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**Datasheet for the decision
of 5 March 2020**

Case Number: T 0247/15 - 3.4.03

Application Number: 02703183.0

Publication Number: 1377922

IPC: G06F17/60

Language of the proceedings: EN

Title of invention:

METHOD AND SYSTEM FOR SCHEDULING ONLINE TARGETED CONTENT
DELIVERY

Applicant:

OpenTV, Inc.

Headword:

Relevant legal provisions:

EPC 1973 Art. 56

Keyword:

Mixture of technical and non-technical features
Inventive step - all requests (no)

Decisions cited:

Catchword:



Beschwerdekammern
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Chambres de recours

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Case Number: T 0247/15 - 3.4.03

D E C I S I O N
of Technical Board of Appeal 3.4.03
of 5 March 2020

Appellant: OpenTV, Inc.
(Applicant) 275 Sacramento Street
San Francisco, CA 94111 (US)

Representative: Schwegman Lundberg Woessner Limited
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 8 October 2014
refusing European patent application No.
02703183.0 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman T. Häusser
Members: M. Papastefanou
W. Van der Eijk

Summary of Facts and Submissions

- I. The appeal is against the decision of the examining division refusing the European patent application No. 02 703 183.0 (published as WO 02/059720 A2) on the ground that none of the requests then on file involved an inventive step within the meaning of Article 56 EPC.
- II. The appellant (applicant) had requested in writing that the decision under appeal be set aside and that a patent be granted on the basis of the Main Request or one of the First and Second Auxiliary Requests, all requests filed with the statement setting out the grounds of appeal on 27 January 2015.
- III. After the board issued summons to oral proceedings and its preliminary opinion, the appellant announced by letter dated 2 March 2020 that it would not attend the oral proceedings, which took place in its absence. The appellant did not put forward any arguments in relation to the board's preliminary opinion.

At the end of the oral proceedings, the chairman announced the board's decision dismissing the appeal.

- IV. Claim 1 of the Main Request is worded as follows:

A method of scheduling delivery of multiple advertisements selectively to a plurality of online users having client devices (10), comprising:

- *determining expected values relating to each user being online to access information over the Internet during a given time period;*
- *generating an ordered list of the advertisements to be selectively delivered to the users based on the expected values, said ordered list being*

prioritized to meet delivery requirements associated with said advertisements;

- *and generating an individual list of items of advertisements to be delivered to each user based on the ordered list, wherein said individual list is dynamically generated for each user on user login,*
- *transmitting advertisements according to the individual list of advertisements to each user.*

V. Claim 1 of the First Auxiliary Request has the same wording as claim of the Main Request with the exception that the expression "expected values" is replaced by the expression "[a] probability p".

VI. Claim 1 of the Second Auxiliary Request has the following wording (compared to claim 1 of the Main Request, added features underlined by the board):

A method of scheduling delivery of multiple advertisements selectively to a plurality of online users having client devices (10), comprising:

- *determining expected values relating to each user being online to access information over the Internet during a given time period;*
- *generating an ordered list of the advertisements to be selectively delivered to the users based on the expected values, said ordered list being prioritized to meet delivery requirements associated with said advertisements;*
- *and generating an individual list of items of advertisements to be delivered to each user based on the ordered list, wherein said individual list is dynamically generated for each user on user login, by matching the profile of the user to the profiles of advertisements in the ordered list,*

- in case that no matching if [sic] found, providing a set of defaults advertisements, otherwise,
 - transmitting advertisements according to the individual list of advertisements to each user,
and
 - monitoring the number of times advertisements has been delivered to a client (10)
 - updating the ordered list according to the delivery feedback of the advertisements.

VII. The appellant argued essentially that, contrary to the opinion of the examining division, the features of the claims distinguishing them from the prior art comprised technical features which solved a technical problem, namely how to optimize the delivery of content to online users.

Reasons for the Decision

1. The duly summoned appellant did not attend the oral proceedings before the board, as it had announced in advance. Pursuant to Rule 71(2) EPC 1973, the proceedings were continued without the appellant. In accordance with Article 15(3) of the Rules of Procedure of the Boards of Appeal (RPBA 2020), the board relied in its decision only on the appellant's written submissions. The board being in a position to decide the case at the conclusion of the oral proceedings (Articles 15(5) and (6) RPBA 2020), the voluntary absence of the appellant was not a reason for delaying the decision (Article 15(3) RPBA 2020).

2. The claimed invention

The claimed invention relates to targeted online

advertising.

- 2.1 There are three parties usually involved in online targeted advertising. The first is the advertiser, who has/produces an advertisement related to a product or a service and wishes to have it delivered to specific users, i. e. to users that correspond to a certain profile. The second is the online content delivery service, who organises the online advertising campaign, selects the eligible users (based on their individual profiles) and delivers the online advertisement(s) accordingly. The third is the user, who is the target of the advertising and receives the advertisement(s).

- 2.2 The advertiser makes an agreement (contract) with an online content delivery service for an advertising campaign. Normally such a contract specifies several conditions related to the campaign, such as the content to be delivered (i. e. the advertisement(s)), the targeted user profile(s), the start and end date of the campaign, how many times the advertisement should be delivered within a certain period of time etc.

- 2.3 In order to be able to run the agreed campaign, the online content delivery service has to determine the eligible user(s) and to schedule the delivery of the advertisement(s) to each one of them. In scheduling the delivery of advertisements some factors are variable (or unknown at the scheduling stage), such as if and when a given user will log on and how long they will remain online. The content delivery service usually makes an estimate regarding these factors in order to schedule the delivery of advertisements to given users such that the conditions of the advertising campaign can be fulfilled. Other factors that can be taken into account are, for example, how many advertisements a

given user can/ should receive at the most within a certain period of time, how much time there should be between successive deliveries of advertisements, whether some advertisements have priority over others etc.

- 2.4 According to the application, the conventional estimates of when a given user will log on and/or how long they will remain online made by the online delivery services are rather conservative. Such conservative estimates result in an inefficient utilisation of "inventory" (available user screen "real estate"), i. e. the users are more often and longer online than estimated without any use being made of this extra online time for delivering advertisements to them (see page 1 of the application as published).
- 2.5 The concept underlying the claimed invention is based on a mathematical method for estimating the probability that a given user logs on and the time they will remain online using operations research and yield management techniques. According to the application, this method provides a better forecast of availability of user screen real estate (or inventory) resulting in a more efficient scheduling and delivery of content to the eligible users (see page 2, first paragraph of the application).
3. As a first, general comment, it should be pointed out that when the application mentions a more "efficient" scheduling of delivery of content or of "optimizing" the delivery of content, these relate to the fulfilment of the conditions related to an advertisement campaign (i. e. assuring that content is delivered to users according to the agreement with the advertiser(s)) and, in general, maximizing the quantity of the delivered

content (advertisements).

4. Main request

The Main Request corresponds to the Main Request underlying the decision under appeal.

- 4.1 Regarding the technical character of the claimed subject-matter, any technical means involved in the method of claim 1 are only implied by the definition that the method relates to the scheduling of the delivery of advertisements to online users having client devices. There is no further mention or suggestion of any technical means in the subject-matter of the claim.

However, in view of the corresponding computer system defined in independent claim 14 and in light of the description and figures of the application, the board interprets claim 1 such that the claimed method is (to be) executed in/by a computer network (see, for example, Figures 1 and 2).

- 4.2 As it appears from the description, the computer network underlying the claimed method is based on technical means that were well-known at the priority date of the application (see page 4, line 19 to page 6, line 15 of the application as published).

The examining division regarded these technical means as notoriously well-known technical features (see also *Case Law of the Boards of Appeal of the EPO*, 9th Edition, July 2019, I.D.9.1.3 c)) and did not consider it necessary to cite any written evidence (i. e. prior art documents) for their existence at the priority date of the application.

The examining division's selection of a notoriously well-known network of client and server computers as closest prior art was not contested by the appellant. The board sees no reason to call this selection into question, either.

4.3 It was also uncontested that claim 1 of the Main Request differed from such a well-known computer network by the features related to scheduling the delivery of multiple advertisements selectively to a plurality of online users.

4.4 In the board's view, advertising is in general a non-technical activity within the meaning of the EPC and the relevant case law.

Consequently, the content of the advertisements, any effect the advertisements might have on the user's behaviour or on the sales of a product (or a service) are not regarded as technical features or technical effects.

4.5 Hence, the board considers that delivering advertisements more "efficiently" (see also point 3 above) is not a technical aim to be achieved or a technical problem to be solved by a skilled person.

4.6 In the board's view, online advertising is merely advertising that is carried out in/by technical means, such as a computer network. The claimed method itself is based on a mathematical model using probabilities (see section titled "Scheduling Mathematics" starting on page 11, line 25 of the published application). Starting from certain assumptions, like the probability a given user will log on during a specific time period

("probability p") and the conditional probability they will remain online for more than a certain number of minutes, the model calculates an order of a specific advertisement in the delivery schedule (see page 13, lines 2 to 6; page 16, line 18 to page 17, line 8), which is supposed to increase the chances that the specific advertisement is delivered to the given user during a specific period.

The basic parameters used in this mathematical model (the probability p that a random user will log onto the web on a given day and the user's web time per day - see page 12, lines 10 to 20) are randomly/arbitrarily set. Even though reference is made to using "statistical computations based on knowledge of prior observed online behavior of users" (page 12, lines 8 to 9), there is no further indication of how these statistical computations are carried out or used and the reference to them remains vague. The board notes that the result of the mathematical calculations is based on arbitrary assumptions, which affect the final result accordingly (see page 16, line 18 to page 17, line 16), i. e. the used parameters are not the result of any measurements or any physical properties.

The board's view is, hence, that the mathematical model described in the application does not contribute to the technical character of the invention, either.

- 4.7 Summarising, the board's view is that the distinguishing features of claim 1 relate to a non-technical method which aims to provide a non-technical effect. According to well-established EPO case law and practice, it is therefore legitimate to formulate a technical problem along the lines of how to implement these features in the notoriously well-known computer

network.

- 4.8 According to the description, the various steps of the claimed method are implemented by software components (see page 6, line 16 to page 7, line 4). These software components are defined by their respective functions. The application does not describe or suggest any particular technical considerations or other details regarding their implementation. There is no apparent technical effect of the claimed method that goes beyond the generation of network traffic.
- 4.9 The board's opinion is therefore that the skilled person (a computer programmer in the present case), to whom is given the administrative method of scheduling the delivery of advertisements for implementation, would arrive at the method steps of claim 1 in an obvious manner based only on common general knowledge.
- 4.10 The appellant argued that the various steps of the claimed method were executed by technical means, like a computer network, so the corresponding claim features were technical (see statement of the grounds of appeal, page 1 and first half of page 2). The board agrees with the appellant in this respect. However, as explained above, the fact that these features are technical is not sufficient for them to be considered inventive.
- 4.11 The appellant argued further that the claimed invention provided a technical solution to a technical problem (see pages 2 and 3 of the statement of grounds of appeal).

The board does not share the appellant's view in this regard. As it has been explained previously, the board does not consider delivering targeted advertising

content to online users more "efficiently" or "optimizing" the delivery of such content for online users as technical problems. In the context of the present application "increasing the efficiency" or "optimizing" relate to fulfilling contractual constraints (of the advertising campaign) and to maximizing the delivered content in general and not to any technical aspects such as the utilisation of technical resources of the computer network, for example. The corresponding solution is an administrative method (scheduling of delivery of online advertising content), which is based on an abstract mathematical model. In the board's view neither the problem nor its solution are of technical nature.

4.12 The board's conclusion is, therefore, that the subject-matter of claim 1 of the Main Request does not involve an inventive step within the meaning of Article 56 EPC 1973.

5. First Auxiliary Request

The First Auxiliary Request corresponds to the First Auxiliary Request underlying the decision under appeal.

5.1 Compared to claim 1 of the Main Request, claim 1 of the First Auxiliary Request specifies that the determined expected value relating to each user being online is the probability p relating to each user being online (see also page 12, lines 10 to 20 of the published application).

5.2 In the board's view, there is no substantive difference in the definition of this feature with respect to the corresponding feature in claim 1 of the Main Request ("expected values" vs "probability p "). The board's

conclusion is therefore that the subject-matter of claim 1 of the First Auxiliary Request does not involve an inventive step for the same reasons as for claim 1 of the Main Request.

6. Second Auxiliary Request

The Second Auxiliary Request corresponds essentially to the Second Auxiliary Request underlying the impugned decision.

6.1 In the decision under appeal the examining division considered that the additional features of claim 1 of the Second Auxiliary Request with respect to claim 1 of the Main Request did not provide any inventive contribution and concluded that the subject-matter of the independent claims of the Second Auxiliary Request did not involve any inventive step (see point 1.3 of the Reasons).

6.2 The appellant has not contested these conclusions of the examining division.

6.3 The board considers that these additional features (see point VI above) relate to administrative steps. Selecting what type of advertisement will be delivered to a user based on their profile (default or targeted advertisement), monitoring the delivery of advertisements and updating the delivery list accordingly, are steps relating to the underlying business model. Their implementation in the context of the claimed method does not provide any particular technical effect or involve any technical considerations or difficulties and lies within the skilled person's common general knowledge.

- 6.4 The board, hence, agrees with the examining division in that the subject-matter of claim 1 of the Second Auxiliary Request does not involve an inventive step, either.
7. Since none of the requests on file is allowable, the appeal must fail.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



S. Sánchez Chiquero

T. Häusser

Decision electronically authenticated