

file based on the format of the source file: for example, a mobile device may allow a user to interact with the mobile client preview file through swiping actions in a different way to a file derived from a word processing document than with a file derived from a presentation document.

- 4 An amended set of claims was filed on 9 September 2014, having three independent claims 1, 11 and 17, considered to relate to the same invention. For the purpose of this decision I need only set out the wording of claim 1:

1. A method comprising:

sending, from a mobile device, a request to preview a file uploaded to a web-based collaboration platform, the uploaded file having a source format;

receiving, at the mobile client device, preview information for accessing or manipulating the preview of the uploaded file, the preview information including a scheme to access one or more file segments of the uploaded file, wherein the file segments are by-products of a conversion of the file from the source format to a target format, the file segments having a requested preview format;

accessing the file segments of the uploaded file using the scheme; and displaying, at the mobile client device, the accessed file segments on a touch screen of the mobile client device, the displayed segments being responsive to swiping actions determined based on the source format.

The law

- 5 The relevant provision of the Act in relation to excluded inventions is section 1(2), which reads:

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.

- 6 The examiner considers that the invention relates to the field of computer programming and that it is caught by the exclusion to patentability set out in section 1(2)(c). In order to decide whether an invention relates to subject matter excluded from patentability under section 1(2), the Court of Appeal has said that the issue must be decided by answering the question of whether the invention reveals a

technical contribution to the state of the art (cf *Symbian*¹, *Aerotel*²). The Court of Appeal in *Aerotel* set out the following four-step test to help decide the issue:

- 1) *construe the claim;*
- 2) *identify the actual (or alleged) 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.*

Arguments and analysis

- 7 With regard to the first of the four steps, the examiner has stated that the claims are perfectly clear in the context of the description and so this step causes no difficulty. I agree.
- 8 With regard to the second step of identifying the actual (or alleged) contribution, agreement has been reached between the examiner and the applicant that the contribution lies in a method of generating mobile client preview files from intermediate files generated previously in converting a source document to a target preview file. The preview file displayed on a touch screen mobile device is responsive to user swipe actions consistent with the format of the source document. The method provides the benefits of allowing previews to be viewed on a wider range of mobile devices, requires less processing of data at the web-based collaboration platform to do so and allows users to have greater control when manipulating preview files.
- 9 The main area of disagreement between the examiner and applicant is in relation to the third and fourth steps of the test regarding whether the invention falls within excluded subject matter and whether the contribution is technical in nature.
- 10 Where a claim involves the use of a computer program, it does not naturally follow that the claim must be excluded. Instead, the contribution of a claim to a computer program must be assessed by reference to the process the program will cause a computer to perform, because, as stated in *Astron Clinica*³, the assessment is based on the substance of the invention. In the case of *Halliburton Energy Services' Applications*⁴, HHJ Birss QC, as he then was, emphasised that “[a] computer programmed to perform a task which makes a contribution to the art which is technical in nature is a patentable invention and may be claimed as such.” Therefore, a computer program that provides a technical contribution will not fall under the exclusion because it is more than a computer program as such. The crux of the matter therefore lies in determining whether the claimed invention makes a technical contribution.
- 11 One way of identifying whether a computer-implemented invention makes a “technical contribution” is to use the signposts set out by Lewison J in *AT&T/CVON*⁵ and subsequently used by Mann J in *Gemstar v Virgin*⁶. In considering the signposts

¹ *Symbian Ltd. v Comptroller-General of Patents* [2008] EWCA Civ 1066

² *Aerotel Ltd v Telco Holdings Ltd and Macrossan's Application* [2006] EWCA Civ 1371

³ *Astron Clinica Ltd & Ors v The Comptroller General of Patents, Designs and Trade Marks* [2008] RPC 14

⁴ *Halliburton Energy Services Inc's Applications* [2012] RPC 129

⁵ *AT&T Knowledge Ventures/CVON Innovations v Comptroller of Patents* [2009] EWHC 343 (Pat)

⁶ *Gemstar-TV Guide International Inc & Ors v Virgin Media Ltd & Anor* [2009] EWHC 3068 (Ch) [2010] RPC 10

in *AT&T/CVON*, it goes without saying that these do not provide a definitive account of what is and what isn't technical, but they do provide useful guidance of where the Courts have determined a technical contribution can be made. The signposts are as follows:

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 there is an increase in the speed or reliability of the computer; and

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

- 12 The first three signposts are clearly not relevant in this case: the invention relates to a computer-implemented method of generating preview files capable of being viewed on a mobile client device and therefore does not have a technical effect on a process outside the computer system, nor does it operate at the level of the architecture of the computer. The invention is concerned with the manner in which data files are processed and not in making the computer operate in a new way.
- 13 In considering the fourth signpost, I have taken into account the written submission from the applicant which argued that "to correctly assess whether a computer system is a better computer system in the sense of running more efficiently and effectively as a computer system, we believe a correct approach in accordance with established UK case law is to compare how the computer system runs with the claimed method compared with how the computer system would run without the claimed method and use that comparison to assess whether or not the computer is being made to run more efficiently and effectively as a computer system."
- 14 The applicant argues that the claimed method results in a web-based collaboration environment in which previews of files can be viewed on a wider range of mobile client devices and in which less processing is required at the web-based collaboration side in order to produce previews that are compatible with mobile client devices. The applicant submits that the contribution of the present claims includes a technical effect that goes over and above routine computer program design and which objectively improves the performance of the web-based collaboration environment.
- 15 The applicant's submission that the amount of processing is reduced is only true in the case when intermediate file segments exist from an earlier request to convert from source file to target preview file; if no intermediate file segments exist then the mobile client preview file is generated from the source file. In the case where intermediate file segments already exist then clearly the amount of processing involved in creating the mobile client preview at that point in time will be less because

some of the processing has been carried out earlier. The trade off here is that the system is required to store any work done at an earlier point in time (i.e. the intermediate files) in order to avoid replicating that work at a later point (i.e. when creating the mobile client preview). The process of creating a mobile client preview from a source file involves the exact same number of processing steps as before, but the efficiency of the whole system can be improved by avoiding the redundancy of duplication when intermediate files already exist. Although the claimed invention can result in a more efficient way of generating preview files, I do not consider that it results in an increase in the speed or reliability of the computer irrespective of the nature of the data being processed. I consider that the comment of Lewison J in *Autonomy Corporation Ltd's application*⁷ (para. 29, sub para. viii), which has been referred to by the examiner in correspondence, is particularly pertinent to the question of whether this aspect of the contribution is technical:

“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);”

- 16 A further aspect of the contribution made by the claimed invention is to allow previews to be viewed on a wider range of mobile devices. This is described at paragraphs [0002], [0015], [0016] and [0062] of the description; for example “Some online file storage systems allow the user to preview the contents of a file before or in lieu of downloading the file. However, mobile devices are often limited in terms of bandwidth and processing power, and thus are limited in providing universal preview functionality; and “The preview interface engine 326 receives requests from mobile client devices to preview files uploaded to the web-based collaboration platform and responsively provides a universal preview to mobile client devices using the intermediate file segment by-products that are generated during the target conversion”; and finally “To enable previews of the uploaded files, a conversion engine in the collaboration environment converts the files to target formats, for example, formats visible on the Web, via a web browser, such as Abode Flash small web format (SWF) files. However, these preview formats are either not compatible with mobile client devices or too large to be efficient for file preview. Accordingly, the described systems generate a special preview for mobile client devices using intermediate file segments that are by-products of the conversion engines conversion from a source format to a target format.”
- 17 The applicant submits that the claimed invention allows source data to be converted into a wider range of formats for preview on a wider range of mobile client devices. The specification does not describe the precise algorithms necessary for converting from a source file to the wider range of preview formats and there is no suggestion that the particular algorithms used result in faster conversion from source to preview. The source data is converted into a wider range of formats by providing specific instructions based on the mobile client device. I do not accept that simply providing more ways of converting data from one format to another depending on the type of mobile phone employed makes this aspect of the contribution technical.

⁷ [2008] EWHC 146 (Pat)

- 18 A further aspect of the contribution made by the claimed invention is the ability for users to have greater control when manipulating preview files through swiping actions on a touch-screen of a mobile device. The applicant says that this benefit is possible because the response to a particular swiping action is determined based on the format of the source file. The specification describes how preview information is transferred to the mobile client device and that this information can include a scheme to access one or more of the intermediate file segments from the collaboration platform as well encoded information to identify the source file type. This encoded information may be used by the mobile client device to determine file manipulation instructions, such as deleting a selected word, zooming in or selecting a particular word, in response to various swiping actions on the touch screen, such as swiping left-to-right, single touch or a double touch. The manipulation instructions may be different from one source file format to another. The applicant argues that allowing users to have greater control when manipulating previews makes the mobile client device a more effective computer, and the step of responding to swiping actions based on the source format of an uploaded file is clearly technical in nature.
- 19 I agree with the applicant that improving the way in which users interact with software running on a computer can provide a technical effect. In the case of *HTC v Apple*⁸ referred to by the applicant, the Court of Appeal found that handling touch events in multi-touch enabled mobile client devices was technical in nature because of the interaction between hardware and elements of the operating system and because it provided a new and improved interface to application providers. The present application does not provide a new way of interacting with a computer in the same sense as in *HTC v Apple*, it merely provides the necessary information to allow a software application running on the mobile client device to respond to known interactions. It seems to me that the way in which the user interacts with the mobile client device is a matter of routine computer program design in the sense that it does not alter the way in which the hardware interacts with the operating system. As such, I do not consider that this aspect of the contribution can be described as technical.
- 20 On the basis of the above, I have been unable to identify a technical aspect of the contribution and therefore I must conclude that the invention falls wholly within the meaning of a computer program.

Conclusion

- 21 I find that the claimed invention is excluded under section 1(2) because it relates to a computer program as such. I therefore refuse the application under section 18(3).

Appeal

- 22 Any appeal must be lodged within 28 days.

H JONES

Deputy Director, acting for the Comptroller

⁸ *HTC v Apple* [2013] EWCA Civ 451