of intellectual property appropriate for a user from among the registered pieces based on the retrieved piece selection information; and  
employing a communication portion of the server to distribute the design data and/or content portions of the selected piece(s) of intellectual property to the user.

### **The Law**

6 The examiner has maintained that the application is excluded from patentability under section 1(2)(c) of the Act, as relating to a method for doing business as such. The relevant parts of this section read:

“1(2) It is hereby declared that the following (among other things) are not inventions for the purposes of this Act, that is to say, anything which consists of -  
(a) ....  
(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 purpose of this Act only to the extent that a patent or application for a patent relates to that thing as such.”

7 These provisions are designated in section 130(7) as being so framed as to have, as nearly as practicable, the same effect as Article 52 of the European Patent Convention, to which they correspond. I must therefore also have regard to the decisions of the European Boards of Appeal that have been issued under this Article.

### **Interpretation**

8 It was common ground between me and Mr Hitching that in deciding whether an invention relates to one of the excluded areas “as such” the test I should apply is whether the invention makes a “technical contribution”. This interpretation follows the decision of the Court of Appeal on another application made by the present Applicant. In *Fujitsu Limited’s Application* [1997] RPC 608, Aldous LJ said at page 614:

“However, it is and always has been a principle of patent law that mere discoveries or ideas are not patentable, but those discoveries and ideas which have a technical aspect or technical contribution are. Thus the concept that what is

needed to make an excluded thing patentable is a technical contribution is not surprising. This was the basis for the decision of the Board in *Vicom*. It has been accepted by this court and by the EPO and has been applied since 1987. It is a concept at the heart of patent law.”

- 9 That this same test should apply across all the areas excluded in section 1(2) was made clear in the Patent Office Practice Notice issued on 24 April 2002 entitled “Patents Act 1977: interpreting Section 1(2)”. That is the test I will apply in deciding the present issue.

### **Argument**

- 10 In seeking to persuade me that the present invention was not excluded from being patentable, Mr Hitching pursued two lines of argument. First he said that the invention was not a business method and second he said that even if I found that it was, it provided a technical contribution and was therefore not a business method “as such”.

- 11 The questions I must therefore decide are:

- a. Is the invention caught by section 1(2)(c) as a method of doing business? If the answer to that question is “yes”
- b. Does the invention make a technical contribution such that it cannot be said to amount to the excluded item *as such*?

A “no” answer to the second question will mean the invention is not patentable.

### A method of doing business

- 12 Mr Hitching first sought to convince me that the invention was not a method of doing business. He said that whilst the transfer of information might be conducted for a charge, for example where the source and end user were in different companies, that was not necessarily the case. The primary function of the system was to allow information to be shared and that could just as well be between employees within a company (where no transfer of money would take place) as between companies. If the invention covered embodiments which did not involve a fee being paid, he said, it was not a method of doing business.
- 13 Furthermore, Mr Hitching referred me to a decision of one of the Comptroller’s Hearing Officers on another of the Applicant’s applications (GB9720151.1). In his decision on *Fujitsu Limited’s Application* SRIS O/459/02 the Hearing Officer found on the facts existing on that case that whilst the invention included business aspects, it amounted to more than a method of doing business and was not caught by the business method exclusion. Mr Hitching felt that the same held true for the present application and that it was patentable.
- 14 Finally, Mr Hitching sought to draw a distinction between the facts existing on the present case and those existing on a series of applications from *Dell USA LP* (SRIS

O/432/01, O/177/02 and O/377/02) which were all refused in the Office as methods of doing business. All three of those applications related to an online system for purchasing a personal computer, the system ensuring that the individual elements were all compatible and that the customer's requirements were met. In refusing the applications the Comptroller's Hearing Officer rejected the argument that the process which culminated in the construction of a computer was akin to a method of manufacture finding instead that this was no more than a method of doing business.

- 15 In attempting to draw a distinction with the present invention, Mr Hitching said that in the *Dell* cases, the Hearing Officer had found the invention to be primarily concerned with the task of selling. In contrast, he said, the present invention was concerned with finding and sharing information which has nothing to do with selling or other business activities. Moreover, he said, the claims were limited to sharing this information in the context of designing semiconductor products. That limitation he said, was not trivial. The semiconductor industry is heavily reliant on the reuse of what Mr Hitching termed "semiconductor IP" with some companies specialising entirely in the design of components without ever actually making anything. The present invention he said was concerned with accessing information in this context, not of buying or selling.
- 16 All of this in Mr Hitching's opinion demonstrated that the present invention was not a method of doing business. I do not agree. Mr Hitching's interpretation of the "business method" exclusion is in my opinion excessively narrow. I am aware that in UK law, exclusions are traditionally interpreted narrowly. However that is not the way that the business method exclusion has been applied in the past. At the hearing I drew Mr Hitching's attention to paragraphs 1.21 to 1.25 of the Manual of Patent Practice which include a number of examples of applications refused under this exclusion. These include *Melia's Application* BL O/153/92 relating to a scheme to exchange all or part of a prison sentence for corporal punishment and *Wills' Application* BL O/89/99 relating to the provision of cards to be held by parents and grandparents to assist in tracing a child who has gone missing. To my mind these cases demonstrate that activities do not necessarily need to involve a financial transaction to fall within the business method exclusion; rather, the exclusion covers administrative activities as well as strictly financial ones.
- 17 I agree with Mr Hitching that there is a difference between the *Dell* applications and the present invention. In my opinion the *Dell* cases fall squarely into the latter category of financial activities whereas the issue is less clear cut in the present case. However, in my opinion, the knowledge management activities to which the present invention relates are just the sort of administrative process which have traditionally been viewed as falling within the business method exclusion. In my opinion the system amounts to a method of doing business and falls within the exclusions of section 1(2).
- 18 If I am wrong on that, and the invention does not fall strictly within the business method exclusion, I am content that it does fall within what I shall call the general area for which patents are excluded. It would be remiss of me at this stage not to refer to the discussion I had with Mr Hitching at the hearing on whether the invention was caught by any of the other exclusions in section 1(2). As Mr Hitching pointed out, in advance of the hearing the examiner only objected to the invention as being excluded

as a method of doing business. I think that is unfortunate. The most convenient method of implementing the invention is undoubtedly, in my opinion, via a piece of software. Indeed there is an independent claim (claim 37) to a computer program for effecting the invention. Consequently it could be viewed as falling within the computer program exclusion. Furthermore, the knowledge sharing activity could also in my opinion be viewed as a mental act irrespective of whether it is conducted via a computer. Consequently, it seems to me that the invention could equally well fall into one of those categories as into the business method one. From our discussion at the hearing I do not doubt that Mr Hitching was also sensitive to the fact that the invention might have been open to objection on one or more of these grounds also. However, having found it to be caught by the business method exclusion and hence to be within what I shall call the excluded fields, it is something of an irrelevance whether the invention falls within any of the other excluded categories.

- 19 In reaching that conclusion I am reassured that the approach I have taken is consistent with that adopted in *Lux Traffic Controls Limited vs Pike Signals Limited and others* [1993] RPC 107. When considering whether a patent for a traffic control system was invalid by virtue of it being a method of doing business, Aldous J said at page 138 line 35:

“As Nichols L.J. pointed out, s. 1(2) of the Act comprises a non-exhaustive catalogue of matters or things which are not patentable. Although not specifically mentioned, I believe a method of controlling traffic as such is not patentable, whether or not it can be said to be a scheme for doing business. The field expressly excluded by the section concerns mere ideas not thought to be the proper subject for patents which are concerned with manufacturing.”

- 20 I take this as meaning that it is less important to decide which specific exclusion an invention is caught by than to decide whether it falls into the general field of excluded matter. Regardless of which exclusion it may be caught by, I feel that the present invention is such that I do need to address the second question namely: does the invention make a technical contribution?

#### Technical contribution

- 21 The second strand of Mr Hitching’s submissions were directed towards convincing me that the invention provided the technical contribution required to make an otherwise excluded invention patentable. In doing so, he went to great length to impress upon me the fact that deciding whether something is patentable (ie not excluded) is a totally separate issue from deciding whether it is novel and involves an inventive step. It was interesting to hear him argue that point because in my experience it is much more common to hear the converse argument - that the Office cannot assess technical contribution without conducting a search to identify the nearest prior art. Moreover, the approach taken by the EPO Technical Board of Appeal in *Pension Benefits Systems Partnership* [2002] EPOR 52 (T931/95) is somewhat inconsistent with Mr Hitching’s position. However, it is a point upon which I am in complete agreement with Mr Hitching so I need address it no further; whether an item is excluded is a separate issue from whether it is novel and inventive.

- 22 I have little doubt that Mr Hitching's motive for arguing that point resides in the degree of innovation provided by the present invention. I said in my introduction that the way each piece of design information is structured to aid the retrieval process is at the heart of the invention. I now need to expand upon that.
- 23 According to the invention, each piece of information to be registered comprises three distinct parts: a design data portion, a catalog portion and a contents portion. What each part comprises is probably best considered with reference to the embodiment described on page 9 of the specification. The catalog portion includes information such as the provider of that piece of semiconductor IP and its function. The design data portion comprises the detailed information relating to the actual item in question, for instance an actual integrated circuit design. The precise scope of what is included in the "contents portion" specified in the claims is not entirely clear and I have relied upon the description to help me pin that down. In the embodiment discussed on page 9, this includes update information as mentioned in the independent claims but also question and answer information, bug data and data sheets. To help me decide the exact purpose of this "contents" portion I have found it informative to consider the overall way the retrieval operation works. As I understand it, when a user wants to access a piece of semiconductor IP (ie to see if he can select an item off the shelf) he submits a search enquiry. The catalog portions of the data stored for lots of pieces of IP are interrogated and the user is presented with all the results meeting his search criteria. My understanding is that he then uses the contents portion to help him select which of the results best meets his needs. Finally he selects a specific item and is given access to that piece of IP. Thus I would say that the contents portion provides the user with supplementary information to help him select the item which best meets his needs from a number which meet his general requirements. At the hearing Mr Hutching did not dispute this interpretation of the data structure and I will therefore proceed on the basis that my understanding is correct.
- 24 At the hearing I queried whether this was anything more than an entirely conventional cataloging system. I put it to Mr Hutching that a hi-fi designer looking to reduce the effect of noise in his system would look to incorporate a noise reduction filter in it. To do that he would obtain a component catalog, turn to the section on noise reduction filters and look at the options available to him. In selecting one of the options he would study the supplementary information contained in the catalog and finally he would place an order and obtain the part meeting his needs.
- 25 Mr Hutching did not attempt to argue that the data structure employed in the present invention was in any way different to this. In fact he went so far as to accept that the data structure was not very innovative and even accepted my proposition that what the applicants had done was to apply "a known technique in an area where it had not previously been used". I will come back to that.
- 26 As I have said earlier, I accept that assessing novelty and inventive step is a separate consideration from that of excluded matter. However, somewhere along the line an invention must make a technical contribution for it to be patentable. If, as seems to me to be the case, the data structuring technique specified in the claim is entirely conventional, then I fail to see how it can of itself provide the required technical

contribution.

27 However, if the data structure is in fact not conventional, then the contribution that data structure makes must still be a technical one for that structure to provide the technical contribution required to make the invention patentable. Mr Hutching identified the contribution which the invention makes to be defining the data structure in such a way as to ease retrieval and then implementing that proposed data structure. At the hearing he said that the key to the invention was the storing of data according to the catalog portion which enabled retrieval whilst handling smaller amounts of data. I cannot accept that cataloging in this way provides the required technical contribution. Cataloging or indexing data is a wholly standard operation carried out whenever data is stored with a view to retrieving it efficiently. Moreover, if there is any contribution in the way this is done it seems to me that it is an academic, intellectual contribution which in itself cannot provide the required technical contribution.

28 Whether the way that data structure is used provides the contribution is another issue I must address.

29 The cataloging example I gave above differs from the present invention in its method of implementation. The filter selection process is a manual one whereas the present invention is entirely automated. However, it is very well established in UK case law that merely using a computer to do what was previously done manually is not sufficient for an invention to be said to make a technical contribution. This is exemplified by Aldous L.J.'s comments in *Fujitsu* where he said, at line 38 on page 618:

“Mr Birss is right that a computer set up according to the teaching in the patent application provides a new “tool” for modelling crystal structure combinations which avoids labour and error. But those are just the sort of advantages that are obtained by the use of a computer program. Thus the fact that the patent application provides a new tool does not solve the question of whether the application consists of a program for a computer as such or whether it is a program for a computer with a technical contribution.”

He went on to conclude that the invention, a system for displaying how two crystals would look when superimposed on each other, did not make the required technical contribution.

30 I do not need to say any more on that matter as Mr Hutching did not try to argue to the contrary: mere computerisation does not constitute a technical contribution.

31 Nor did Mr Hutching try to argue that the hardware and communication protocols used to implement the invention were anything other than conventional. Indeed, all the indications in the specification lead me to conclude that these are entirely conventional and cannot provide the required technical contribution.

32 To my mind that leaves the only remaining potential source for the required technical contribution to be the application of the specific data structuring technique to the field of semiconductor product design. In putting forward his case, Mr Hutching made



much of the fact that the characteristics of the semiconductor design industry were such that there were particular advantages to be had in applying this technique to that field. First he said the industry relies very heavily on what he described as “re-usable” elements which I take to mean off-the-shelf products. As a result, he said, the industry had spawned a host of companies concerned entirely with designing products but with no manufacturing interest at all. Manufacturing companies employ the services of these design companies to provide leading edge design without having to go to the cost of developing in house design capabilities. They benefit from quicker and cheaper access to new products which can be a critical factor in the semiconductor industry. Furthermore, the proliferation of potential sources of new designs and the globalisation of the industry has, in Mr Hutching’s words, made finding appropriate semiconductor IP akin to finding a needle in a haystack. The invention, he said, provides a solution to meet this particular set of problems.

33 I do not dispute the benefits that the invention might bring over conventional ways of sharing information on what other researchers had developed. However it is clear from the paragraph of his decision which I quoted above that Aldous LJ in *Fujitsu* did not consider the sort of advantages associated with using a computer to do what was previously done manually to confer a technical contribution. I consider the advantages Mr Hutchin has outlined to fall into that same category and conclude that they do not provide the required technical contribution in this instance.

34 Furthermore, I do not consider the application to the field of designing semiconductor products to provide any firmer basis for conveying a technical contribution than was the case in *Fujitsu*. That it is the substance of an invention and not the form of wording employed that is important when determining whether an invention is excluded is a well established principle of UK Patent law. For example, in *Merrill Lynch’s Application [1989] RPC 561*, Fox LJ said at page 569:

“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.”

In refusing the applicant’s earlier application, the Court of Appeal rejected not only claims to the method and apparatus for processing images of crystal structures, but also claims to the method of manufacturing crystals using the crystal modelling technique. In so doing, the court identified what it considered to be the precise substance of the invention and based its decision on that.

35 Mr Hitching impressed upon me that in properly construing the invention (which is what I must do) I could not ignore the wording in the claims which limited the protection the applicant sought to the field of semiconductor product design. I have taken full account of all the elements in the claims but it is my considered opinion that the essence of the present invention is concerned with the administrative process of structuring data to allow easier retrieval and sharing of information. I think it is stretching things somewhat for the preamble of the claims to frame the invention as “semiconductor product designing apparatus” and a “semiconductor product designing method”. Implementing the invention does not result in the production of any tangible

result. The end result is merely the sharing of information across a network. That the information relates to semiconductor products to my mind makes no more of a technical contribution than was provided by the method of manufacture claims in the earlier *Fujitsu* case.

- 36 In my opinion the invention defined in claims 1 and 36 does not provide the technical contribution required to make an otherwise excluded item patentable.

#### Appendant Claims

- 37 Whilst he did not address me in detail on any dependent claims, Mr Hutching asked that I give additional consideration to claims 8 & 9 in the event that I find claims 1 and 36 to be unpatentable. Claim 8 is dependent on claim 1 and includes the feature that each piece of semiconductor IP is allocated a disclosure extent to restrict the users it can be disclosed to. Claim 9 includes the additional feature that the disclosure extent is registered in the catalog portion as a mask. Having found the independent claims to be lacking the required technical contribution, I can see nothing in these particular claims which provides one. In their simplest form this seems to be doing nothing more than applying a security coding to a piece of information along the lines of “not for public dissemination” or “authorised personnel only”.
- 38 Furthermore, having read the specification in its entirety I can find nothing in it which could form the basis of a patentable invention.

#### **Conclusion**

- 39 I have found that the invention falls into the areas excluded from patentability as a method of doing business. Moreover, I have found that the invention does not make the technical contribution required to make an otherwise excluded invention patentable. I therefore refuse the application under section 18(3) on the grounds that the invention claimed therein is excluded under section 1(2)(c).

#### **Appeal**

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

#### **A Bartlett**

Deputy Director acting for the Comptroller