



PATENTS ACT 1977

PARTIES	Andres Kruse & Elaine Kruse
ISSUE	Whether patent application GB1217066.8 complies with Section 1(2) of the Patents Act 1977
HEARING OFFICER	Ben Buchanan

DECISION

Background

- 1 This decision relates to whether patent application GB1217066.8 complies with Section 1(2) of the Patents Act 1977 ("the Act").
- 2 The application was filed on 25 September 2012 and published on 26 March 2014 as GB2506193A. The compliance period has been extended and ends on 4 July 2021.
- 3 In his first examination report of 4 March 2020, the examiner objected to the application on the basis that it related solely to excluded subject matter, namely the presentation of information and/or a program for a computer as such. Despite amendment and argument on behalf of the applicant, the examiner has maintained that objection. The applicant requested to be heard on the matter in their letter of 2 March 2021 and filed skeleton arguments on 12 May 2021.
- 4 On 19 May 2021 a hearing was held on the matter at which the applicant was represented by Mr D Fry and Dr N Beqo of Agile IP.
- 5 The only matter to be decided is whether or not the invention is excluded under Section 1(2)(c) & (d) of the Act. The examiner has not formally considered other matters, so no assessment of novelty, inventiveness or unity has yet been made. In particular, the question of whether the original search covered the subject matter of the currently amended claims has not been considered, nor has the original search been updated.
- 6 Should I find in favour of the applicant, the application will be returned to the examiner for further processing, updating of the search and formal examination of the remaining substantive issues.
- 7 Finally, subsequent to the hearing, on 28 May 2021 third party observations under Section 21 of the Act were received. Although they refer to the hearing, there is nothing material to consider in relation to the issue to be decided. The examiner will

need to consider any matters arising from these observations should my decision find in favour of the applicant.

Subject matter

- 8 The application describes a number of different ways of displaying paragraphs of text on a computer screen (or similar electronic display device). For example, in one embodiment (see figure 5) the first and final sentences of each paragraph are displayed in different fonts to each other and to the remaining sentences of the paragraph. Following filing of the most recently amended claims, in the embodiment of interest, only the first sentence of each paragraph is displayed until a user action causes the whole of a selected paragraph to be displayed, as illustrated in figures 6a and 6b of the application (reproduced below).

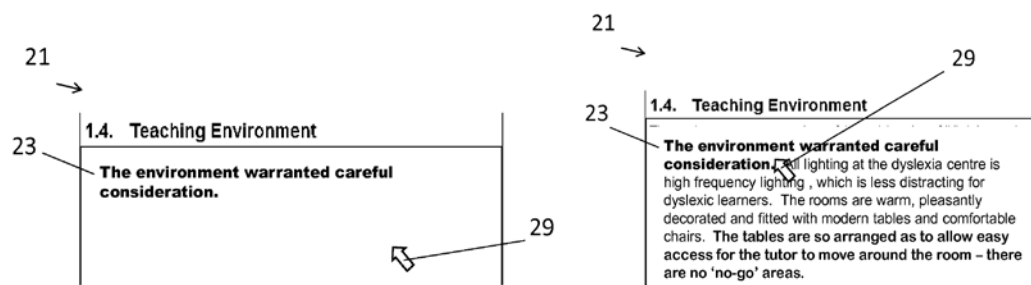


Fig. 6a

Fig. 6b

- 9 Figure 6a shows the paragraph with only the first sentence displayed. Following a user action, e.g. movement of a mouse pointer (29) over the first sentence, the remainder of the paragraph is revealed as shown in figure 6b.
- 10 The description makes clear that the collapsing and subsequent expanding of selected paragraphs reduces the amount of data and processing power necessary to display a document, and that it is particularly useful for smart phones and tablets with a limited display size.

The law

- 11 The examiner raised an objection under Section 1(2) of the Act that the invention is not patentable because it relates to the presentation of information and/or a program for a computer. The relevant provisions of this section of the Act are shown 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...

(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.

- 12 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.

- 13 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.

- 14 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 technical contribution. In *HTC/Apple*⁴ the signposts were reformulated slightly in light of the decision in *Gemstar*⁵. The 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

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

² *Symbian Ltd v Comptroller General of Patents* [3009] RPC 1

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

⁴ *HTC v Apple* [2013] EWCA Civ 451

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

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

- 15 The agent agreed at the hearing that the *Aerotel* assessment was the correct approach for determining patentability, and that consideration of the signposts was appropriate.

Application of the *Aerotel* approach

Step (1): Properly construe the claim

- 16 The latest claims are the amended claims filed on 29 October 2020 (which also accompanied the skeleton arguments). It is worth emphasising that these define a different scope to any of the original claims as searched and initially examined. They reflect a “second embodiment” of the invention as described in the application as filed on page 9 line 21 – page 11 line 6.

- 17 Amended claim 1 reads as follows:

Claim 1. Apparatus, comprising;
an input module for receiving textual input;
an output module for displaying the textual input; and
a processing module configured to identify from the received text:
a plurality of paragraphs for display;
an initial, first sentence and a second sentence within each paragraph, and display only the first sentence of each paragraph;
responsive to user action in relation to a selected one of the displayed first sentences, to display the remaining sentence(s) of the selected paragraph.

- 18 There are further independent claims 9, 17 (in defining a computer program), 18, and 19 which are generally similar to claim 1 and each of which include the main features of claim 1. I noted at the hearing that no assessment of unity had been made by the examiner, but that I considered that all the independent claims would stand or fall together in respect of Section 1(2). The agent agreed and so I need only consider claim 1, my reasoning applying by extensions to the remaining independent claims.

- 19 It should also be said that whilst I am content that the current claims reflect the second embodiment, I have made no assessment as to whether they are supported and do not add subject matter. It strikes me that the limitation in the claims to only *identifying an initial, first sentence and a second sentence within each paragraph* is broader than the supporting description of the second embodiment in the specification which describes the identification of first, terminating and intermediate sentences. I make no finding on this matter, because if the claims as they stand are excluded from patentability, then the point is moot. If not, the examiner will consider the matter.

- 20 There is a related issue relating to the construction of claim 1, in regards to what is meant by “a second sentence”. It is not clear whether the second sentence is intended to be the sentence immediately following the first sentence or whether it is

some other sentence of the paragraph; i.e. whether first and second are being used to identify the position of each sentence in the paragraph or whether they are being used simply to distinguish the sentences from one another for the purposes of the claims. Furthermore, other than identifying the second sentence, claim 1 does not require any specific action to be taken with the second sentence.

- 21 I queried this at the hearing and the agent confirmed that the second sentence was intended to refer to the sentence immediately following the first sentence. This would however be inconsistent with claim 2 which specifies that the second sentence is the terminating sentence.
- 22 Having carefully considered this conundrum, and given that no specific action is specified in claim 1 regarding the second sentence, I consider it should be construed broadly simply to require that the processing module is capable of identifying multiple sentences in the paragraph – including the first sentence. This is also consistent with the second embodiment.
- 23 There are no other difficulties in the construction of the claims and neither the examiner nor the agent have identified any issues.

Step (2): Identify the actual or alleged contribution

- 24 As the application stands, without a settled assessment of novelty or inventive step, we are concerned with the alleged contribution. Guidance on how to identify the contribution is given in paragraph 43 of *Aerotel*, where the court accepted the proposition that identifying the contribution 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.”

- 25 The examiner has identified the contribution as

“a computer with an input module for receiving textual input and software to identify from the input text a first sentence and second sentence within a particular paragraph, which displays only the first sentence until in response to user action the remaining sentences are displayed”

- 26 The contribution identified by the agent at the hearing was:

“addressing information overload and reducing processing power required by reducing the amount of information displayed”

- 27 At the hearing the agent characterised this as a “two part contribution”. Firstly, there is a contribution to the user. The agent explained that the invention was devised to facilitate the processing of information on the screen by a reader. For example, some people, such as those with dyslexia, find it easier to scan or read a large body of text if different parts of the text are differentiated from each other or only displayed on demand. In turn, this contributes to the accessibility of the information (“addressing information overload”). Secondly, by only displaying a portion of each paragraph until a user action indicates that a full paragraph should be displayed, processing capacity

and power consumption are reduced due to the reduced requirement for rendering and displaying information on the screen, because not all the information is displayed at once.

- 28 The above formulation is consistent with the skeleton arguments, although these focus on the second part of the above contribution and the allegedly technical problem of reducing data to be processed and displayed (or as it was also put, how to identify which sentence to retain to display), rather than the advantage to the reader.
- 29 Neither of these formulations seem to me to fully reflect the whole of the contribution as required by *Aerotel*. Rather, each of them relates to a different aspect of the overall contribution; that identified by the examiner being the *how the invention works*, and that identified by the agent being *the problem to be solved* and *what its advantages are*. Combining both these parts provides the following contribution:

Receiving textual input and identifying from the input text a first sentence and second sentence within a particular paragraph; displaying only the first sentence, until in response to user action the remaining sentences of the paragraph are displayed in order to reduce information overload and the required processing power by reducing the amount of information displayed

- 30 The agent made clear at the hearing that the identification of sentences within a paragraph is based on standard sentence delimiters and/or metadata.

Steps (3) & (4): Does the contribution fall solely within the excluded subject matter; check if the contribution is actually technical.

- 31 The third and fourth steps of the *Aerotel* test involve considering whether the contribution falls solely within excluded categories, and then checking whether the contribution is technical in nature. It is appropriate to consider these two steps together because whether the contribution is technical in nature will have a direct impact on whether it falls solely within excluded matter.
- 32 The contribution is clearly implemented through the use of a computer program. However, the fact that the invention is effected in software does not mean that it should immediately be excluded as a program for a computer as such. In *Symbian*, the Court of Appeal stated that a computer program may not be excluded if it makes a technical contribution.
- 33 In order to determine if the contribution is technical in nature I will make use of the *AT&T* signposts. The agent suggested at the hearing that it is the fourth of these signposts which is applicable to the claimed invention. I shall nevertheless consider each of the signposts in turn. Only one need indicate patentability for the objection to fall away.

First signpost – whether the claimed technical effect has a technical effect on a process which is carried on outside the computer

- 34 The identified contribution may be said to have an effect outside the computer in that the display of the text may be said to be improved to the advantage of a reader.

However, that effect only relates to the way in which information is presented. Accordingly, it relates to the excluded field: the presentation of information. It does not provide a suitable *technical* effect. I note the advantage to users such as those with dyslexia, and the associated benefits, including commercial advantages highlighted in the hearing, but I regret this is not persuasive of technical effect or patentability.

Second signpost - 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

- 35 There is no suggestion that the contribution operates at the level of the architecture of the computer. It is clearly directed to a computer program intended to run on a standard operating system. The description on page 6 at lines 29-32 confirms that the program is configured to be run either as a stand-alone application or as an “add on” for use with conventional text editor programs.

Third signpost - whether the claimed technical effect results in the computer being made to operate in a new way

- 36 Similarly, there is nothing to suggest that the computer operates in a new way. The computer operates under the instruction of the program, processing those instructions in a conventional way.

Fourth signpost - whether the program makes the computer a better computer in the sense of running more efficiently and effectively as a computer

- 37 This is the signpost that the agent relied upon at the hearing in support of their argument that the invention was not excluded.
- 38 The agent argued that the invention makes for a better computer as it reduces the processing power required. Essentially the program displays only one full paragraph of text at a time – with the remaining paragraphs limited only to their opening sentences. This reduction in the amount of text being displayed was said to reduce the graphical processing power required – the display of graphics being particularly processor intensive. It was alleged that this is of particular benefit to e-reader hardware which typically has limited processing power. It was further said that the reduction in processing power led to improved battery life for such devices. It was alleged that a reduction in displayed text of 80% (as shown in figures 5 & 6 of the application) would lead to a proportionate reduction in processing power and extension of battery life. This is indeed an attractive argument, but does the reduction of data processed and displayed make for a better computer per se?
- 39 The examiner has referred to the High Court decision in *Autonomy*⁶. In that decision, at paragraph 25, Lewison J quotes from the decision in *Raytheon’s Application*⁷ which includes the following passage at paragraph [37]:

⁶ *Autonomy Corp Ltd v Comptroller General of Patents, Trade Marks & Designs* [2008] EWHC 146(Pat)

⁷ *Raytheon Company v Comptroller General of Patents, Designs and Trade Marks* [2007] EWHC 1230 (Pat)

“[37] ... Nevertheless, it seems to me that this aspect of the contribution is no more than a reflection of how the programmer has chosen to create the desired representation. Just as in Fujitsu the programmer had to devise a program to create a pictorial display which reproduced the effect of a model, so here the programmer had to devise a program to produce a visual representation of the rack and all it contains. The fact he has chosen to do it by synthesising the representation from a number of smaller images is simply a matter of program design. The result is not a new combination of hardware as in Aerotel. Nor is it an improved computer or an improved display as in Vicom. The result is a computer of a known type operating according to a new program, albeit one which reduces the load on the processor and makes an economical use of the computer memory. I agree with the Hearing Officer that this aspect of the contribution relates to a computer program as such.”

40 Similar considerations apply to the present case. The inventor has devised a program which represents the input text in a modified way. However, the choice to do that by displaying only the first sentence of each paragraph seems to be a design choice, inspired by advantage to the reader as acknowledged above. The result is neither new hardware nor an improved computer nor an improved display. As with the above judgment *the result is a computer of a known type operating according to a new program, albeit one which reduces the load on the processor and makes an economical use of the computer memory.*

41 At paragraph 29 of *Autonomy* Lewison J goes on to say:

“29 Where does all this leave us? From these authorities I think that the following can be deduced:...

viii) The mere fact that a computer program reduces the load on the processor or makes economical use of the computer’s memory or makes more efficient use of the computer’s resources does not amount to making a better computer, and thus does not take it outside the category of computer program as such (Aerotel commenting on Gale; Raytheon);

ix) An effect caused merely by the running of the program will not take a program outside the exclusion (Aerotel);

x) The manipulation of data stored on a computer (whether on the computer in use or on a remote computer) is unlikely to give rise to a contribution that exists independently of whether it is implemented by a computer (Bloomberg)

xi) Even if the claimed invention is not a computer program as such, it is still necessary to ask whether the contribution lies solely in some other field of excluded matter. If it does, then the contribution will not be patentable (Oneida).”

42 Point (viii) reiterates the comments in *Raytheon*, that simply reducing the load on a processor does not amount to making a better computer and does not take a program outside the exclusion. In the same way, the agent’s arguments that the contribution serves to reduce the processing power required do not make the

computer a *better computer*. Similarly, the fact that the instant program makes better use of the computer's resources – such as battery life – does not make the computer any better.

- 43 The only effect is one achieved by the running of the program (point (ix)). There is no better computer and signpost four does not assist the applicant.

Fifth signpost - whether the perceived problem is overcome by the claimed invention as opposed to merely being circumvented

- 44 The final signpost asks whether the claimed effect overcomes a problem as opposed to merely circumventing it.

- 45 The problem has been formulated in various ways. In their skeleton arguments the applicant asserts that the problem of *how to reduce data to be processed and displayed* is technical. This position was also put forward by the agent at the hearing. The underlying problem is that there is too much information for a user/reader to intuitively “follow” and visually process (which was informally referred to in the hearing as “information overload”). This seems to me to be a neurological, rather than technical problem. There is an associated problem of there being too much data for a given limited device display-processing and power capability. Addressing this by reducing the amount of data displayed by selectively processing and displaying it in part is circumventing the underlying problem⁸. Nonetheless, for completeness we can still consider *how* this is done.

- 46 The question of how to do this was also formulated as the problem in the hearing (“how to identify which sentence to retain to display”). In this case the problem is either not a technical one, because the answer is an artefact of the way the human brain processes information with a natural preference for each paragraph to be represented by its first sentence, or it is not inherent in the *contribution* because the metadata, delimiters and detection of user action used by the program are conventional. If the problem is formulated as how to reduce required processing power and/or extend battery life, have these been overcome? I think not. The problem has in fact been circumvented by segmenting the text into components and displaying only a subset at a time. The program does not provide a technical solution which overcomes the problem, however it is formulated.

- 47 Accordingly this signpost also does not point to a relevant technical effect.

- 48 I have considered all the arguments put to me but I cannot see anything which can be considered a technical effect. I did specifically ask for any comments on the objection put forward by the examiner that the contribution consisted of the presentation of information. The agent helpfully explained that they considered the presentation of ordered content in response to user selection to go beyond mere presentation. I regret I disagree. While the selection and order of the content presented enables favourable interpretation by a reader it is, nonetheless, the selective presentation of ordered information and does not, to my mind, provide anything beyond the excluded category or of a technical nature.

⁸ The Manual of Patent Practice at section 1.38.5 refers

49 In the absence of any technical nature to the contribution, I find that claim 1 consists of a program for a computer and the presentation of information as such. It does not comply with Section 1(2)(c) & (d) of the Act. Similarly, there is no technical contribution in any of claims 9, 17, 18 or 19 and these claims are similarly directed to excluded things. I have considered the application as a whole and I can see no basis for incorporation in the claims anything which might enable a saving amendment.

Conclusion

50 Since the invention fails to comply with Section 1(2) of the Act, the application is refused under Section 18(3) of the Act.

Appeal

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

Ben Buchanan

Deputy Director, acting for the Comptroller