



PATENTS ACT 1977

APPLICANT GE-Hitachi Nuclear Energy Americas, LLC

ISSUE Whether application GB1916397.1 complies with
 Section 1(2) of the Patent Act 1977.

HEARING OFFICER Dr Stephen Brown

DECISION

Background

- 1 The application was filed on 10th May 2018 as part of the national phase filings of PCT Application PCT/US2018/032047. It was republished by the UK Office on 26th February 2020 as GB2576654 A. The original compliance period ended on 28th November 2022, and the extended compliance period now ends on 28th January 2023.
- 2 In his first examination report of 28th September 2021 the examiner objected to the application on the basis of novelty and inventive step. It was noted at that time that the top-up search had been deferred, as had consideration of excluded matter until such time as the contribution could be better ascertained.
- 3 The applicant filed amendments with their attorney's letter dated 29th November 2021, and the examiner dropped the novelty and inventive step objections but raised further clarity and support objections. The examiner also then considered excluded matter under section 1(2) and decided that the alleged contribution related solely to excluded subject matter, namely a program for a computer as such. A further examination report was issued on 13th January 2022 with these objections. The top-up search was also further deferred at that time.
- 4 The applicant filed amendments with their attorney's letter dated 13th May 2022, however the examiner did not find that these amendments overcame the excluded matter objection and a further examination report was issued on 30th June 2022. This report included inviting the applicant to request a hearing.
- 5 This the applicant did in their attorney's letter dated 15th August 2022. The matter thus came before me for a hearing on 21st November 2022 . The applicant was represented by Tomas Karger of Marks & Clerk. I was assisted by Thomas Britland.
- 6 Although no formal auxiliary requests have been raised, in the letter of 15th August 2022 the applicant requested that the matter of claims 5 & 14 were additionally considered. At the hearing Mr Karger noted that this also includes the matter of

claims 4 & 13, respectively, due to claim dependencies. Further, at the hearing, Mr Karger asked that it be considered whether it would be acceptable to add the final explicit feature of simulating the system and if acceptable, whether such an addition would make the claims non-excluded under Section 1(2)(c) of the Act. Although these were not referred to as Auxiliary Requests, I will treat them as such and refer to them as the first and second auxiliary requests, respectively, below.

- 7 To summarise, the matter to be decided is whether the invention as set out in the claims filed on 13th May 2022 is excluded under section 1(2)(c) of the Act as a program for a computer, as such. In addition, if I find it is excluded, whether the invention as set out in the first auxiliary request is excluded under the same. Finally, if I find that this is also excluded, whether the invention set out in the second auxiliary request is excluded under the same.

The Application

- 8 The claimed invention relates to a method of facilitating modelling of a system, and a simulation model generating apparatus for generating such a model, of a process plant from a piping and instrumentation diagram (PID) stored in an extensible markup language (XML) file. The claimed invention works by having the XML file store attributes of components listed in the PID which can be used by the system to automatically apply the attributes to the simulated components when generating the simulation model in a simulation modelling software environment.
- 9 By having the system generate the simulation model from the XML file which stores both the arrangements of the components and their attributes, the time-consuming process of a simulation engineer manually creating the simulation model and inputting the attributes is addressed. It was argued at the hearing that the accuracy of the system will also be improved by the resultant reduction of human error.
- 10 The claims being considered are those filed on 13th May 2022. There are two independent claims, they read as follows:

Claim 1:

A method of facilitating modeling of a system, the method comprising:

receiving, at a processor, an extensible markup language (XML) file corresponding to a piping and instrumentation diagram (PID) of the system;

identifying, by the processor, components of the system that are described in the XML file, the XML file including information about attributes of the identified components, the identifying including identifying a corresponding XML element in the XML file for each component;

generating, by the processor, a corresponding component object data structure for each identified XML element;

storing, by the processor, information about the attributes of the identified components in the corresponding generated component object data structures; and

generating, by the processor, a simulation model page using syntax of a simulation modeling software environment, the generating of the simulation model page being based on the information about the attributes of the identified components stored in the generated component object data structures.

Claim 10:

A simulation model generating apparatus, comprising:

memory storing computer-executable instructions; and

one or more processors configured to execute the computer-executable instructions such that the one or more processors are configured to perform operations including,

receiving an extensible markup language (XML) file corresponding to a piping and instrumentation diagram (PID) of a system,

identifying components of the system that are described in the XML file, the XML file including information about attributes of the identified components, the identifying including identifying a corresponding XML element in the XML file for each component,

generating, by the processor, a corresponding component object data structure for each identified XML element,

storing information about the attributes of the identified components in the corresponding generated component object data structures, and

generating a simulation model page using syntax of a simulation modeling software environment, the generating of the simulation model page being based on the information about the attributes of the identified components stored in the generated component object data structures.

- 11 The simulation model generating apparatus of claim 10 is defined by particular features which allow it to perform the method of claim 1. As such, both claims will stand or fall together. The following analysis thus applies to both claims, however for conciseness only claim 1 will be explicitly discussed.

The law

- 12 The examiner raised an objection under section 1(2) of the Act that the invention is not patentable because it relates to one or more categories of excluded matter. The relevant provisions of this section of the Act are:

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

...

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

...

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.

- 13 The assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*¹, as further interpreted by the Court of Appeal in *Symbian*². In *Aerotel* the court reviewed the case law on the interpretation of section 1(2) and set out a four-step test to decide whether a claimed invention is patentable:

(1) Properly construe the claim;

(2) identify the actual contribution;

(3) ask whether it falls solely within the excluded subject matter;

(4) check whether the actual or alleged contribution is actually technical in nature.

- 14 The Court of Appeal in *Symbian* made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it was confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “technical contribution”. Paragraph 46 of *Aerotel* states that applying the fourth step of the test may not be necessary because the third step should have covered the question of whether the contribution is technical in nature. It was further confirmed in *Symbian* that the question of whether the invention makes a technical contribution can take place at step 3 or 4.

- 15 Lewison J (as he then was) in *AT&T/CVON*³ set out five signposts that he considered to be helpful when considering whether a computer program makes a

¹ *Aerotel Ltd v Telco Holdings Ltd & Ors Rev 1* [2007] RPC 7

² *Symbian Ltd v Comptroller General of Patents* [2009] RPC 1

³ *AT&T Knowledge Ventures/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

technical contribution. In *HTC/Apple*⁴ the signposts were reformulated slightly in light of the decision in *Gemstar*⁵. The revised signposts 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 the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer*
- v) whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

- 16 Mr Karger agreed at the hearing that the *Aerotel* assessment was the correct approach. At the hearing, Mr Karger did rightly note that the *AT&T* signposts are not necessarily considered determinative but are available as helpful aids when considering whether the contribution is technical in nature. That being said, Mr Karger did comment on that decision during his discussion.

Application of the *Aerotel* test

Step (1): Properly construe the claim

- 17 I don't believe there to be any particular difficulty in construing the claims, but for completeness I will provide a little detail on two of their terms below:
- a) 'Attributes' means features of the components, for example, "ComponentName", "ComponentClass", "ID" and "TagName" as set out in paragraph [0053] of the description;
 - b) 'Component Object Data Structure': refers to an array or table which stores the attribute data, the only example appears as the array in Table 1, on page 15 of the description;
- 18 Taking into account these meanings, considered in light of the description, I believe that the claims may simply be construed as read.

⁴ *HTC v Apple* [2013] EWCA Civ 451

⁵ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

Step (2): Identify the actual or alleged contribution

- 19 Both the examiner and Mr Karger are agreed that the approach to how the contribution is identified is set out in paragraph 43 of *Aerotel*:

“it is an exercise in judgment probably involving the problem said to be solved, how the invention works, what its advantages are. What has the inventor really added to human knowledge perhaps best sums up the exercise. The formulation involves looking at substance not form – which is surely what the legislator intended”.

- 20 There has been some disagreement over the examiner’s identified contribution in the correspondence. Although the examiner had not explicitly mentioned paragraph 8 of *AT&T/CVON*, which suggests that to determine the contribution we must have “*some notion of the state of the art*”, it was clear that the examiner followed this approach and considered what was known in the prior art when forming their contribution. In their most recent examination report, the examiner identified the contribution as:

A computer implemented method of identifying elements corresponding to components of a system and their attribute information from a PID, storing the attribute information of each component in its own corresponding generated component object data structure, and generating a simulation model page based on attributed information of each of the identified components stored in the component object data structures automatically.

- 21 At hearing, Mr Karger made it clear that his belief was that the contribution of the invention is “*effectively the subject matter of claim 1*”.
- 22 In comparing claim 1 to the contribution identified by the examiner, I find the main, substantive difference is reference to XML files as opposed to merely “information”. This point has been argued by the attorneys and the examiner previously in the letter of 13th May 2022 and the examination report of 30th June 2022. I find that I agree with both positions. The examiner is correct that whether the file type is XML, HTML or CSV, does not matter provided the file type is capable of containing the information. Similarly, the attorney is correct, the invention is limited to XML files and including this in the contribution provides a necessary context for understanding. However, merely choosing a particular file format, one that has its own ISO standard, is unlikely to affect the technicality of the contribution. Indeed I believe that whether the files are identified as XML files or not is immaterial to whether the contribution is technical.
- 23 I also note that both the examiner and agent make reference to the problems being solved by the claimed invention and its advantages, but neither have included these in the contribution. In paragraph 43 of *Aerotel*, Birss LJ discusses three questions which, when answered, should help in the formulation of the actual contribution. I will avail myself of the assistance provided by Birss LJ in considering the contribution for myself:
- i) The problem to be solved is the manual input of, potentially, hundreds of components in a simulation model page of modelling software.

- ii) How the invention works is by receiving an XML file of a PID of a system, identifying the components of the system and their attributes from the XML file as well as a corresponding XML element for each component, generating a corresponding component object data structure for each identified XML element, storing the attributes of each component in their respective component object data structure, and generating a simulation model page in the modelling software using the attributes stored in the component object data structures.
- iii) The advantages are that user time is saved as the components and their attributes are automatically identified when populating the simulation model page, accuracy may also be improved by reducing the opportunity for human error.

24 While I have included the advantage of reduced human error, as put forward by Mr Karger, I note that it is not mentioned explicitly in the application. Also, it only removes human error from the process of converting the PID to a simulation model, it potentially increases the chances of human error being missed when the PID is formed in the first place.

25 Regardless of this, I find that the actual contribution of the invention is:

A method of automating the populating of a model of a system from a PID of the system, thus saving time and improving accuracy of the population, the method comprising receiving an XML file of a PID of a system, identifying the components of the system and their attributes from the XML file as well as a corresponding XML element for each component, generating a corresponding component object data structure for each identified XML element, storing the attributes of each component in their respective component object data structure, and generating a simulation model page in the modelling software using the attributes stored in the component object data structures.

Step (3): Does the contribution fall solely within the excluded subject matter

26 As noted above, Mr Karger argued that the *AT&T* signposts are not always determinative, but they can be considered helpful. At hearing, Mr Karger began by making a broader argument, outside of the signposts, regarding the general concept that an invention which either solves a technical problem external to the computer or solves one within the computer, is not excluded. Notwithstanding that this discussion comes from *Symbian*, which is covered by signposts (ii) & (iv), Mr Karger's argument actually ended up straddling many of the signposts. Therefore, given that the *AT&T* signposts represent the "most reliable guidance" I see no reason to depart from their use in this case. I also note that in the previous correspondence, explicit attention was directed to signposts (i) and (v). Also, reference was made to the system operating in a "new way" which is the crux of signpost (iii). Therefore, I believe it would be best to discuss all five signposts in order here, which I will now do.

The AT&T Signposts

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

- 27 Mr Karger’s arguments at the hearing largely aligned with the points previously made in correspondence, in that the effect outside of the computer is the reduction in work being carried out by simulation engineers. As the simulation engineer does not need to manually enter information from the PID into the simulation model, there was a real-world effect outside of the computer.
- 28 Mr Karger also referred to *Halliburton*⁶, in that, while claim 1 is not tied to a process plant system, it is implicit, and it is included in claim 2. He argued that this aligned with *Halliburton* where making the drill bit wasn’t explicitly claimed but the claim was nonetheless allowable.
- 29 I’m afraid I do not find this argument convincing. The result of the contribution is the population of information in a simulation page, there is no output, implicit or otherwise beyond this. *Halliburton* related to the complex modelling of drill bits to specifically design an *improved* drill bit. Regardless of whether the present contribution is tethered to a physical interaction or not, it doesn’t relate to an *improved* process plant or even an *improved* simulation, it relates to *improved* population of data into an entirely standard simulation model. The contribution is merely a manner of automating data entry which would otherwise be performed by a simulation engineer. I do not consider this a technical effect external to the computer. The contribution thus does not meet the first signpost.

Signpost (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

- 30 There has been no suggestion that the actual contribution runs at a level of architecture of the computer. It is clear that the invention runs only on the simulation modelling software environment which I consider to clearly be an application-level process. Therefore, I conclude that the contribution does not meet signpost (ii).

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

- 31 Mr Karger did not comment on this at hearing, but in the correspondence of 13th May 2022, the argument was made that the “*computer (processor) must function in a new manner (not previously performed by a simulation engineer) in order to address the problem*”. I cannot agree this line of reasoning. All novel software gives the processor a different set of instructions but this does not mean that the processor

⁶ Halliburton Energy Services Inc. [2011] EWHC 2058 (Pat)

itself operates in a new manner. This is discussed in paragraph 30 of *AT&T*, quoting from *Gale*⁷, which provides the basis for this signpost, the key point I believe is this:

But, as I understand it, in the present case Mr. Gale has devised an improvement in programming. What his instructions do, but it is all they do, is to prescribe for the cpu in a conventional computer a different set of calculations from those normally prescribed when the user wants a square root. I do not think that makes a claim to those instructions other than a claim to the instructions as such. The instructions do not define a new way of operating the computer in a technical sense.

- 32 There are clear parallels between this interpretation of the claim in *Gale*, and the present invention. The present invention provides a series of instructions which cause the simulation modelling software environment to operate in a different way (pulling data from an XML file), but the computer itself runs conventionally under the instruction of the software regardless. The method is not generally applicable because it only confers advantages when used in conjunction with the XML file and the simulation modelling software environment. Thus, the contribution does not meet signpost (iii) either.

Signpost (iv) – whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

- 33 Mr Karger began his argument at hearing by discussing paragraph 48 of *HTC*, his assertion was that *HTC* related to an improved interface which allowed application programmers (developers) to write application software more easily and that as a device, it is easier to use. The comparison is that the present contribution relates to an interface for simulation engineers (although this is not specifically disclosed) which makes it easier to receive a fully populated simulation model page. He further asserted that the interface, in a similar manner to that of *HTC*, allowed the simulation model page to be more easily and effectively created by the program instead of the simulation engineer, resulting in a better computer.
- 34 I'm afraid I find this argument unconvincing too. Firstly, the assertions made are in error. In *HTC*, the invention related to the manner in which multiple touches on a touch-sensitive device were dealt with at an operating system level of the device, which meant that multiple simultaneous touches could be easily disregarded before the application had to process it. This meant that applications that only accepted single inputs or were required to need exclusive input (i.e. not receive inputs at the same time as another application) would not need to have the additional complex coding necessary to interpret additional touches programmed in. It was therefore easier for developers to write applications for the device as the operating system itself dealt with the issue of multiple touches before the data was fed to the application. Contrary to Mr Karger's assertions, it was not merely an interface which allowed developers to write applications more easily, it was a system interface which took the hardware inputs and processed them in a new way before sending the data to the applications. In the present invention, the interface is described as being a

⁷ *Re Gale's Application* [1991] R.P.C. 305

graphical user interface (GUI) for a single program which converts one file format into another making it easier for a simulation engineer to enter data.

- 35 User experience may be a positive outcome for a non-excluded technical advance, as is the case in *HTC*, but it is not a technical advance in and of itself. In the case of *Symbian*, the user experience was improved by the reduced number of crashes of the system, but the technical advance was in the process which stopped the crashes. The computer was considered a better computer because it no longer crashed. I find no parallel with this in the present contribution, it is a standard computer operating in a standard way on specific software. I therefore find that the fourth signpost is not satisfied.

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

- 36 The problems Mr Karger set out as having been overcome are how to reduce simulation engineer time and how to reduce input errors. Mr Karger did not elaborate in any manner that I have not otherwise discussed above in regard to the other signposts. In the correspondence of 13th May 2022, it was argued that the problem was “how to automate a previously manual process”, however I disagree with this as this is the solution of the problem, not the problem itself. In order to determine whether the problem is overcome, it is best to begin by setting out the difference between the manual and automatic process. The manual process is taken to involve:

A person designing a PID in a first environment (another application or physically with a pen and paper), that PID then being used by the same person or a different person to manually populate the simulation modelling page in the second environment (the simulation modelling software environment)

- 37 The automated process, in full, is taken to involve:

A person designing a PID in a first environment which can be saved as an XML file, that XML file being used by the same person or a different person to automatically populate the simulation modelling page in the second environment (the simulation modelling software environment)

- 38 What becomes immediately clear in this situation is that the PID must still be designed first, the attributes of the components (what they are, where they are located, how they are connected) must be input. The present invention merely changes the point at which the attribute data is input into the system, moving it from the input into the modelling simulation page back to the PID design stage. Therefore, I find the problem of saving time when populating the simulation modelling page is circumvented.

- 39 Notwithstanding that the problem has been circumvented, I also note that the act of automating a data entry process is also not a technical problem in the first place. As noted above, improving a user experience (reducing time) is not a technical advance in and of itself, it is merely an advantage.

- 40 Having considered the contribution in light of the *AT&T* signposts, I am of the opinion that it falls solely within excluded subject matter. None of the signposts I have considered suggest that the contribution provides the required technical effect and so I find that it is no more than a program for a computer as such.

Step 4: Is the contribution technical in nature?

- 41 The final step of the *Aerotel* test is to check whether the contribution is technical in nature. Since I have decided that it does not have a technical effect beyond that of a program running on a computer it also fails this step of the test. I thus decide that the claims are excluded under section 1(2).

First Auxiliary Request

- 42 Having found the main claims to be excluded, I will now consider the claims with the addition of the matter of claims 4 & 5 and 13 & 14, respectively, as set out in the first auxiliary request following the same approach as above. I will not reproduce both sets of claims here, only claims 1, 4 & 5, as the same matter is added to both independent claims and as before, both sets of claims will stand or fall together. Note, for ease, I have highlighted the matter of claims 4 & 5 in bold to set it apart from the matter already considered in claim 1:

Claims 1, 4 & 5:

A method of facilitating modeling of a system, the method comprising:

receiving, at a processor, an extensible markup language (XML) file corresponding to a piping and instrumentation diagram (PID) of the system;

identifying, by the processor, components of the system that are described in the XML file, the XML file including information about attributes of the identified components, the identifying including identifying a corresponding XML element in the XML file for each component;

*generating, by the processor, a corresponding component object data structure for each identified XML element, **wherein each generated component object data structure is an array that includes attributes of the identified XML element to which the generated component object data structure corresponds as array elements;***

generating an endpoint node array list, a link array list, and an on-link node array list; and

based on a type of the identified XML element to which each array corresponds, adding each array to one of the endpoint node array list, the link array list, and the on-link node array list,

the endpoint node array list including arrays corresponding to identified XML elements that are defined as origin nodes or termination nodes of links in accordance with design rules of the simulation software modeling environment,

the on-link node array list including arrays corresponding to identified XML elements that are designated as nodes that are placed on top of links in accordance with design rules of the simulation software modeling environment,

the link array list including arrays corresponding to identified XML elements that are defined as links in accordance with design rules of the simulation software modeling environment;

storing, by the processor, information about the attributes of the identified components in the corresponding generated component object data structures; and

generating, by the processor, a simulation model page using syntax of a simulation modeling software environment, the generating of the simulation model page being based on the information about the attributes of the identified components stored in the generated component object data structures.

43 I will briefly comment on the construction of these claims here. I have already commented on the construction of “component object data structure” as to have required a table or array, as this is the only example provided in the application. I will however, for context, discuss the construction of the various node types which are set out in paragraph 83 of the application:

- (a) *‘Endpoint Nodes’ are components such as tanks or filters;*
- (b) *‘On-link Nodes’ are components such as valves or check valves;*
- (c) *‘Link Nodes’ are components such as pumps or piping.*

44 Therefore, the additional matter to consider can be easily construed based on the concept that the respective node array lists are merely lists which hold the component object data structure arrays of the specific types of components listed.

45 Instead of revising my previous alleged contribution, I feel it is best to consider what the matter of claims 4 & 5 alone would actually add. Claim 4 merely specifies that the generated component object data structure is in the form of an array element. Claim 5 then goes on to generate a series of lists and then a basis for how each identified XML element is sorted into the appropriate list. None of this additional matter is considered to operate externally to the computer, to operate at the level of the architecture of the computer, results in the computer being made to operate in a new way, makes the computer a better computer or addresses the problems that have already been discussed.

46 Mr Karger argued at the hearing that the use of the node array lists causes the computer to operate in an entirely new way but this reasoning fails for the same reasons I have set out above. Namely, it does not make the processor itself operate in a new way, it merely makes it follow different instructions.

- 47 The claims as set out in the first auxiliary request thus fail to meet any of the *AT&T* signposts. Therefore, using the reasoning set out above, I find that the first auxiliary request is also excluded from patentability.
- 48 Before I move on to consider the second auxiliary request, I should address points made by Mr Karger involving the relevance of the European Patent Convention (EPC) and the European Patent Office (EPO) Guidelines. It is true that the UK patent legal practice is, as much as possible, intended to align with that of the EPC. However, we are still ultimately bound by UK statute, regulation, and case law. Further, decisions of the EPO technical board of appeal decisions can only be considered persuasive. That being said, I will take a moment to address Mr Karger's points regarding the decision T1194/97.
- 49 I will not discuss the decision in detail, especially as the analogy Mr Karger made at hearing actually appears to be related more to T163/85 which is discussed in T1194/97. That decision, T163/85, specified that there are considered two kinds of data: cognitive data (e.g. a picture) which is considered excluded; and functional data (e.g. encoding data) which is allowable. Functional data is considered data without which the system cannot operate, in T163/85 this was a form of header data that told the television receiver how to decode the television video signal. Without the header, the television receiver could receive the signal but not decode it, therefore resulting only in static.
- 50 Mr Karger's argument was that the node array lists fell within this category and that without them, the present invention would not function. I am not convinced this is the case. Firstly, going back to the signposts and the fundamental point of the level the present invention operates at, for the node array lists to be functional data they must be necessary for the operation of *the computer itself*. The computer will still operate, assuming the node array lists are necessary for the generating a simulation page, their absence will only halt the population of the data into simulation page, not the computer itself.
- 51 Secondly, I am not entirely convinced that the node array lists are strictly necessary in the first place, certainly not to the extent they are presently included in the claims. My understanding of the node array lists is that all the components are separated into their respective node type, then when simulation modelling software environment comes to generate the simulation model page, it reads through each list in turn putting each component in its correct place with its correct connections. It is not clear how merely having a non-categorised list of component object data structure arrays would stop the operation of the simulation generator. Therefore, I do not believe the node array lists are functional data as required by the EPO Guidelines.

Second Auxiliary Request

- 52 Mr Karger put it to me to consider whether it would be acceptable to add the step of *running the simulation of the process plant* and whether that addition would make the claimed invention non-excluded.

53 I will not particularly dwell on this point, the contribution of the invention is directed to a method of populating the simulation model page, whether or not that simulation is run is immaterial as is whether it is run based on a particular processing system, real or otherwise. As I discussed above, this case is dissimilar to that of *Halliburton* in that it does not seek to design a better system it merely seeks to populate data into the model faster. Therefore, I find that the addition of this step would not take the claims out of excluded subject matter.

Conclusion

54 I conclude that the claimed invention, and the two auxiliary requests, are excluded from patentability under section 1(2)(c) of the Act as a program for a computer as such.

55 Having reviewed the application, I do not believe there is any matter present which may allow for a saving amendment. I therefore refuse the application under section 18(3).

Appeal

56 Any appeal must be lodged within 28 days after the date of this decision.

Dr Stephen Brown

Deputy Director, acting for the Comptroller