



report was issued the compliance period was automatically extended in accordance with rule 30(2)(b) to be 12 months from the date of the first examination report i.e. to 22 May 2018. On the 21 May 2018, the applicant filed a F52 extending the compliance period by two months to 22 July 2018. The day before the hearing a further F52 was filed requesting a discretionary extension of the compliance period. I have allowed the request and the compliance period has been extended to the current date of 22 September 2018.

### **The invention**

- 6 The invention relates to a method and to a system which provide for progressive teaching of improved reading skills to a learner. A computer enabled by a suitable software program is connected to an electronic display monitor. A learner is presented with a written passage on the monitor. A learning process involves having the learner read the passage and recording words that the learner pronounces incorrectly or cannot pronounce as error words. Corrective feedback is provided to the learner which may optionally include an audible correct pronunciation of the error words and/or, optionally, include a definition of the error words. The plurality of error words is correlated to a set of similar or associated words in a database to provide a set of related training words. Training is also provided with respect to error words and training words. The learner is then progressed through subsequent passages in which the reading level is increased to provide exposure to progressive reading exercise with ongoing corrective tuition.
- 7 At the hearing Mr Marais helpfully gave a comprehensive explanation of the invention. Mr Marais explained that the invention is a program that helps delayed readers, not a “learn how to read program”. Specifically the program is designed to address the speech pathology of learners, and it does this by identifying errors that the learners make while they read, it then presents a set of related training words, and subsequently further provides training in the form of training exercises based upon a set of related training words.
- 8 Therefore it is providing bespoke training to ameliorate specific speech pathology of specific individual learners. The invention provides bespoke training in the form of training exercises which are based on the errors the learner makes. The program will also provide statistics for the parent, teacher, speech therapist, speech pathologist etc. The program is looking at specific learner speech pathology and providing optimisation of teaching time by allowing parents, teachers etc. to realise what the problems are. This enables the parent or teacher to obtain a bigger picture to inform further decisions and further training. Ms Pereira explained the parent/carer/tutors at home are not necessarily trained/skilled enough to provide amelioration of the speech pathology. The program which is available online brings the required expertise into the delayed reader’s environment e.g. the home, without the need for a specialist speech therapist or speech pathologist.
- 9 The latest set of claims filed on 11 September 2018 has twenty-eight claims including two independent claims – claims 1 and 13. Claim 1 is set out below:

*A method for progressive teaching of improved reading skills to a learner, comprising the following steps:*

- connecting a computer enabled by a suitable software program to an electronic display monitor,
- presenting a first written passage provided by the computer to the learner on the monitor,
- initiating a learning process by allowing the learner to commence reading the first passage,
- recording a plurality of words from the first passage that the learner pronounces incorrectly or cannot pronounce as error words,
- providing corrective feedback to the learner which may optionally include an audible correct pronunciation of the error words and/or, optionally, include a definition of the error words,
- allowing the learner to complete reading the first passage,
- matching the plurality of error words to a set of similar or associated words in a database to provide a set of related training words wherein similar or associated words are determined by a comparative analysis to determine words that are similar in spelling pattern, phonetic transcription or syllable division to the error words,
- providing training with respect to at least one of the plurality of error words and at least one of the set of related training words,
- progressing to a second passage, and in so doing,
- advancing the reading level of the passages by repeating the process; and
- wherein the method is implemented via the internet using a computer with the software installed on a remote server.

Claim 13 reads as follows:

*A system for progressive teaching of reading skills to a learner comprising a computer processor connected to a monitor, the processor enabled by a suitable software program:*

- to present a first of a plurality of reading passages on a program interface displayed on the monitor for a learner to read;
  - with a computer input control associated with a cursor for interaction with the program interface to mark any words in the first passage that cannot be pronounced or are pronounced incorrectly;
  - to record the marked words as error words;
  - the processor including a database of words used for the plurality of passages;
  - the database including details of the correct pronunciation of the words, preferably the database is compiled with categories comprising examples of function words and/or trick words and/or word patterns each category having similar spelling patterns, phonetic transcriptions and/or syllable divisions;
- the software program configured:*
- to match the recorded error words to a set of similar or associated words in the database and to provide a set of related training words, wherein similar or associated words determined by a comparative analysis to determine words that are similar in spelling pattern, phonetic transcription or syllable division to the error words,
  - to provide training with respect to at least one of the recorded error words and/or set of related training words,

- to provide corrective feedback relating to at least one recorded error word, which includes the details of the correct pronunciation of the error words; and  
- to present a second reading passage for a repeat of the reading and corrective feedback process;  
with further repeats through subsequently presented passages in which the reading level is increased providing exposure to progressive reading exercise with ongoing corrective tuition; and  
- wherein the system is implemented via the internet using a computer with the software installed on a remote server.

### The issues to be decided

- 10 The issues for me to decide are (i) patentability i.e. whether the invention falls into one of the categories set out in section 1(2)(c) of the Patents Act 1977 as a program for a computer as such and (ii) added matter, i.e. whether the amended claims have added subject-matter beyond that contained in the application as filed contrary to section 76 of the Patents Act 1977. I shall deal with each of these in turn.

### The law

- 11 The examiner has raised an objection under section 1(2) of the Patents Act 1977 that the invention is not patentable because it relates inter-alia to one or more categories of excluded matter. The relevant provisions of this section of the Act are shown in bold 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.*

- 12 The examiner and the applicant agree that the assessment of patentability under section 1(2) is governed by the judgment of the Court of Appeal in *Aerotel*<sup>1</sup>, as further interpreted by the Court of Appeal in *Symbian*<sup>2</sup>.

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<sup>1</sup> *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371, [2007] RPC 7

<sup>2</sup> *Symbian Ltd's Application* [2008] EWCA Civ 1066, [2009] RPC 1

- 13 In *Aerotel*, the court reviewed the case law on the interpretation of section 1(2) and approved a four-step test for the assessment of what is often called "excluded matter", as follows:

*Step one: properly construe the claim*

*Step two: identify the actual contribution (although at the application stage this might have to be the alleged contribution)*

*Step three: ask whether it falls solely within the excluded matter*

*Step four: check whether the actual or alleged contribution is actually technical in nature.*

- 14 Subsequently, the Court of Appeal in *Symbian* made clear that the *Aerotel* test is not intended to provide a departure from the previous requirement set out in case law, namely that the invention must provide a "technical contribution" if it is not to fall within excluded matter. The *Aerotel* test has subsequently been endorsed by the Court of Appeal in its decisions in both *HTC*<sup>3</sup> and *Lantana*<sup>4</sup>.

- 15 Lewison J (as he then was) in *AT&T/CVON*<sup>5</sup> set out five signposts that he considered to be helpful when considering whether a computer program makes a technical contribution. In *HTC* the signposts were reformulated slightly in light of the decision in *Gemstar*<sup>6</sup>. 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.*

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

- 16 Section 76 of the Act sets out the requirement that no subject-matter should be added to an application after the filing date:

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<sup>3</sup> *HTC Europe Co Ltd v Apple Inc* [2013] RPC 30

<sup>4</sup> *Lantana Limited and The Comptroller General of Patents, Designs and Trade Marks* [2014] EWCA Civ 1463

<sup>5</sup> *AT&T Knowledge Venture/CVON Innovations v Comptroller General of Patents* [2009] EWHC 343 (Pat)

<sup>6</sup> *Gemstar-TV Guide International Inc v Virgin Media Ltd* [2010] RPC 10

*76. No amendment of an application for a patent shall be allowed under section 15A(6), 18(3) or 19(1) if it results in the application disclosing matter extending beyond that disclosed in the application as filed.*

- 17 I shall turn first to the question of whether subject-matter has been added by amendment of the application after the filing date.

#### **Added matter**

- 18 In his pre-hearing report the examiner contends that the amended independent claims filed with the agent's letter of 14 June 2018 contain added subject matter. As mentioned above the applicant has subsequently filed amended claims following the pre-hearing report and prior to the hearing. In the latest set of amended claims the passages in the independent claims objected to by the examiner as adding matter have all been deleted. Therefore the question of added matter raised by the examiner has been overcome and the latest set of amended claims do not include any added matter.

#### **Excluded matter**

- 19 The examiner maintains that the claims define an invention which consists of a program for a computer. His position is set out most recently in his pre-hearing report. Detailed arguments against the examiner's position are contained in the applicant's responses to the examination reports, through their attorney and further through the skeleton arguments. These arguments were elaborated clearly and helpfully at the hearing by Mr Marais and Ms Pereira. Taking all these arguments into account, I must determine whether the claimed invention relates solely to excluded subject matter under section 1(2).

#### Step 1: Properly construe the claims

- 20 Throughout the examination process, the examiner and the attorney have been in agreement that the scope of the claims is sufficiently clear that there have been no issues arising under step one. The applicant presented no further argument relating to the construction of the claims at the hearing. I agree the claims are clear and may be interpreted as read.

#### Step 2: Identifying the actual or alleged contribution

- 21 In paragraph 43 of *Aerotel*, it is made clear that identifying the contribution is probably best summed up as determining what the inventor has really added to human knowledge, and this involves looking at the substance and not the form of the claim (as construed in step one). However, the court in *Aerotel* acknowledged that, for a patent application (as opposed to a granted patent), it may only be possible to identify the alleged, and not the actual, contribution.
- 22 In his pre-hearing report the examiner has identified the contribution to be a method/system for presenting a body of text to a user, receiving input at a computer for selecting one or more words within the body of text, querying a database at a computer (or at a remote server) to identify similarly sounding or constructed words, and presenting a second body of text that includes these words to the user.

- 23 In their skeleton argument and at the hearing the applicant has argued that the contribution involves more than merely the identification by querying a database. The applicant considers the contribution to further include “providing training” in relation to both an error word and a training word.
- 24 At the hearing Mr Marais explained that the contribution is not just clicking on an error word and that that is the base for providing a set of training words. The contribution also includes the step of providing training related specifically to at least one of the training words. This step by its very nature is technical because as a learner uses the program certain errors will provide trends. The training exercise will be based on the trends seen in the errors e.g. a child might struggle with comprehension, reading rate or spelling/vocabulary/tenses. The training itself becomes bespoke by logging an error and providing a related set of training words but further providing training based upon the related set of training words. It’s the provision of the training step which really provides the contribution.

25 I am content to accept the provision of training is part of the contribution.

26 In my view therefore, I consider the contribution is thus a method/system for presenting a body of text to a user; receiving input at a computer for recording one or more words within the body of text that the learner pronounces incorrectly or cannot pronounce as error words; querying a database at a computer (or at a remote server) to identify similarly sounding or constructed words to provide a set of related training words, and providing training with respect to at least one of the error words and at least one of the set of related training words.

Steps 3 and 4: Does the contribution fall solely within excluded matter/is it technical in nature?

27 What I must now decide is whether the contribution identified above relates solely to a program for a computer. This corresponds to step three of the *Aerotel* test.

28 The fourth step of the test is to check whether the contribution is technical in nature. In paragraph 46 of *Aerotel* it is stated that applying this 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 will not, as the fourth step puts it, be "technical in nature". Similarly a contribution which consists of more than excluded matter will be a "technical contribution" and so will be "technical in nature".

29 In this case, the arguments concerning whether the invention is excluded are very much wrapped up with the question of whether the contribution is technical in nature. Given that, I have considered the third and fourth steps together.

30 It is not disputed that the invention is implemented on a computer however that in itself does not necessarily mean that it is excluded as a computer program. If the invention provides a technical contribution then it is not excluded.

31 Mr Marais contends the invention is a technological innovation and there are tangible and measurable effects outside of the computer itself in the form of the generated statistics and the amelioration of the speech pathology. Speech pathology is a

technical science as one studies a science degree to become a speech pathologist. Mr Marais also looked to the definition of technical which says “relating to a particular subject, art, craft or its techniques” and further to synonyms for technical such as practical, scientific or applied. It is argued the invention is scientific and technical and it addresses peculiar speech pathology. In the applicants opinion the invention is not merely providing a learn how to read program and not merely providing a corrective pronunciation of a word that has been mispronounced.

- 32 As a result of the invention, Mr Marais argues, the training is more efficient, it's expedited and bespoke to the learner. All of this is outside of the computer and is technical in nature. The program brings the speech therapist into the home/ environment of the delayed reader. The computer learns the errors the reader is making and identifies the speech pathology.
- 33 Whilst I can appreciate the complex nature of speech pathology as the applicant has explained I am not persuaded by any of the arguments. The program records errors words, queries the database to provide a set of training words and then generates bespoke training for the learner. All of this is contained within the programming. I agree that training is then carried out outside of the computer by the learner and the parent/tutor. However I do not consider reading or the teaching of reading to be a technical process. The process of reading is a process which occurs within a learner's brain.
- 34 The method/system of the claimed invention is in essence a dialogue between the learner and the computer. It starts with a determination of the learners reading abilities, which includes the recording of error words, and is then followed by the provision of training. None of these steps, or indeed any of the steps set out in the claimed invention involve or produce any technical effect.
- 35 Both the examiner and the applicant's attorney made reference to the *AT&T/CVON* signposts during the prosecution of this application. I note in reading the correspondence on file that there was clear disagreement over the assessment of these signposts. The examiner has discussed the first, third, fourth and fifth signposts in his pre-hearing report with the applicant concentrating on the first and fifth in their skeleton arguments and at the hearing.
- 36 The first signpost relates to whether a technical effect occurs on a technical process outside of the computer. The applicant has argued that the provision of bespoke training to the learner is technical in nature and has a technical effect on a technical process outside of the computer. Again I am not persuaded by this argument. The fact that something occurs outside the computer does not mean that there is a technical effect. In the present case, there is no technical effect but simply conventional communication. There is no special arrangement of hardware and the operation thereof appears to be entirely conventional. The recording of the error words, identifying a set of related training words and providing bespoke training with respect to at least one of the error words and at least one of the set of related training words is all carried out within the computer. The effect the bespoke training has outside of the computer is on the learners reading abilities and the ease of teaching for the parent/tutor not requiring any specialist speech therapist/pathologist skills. The fact that the program provides bespoke training for the parent/tutor absent any specialist skills points to the process outside of the computer not being technical

in nature. As set out above I do not consider reading or the teaching of reading to be a technical process and as such the bespoke training does not have an effect on a technical process outside of the computer.

- 37 I agree with the examiner's view when considering the third and fourth signposts. The computing and network apparatus is entirely conventional. The computing apparatus does not function in an improved manner nor is there any improvement to the function of networking or communication apparatus. While any program defines a new set of instructions, the underlying computer is not caused to operate in new way. Further the program does not make the computer a better computer in the sense of running more efficiently and effectively as a computer
- 38 The fifth signpost looks at the technical character of an alleged invention by means of the problem addressed. When the problem is a technical one, the alleged invention can be considered to have a technical nature leading to it falling outside the exclusion if (but not only if) it solves the problem. As I make clear above, reading, the assessment of a person's reading skills and the teaching of reading is not technical in nature and so the fifth signpost is mute.

### **Conclusion**

- 39 I therefore conclude that each of the independent claims define an invention which is excluded under section 1(2) as a program for a computer as such.
- 40 I have carefully read all of the dependent claims and find no matter in those claims that provides any contribution beyond these exclusions. Thus claims 1 to 28 are all excluded.
- 41 I have read through the specification but can find no saving amendment. I therefore refuse the application under Section 18(3).

### **Appeal**

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

**C. L. Davies**

Deputy Director, acting for the Comptroller