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Datasheet for the decision of 26 June 2020

Case Number: T 0712/14 - 3.5.01

Application Number: 05734009.3

Publication Number: 1636749

IPC: G06Q10/00

Language of the proceedings: EN

Title of invention:
GATHERING DATA CONCERNING PUBLICATION USAGE AND EXPOSURE TO PRODUCTS AND/OR PRESENCE IN COMMERCIAL ESTABLISHMENT

Applicant:
Arbitron Inc.

Headword:
Portable acoustic monitor/Arbitron Inc.

Relevant legal provisions:
EPC Art. 56, 84, 123(2)

Keyword:
Inventive step - indicating usage of a publication using a piezoelectric transducer and an acoustic transmitter (yes - non-obvious solution)

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Case Number: T 0712/14 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 26 June 2020

Appellant: (Applicant)	Arbitron Inc. 9705 Patuxent Woods Drive Columbia, MD 21046 (US)
Representative:	Samson & Partner Patentanwälte mbB Widenmayerstraße 6 80538 München (DE)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 4 November 2013 refusing European patent application No. 05734009.3 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	W. Chandler
Members:	W. Zubrzycki
	C. Schmidt

Summary of Facts and Submissions

I. This decision concerns the appeal filed against the decision of the examining division to refuse the European patent application No. 05734009.3, published as WO 2005/103979 A2, for lack of inventive step over the combination of D1 (US 5234345 A) and D7 (US 2003/005430 A1).

The decision mentioned the following additional documents cited in the European search report: D2 (US 2002/169653 A1), D3 (US 4659314 A), D4 (EP 0408348 A), D5 (WO 00/72289 A) and D6 (US 2003/097302 A1).

II. In the statement setting out the grounds of appeal the appellant requested that the decision be set aside and a patent be granted based on the main or first to second auxiliary request filed therewith.

III. In the communication accompanying summons to oral proceedings, the Board considered that the most limited second auxiliary request did not meet the requirements of Articles 123(2), 84 and 56 EPC.

IV. With a letter of reply, the appellant filed a third and fourth auxiliary request.

V. During oral proceedings before the Board on 26 June 2020, the appellant filed a fifth auxiliary request. After discussing this request, the appellant declared that it should become the new main request. The appellant withdrew all other requests on file. The appellant's final request was that the decision be set aside and a patent be granted on the basis of the main

request filed during the oral proceedings.

VI. Claim 1 reads:

A system characterised by being configured to gather data concerning usage of a publication (20; 40; 62; 100; 120; 140; 160; 300; 400) by an individual, exposure of the individual to predetermined products within a commercial establishment and exposure of the individual to media data having an acoustic component, such as radio and television broadcasts, pre-recorded content and streaming media, the system comprising:

a publication usage data producing system including:

a piezoelectric transducer (44, 80, 104, 105) included in the publication, the piezoelectric transducer to produce when deformed data indicating usage of the publication and providing the data to a first wireless transmitter (28, 58, 84, 108, 109, 124, 132); and

said first wireless transmitter (28, 58, 84, 108, 109, 124, 132) in or on the publication to communicate publication usage data concerning participant's usage of the publication by transmitting acoustic energy;

a second transmitter (36, 40, 56, 70, 78, 886) in the commercial establishment to transmit an acoustic product signal containing product data of a product in the commercial establishment;

a portable monitor (24; 200; 500; 1204) including:

a microphone (822) to gather acoustic media data, to detect the publication usage data and to receive the product signal;

a first processor (830) to:

determine product exposure data based on the product data contained in the product signal;

detect an ancillary code in the acoustic media data; and

identify acoustic media exposure data based on the ancillary code;

a transceiver to establish a wireless link (1064) to communicate the publication usage data, the product exposure data, and the acoustic media exposure data to a second processor (1066); and

an enclosure (828) to house the microphone, the first processor, and the transceiver; and

the second processor (1066) to store the received publication usage data, product exposure data, and acoustic media exposure data in one or more databases;

wherein the system is configured to provide integrated data estimating exposure of the individuals to the products, media and publications.

Claim 2 reads:

A method of gathering data concerning usage of a publication (20; 40; 62; 100; 120; 140; 160; 300; 400) by an individual, exposure of the individual to predetermined products within a commercial establishment and exposure of the individual to media data having an acoustic component, such as radio and television broadcasts, pre-recorded content and streaming media, the method comprising:

generating publication usage data by:

producing, when deformed, by a piezoelectric transducer (44, 80, 104, 105)

included in the publication, data indicating usage of the publication and providing the data to a first wireless transmitter (28, 58, 84, 108, 109, 124, 132);

communicating, by said first wireless transmitter (28, 58, 84, 108, 109, 124, 132) in or on the publication, publication usage data concerning participant's usage of the publication by transmitting acoustic energy;

transmitting, from a second transmitter (36, 40, 56, 70, 78, 886), an acoustic product signal containing product data of a product in the commercial establishment;

using a portable monitor (24; 200; 500; 1204) carried on the person of the individual to:

detect the publication usage data with a microphone;

receive the product signal with the microphone; gather acoustic media data with the microphone; determine product exposure data based on the product data contained in the product signal;

detect an ancillary code in the acoustic media data; and

identify acoustic media exposure data based on the ancillary code;

establish a wireless link (1064) to communicate the publication usage data, the product exposure data, and the acoustic media exposure data to a second processor (1066); and

storing, by the second processor (1066), the received publication usage data, product exposure data, and acoustic media exposure data in one or more databases;

providing integrated data estimating exposure of the individuals to the products, media and publications.

Reasons for the Decision

1. *The invention*

The invention concerns a portable monitor for gathering data about consumer activity and exposure to media (paragraph [4] of the published application).

Figure 14 shows a portable monitor 24 that comprises a microphone 822 connected to a processor 830 which analyses received acoustic signals. The portable monitor also comprises a wireless network transceiver 839 enabling data to be uploaded to a centralised data processor 1066 ([138] and Figure 16) which generates reports based on the uploaded data ([184]).

The microphone receives acoustic signals and supplies them to the processor which detects the presence of an embedded ancillary code and uses it to identify the user's exposure to audio media ([127]).

The microphone also receives another acoustic signal from an acoustic transmitter close to the product in a retail store to collect data about the user's interest in a certain product when the user approaches it ([178] in combination with [167]). The microphone supplies the received signal in a suitable form to the processor which detects data contained in the product signal.

Finally, the microphone receives an acoustic signal from a transmitter triggered by a voltage from a piezoelectric transducer 44 attached to or put in a page 48 of a publication to detect that a user is using the publication, as shown in Figure 2 ([59]). This occurs when the user, for example a participant of a

publication usage study, reads the publication and thereby turns the page and flexes the transducer.

2. *The decision under appeal*

2.1 The examining division refused the application for lack of inventive step. They held that using acoustic signals for conveying data concerning usage of publications and exposure to products was obvious in the light of the combined teaching of D1 and D7.

The claims on which the decision was based are no longer maintained. The appellant clarified them and limited the scope to using a piezoelectric transducer for producing, when deformed, data indicating usage of the publication and providing this data to a wireless acoustic transmitter. The decision of the examining division did not deal with these aspects.

However, the present claims still relate, like the refused ones, to using acoustic signals for conveying data concerning usage of publication and exposure to products. Their scope is therefore still within the bounds of the invention discussed in the appealed decision and the Board assumes that the search covered these aspects.

2.2 According to Article 111(1) EPC the Board may exercise any power within the competence of the examining division or remit the case to that department for further prosecution. It is thus at the Board's discretion whether it examines and decides the case or whether it remits the case. In the present case the Board is in a position to decide on the merits of the case.

3. *Article 123(2) EPC*

The Board considers that claims 1 and 2 comply with the requirement of Article 123(2) EPC. These claims are based on original claims 1 and 4 and description paragraphs [22], [53], [54], [59], [63], [122], [126], [127], [138], [164], [177], [178], [182] and [189].

The description does not explicitly disclose that a microphone included in a portable monitor detects publication usage data emitted by a wireless acoustic transmitter located in or on a publication. However, the appellant argued during the oral proceedings that this feature was implicitly derivable from the combination of [53], [54], last sentence and [126]. The Board agrees with this view.

4. *Article 84 EPC*

The Board furthermore considers that claims 1 and 2 are clear (Article 84 EPC).

It is clear in the light of the claims' context that the term "publication" refers to a printed publication. Furthermore, the skilled reader would understand that the expression "data indicating usage of the publication" refers to electric voltage generated by the deformed piezoelectric transducer, while the expression "publication usage data" relates to digital or analog information enabling identifying a particular publication, the information being generated by the first wireless transmitter upon receiving the generated voltage.

5. *Article 56 EPC*

5.1 As the Board considers that the features specifying components for detecting usage of publications have inventive merit, the Board confines the following analysis to this part of the claimed subject-matter.

5.2 Document D1, being the closest prior art, discloses a system for determining that a user reads a paper publication e.g. a magazine (see column 1, lines 6 to 12). The magazine comprises a battery-powered transmitter unit preferably constructed in the form of a flat card-sized insert for the magazine (column 2, lines 17 to 36). The battery is connected to the transmitter by a mechanical or a light-sensitive switch which is activated when the magazine is opened to the place where the card has been inserted (column 3, lines 59 to 62; column 9, lines 4 to 10). The transmitter, triggered by activating the switch, emits via an antenna an analog or digital signal identifying the magazine (column 2, lines 31 to 38). This signal is received by a portable receiver unit which recognises the signal as relating to the particular magazine and associates the signal with the time it was received in order to create data indicating that the magazine was read at the given time (column 2, line 50 to column 3, line 22).

Among other things, the subject-matter of claim 1 differs from D1:
A) By the piezoelectric transducer which when deformed produces data indicating usage of the publication and provides this data to a first wireless transmitter.
B) In that the first wireless transmitter communicates publication usage data by transmitting acoustic energy, rather than an RF signal.

The objective technical problem is thus to provide an

alternative solution for detecting usage of publications.

D7 concerns a portable monitor (see [31], last three lines) including a microphone ([30], lines 5 to 10) for monitoring a user's exposure to audio media, such as radio broadcasts ([30], last 7 lines). However, it does not concern detecting usage of printed publications and, in the Board's judgement, the skilled person would not have consulted it faced with the problem of detecting usage of publications. The skilled person would thus have had no reason to replace an RF signal by an acoustic one. The Board judges that the skilled person would not derive hints to do so from his common general knowledge either.

Even assuming for the sake of argument that the skilled person would have consulted D7, he would still have had no reason to use a piezoelectric transmitter instead of a switch. The appellant correctly observed during the oral proceedings that none of the documents on file disclosed or suggested such a use of a piezoelectric transducer. While the Board recognises that piezoelectric transducers were well known at the priority date, placing such a transducer in or on a publication in order to detect its usage is in the Board's view not part of the common general knowledge and thus would require some hint in the prior art.

Hence, the Board judges that the subject matter of claim 1 is not obvious.

5.3 Like D1, D3 and D4 deal with detecting usage of publications. D3 discloses, similarly to D1, using battery-powered cards and D4 adds that a transmitter provided in such a card can pick up power from a

received activating signal instead of a battery (see D4, column 8, lines 12 to 15). Neither D3 nor D4 suggests, however, employing a piezoelectric transducer.

Accordingly, starting from D3 and D4, the invention is not obvious for the reasons given in connection with D1.

5.4 D2, D5 and D6 and D7 do not deal with detecting usage of publications and are not promising starting points, for assessing inventiveness of this subject-matter.

5.5 For these reasons, the Board judges that the subject-matter of claim 1 involves an inventive step. The same applies for claim 2 whose scope corresponds to that of claim 1.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the examining division with the order to grant a patent on the basis of the main request filed during the oral proceedings before the Board and a description to be adapted thereto.

The Registrar: The Chairman:

T. Buschek W. Chandler

Decision electronically authenticated