

melody and suggests a way of graphically depicting this relationship in a way that is different to traditional ways of displaying music.

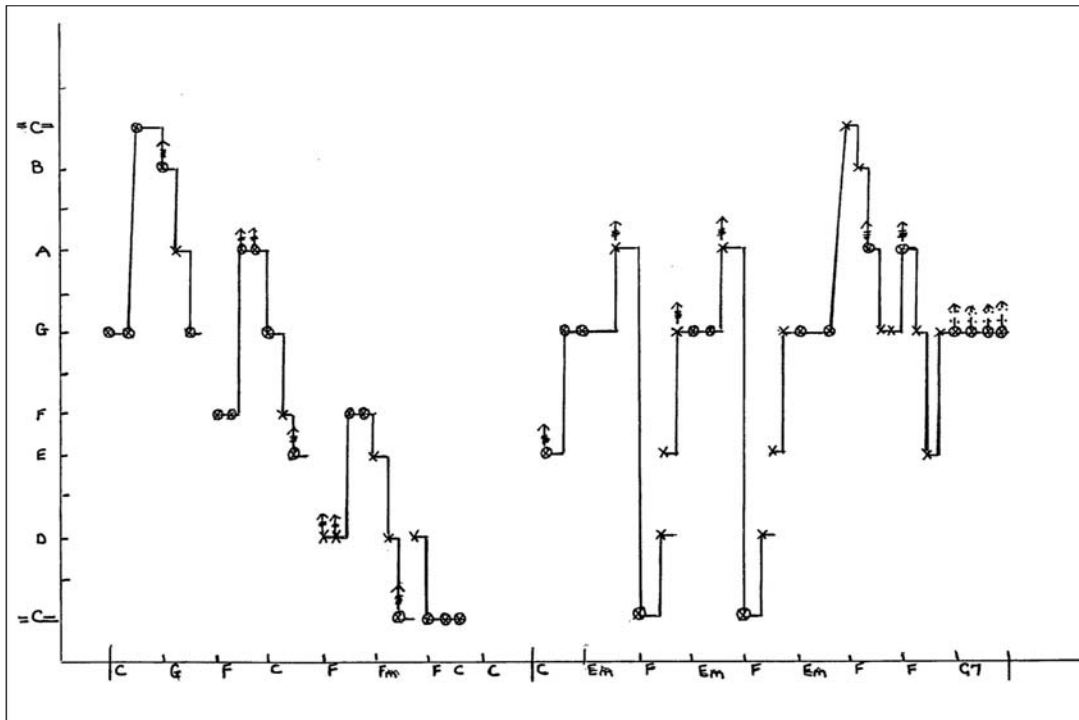


Figure 1/3 of the specification

- 5 From this display a user is able to extract information pertaining to, for example, the sequence of harmony chords (horizontal axis), notes of a melodic key (vertical axis), chords and non chord tones ('x's), bends (arrow-headed wavy line) and slides (slanted lines). An operator can then, in an undisclosed manner, alter any part of the parameters displayed and in doing so improve their understanding of how structural elements such as bend, slides and fills, can be put to good use.
- 6 According to the application, a reference database of "music theory and information, inclusive of consonant and dissonant parameters relevant to recognized genres for example, jazz, rock, classical and other music types" is provided to assist the operator in modifying their work.
- 7 There has been some amendment during the examination process with the claim set being reduced to a single claim and the description being substantially revised. The latest claim on file is that filed by Mr Phillips with a letter dated 10 December 2005. The single claim reads:

The technical innovation claimed is a computer assisted process of musical invention incorporating a graphic display that shows a true physical representation of musical work showing the changing melody and harmony plotted against real time, including the visual depiction of musical devices such as fills, suspensions, bends, chord and non-chord tones, degrees of consonance and dissonance as well as the varying and repeating melodic motifs, thereby creating an interactive process on invention of musical works for specific genres or specific commercial

uses whereby the operator, drawing on the incorporated bank of unique musical theory and parameters, inputs specific parameters of consonance, dissonance, structure, degree of melodic movement and so on, such that these limits and parameters interactively prompt or lead the operator to alter or create parts of the musical work to conform with specified desired outcomes in musical style via the computer display.

The Law

8 There are three issues where, in the opinion of the examiner, the current form of the application is contrary to the requirements of the Patents Act.

9 The first and arguably most fundamental issue is whether the application is excluded from patentability by section 1(2) which states:

“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)

(b)

(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.”

10 The second issue is whether the claims are novel and inventive as required by section 1(1) which states:

“A patent may be granted only for an invention in respect of which the following conditions are satisfied, that is to say –

(a) the invention is new;

(b) it involves an inventive step;

(c) it is capable of industrial application;

(d) the grant of a patent for it is not excluded by subsections (2) and (3) below;

and references in this Act to a patentable invention shall be construed accordingly”

11 Sections 1(1) and 1(2) are designated in section 130(7) as being so framed as to have, as nearly as practicable, the same effect as the corresponding provisions of the European Patent Convention. I must therefore also have regard to the decisions of the European Boards of Appeal that have been issued in these areas.

12 The final issue is whether amendments introduced by Mr Phillips add subject matter to the application contrary to section 76(2) which reads:

“No amendment of an application for a patent shall be allowed under section 15(A), 18(3) or 19(1) if it results in the application disclosing

matter extending beyond that disclosed in the application as filed.”

- 13 The question of whether the application relates to excluded matter seems to me to be fundamental to the decision as to whether or not to grant a patent, and I feel it is convenient to deal with this first.

Section 1(2)

Interpretation

- 14 In a Practice Notice¹ issued on 29 July 2005, the Office explained that it was adopting a new approach to assessing whether an invention relates to unpatentable subject matter. This new approach reflects the approach adopted by Peter Prescott QC sitting as Deputy Judge in his judgment in *CFPH*². The new approach is a two step approach which can be summarised as follows:

Identify what is the advance in the art that is said to be new and not obvious (and susceptible of industrial application)

Determine whether it is both new and not obvious (and susceptible of industrial application) under the description of an “invention” in the sense of Article 52 of the European Patent convention – which section 1(2) of the Act reflects.

- 15 Once the new and non-obvious advance has been identified, Mr Prescott suggests that it would often be possible to determine whether this was an advance under the description of an invention by asking “Is this a new and non-obvious advance in technology”. However, because of the difficulty sometimes associated in determining what is meant by technology, Mr Prescott says that if there is any doubt in this regard then it will be necessary to have recourse to the terms of Article 52 of the EPC.
- 16 Subsequent judgments issued by the High Court (*Halliburton*³, *Shoppalotto*,⁴ *Crawford*⁵ and *RIM v Inpro*⁶) all point to a similar requirement for a technical advance in order to pass the test for patentability.

- 17 In *Halliburton*, Pumphrey J. said at paragraph 215:

“The contribution the inventor makes must lie in a technical effect, and **not merely in excluded subject matter.**” (my emphasis)

- 18 In *Shopalotto* he said at paragraph 9 in relation to computer programs:

1 Patent Office Practice Notice: Patents Act 1977: Examining for Patentability” see <http://www.patent.gov.uk/patent/notices/practice/examforpat.htm>

2 *CFPH LLC's Application* [2005] EWHC 1589 Pat

3 *Halliburton Energy Services Inc v Smith International (North Sea) Ltd and others* [2006] RPC 25

4 *Shopalotto.com's Application* [2005] EWHC 2416 (Pat)

5 *Cecil Lloyd Crawford's Application* [2005] EWHC 2417 (Pat)

6 *Research In Motion UK Ltd v Inpro Licensing* [2006] EWHC 70 (Pat)

“...that the approach is to ask what it (the programmed computer) contributes to the art over and above the fact that it covers a programmed computer. If there is a contribution outside the list of excluded matter, then the invention is patentable, but **if the only contribution to the art lies in excluded subject matter, it is not patentable.**” (my emphasis)

and at paragraph 11 line 4:

“It follows that an inventive contribution cannot reside in excluded subject matter”.

- 19 Finally Kitchin J., having discussed the *Fujitsu*, *Halliburton* and *CFPH* decisions, said at paragraph 11 of his judgement in *Crawford*:

“At the heart of all these decisions is the consistent principle that an invention must make a contribution to the art (that is to say the invention must be new and not obvious) and that contribution must be of a technical nature (susceptible of industrial application and not within one of the areas excluded by Article 52(2)).”

- 20 To my mind, the teaching of all these decisions is consistent in this respect: if the advance or contribution lies in excluded subject matter, the invention is not patentable.

Arguments

- 21 From the outset, the examiner raised the issue that the application might relate to excluded subject matter under section 1(2). During the course of the examination process, the aforementioned *CFPC* and *Halliburton* judgments were handed down and the new guidance for assessing patentability was published. In the examination report of 13 October 2005, the examiner referred to the judgments and explained that the application had been re-examined using the new guidance.
- 22 The re-examination found the advance in the art to be the graphical depiction of a piece of music. As a consequence, the examiner reaffirmed earlier objections that the application related to matter excluded under section 1(2)(d). The examiner also indicated that the invention might be excluded under section 1(2)(c) as relating to a method of performing a mental act.
- 23 It is clear from the correspondence on file that Mr Phillips believes that his invention provides a technical contribution outside of an excluded field. There is, however, little argument to support his assertions and no clear indication of the technical contribution provided by the advance in the art made by the invention. The most useful comments appear firstly in a letter dated 20 March 2005 where it is explained that the:

“computer apparatus of the present invention allows visual display and experiment with...beat/melody patterns and also allows experimentation

with different harmonies to sound [and] varying [the] degrees of consonance and dissonance”.

24 In a letter dated 30 June 2005 Mr Phillips goes on to say that:

“[t]he new functional or technical aspect as defined within the originally filed documents has always hinged on the idea that no one has ever before realised that when a musical work is graphically represented in real time and with actual melodic motion, (as opposed to the traditional notation...), then melodic motifs...as well as degrees of consonance and dissonance... are given a tangible planning aspect.”

25 Finally in a submission directed specifically to me dated 26 March 2006, Mr Phillips restates his view that the invention relates to more than just the particular method of graphically display a piece of music although admitting that the display was “intrinsically important to the apparatus/process”. In this submission he also states:

“The original disclosure was always describing a real physical process and was not a scheme or method for performing a mental act. I have not requested a patent for a description of how to write a new musical work in a traditional manner, but have requested a patent for a novel and tangible process as disclosed”

26 After carefully considering the application as filed and all the arguments put forward during the examination process, I am satisfied that the invention as a whole relates to more than just a particular method of graphically displaying information about a piece of music. Rather it extends to a computer based process which utilizes that particular graphical representation to aid in the composition or invention of music or musical elements.

27 Having identified the invention I now need to identify what contribution or advance to the state of the art does the invention make. To answer this I need to determine what was the state of the art at the time the application was filed. Mr Phillips acknowledges in his application that computer based systems for composing or inventing music were common at that time. In her search the examiner has indeed cited 5 documents which show such computer based systems for composing music. It does not seem to be in dispute that these existing systems provide for the input of a musical piece, means for graphically displaying and playing back that piece of music and means to enable a user of the system to experiment with and alter the piece. Mr Phillips also acknowledges in his application that such systems may contain reference databases to assist the user to experiment and improve their work.

28 Although set out as an apparatus or process comprising computerised means, I can find no indication that the computer hardware employed by Mr Phillips is anything but conventional.

29 So what therefore is the advance or contribution to the art that the invention makes? Or to put it another way what are the new and non-obvious features of

the invention?

- 30 To my mind, having taken into account the literature cited during the examination process, the advance or contribution to the art that the invention makes stems essentially from the particular way in which the information is displayed by the computer. None of the prior art for example discloses or suggests displaying the information in the way set out in this application but instead rely on more traditional music notation. But is the advance or contribution just this new way of depicting music or is it more? Mr Phillips certainly believes it is more and that the contribution is as much about how you use this graphical depiction to help you compose or invent music as it is about the graphic itself. In other words he is arguing that he has contributed a new computer based process of composing or inventing music.
- 31 I am prepared to accept that Mr Phillips may well have contributed a new way of inventing music. However even though that process makes use of a computer, and uses a new way of graphically representing music, it is still just a method for inventing music. And irrespective of whether it is done with the aid of a computer, a process for inventing music is an abstract process. It is in effect a method of performing a mental act. The process set out in the application could conceivably be performed manually by a person armed with the particular theory underpinning the process. Admittedly producing the graphical depiction of the musical work with paper and pencil would be considerably slower than using a computer. However making use of the advantages that naturally follow from using a computer to automate or semi-automate a process does not make something patentable that would otherwise not be patentable. I must conclude therefore that the process set out in the application is excluded from patent protection under section 1(2)(c) as a method of performing a mental act.
- 32 I would add also that the use of a database of music theory, or of other relevant information or parameters, in the music invention process, whether the database is computer based, paper based or existing in the mind of the composer, would not alter the fact that the process is still a process for performing a mental act and as such would still be excluded under section 1(2)(c).

Saving amendments

- 33 I have looked carefully through the application as filed but can find nothing within it which could form the basis of a patentable claim. As I have already mentioned the hardware used to implement the process is entirely conventional. Even if the application was amended to relate more specifically to the method of graphically depicting the piece of music then, whilst that may overcome the objection arising from section 1(2)(c), it would then fall foul of the presentation of information exclusion of section 1(2)(d).

Section 1(1) and Section 76(2)

- 34 Having decided that the invention is not patentable there is no need for me to

go on and consider whether the invention is novel under section 1(1), and whether the amendments dated 10 December 2005 add subject matter under section 76(2). However, for completeness, I believe that some passing comment should be made.

- 35 On the issue of novelty, I have considered the documents cited by the examiner, and I can find no disclosure which would anticipate the particular graphical display shown in Figure 1 of the application (see above). Hence an invention relating to apparatus or a process that relies on such a display would appear to be novel.
- 36 With regard to the objection to added matter, I am content that the original application did contemplate an interactive program in which the user might alter parts of a musical works to conform to a desired outcome. Support can be found from the PCT application as originally filed at page 2, lines 26 to 35, and page 19, lines 29 to 33. Therefore, the amendments objected to in the examiner's report of 14 February 2006 do not add subject matter.

Conclusion

I have found that the invention is excluded from patentability under section 1(2)(c). Having read the specification carefully I cannot see that any saving amendment is possible. I therefore refuse the application in accordance with section 18(3) of the Act.

Appeal

- 37 Under the Practice Direction to Part 52 of the Civil Procedure Rules, any appeal must be lodged within 28 days.

P Thorpe
Deputy Director