

- 6 I note that the examiner has deferred consideration of inventive step under section 1(3) of the Act so, should I find in favour of the applicant in relation to excluded matter under section 1(2), the application would need to be remitted to the examiner for further consideration.

The Invention

- 7 The invention arises in the context of “configuration software” which, according to lines 26 & 27 of the description, “*has been widely used in the industrial control industry and the electric power industry.*” The agent’s letter of 14 September explains that “configuration software” encompasses Supervisory Control and Data Acquisition (SCADA) systems and also the more general Human and Machine Interfaces (HMI). The examiner accepted this clarification and I agree that it reflects the content of the application; hence, it is through the lens of SCADA systems that I shall interpret the application.
- 8 A brief introduction to SCADA is therefore useful to place the invention in its proper context. SCADA systems serve to monitor and control industrial processes or networks. By way of illustration, they might be used in conjunction with the apparatus of a production facility, or with a network distributing a consumable such as electricity, gas or water, or simply with a suite of devices in a warehouse. Typically, multiple sensors are arranged on the apparatus or across the network. Output from the sensors is handled by field controllers, such as programmable logic controllers, which then pass data to a computer. The computer might be a single personal computer (PC) running the configuration software, or it might be a distributed array of user terminals running a client module of the software which are connected to a central device running a server module of the software. No matter how the computer hardware is arranged, the software provides a graphical user interface which displays real-time information about the process being monitored. This user interface may provide for the input of commands to control the monitored process. The configuration software typically includes a “historian” module which records data over time and processes the data to generate informative reports.
- 9 The application explains, in its background section (see lines 10-42), that “*more and more enterprises need to provide multilingual user interface for configuration software users in different regions.*” It says that the usual approach to providing functionality in more than one language is to make localised versions of the software based on the languages used in a particular region. This results in separate software development streams for separate regions which, it says, can introduce inconsistencies into the coding of the software, which in turn introduces complexity to the processes of maintenance and upgrading. To address this scenario, the invention is directed to providing a single-version configuration software with unlimited multi-language translation capability.
- 10 The invention as currently claimed in claim 1 relates to a method for producing instructions for operating a computer and allowing interaction with the computer in the language best suited to the operator or geographic location without the need to modify the actual software being used to run the computer. The method is defined by a sequence of five essential steps in claim 1 with the five subsequent dependant claims each providing further detail on one of these steps. The application says (at lines 37-

42) that by adopting this approach “no software codes need to be modified, thereby greatly simplifying the process of software localization.”

- 11 In the invention as claimed (see below), the applicant uses the term “character strings” which, based on the specification, I consider means text intended for display to the user. These character strings could be information, instructions, titles or labels, essentially anything displayed by the software and intended to be read by the user. For consistency, I shall use the same term in this decision.
- 12 The application is explicit that the character strings must be recorded using Unicode and encoded in UTF-8. Unicode (also referred to as the Unicode Standard) is an information technology standard for the consistent encoding, representation and handling of text expressed in most of the world’s writing systems¹. Put simply, there is a unique code for every character in every writing script, such as the Latin or Arabic scripts. UTF-8 is an eight-bit encoding used for electronic communication. It is defined by the Unicode Standard and the name is derived from ‘Unicode Transformation Format – 8 bit’. It is the encoding scheme used for almost all webpages². I note that the application uses the lower-case form, “utf-8”, but, as this term is an abbreviation, I will use the upper-case form “UTF-8” in this decision.

The Claims

- 13 The application as currently on file comprises one independent claim and five dependent claims. Independent claim 1, reproduced in full below, comprises an initial overview, which I shall refer as the preamble, followed by the detail of the five steps in the method.

1. An internationalized and multilingual realization method for a configuration software includes:

in the development process of the configuration software, a Unicode coding standard is used to write a tool interface and product configuration files coded by UTF-8; wherein as a configuration template, the product configuration files are provided to users for use, and are used for storing product configuration information and configuration logical application information; after configuration is finished, logical storage files are exported with complete configuration information and coded by UTF-8 for application in engineering of software,

wherein the specific flow is as follows:

step 1, in the development process of the configuration software, analyzing the source code of the configuration software, the product configuration files and the logical storage files, extracting character string information, and generating character string files coded by Unicode;

¹ For further explanation on Unicode and the Unicode standard, see <https://en.wikipedia.org/wiki/Unicode>

² For further explanation on UTF-8 and its role in electronic communication, see <https://en.wikipedia.org/wiki/UTF-8>

step 2, translating the character string files coded by Unicode into a target language and storing them;

step 3, importing the translated character string information in the target language into a multilingual database through a multilingual import tool;

step 4, operating a configuration tool, the configuration tool adapted to read corresponding character strings in the multilingual database based on a displayed language, export the character string files corresponding to omitted translation information, and realize multilingual display at a PC terminal; and

step 5, after configuration by users, exporting engineering files storing multilingual information from the multilingual database, downloading to a device, and realizing multilingual display in the device.

- 14 There are five dependant claims, 2-6, each one providing further detail on the corresponding of the five steps referred to in claim 1 (i.e., claim 2 further elaborates step 1; claim 3 further elaborates step 2 etc.). For the purposes of this decision, I will focus on independent claim 1.

The Issue to be decided

- 15 The issue to be decided is whether the invention as claimed relates to matter excluded under Section 1(2) of the Act, specifically part (c).
- 16 I note that the examiner has deferred consideration of inventive step under section 1(3) of the Act so, should I find in favour of the applicant in relation to excluded matter under section 1(2), the application would need to be remitted to the examiner for further consideration.

Excluded Matter – Section 1(2)

The Law

- 17 Section 1(2) of the Act sets out certain categories of subject-matter which are not considered to be inventions. These categories are often referred to as ‘excluded subject-matter’.
- 18 The relevant provisions of section 1(2) of the Act are shown with added emphasis below:

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) a discovery, scientific theory or mathematical method;

(b) a literary, dramatic, musical or artistic work or any other aesthetic creation whatsoever;

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

(d) the presentation of information;

*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.***

19 The assessment of patentability under Section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*³, as further interpreted by that court in *Symbian*⁴. 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. These steps are:

(i) properly construe the claim;

(ii) identify the actual contribution;

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

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

In *Symbian*, the Court of Appeal made it clear that the four-step test in *Aerotel* was not intended to be a new departure in domestic law; it confirmed that the test is consistent with the previous requirement set out in case law that the invention must provide a “*technical contribution*”.

20 Kitchen LJ noted in *HTC*⁵ that the *Aerotel* test is followed in order to address whether the invention makes a technical contribution to the art, with the rider that novel or inventive purely excluded matter does not count as a “technical contribution”. Thus, the question of whether a computer-implemented invention is patentable has to be resolved by asking whether it reveals a technical contribution to the state of the art and this question is answered with the aid of the four-step test for excluded subject-matter set out in *Aerotel*.

21 According to paragraph 46 of *Aerotel*, applying the fourth step may not be necessary because the third step should have covered the question. This is because a contribution which consists solely of excluded matter will not count as being a “technical contribution” and thus will not, as the fourth step puts it, be “technical in nature”.

³ *Aerotel Ltd v Telco Holdings Ltd & Macrossan’s Application* [2006] EWCA Civ 1371; [2007] RPC 7.

⁴ *Symbian Ltd v Comptroller-General of Patents* [2009] RPC 1

⁵ *HTC Europe Co Ltd v Apple Inc* [2013] EWCA Civ 451

22 Lewison LJ provided five signposts in *AT&T/CVON*⁶, which he reformulated in *HTC*⁵ in light of the decision in *Gemstar*⁷, which he considered helpful when exploring the issue of whether (or not) a computer programme makes a technical contribution. These so-called “AT&T 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; and*
- v) *whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented.*

23 I note that there is no disagreement between the applicant and the examiner over the relevant law.

Arguments from the applicant

24 The agent’s letter of 1 December 2021 argues that the invention meets AT&T signposts (ii) and (iv) above and therefore makes a technical contribution to the art such that it is not excluded from patentability as a computer programme.

25 In respect of AT&T signpost (ii), it was argued that “*the multilingual realisation is practicable irrespective of the software for which it is desired and does not require a specific set of data in order to function.*” Moreover, the invention “*is making changes at the architectural level (i.e. the computer code) and in a technical manner (i.e. changing portions of computer code.*”

26 In respect of AT&T signpost (iv), it was argued that the invention “*enables the computer to run more efficiently and effectively as a computer, by virtue of the claimed multilingual realization of software, as opposed to requiring entirely separate installations of a software package. The computer is in fact made better in the sense of running more efficiently and effectively as a computer, as the overall required storage requirements are reduced compared to the conventional approach whereby multiple separate installations (with multiple redundant parts) are required.*”

⁶ *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

⁷ *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

Analysis

27 The first step in *Aerotel* is to construe the claim.

Step (1): Properly construe the claim.

28 I must read the claim through the eyes of the notional “person skilled in the art” who has read the specification (that is the description, drawings and claims) as a whole and who is seeking to implement the invention. The skilled person would have regard to the context of the invention, which I have sought to explain above, and would develop their understanding of the invention within that context.

29 Since the claim is to be construed in light of the specification then, before I turn to the specific wording of the claim, I must first address any matters of significance which arise in interpreting the specification as a whole. This will ensure that I read the claim through the correct lens. I shall address five such matters:

- (a) how the translation of the character strings is performed;
- (b) the use of the software with multiple devices;
- (c) the role of configuration files;
- (d) the selection of the software’s display language; and
- (e) the iterative translation loop shown in figure 1.

(a) How the translation of the character strings is performed.

30 The application is silent on how the character strings are to be translated. Claim 3, as filed, provides that “*the translation results are edited and input*”, wherein the word “*edited*” could be taken to suggest some human involvement. By contrast, line 118 of the description refers to “*a mode of translating*”, the word “*mode*” perhaps pointing towards machine translation. The application is also silent as to why Unicode and UTF-8 are identified as essential features of the invention. I would speculate that the selection of Unicode with UTF-8 encoding is to enable the character strings to be processed by machine translation services, which may be web-based, but the application does not say as much. Based on the specification as a whole, the notional skilled addressee would understand that the translation could be performed by a computer; nevertheless, translation by a human is not excluded as a possibility.

(b) Use of the software with multiple devices.

31 The invention involves at least two tiers of programmable device. Step 4 of the invention recites a PC terminal, which represents an upper tier computer that runs the configuration software. This computer exports “engineering files” for downloading to at least one other device to realise display of the selected language on that device, as per step 5 of the invention. The description (lines 221-222) and claim 6 refer to this lower tier of device as a slave computer, from which I infer that it could be another PC or a programmable panel display.

(c) The role of the configuration files.

32 Claim 2, and the corresponding portions of the description (see lines 68-76, lines 144-146, and lines 152-156) refer to the character strings being written to three separate

files: a “tool interface” file, a “product configuration information” file, and a “configuration logical application” file. These are the character string files that are translated at step 2 of the invention. They are said to be written in an “excel” format, which may be a reference to the registered trade-mark “EXCEL” owned by Microsoft Corporation and used in respect of its spreadsheet software. Lines 157-161 indicate the “excel” format enables conversion of the character strings into the desired Unicode UTF-8 encoding.

- 33 The application does not elaborate on the role these files play in supporting the configuration software. My impression is that generic configuration software, as produced by a commercial software house, needs to be tailored to reflect the specific details of the customer’s industrial process with which the software will interface. For example, specific titles and labels might be entered. The tailoring would be performed by a user using the higher tier PC terminal recited in step 4 of the invention to input bespoke character strings to the configuration software. The tailored configuration would then be implemented at the shop-floor level by the configuration software writing and exporting the “engineering files” to be run on the lower tier of devices.

(d) The selection of the software’s display language.

- 34 How the language displayed by the configuration software is selected is addressed at lines 95-107 of the description, which says the initial selection is based on “the stored interface for use in interface display in a PC terminal.” The agent’s letter of 14 September 2021 explains that this means that the software language is matched to that selected for the computer’s operating system such that, for example, if the operating system is using English then the software will use English. The examiner accepted this clarification and I am content to do the same. The initial language, English in my example, is referred to as the “source language.” The description goes on to consider what happens when the language setting of the operating system is changed to a different language, referred to as the “target language.” In this situation, the software restarts and searches the multilingual database for character strings in the target language which correspond to those used previously in the source language.

(e) The iterative translation loop.

- 35 Figure 1, lines 101-107 of the description, and claim 5 explain what happens if a particular character string is not available from the database in the target language. Such missing character strings are written to a file using Unicode encoding and are passed back to step 2 for translation, leading to the situation where all the necessary character strings are available in the target language.
- 36 The application doesn’t elaborate any further on this translation loop and so I shall again venture to speculate as to what might be intended. It is apparent that the generic configuration software will necessarily contain many character strings, for example to populate titles, menus and instructions. These are character strings that could be translated during the production of the software, such that the multilingual database is pre-populated with corresponding character strings in target languages at the point of supply to a customer. Referring to my previous suggestion that the software then needs to be tailored to meet the needs of the customer, such tailoring would involve the input of further character strings for which there would be no equivalents in the

multilingual database. It may be these bespoke character strings, alongside any others that are missing, which are passed back for translation.

- 37 Even with the context as a sketch of the technological landscape, and with the specification as a guide, as discussed above, I have found it difficult to construe claim 1. Some of the terms used are not explained in the description, such that the addressee must do their best to interpret them informed only by the general knowledge common to those skilled in the art. Moreover, it is difficult to distinguish which parts of the claim are intended to recite the essential features of the invention from those which are intended merely to establish a context for the essential features. As a result, there is, in my view, some uncertainty as to the intended scope of the claim.
- 38 Despite these difficulties, the examiner concluded that the claimed invention is implemented on a computer. The attorney did not contest that view and submitted arguments as to why two of the AT&T signposts for computer-implemented inventions are met. I agree that this represents a first construction of the claim but I do not consider that this represents the only construction that can be placed on claim 1. I shall therefore first consider if the invention as claimed is a computer-implemented invention. I will then go on to consider an alternative construction for claim 1.

First construction – a computer-implemented invention?

- 39 Owing to the uncertainties arising in respect of how to interpret claim 1, I think it is helpful first to identify those features which can be understood with some confidence. To that end, I turn first to the final two steps recited in the claim, steps 4 and 5.
- 40 Step 4 culminates in multilingual display at a PC terminal. The paragraph of the description beginning at line 95 (page 4) tells us that this is in the context of the configuration software running on the PC and being operated by a user. By “multilingual display”, I believe it means that the software can display character strings in a language other than that in which they were first written, so not just in the “source language” but also in one or more “target languages.”
- 41 Step 5 provides that, after configuration by users, “engineering files” storing multilingual information are exported and downloaded to a device to realise multilingual display in the device. I suggest that the “configuration by users” is probably the tailoring process already mentioned; however, even if I am wrong about that, “users” here seems to refer to one or more users who are at the industrial site, since the rest of the step is to deliver operating files containing character strings in the selected language to the lower tier device or devices such that they can display in that language.
- 42 I therefore infer that step 4, which delivers display in the selected language at the higher tier PC terminal, and step 5, which delivers display in the selected language at the lower tier devices, must both occur at the industrial site.
- 43 Turning now to steps 2 and 3 which cover the translating of the character strings and storing of the resulting translations, I find that these steps do not impose any significant constraints on where or how they are implemented.

- 44 This brings me to step 1, which recites “*in the development process of the configuration software, analyzing the source code of the configuration software, the product configuration files and the logical storage files, extracting character string information, and generating character string files coded by Unicode.*” The phrase “*in the development process of the configuration software*” does not sit comfortably with the concept of a computer-implemented invention delivered by the running of the configuration software at the industrial site, given my interpretation of steps 4 and 5.
- 45 Thus, it is necessary to consider, how else step 1 might be interpreted within the framework of a computer-implemented invention. I consider that step 1, and the first occurrence of steps 2 and 3, should be read, not as steps in a method, but as defining the multilingual database which results from that method. The database is an essential component of the invention which must be available to the configuration software running on the higher tier PC at the customer’s site, no matter whether it is hosted locally on the PC or remotely on a server. Therefore, it is consistent with steps 4 and 5 of this claim which also involve the configuration software running on the higher tier PC.
- 46 Following this approach, claim 1 can be construed as follows:

A computer implemented system for providing a multilingual interface in a configuration software, wherein the system comprises:

a configuration software running on a personal computer (PC) and containing character strings in a source language;

a multilingual database containing both the character strings in the source language and corresponding translated character strings in target languages;

a configuration tool which detects the display language of the PC operating system and passes translated character strings in that language from the multilingual database to the configuration software;

wherein if any required translated character string is missing from the database the corresponding character string is exported to a file using UTF-8 encoding; and

wherein after configuration by a user, the configuration software exports one or more files for download to a separate device or devices to realise display of the target language on those devices.

- 47 I note that the invention of claim 1 was construed as a computer-implemented invention during the examination process. However, if I do not consider that step 1, and the first occurrence of steps 2 and 3, should be read as defining the multilingual database which results from the method rather than as steps in the method itself, I find an alternative construction.

Alternative second construction – a method of doing business?

- 48 This alternative or second construction is better characterised as a method of doing business and accommodates all five of the method steps recited in claim 1.
- 49 Step 1 of the method is required to occur during the development process of the software and requires access to the source code, both of which would seem to indicate that it is carried out by the creator of the software. This step involves extracting character string information from the source code and other files and recording that information in files coded by Unicode. I infer from the preamble that UTF-8 encoding would be used. This procedure of extracting and recording could be performed by a person using a computer. For the step to be entirely computer-implemented, a computer programme other than the configuration software would be needed to extract and record the character string information from the source code of the configuration software.
- 50 Step 2 is the translating of the resulting character string files into a target language and storing the results. As mentioned previously, there is no clear indication as to whether this step involves human intervention. The wording of claim 1, and the further details provided in claim 3, are broadly compatible with either human intervention or with a fully computer-implemented step. Although step 2 recites a single target language, I infer from the wider description of the invention that translation into multiple target languages is envisaged.
- 51 Step 3 is importing the translated character string information into a database via an import tool. A screenshot of the tool's graphical user interface is shown in figure 2. The interface includes action buttons such as "Browse", "Open" and "Add", suggesting that user involvement is envisaged in the completion of this step.
- 52 Steps 2 and 3 are plausibly steps of which the first occurrence could be performed during the creation of the configuration software, that is to say at the software house by the creator of the software. For completeness, I acknowledge that aspects of those steps may occur remotely, with the translation being performed by a translation service and the resulting translations being imported into a remote multilingual database that potentially could serve multiple industrial sites. Nevertheless, the steps would be under the control of processes running at the software house.
- 53 By contrast, step 4 is necessarily performed during use of the configuration software by the customer, that is to say, at the industrial site. Step 4 requires operating a configuration tool which detects the present language setting of the computer and downloads from the database the character strings in that language, such that the configuration software running on the computer displays in the selected language. There is an additional feature in step 4, which is that if certain character strings in the selected language are missing from the database, the corresponding strings in the original or previous language are exported. Claim 5 tells us that they are exported in Unicode encoding, presumably UTF-8, and figure 1 shows that the exported strings are passed back to step 2 for translation. This process loop is noteworthy because the resulting iteration of steps 2 and 3 is initiated by the configuration software being run by the customer, as opposed to the first instance of those steps which may occur during the creation of the software. As before, I would speculate that the UTF-8 encoding allows the exported strings to be passed to a remote, potentially third-party,

machine translation service for translation, but there is no disclosure of such in the application.

- 54 To recap step 5, it says that, “after configuration by users”, “engineering files” containing information in the selected language are exported and downloaded to a device such that the device can display in the selected language. The words “after configuration by users” imply a step in between steps 4 and 5 in which the customer performs some act of configuration, which I infer relates to the tailoring of the software. In that context, it is plausible and consistent to read the exporting action of step 5 as being initiated by the user of the computer rather than by the software running on that computer.
- 55 If the above construction of the claim is correct, then we have step 1 performed in the software house by the creator of the software, and steps 4 and 5 performed at the industrial site by the customer. Step 2 may occur remotely and may be entirely computer-implemented. Step 3 may be controlled from the software house in its first iteration and from the customer’s site in any subsequent iterations; it may involve a user interacting with the import tool, or the import tool could be launched and operated by a computer programme. What is clear in this construction is that the method is not constrained to be entirely computer-implemented, rather it defines an administrative methodology for delivering multilingual functionality in a configuration software.
- 56 I am unable to determine with confidence which of the two constructions was intended by the applicant, so I shall consider both as I proceed through the steps of the *Aerotel* test.

Step (2): Identifying the actual contribution

- 57 The attorney proposed a contribution that was accepted by the examiner: “A *method of making the language display of an executed configuration software adapted to the computer executing such software.*” This proposed contribution rightly omits the personal computer on which the configuration software is run, for it is a standard personal computer which the courts have consistently found forms no part of the contribution to the art.⁸
- 58 The proposed contribution captures the purpose of the invention; however, it encompasses within its scope a great deal more than the solution taught by the application. I therefore propose to restrict it to take account of how the invention works. I shall take the contribution from the first construction as a computer-implemented invention to be as follows:

“A computer-implemented method of making the language display of an executed configuration software adapted to the computer executing such software, wherein character strings for display are translated into target languages and stored in a database from which they are accessed as required.”

- 59 With regards to the alternative claim construction, the invention may be implemented at least in part in part by people such that it is not necessarily a computer-implemented

⁸ E.g., Jacob L.J. at paragraph 73 of *Aerotel*.

method. I shall take the contribution of my alternative second construction as a method of doing business to be as follows:

“A method of developing and using a configuration software wherein character strings are extracted from the source code of the configuration software, translated into target languages, and stored in a database from which they are accessed as required, such that when the software is executed it adapts its display language to that of the computer on which it is executed.”

- 60 I could add to either contribution that the configuration software writes and exports engineering files for download to another device but, as I shall explain, this wouldn't impact on whether the invention falls solely within excluded subject matter.

Step (3): Is there any contribution outside the excluded categories?

First construction

- 61 A computer-implemented invention necessarily involves a computer programme; however, whether the invention amounts to a computer programme as such, and is therefore excluded from patentability, is determined by whether the contribution to the art has a technical nature. This can be assessed by testing the contribution against the five AT&T signposts which are indicative of a technical effect in computer-implemented inventions.
- 62 The first AT&T signpost is a technical effect on a process which is carried on outside of the computer. It is worth emphasising here that “the computer” of the signpost need not be a single computer, it may be a network.⁹ Thus, even if the multilingual database is hosted remotely from the personal computer on which the configuration software is running, the resulting network of database host plus personal computer would nevertheless be considered to be “the computer” of the signpost. Similarly, the passing of engineering files to a lower tier device would also not provide an effect outside of “the computer.”
- 63 In the case of the computer-implemented contribution, its components consist of adapting the language display of the configuration software to that of the computer by translating and displaying character strings, wherein a database is used to manage those character strings. Each of these components occurs within the computer. Whilst the industrial systems with which a configuration software interfaces are certainly technical in nature, they are not part of the contribution here, and the creation, storage and display of translated text has no direct effect on those systems. The display of translated text is pertinent only to the human user, such that there is no *technical* effect on any process carried on outside of the computer. It follows that the first AT&T signpost is not met.
- 64 The second AT&T signpost is a technical effect operating at the level of the architecture of the computer. The translated character strings provided by the invention arise only in the context of the configuration software, the character strings being displayed by the upper tier computer and on the lower tier devices. There is no

⁹ Birrs J. at paragraph 30 of *Lantana v Comptroller-General of Patents* [2013] EWHC 2673 (Pat)

provision for translated text to appear in any application other than the configuration software, such that the effect produced is intrinsically linked to the application being run and to the specific data, in the form of the character strings, contained therein. The applicant highlights that the invention alters the coding of a programme. Whilst I accept that the invention alters the character strings handled by the configuration software, in that it translates them into different languages, I do not agree that this demonstrates an effect at the level of the architecture of the computer because the effect is confined to the character strings displayed by the specific configuration software application. The programming of the configuration software of the invention will be different to that of other configuration software, but there is no consequential effect on any other application running on the computer. It follows that there is no effect operating at the level of the architecture of the computer. Therefore, the second AT&T signpost is not met.

- 65 The third AT&T signpost is the computer being made to operate in a new way. With the effect of the invention being restricted to the handling and display of character strings in a particular application, there is no impact on how the computer operates. Therefore, the third AT&T signpost is not met.
- 66 The fourth AT&T signpost relates to whether the programme makes the computer run more efficiently and effectively. The applicant highlights how the invention reduces the necessary storage and the number of installations on the computer and argues that the computer is therefore more efficient and effective. As was mentioned in the examiner's final report, dated 13 December 2021, there is a critical distinction to be drawn between the computer and the software. The amount of storage, and the number of installations required, is specific to the configuration software itself, in that those same measures for other applications are not affected by the invention. Hence, whilst the invention may deliver a configuration software which needs less storage and fewer installations and which therefore may be considered better than alternative software, it does not deliver a computer able to realise those benefits for other applications. Hence, the computer running the configuration software is not in and of itself a better computer, such that the fourth AT&T signpost is not met.
- 67 The fifth AT&T signpost requires a technical problem to be overcome rather than being merely circumvented. The problem identified by the application is how to provide a multilingual configuration software without having to write a different version of the software for each language or regional group of languages. The problem therefore relates to how the necessary translations are managed and delivered, in other words how they are administered. There is nothing inherently technical in this problem, rather it is an administrative and commercial matter. With the problem being addressed not being a technical one, it follows that the fifth AT&T signpost is not met.
- 68 The AT&T signposts therefore indicate that the computer-implemented contribution does not involve a technical effect.

Alternative second construction

- 69 Turning now to consider the contribution of the alternative claim construction as a method of doing business. This method begins in the software house, where the software is developed, and completes at the industrial site, where the software is used. This separation of its steps in time and space implies that the configuration software

is supplied to the customer, such that there must be some human activity occurring within the scope of the method. At least parts of the recited method steps are susceptible to being performed by people; moreover, to the extent that the method may be computer-implemented, it would involve the use of more than one computer programme on more than one site and at widely separated times, which again points towards the need for some human involvement. The method, then, is not one which can be performed coherently by a computer programme. It sets out a plan by which to provide multilingual functionality in configuration software and so has an administrative and/or commercial nature which renders it a method of doing business. To the extent that such methods are not technical, they are excluded from patentability under the same provision of the Act as are computer programmes.

- 70 My reading of the claim as a method of doing business has not introduced any technical features which were absent from my reading of it as a computer-implemented invention. My conclusion with regards to a technical effect therefore remains the same: there is no such effect.
- 71 Whether I construe the claim as a computer-implemented invention, or as a method of developing and using a configuration software, I conclude that the contribution falls solely within subject matter that is excluded from patentability, either as a programme for a computer or as a method for doing business.

Step (4): Check whether the contribution has a technical nature

- 72 I have already covered this fourth step in respect of the contributions defined above. However, to assess whether there is any scope for saving amendments, I shall consider whether any aspect of the invention as it is described in the specification has a technical nature.
- 73 The critical operations in the first three steps of the method involve extracting text from a file, translating the text, and storing the translations in a database. There is no teaching in respect of methods by which to extract, translate or store text; for this functionality the application relies on that which is already known. Thus, these steps amount to the use of a computer to facilitate the administration of a translation task. In steps 4 and 5, the configuration software matches its display language to that selected for the operating system of the computer, imports text from the multilingual database, and writes executable files for the lower tier devices. Again, there is no technical teaching by which to implement these steps, such that they must be achieved by using conventional computer programming. Each step is thus administrative, rather than technical, in nature.
- 74 Even looking at the invention as broadly as possible, it necessarily concerns a procedural arrangement for providing translated text within a software application; there is no involvement with a technical process. I am therefore satisfied that the invention as described is not of a technical nature.

Conclusion

- 75 Taking all of the above into account, I find that the invention is excluded from patentability under section 1(2) of the Act, whether it is construed as a programme for a computer or as a method of doing business.

- 76 Furthermore, I have found nothing in the application as filed which relates to a non-excluded invention, such that I consider there is no possibility of a saving amendment.
- 77 As the application does not comply with the requirements of the Act, I therefore refuse this application under section 18(3) of the Act.

Appeal

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

Dr L Cullen

Deputy Director, acting for the Comptroller