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# Datasheet for the decision of 18 July 2017

**Case Number:** T 1397/12 - 3.5.05

**Application Number:** 04781270.6

**Publication Number:** 1654631

**IPC:** G06F3/16, G06F17/20, G09B21/00

**Language of the proceedings:** EN

**Title of invention:**
SCREEN READER HAVING CONCURRENT COMMUNICATION OF NON-TEXTUAL INFORMATION

**Applicant:**
Freedom Scientific Inc.

**Headword:**
NON-TEXTUAL DISPLAY SCREEN READING/FREEDOM SCIENTIFIC

**Relevant legal provisions:**
EPC Art. 56

**Keyword:**
Inventive step - (no)

**Decisions cited:**

**Catchword:**

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**Beschwerdekammern**
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**Case Number: T 1397/12 - 3.5.05**

# D E C I S I O N
# of Technical Board of Appeal 3.5.05
# of 18 July 2017

| | |
|---|---|
| **Appellant:** (Applicant) | Freedom Scientific Inc.<br>11800 31st Court North<br>St. Petersburg,<br>Florida 33716-1805 (US) |
| **Representative:** | Zech, Stefan Markus<br>Meissner Bolte Patentanwälte<br>Rechtsanwälte Partnerschaft mbB<br>Postfach 10 26 05<br>86016 Augsburg (DE) |
| **Decision under appeal:** | **Decision of the Examining Division of the European Patent Office posted on 7 February 2012 refusing European patent application No. 04781270.6 pursuant to Article 97(2) EPC.** |

**Composition of the Board:**

| | |
|---|---|
| **Chair** | A. Ritzka |
| **Members:** | P. Cretaine |
| | F. Blumer |

## Summary of Facts and Submissions

I. The appeal is against the decision of the examining division, posted 7 February 2012, to refuse European patent application No. 04781270.6 on the grounds of lack of inventive step (Article 56 EPC) of a main request and of a first and a second auxiliary request having regard to the disclosure of

**D1**: US 5 899 975 in combination with

**D2**: US 5 572 625.

The following documents were also used for inventive step objections with respect to the dependent claims:

**D3**: US 2002/105496 and

**D4**: DE 35 27 065.

Furthermore, the examining division found that the main request did not comply with the requirements of Articles 84 and 123(2) EPC.

II. Notice of appeal was received on 10 April 2012 and the appeal fee was paid on the same day. The statement setting out the grounds of appeal was received on 11 June 2012. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of a main request or any of a first, second or third auxiliary requests, all requests filed with the statement setting out the grounds of appeal. Oral proceedings were requested as an auxiliary measure.

III. A summons to oral proceedings was issued on

10 January 2017. In an annex to this summons, the board gave its preliminary opinion that, having regard to the amendments with respect to the set of claims on which the decision was based and to the arguments provided by the appellant, the main request and the first to third auxiliary requests met the requirements of Articles 84 and 123(2) EPC. However, objections under Article 56 EPC were raised against the main request and the first to third auxiliary requests.

IV. With a letter dated 11 May 2017, the appellant filed new sets of claims according to the first to fifth auxiliary requests.

V. Oral proceedings were held on 18 July 2017. During them, the appellant withdrew the first, second and third auxiliary requests submitted with the statement of grounds of appeal dated 11 June 2012. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request as filed with the statements of grounds of appeal dated 11 June 2012, or, subsidiarily, on the basis of any of the first, second, third, fourth and fifth auxiliary requests, all requests filed with the letter dated 11 May 2017. After deliberation, the board announced its decision.

VI. Claim 1 of the main request reads as follows:

" A screen reader software product comprising:
- a screen reader module communicatively coupled with resident software on a computer, the screen reader module adapted to collect textual and non-textual display information generated by the resident software;
- a broadcast module communicatively coupled to the screen reader module, the broadcast module adapted to

communicate the display information collected by the screen reader module to an output device;
wherein the output device is a speech synthesizer for synthesizing text based upon the display information;
- a schema module communicatively coupled to the broadcast module, the schema module adapted to send non-textual display information with associated textual display information to the output device in substantially concurrent fashion, wherein the non-textual display information is broadcast as an additional audio output layer to the broadcast of the textual display information, whereby the schema module audibly communicates the non-textual display information in substantially concurrent fashion with the synthesized text, and
wherein the additional audio output layer broadcasts a pre-selected sound associated with the non-textual display information."

Claim 1 of the first auxiliary request differs from claim 1 of the main request in that the "broadcast module" feature reads:
"- a broadcast module communicatively coupled to the screen reader module, the broadcast module adapted to communicate the display information collected by the screen reader module to an output device;
wherein the output device is a speech synthesizer for synthesizing text based upon the display information;
wherein the display information is information that would ordinarily appear on a screen of the computer;".

Claim 1 of the second auxiliary request differs from claim 1 of the first auxiliary request in that the last feature of the claim "and wherein the additional audio output layer ...information." is replaced by the feature "wherein the additional audio output layer

broadcasts a pre-selected sound associated with the non-textual display information, and wherein the non-textual display information is selected from the group consisting of data entry forms, and graphic user interface configuration."

Claim 1 of the third auxiliary request adds to claim 1 of the second auxiliary request the last feature "wherein the pre-selected sound is end-user-definable".

Claim 1 of the fourth auxiliary request adds to claim 1 of the third auxiliary request the last feature ",wherein the output device additionally comprises at least one Braille display (76, 78),
wherein the schema module modifies the broadcast of the textual display information to communicate the non-textual display information by altering tactile characteristics of the Braille display (76, 78)."

Claim 1 of the fifth auxiliary request adds to claim 1 of the fourth auxiliary request, in line 5 after the wording "information generated by the resident software", the wording ", wherein the non-textual display information corresponds to a detected application interface (API) event;".

## Reasons for the Decision

1. The appeal is admissible.

2. Main request - inventive step

2.1 Prior art

**D1** discloses a system comprising a screen reader software product ("TEXT/SCREEN READER 220", Figure 2) for collecting textual display information and a speech synthesizer ("VOICE SYNTHESIZER DRIVER 210", Figure 2) for speech synthesizing text based on the display information (see column 4, lines 33 to 39). Furthermore, text formatting commands embedded within the
textual information (see column 1, lines 58 to 62) are used by the system to adjust the voice presentation properties, such as the voice family (e.g. a man's voice), the voice pitch (e.g. a tenor voice), the voice variant (e.g. foreign accent), the speed of speech delivery (e.g. slow speech), or the voice volume (see from column 4, line 65 to column 5, line 47; column 7, lines 43 to 48). As an example of textual information comprising embedded commands, D1 refers to desktop publishing documents or html documents commonly used on the worldwide web.

**D2** discloses a method for converting a digitized representation of textual information into an audio output using a voice synthesizer. The audio output combines synthesized speech delivered with varying voice characteristics with non-speech sounds to render structural features of the work (see column 20, lines 48 to 53) such as typographical formatting (see for instance column 20, lines 66-67: "Playing a short sound to indicate a bullet when reading itemized lists" and column 21, lines 23-24: "Playing a continuously repeating sound while reading an abstract").

**D3** discloses a device for providing a representation of a text in Braille characters by using a matrix of movable pins (see Figure 3). Additional information related to the text, such as a bold portion of text or

the presence of a hyperlink or of active elements of a graphical user interface, is communicated by the trembling of the pins of the Braille display (see paragraphs [0035] to [0042]).

**2.2** It was common ground in the written and oral proceedings that D1 represented the closest available prior art since it disclosed both a screen reader and an associated speech synthesizer.

The only difference between the subject-matter of claim 1 and the disclosure of D1 is that non-textual display information is broadcast, in the form of a preselected sound, as an additional and concurrent audio output layer to the broadcast of the textual display information, instead of being communicated by altering the voice properties of the synthesized text as in D1.

The technical effect of this distinguishing feature is that, by using sounds superposed on the synthesized voice, more non-textual information can be communicated to the user. The objective technical problem can thus be formulated as how to improve the D1 system to enable more non-textual display information to be communicated.

The person skilled in the art of audio rendering of text documents would consider document D2 which teaches the use of non-speech sounds in addition to speech altering in order to render non-textual information contained in a digitized text work (see point 2.1 above). The skilled person would obviously consider implementing the teaching of D2 in respect of the use of non-speech sounds in the D1 system in order to expand the capabilities of D1 and thereby arrive at

the subject-matter of claim 1.

Thus, the subject-matter of claim 1 does not involve an inventive step, having regard to the combination of D1 and D2 (Article 56 EPC).

2.3 The appellant argued that D1 did not disclose collecting non-textual display information from a textual source by a screen reader but was rather limited to parsing an html document to obtain identifiers utilised with embedded formatting comments.

The board is however not convinced by this argument. Obtaining the text headings H1, H2, H3 shown in Figure 5 of D1 amounts to collecting non-textual information, in that case the font size of the text, from the html textual source. Thus, as pointed out by the appellant itself in the statement setting out the grounds of appeal (see page 4, second paragraph), non-textual information is gathered by the reader module of D1. Moreover, claim 1 does not contain any detail concerning a particular software-based process for collecting non-textual information which could distinguish its subject-matter from the software-based process disclosed in D1.

The appellant further argued that the skilled person would not combine D2 with D1 since D2 was not related to the audio rendering of textual documents displayed to a user on a screen but rather to the audio rendering of mathematical expressions embedded in a digitized text, without using a screen reader. The board however considers that the skilled person would look at prior art documents related generally to converting textual information into audio output, as is the case with D2 (see for instance column 1, lines 13 to 21 and

column 3, lines 43 to 50), with the aim of helping visually impaired users, as is also the case for D2 (see column 1, lines 18 to 21 and 25 to 26; column 38, lines 18 to 20 and 34 to 37). For these reasons the board holds that a combination of D1 with D2 is not based on an ex-post facto analysis, as stated by the appellant.

2.4 The board therefore finds that the main request is not allowable under Article 56 EPC.

3. First to fifth auxiliary requests

3.1 Admissibility

These requests have been submitted in response to the board's communication pursuant to Article 15(1) RPBA, with the aim of overcoming the inventive step objections raised by the board in this communication. Taking into account the relatively low complexity of the amendments and the fact that some of them were already present in the auxiliary requests submitted with the statement setting out the grounds of appeal, the board decided in oral proceedings to exercise its discretion under Article 13(1) RPBA and to admit the first to fifth auxiliary requests into the appeal proceedings.

3.2 First auxiliary request

Claim 1 adds to claim 1 of the main request the feature that the display information is information that would ordinarily appear on a computer screen. The appellant argued that neither D1 nor D2 disclosed that the non-textual information to be rendered by an audio output was displayed on a screen.

The board however holds that the font sizes defined by the header H1, H2 and H3 in D1, defining the sizes of the characters forming the textual display, do represent non-textual information which is displayed to the user on the screen, in the same manner as the italic style of text portions is displayed to the user in the present application (see Figure 8). Therefore, the above-mentioned added feature is already disclosed in D1 and the subject-matter of claim 1 does not involve an inventive step, having regard to the combination of D1 with D2.

3.3 Second auxiliary request

Claim 1 adds to claim 1 of the first auxiliary request the feature that the non-textual display information is selected from the group consisting of data entry forms and graphic user interface configuration.

D1 relates to web pages created by the html language. It was common knowledge at the priority date of the present application in 2003 that such web pages could comprise interactive forms and links. The non-textual information provided by these pages thus falls under the broad definitions of "data entry forms" or "graphic user interface configuration".

Therefore, the subject-matter of claim 1 does not involve an inventive step, having regard to the combination of D1 and D2 (Article 56 EPC).

3.4 Third auxiliary request

Claim 1 adds to claim 1 of the second auxiliary request the feature that the pre-selected sound is end user-definable.

D1 discloses however that the audio output is generated in accordance with the user's preferences (see column 6, lines 46 to 50). Therefore, the above-mentioned additional feature of claim 1 is already disclosed in D1 and the subject-matter of claim 1 does not involve an inventive step, having regard to the combination of D1 and D2.

3.5 Fourth auxiliary request

Claim 1 adds in substance to claim 1 of the third auxiliary request the feature that the output device additionally comprises a Braille display and that the non-textual display information is also communicated by altering tactile characteristics of the Braille display.

D3 discloses a device for providing a representation of a text in Braille characters and additionally communicating non-textual information related to the text by the trembling of the pins of the Braille display (see point 2.1 above), according to the above-mentioned additional feature of claim 1. Since this feature is juxtaposed with the other features of claim 1 and is already disclosed in D3, the subject-

matter of claim 1 does not involve an inventive step, having regard to the disclosure of D1 in combination with D2 and D3.

3.6 Fifth auxiliary request

Claim 1 adds to claim 1 of the fourth auxiliary request the feature that the non-textual display information corresponds to a detected application interface (API) event.

However, D3 teaches the representation of non-textual display information, such as a non-shape related attribute, e.g. the presence of a hyperlink (see paragraph [0035]), and of active elements of a graphical user interface (GUI), e.g. selectable menu items (see paragraph [0039]), by an additional tactile or audio output (see paragraph [0045]). Hyperlinks and selectable GUI menu items fall under the broad definition of an API event. Therefore, the above-mentioned additional feature of claim 1 is already disclosed in D3 and the subject-matter of claim 1 does not involve an inventive step, having regard to the disclosure of D1 in combination with D2 and D3.

4. Conclusion

None of the appellant's requests meets the requirements of Article 56 EPC.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar: The Chair:

A. Wolinski A. Ritzka

Decision electronically authenticated