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**Datasheet for the decision
of 30 June 2015**

Case Number: T 1880/10 - 3.5.04

Application Number: 01305034.9

Publication Number: 1162840

IPC: H04N7/16, H04N7/173

Language of the proceedings: EN

Title of invention:

Advertising delivery method

Applicant:

Invidi Technologies Corporation

Headword:

Relevant legal provisions:

EPC 1973 Art. 56, 84

EPC Art. 123(2)

Keyword:

Amendments - added subject-matter (no)

Claims - clarity (yes)

Inventive step - (yes)

Decisions cited:

Catchword:



**Beschwerdekammern
Boards of Appeal
Chambres de recours**

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Case Number: T 1880/10 - 3.5.04

**D E C I S I O N
of Technical Board of Appeal 3.5.04
of 30 June 2015**

Appellant: Invidi Technologies Corporation
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Alberta T5J 3R8 (CA)

Representative: Harris, Ian Richard
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 23 March 2010
refusing European patent application
No. 01305034.9 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair T. Karamanli
Members: C. Kunzelmann
R. Gerdes

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division to refuse European patent application No. 01 305 034.9 under Article 97(2) of the European Patent Convention (EPC).
- II. The application was refused on the grounds that the method according to claim 1 of the sole request then on file did not involve an inventive step (Article 56 EPC) in view of documents
- D1: US 6 029 045 A and
D6: WO 00/33233 A1.
- III. The reasons for the decision may be summarised as follows:

The invention concerned a method of delivering and showing targeted assets to viewers of a broadcast network. Claim 1 comprised a feature of determining the gender of the current viewer and also referred to the determined gender of the current viewer. This wording was not supported by the description since the real gender was not determined. Instead a likelihood that the current viewer had a given gender was determined. Thus, in principle, there was an infringement of Article 84 EPC. But the examining division accepted the verbal intention of the applicant made in the oral proceedings to change these references. Thus, the examining division interpreted the claims to include references to the "likely gender" and the "determined likely gender".

D1 was considered as the closest prior art. It disclosed all the features of claim 1 except two

broadly claimed features. These were the feature of determining the gender of the current viewer as a particular criterion for targeting assets to viewers of a broadcast network, and the feature of determining a value for the current viewer representing a likelihood that the current viewer had a given gender. These features not known from D1 could be seen as solving the problem of how to provide more detailed, accurate and improved targeted advertising. Such parameters belonged more to the field of market research than to any technical field. The person skilled in the art in the present case thus had to be considered as a team consisting of both engineers and experts in market research and/or demographics. Gender was a well-known parameter used in market research.

D6 was concerned with targeted advertising and disclosed that age, gender, income and other data were parameters used for targeting the advertising. In particular, gender was one prominent example. In D6 values between 0 and 1 were determined to describe the likelihood of a subscriber being part of a demographic group such as male or female. This value was used to select assets for showing to a viewer. Hence the use of a likelihood value to determine a current viewer was rendered obvious by D6. The incorporation of the gender aspect known from D6 into D1 was a matter of routine. Claim 1 according to the sole request was silent as to any particular formulae or treatment of these likelihood values.

- IV. The applicant appealed and requested that the decision be set aside. With the statement of grounds of appeal, the appellant (applicant) filed claims according to an auxiliary request.

- V. The board issued a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA), annexed to a summons to oral proceedings. The board *inter alia* gave the preliminary opinion that the references to "the current viewer" (see "the current audience at the subscriber device" in the present claims) raised a number of problems under Article 84 EPC 1973 which needed to be discussed in the oral proceedings.
- VI. The appellant replied with a letter dated 28 May 2015 and filed claims and description pages 1 to 4 and 30 to 32 according to a new main and first and second auxiliary requests. The letter comprised arguments as to how the claims had been amended to take account of the indications in the board's communication and as to why the appellant considered the claims to be formally allowable. The appellant also submitted arguments in support of inventive step.
- VII. Oral proceedings before the board were held on 30 June 2015. During the oral proceedings, the appellant filed claims 1 to 11 according to a new sole request and withdrew all previous requests. The appellant also filed a new page 2 of the description.

The appellant's final request was that the decision under appeal be set aside and that a patent be granted in the following version:

Description:

- pages 5 to 29 as originally filed;
- amended pages 1, 3, 4, and 30 to 32 filed with the letter of 28 May 2015;
- amended page 2 filed during the oral proceedings of 30 June 2015;

Claims:

Nos. 1 to 11 of the sole request filed during
the oral proceedings of 30 June 2015; and

Drawings:

Figs. 1 to 8 filed with the letter of 4 July 2001.

At the end of the oral proceedings, the Chair announced
the board's decision.

VIII. Claim 1 of the sole request reads as follows:

"A method of delivering and reporting delivery of
targeted assets to viewers of a broadcast network, the
method comprising the steps of operating a processor at
a subscriber device (10):

to determine, in real-time, a female audience gender
value representative of the likelihood that a
current audience at the subscriber device has a
female gender and a male audience gender value
representative of the likelihood that a current
audience at the subscriber device has a male
gender by, at regular intervals,
determining a program being watched,
determining, from a table at the subscriber
device, an audience composition value for
the program being watched, wherein the table
lists programs, categories and genres and,
for each entry in the table, an audience
composition value determined from ratings
data of the gender composition of the
viewers for a given program,
where the processor cannot find the program being
watched in the table, attempting to lookup
the program category or genre in the table
to determine the audience composition value,
the category and genre information being

derived from an electronic program guide at the subscriber device, and updating the female audience gender value and the male audience gender value according to the equations

$$F' = (k * F) + (1 - k) * C',$$

$$M' = (k * M) + (1 - k) * (1 - C'),$$

where F' is an updated female audience gender value,
 F is a previous female audience gender value,
 M' is an updated male audience gender value,
 M is a previous male audience gender value,
 C' is an audience composition value, and
 k is a decay constant based on a sampling period;

to receive broadcast information directed to network viewers, the broadcast information including a plurality of assets and asset-related information including target criteria for each of the assets, a said target criterion being a female gender constraint based on whether the female audience gender value is greater or less than a given value or a male gender constraint based on whether the male audience gender value is greater or less than a given value;

to select when to deliver an asset from the plurality of assets at the subscriber device based on a comparison, conducted at the subscriber device, of a said updated audience gender value and the target criteria for the assets, wherein the asset played at the subscriber device is determined by

matching said updated audience gender value to the gender constraint; and
to transmit report information from the subscriber device to a platform of said broadcast network, said report information identifying the asset delivered by the subscriber device."

IX. Claim 7 of the sole request reads as follows:

"A subscriber device (10) for use in delivery and reporting of the delivery of targeted assets to viewers of a broadcast network, the subscriber device being connected to a broadcast network and configured:
to include a real-time profiler (12), said real-time profiler being operative to determine, in real-time, a female audience gender value representative of the likelihood that a current audience at the subscriber device has a female gender and a male audience gender value representative of the likelihood that a current audience at the subscriber device has a male gender by, at regular intervals, determining a program being watched, determining, from a table at the subscriber device, an audience composition value for the program being watched, wherein the table lists programs, categories and genres and, for each entry in the table, an audience composition value determined from ratings data of the gender composition of the viewers for a given program,
where the program being watched cannot be found in the table, attempting to lookup the program category or genre in the table to determine the audience composition value, the category and genre information being derived from an

electronic program guide at the subscriber device, and

updating the female audience gender value and the male audience gender value according to the equations

$$F' = (k * F) + (1 - k) * C',$$

$$M' = (k * M) + (1 - k) * (1 - C'),$$

where F' is an updated female audience gender value,

F is a previous female audience gender value,

M' is an updated male audience gender value,

M is a previous male audience gender value,

C' is an audience composition value, and

k is a decay constant based on a sampling period; and;

the subscriber device further being configured to include a targeter (14) configured

to receive broadcast information directed to network viewers, the broadcast information including a plurality of assets and asset-related information including target criteria for each of the assets, a said target criterion being a female gender constraint based on whether the female audience gender value is greater or less than a given value or a male gender constraint based on whether the male audience gender value is greater or less than a given value;

to select when to deliver an asset from the plurality of assets at the subscriber device based on a comparison, conducted at the

subscriber device, of a said updated audience gender value and the target criteria for the assets, wherein the asset played at the subscriber device is determined by matching said updated audience gender value to the gender constraint; and to transmit report information from the subscriber device to a platform of said broadcast network, said report information identifying the asset delivered by the subscriber device."

X. Claims 2 to 6 are dependent on claim 1 and claims 8 to 11 are dependent on claim 7.

XI. The appellant's arguments may be summarised as follows:

The application documents had been amended to take into account the objections under Article 84 EPC raised in the decision under appeal as well as in the preliminary opinion of the board. The claimed subject-matter sought to predict at a subscriber device what the gender make-up of the current audience might be, rather than requiring the current audience to identify who was viewing. The subscriber device used information available to it to assess the likelihood that a current audience had a given gender composition, and that was then compared to a target criterion to determine when to deliver a given asset.

With respect to the issue of inventive step, the closest prior art D1 did not disclose the determination of a female audience gender value and a male audience gender value as specified in claim 1. It did not matter whether it was a well-known business or marketing concept that gender-specific advertisements could be

inserted in television programmes which were intended mainly for an audience of a given gender. How to provide more efficient delivery of targeted assets which could take account of a gender make-up of a current audience in real time was a technical problem which required a technical solution.

In the present invention, the subscriber device automatically computed and updated audience gender values and compared such an audience gender value to a gender constraint for an asset. The privacy of the audience was not compromised, since no input by the audience, such as an audience gender profile, was required.

D1 discussed one technical solution to the technical problem of how to provide targeted delivery of local content. The approach of D1 was very different from the claimed subject-matter. D1 was based on the establishment of user preferences. These user preferences were used to generate command and control data that was downloaded to the set-top box to determine what local content should be stored at the set-top box. Thus, D1 caused potential privacy issues and did not react in real time to a current audience at a set-top box. D1 did not attempt to establish the make-up of an audience at a set-top box at a given time.

D6 disclosed a very complex approach for attempting to identify a subscriber from a set of subscriber profiles, and that this could be used to infer a gender of a subscriber. However, D6 did not suggest that this inference might be used to determine when to deliver an asset, or how this might be achieved.

The methods of D1 and D6 were so different that it was difficult to imagine how a person skilled in the art could combine them. Moreover, such a combination would not result in the claimed invention.

Reasons for the Decision

1. The appeal is admissible.
2. *Amendments (Article 123(2) EPC)*
 - 2.1 Claim 1 specifies a method of delivering and reporting delivery of targeted assets to viewers of a broadcast network as disclosed, for instance, in claims 1 and 2 of the application as filed. The feature of operating a processor at a subscriber device is disclosed, for instance, in paragraphs 13, 20 and 46 of the application as filed. The features relating to the determination of the female audience gender value and the male audience gender value are disclosed in paragraphs 48 and 49 of the application as filed. The features relating to the reception of broadcast information are disclosed, for instance, in original claim 1 and paragraphs 42 to 47. The features relating to the selection of when to deliver an asset are disclosed in paragraphs 44 and 47. The features relating to the transmission of report information are disclosed, for instance, in original claim 2 and paragraph 53.
 - 2.2 Independent claim 7 essentially specifies a subscriber device for use in the method of claim 1 and is thus disclosed in the same parts of the application as filed.

2.3 The subject-matter of claims 2, 6 and 8 is disclosed in paragraph 23 as originally filed. Claim 3 corresponds to original claim 5, claims 4 and 10 to original claim 6, and claims 5 and 11 to original claim 7. The subject-matter of claim 9 is disclosed, for instance, in original claim 11.

2.4 The description has been brought into line with the amended claims and discusses D1 and D6. The original drawings have been replaced by formal ones.

2.5 In view of the above, the board finds that the application meets the requirements of Article 123(2) EPC.

3. *Clarity and support by the description (Article 84 EPC 1973)*

3.1 The present amended claims are not subject to the lack of support objection raised in the decision under appeal. They do not refer to the current viewer or viewers or to the real genders of any viewers. Thus there is no longer an issue that audiences comprising several persons of different gender or changes to the audience composition over time might lead to an ambiguity of the expression "current viewer". Instead, claim 1 now specifies that a female audience gender value and a male audience gender value are determined in real time by taking steps explicitly given in claim 1. Claim 7 now specifies that a real-time profiler of the subscriber device is operative to determine in real time a female audience gender value and a male audience gender value in the same way as in the method of claim 1. The audience gender values represent the respective likelihood that, at a given point in time, a current audience at the subscriber

- device has a female gender or a male gender. This is clear and supported by the description, in particular the description of gender prediction by means of a gender plug-in for the profiler of the subscriber device in paragraphs 47 to 50 of the description.
- 3.2 The present amended claims also make it clear that the targeting of the assets is based on a comparison, conducted at the subscriber device, of the female audience gender value or the male audience gender value with target criteria for the assets. In particular, the claims make it clear that the targeting of the assets also includes the selection of when to deliver (to the viewers forming the audience) an asset received at the subscriber device.
- 3.3 The claims make it clear that protection is sought for a method having the features of claim 1 and a subscriber device having the features of claim 7. Protection is also sought for a system comprising the claimed subscriber device, a privacy manager system component of a service provider and an information manager component of the service provider as specified in claim 9.
- 3.4 In view of the above, the board finds that the present amended claims meet the requirements of Article 84 EPC 1973.
4. *Novelty and inventive step (Articles 54(1) and 56 EPC 1973)*
- 4.1 It is undisputed that none of the available documents discloses details regarding the determination of a female audience gender value and a male audience gender value as specified in present amended claims 1 and 7.

The board too agrees. Thus the claimed method and the claimed subscriber device are new (Article 54(1) EPC 1973).

- 4.2 It is also undisputed, and the board agrees, that D1 may be considered as the closest prior art for the assessment of inventive step.
- 4.3 D1 discloses a method of delivering targeted assets ("targeted content", see, for instance, column 2, lines 49 to 58, or "targeted commercials", column 14, lines 58 to 61) to viewers of a broadcast network. Equipment at the data transmission facility assembles and delivers local content to be inserted into the live data streams at a later time and transmits individualised instructions to each set-top box about what local content should be inserted into the live data stream (column 3, lines 1 to 13). It is implicit that the method of D1 also includes reporting delivery of targeted assets (see column 7, lines 12 to 32).
- 4.4 However, a number of features of the invention as specified in the present claims are not disclosed in D1. One example is implementation details concerning the determination of gender values on the basis of *inter alia* an audience composition value. These implementation details include the use of a table listing programmes, categories and genres. As a fallback solution an electronic programme guide is employed to look up the programme category or genre. Another example is the reception of broadcast information including a target criterion being a gender constraint at the subscriber device, and the selection of when to deliver an asset based on a comparison of the audience gender value and the target criterion at the subscriber device. In D1 the timing of the delivery

of assets is determined by command and control data from the data transmission facility (see column 9, line 61 to column 10, line 33). As convincingly argued by the appellant, these features contribute to the technical solution of the problem of how to provide more efficient delivery of targeted assets which can take account of a gender make-up of a current audience in real time without compromising the privacy of the audience.

- 4.5 D6 discloses a subscriber identification system. It attempts to identify a particular viewer within a household based on, for instance, the individual viewer's viewing and programme selection habits (page 2, lines 22 to 29, page 7, lines 1 to 15). This information is used to generate subscriber profiles which may include an individual's characteristics including age and gender. However, D6 does not disclose the features of the claimed invention discussed in point 4.4 above.
- 4.6 In view of the above, the appellant's argument that a combination of D1 and D6 would not result in the claimed invention is persuasive. Moreover, D1 attempts to target assets to a household having a particular set-top box. There is no indication in D1 that different users of the same set-top box (such as different members of one household) could be distinguished (column 6, lines 17 to 40).
- 4.7 Thus, in view of D1 and D6, the claimed subject-matter is not obvious to a person skilled in the art.
- 4.8 The other available documents are not more pertinent. Hence the board finds that the method of claim 1 and the subscriber device of claim 7 involve an inventive

step (Article 56 EPC 1973). The same is true for the subject-matter specified in dependent claims 2 to 6 and 8 to 11.

5. The board sees no other obstacle to the grant of a patent on the basis of the present application documents.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to grant a patent in the following version:
Description:
 - pages 5 to 29 as originally filed;
 - amended pages 1, 3, 4, and 30 to 32 filed with the letter of 28 May 2015;
 - amended page 2 filed during the oral proceedings of 30 June 2015;Claims:
Nos. 1 to 11 of the sole request filed during the oral proceedings of 30 June 2015; and
Drawings:
Figs. 1 to 8 filed with the letter of 4 July 2001.

The Registrar:

The Chair:



K. Boelicke

T. Karamanli

Decision electronically authenticated