Datasheet for the decision
of 17 January 2007

Case Number: T 0958/03 - 3.5.01
Application Number: 98941014.7
Publication Number: 1008090
IPC: G06F 17/60
Language of the proceedings: EN

Title of invention:
Method and apparatus for generating purchase incentives based on price differentials

Applicant:
CATALINA MARKETING CORPORATION

Opponent:
-

Headword:
Purchase incentives/CATALINA MARKETING

Relevant legal provisions:
EPC Art. 23(3), 52(1)(2)(3), 56
RPBA Art. 10b(1)(3)

Keyword:
"Marketing policy - contribution to technical character (no)"
"Objective problem - inclusion of non-technical innovation (yes)"
"Technical implementation - obvious (yes)"

Decisions cited:
T 0026/86, T 0769/92, T 0641/00, T 0258/03, T 0531/03
BGH X ZB 15/98-Sprachanalyseeinrichtung
BGH X ZR 43/91-Tauchcomputer

Catchword:
-
Case Number: T 0958/03 - 3.5.01

DECISION
of the Technical Board of Appeal 3.5.01
of 17 January 2007

Appellant: Catalina Marketing Corporation
200 Carillon Parkway
St. Petersburg, FL 33716 (US)

Representative: Kunz, Herbert
HAMMONDS
Karl-Scharnagl-Ring 7
D-80539 München (DE)

Decision under appeal: Decision of the Examining Division of the European Patent Office posted 22 April 2003 refusing European application No. 98941014.7 pursuant to Article 97(1) EPC.

Composition of the Board:
Chairman: S. Steinbrener
Members: K. Bumes
A. Pignatelli
Summary of Facts and Submissions

I. This appeal is against the decision of the Examining Division to refuse application 98941014.7 on the ground that the apparatus according to main, first and second auxiliary requests did not involve an inventive step over


II. In the statement of grounds of appeal, the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request (= main request refused by the Examining Division) or one of auxiliary requests 1 to 4 submitted with the statement of grounds.

Claim 1 of the main request reads:

"1. An incentive generation apparatus, for use with a sales transaction recording system having at least one checkout terminal (12) and a store controller (10) with access to an item price file (20), the apparatus comprising:

storage means (28) for holding data defining incentive terms pertaining to at least one item of which sales are to be promoted;

means (14) for identifying a triggering item which is purchased and presented at a checkout terminal;

means (22) for identifying whether the triggering item is a promoted item;

means (22) for identifying a competitive item associated with the promoted item in an incentive deal; characterised by

said data held by said storage means is located in discrete sets of incentive terms, each set pertaining
to said at least one item to be promoted;
    means (24) for obtaining sales prices for the
promoted item and the competitive item;
    means (22) for determining the difference in price
between the promoted item and the competitive item;
    means (22) for selecting a set of incentive terms
from the storage means, based on whether the purchased
item is the promoted item or the competitive item,
further based on the difference in prices of the
promoted item and the competitive item; and
    means (22, 16) for generating an incentive for the
consumer, consistent with the selected set of incentive
terms."

Independent claim 6 of the main request is a
corresponding method claim, claim 10 defines a computer
program by reference to claim 6, and claim 11 relates
to the computer program of claim 10 embodied on a
computer readable medium.

Claim 1 of the first auxiliary request specifies that
the apparatus is a sales transaction recording system
and that its functions are carried out during a
consumer transaction.

III. The Board summoned the appellant to attend oral
proceedings scheduled for 17 January 2007. In an annex
to the summons, the Board summarised the issues to be
discussed and expressed doubts about the inventive step
of all versions of claim 1, the admissibility of
amendments according to Article 123(2) EPC (auxiliary
requests 2 and 3), and the clarity of claims and their
support by the description pursuant to Article 84 EPC
(auxiliary request 2).
IV. By facsimile transmission in the evening of Friday 12 January 2007, the appellant filed amended sets of claims forming auxiliary requests 5 to 8. The Board received the additional requests on 15 January 2007.

V. At the oral proceedings on 17 January 2007, the appellant declared that auxiliary requests 5 to 7 superseded auxiliary requests 2 to 4. Auxiliary request 8 was withdrawn when the Board indicated that it would not admit that late-filed request into the proceedings since the request exceeded the scope of the preceding discussion considerably.

The appellant thus requests that the decision under appeal be set aside and that a patent be granted on the basis of the set of claims in accordance with the main request filed with letter of 1 November 2002, or alternatively with the first auxiliary request filed with the statement of grounds of appeal, or with one of the fifth to seventh auxiliary requests filed with letter of 12 January 2007.

Claim 1 of auxiliary request 5 reads:
"1. Targeted incentive generation apparatus, for use with a sales transaction recording system having at least one checkout terminal (12), a store controller (10) with access to an item price file and storage means (24) for holding data defining separate sets of incentive terms pertaining to at least one item of which sales are to be promoted, the apparatus further comprising means (22, 40-52) for effecting a processing sequence having:

   means (14) for identifying (44) a purchase
triggering item presented at a checkout terminal; and
means (22) for identifying (60, 62, 64, 68, 70) an
additional item associated with the purchased
triggering item in an incentive deal, wherein one of
the two items is a promoted item and the other is a
competitive item;
characterised in that the means (22, 40-52) for
effecting a processing sequence further includes
means (24) for obtaining (66) sales prices for the
promoted item and competitive item;
means (22) for selecting (72) a set of incentive
terms from the storage means, based on whether the
purchased triggering item is a promoted item or the
competitive item, and further based on the prices of
the promoted item and competitive item, wherein the
incentive terms are determined by a customer's
purchasing behaviour and price of the promoted item
relative to the competitive item;
means (22, 16) for generating (80-92) an incentive
for the customer, consistent with the selected set of
incentive terms; and
means (22) for storing (50) the incentive in a
queue for outputting for customer use, the queue
comprising a coupon queue containing one or more
printable coupons; and in that the apparatus further
comprises
means (22) for effecting a processing loop (54-58)
comprising:
means for initiating the processing sequence if
there is an input to the process; and
means for initiating (56) if there is no input to
the process and if there is any queued incentive for
the customer, the output of the incentive, including
printing the coupon(s) in the coupon queue; and
means for continuing the processing loop whether there is any queued incentive or not."

Claim 1 of auxiliary request 6 reads:
"1. An apparatus for generating incentive data, for use with a sales transaction recording system having at least one checkout terminal (12) and a store controller (10) with access to an item price file (20), the apparatus comprising:

storage means (24, 28) for holding data defining incentive terms pertaining to at least one item of which sales are to be promoted;

means (14) for identifying a triggering item which is purchased and presented at a checkout terminal;

means (22) for generating (72) an incentive for the customer, the incentive being for an item that is associated in the storage means (24, 28) with the triggering item purchased;

characterised by further including

means (24) for identifying whether the triggering item is a promoted item;

means (22) for identifying a competitive item associated with the promoted item in an incentive deal;

said storage means (24, 28) including an incentive matrix file (28) containing one or more incentive matrices, the or each incentive matrix containing plural different incentive terms and being accessible based upon the difference in price between promoted and competitive items and a customer profile;

means (22) for estimating a customer profile based upon the equality or inequality of prices of the promoted item and said at least one associated competitive item;

means (22) for accessing said matrix based upon
said estimated profile, and item purchased;
    means (22) for selecting incentive data based on
said estimated profile, a determination whether the
purchased item is the promoted item or the competitive
item, and upon the difference in price between the
promoted item and the at least one associated
competitive item; and in that
    the generated incentive has data representative of
a value varied in dependence upon the selected
incentive data."

Claim 1 of auxiliary request 7 reads:
"1. An apparatus for generating incentive data, for
use with a sales transaction recording system having at
least one checkout terminal (12) and a store controller
(10) with access to an item price file (20), the
apparatus comprising:
    storage means (24, 28) for holding data defining
incentive terms pertaining to at least one item of
which sales are to be promoted;
    means (14) for identifying a triggering item which
is purchased and presented at a checkout terminal;
    means (22) for generating (72) an incentive for
the customer, the incentive being for an item that is
associated in the storage means (24, 28) with the
triggering item purchased;
    characterised by further including
    means (24) for identifying whether the triggering
item is a promoted item;
    means (22) for identifying a competitive item
associated with the promoted item in an incentive deal;
    said storage means (24, 28) including an incentive
matrix file (28) containing one or more incentive
matrices, the or each incentive matrix containing
plural different incentive terms and being accessible based upon the difference in price between promoted and competitive items and a customer profile;

means (22) for estimating a customer profile based upon at least three values, including a first value when the purchased item has a lower price than the associated competitive item, a second value when the purchased item and the associated competitive item have the same price, and a third value when the purchased item has a higher price than the associated competitive item;

means (22) for accessing said matrix based upon said estimated profile, and item purchased;

means (22) for selecting incentive data based on said estimated profile, a determination whether the purchased item is the promoted item or the competitive item, and upon the difference in price between the promoted item and the at least one associated competitive item; and in that

the generated incentive has data representative of a value varied in dependence upon the selected incentive data."

VI. The appellant essentially argues that the claimed incentive generation apparatus achieves a technical overall effect: it saves a sales company's resources (paper, ink, print head, energy etc) by generating incentives that are better targeted, i.e. tailored to various categories of customers. In addition, the apparatus entails a computational implementation, and the data sets processed represent physical entities (product items, coupons, etc).
VII. The Board pronounced its decision at the end of the oral proceedings.

**Reasons for the Decision**

*Teaching of the application*

1. At a point of sale (POS, checkout terminal), an incentive is conventionally generated (i.e. a promotion coupon or voucher is printed) for a customer purchasing an item, see D2 (as detailed below).

A goal in such a system is to maximize the redemption rate by more precisely "targeting" the consumers that receive coupons, see page 2 (lines 12 to 14) of A1: WO-A1-99/12117.

To achieve that goal, the application proposes to select an incentive based on whether the purchased item is a promoted item or a competitive item (reflecting a customer's purchasing behaviour), and on the price difference between the promoted item and the competitive item.

**Main request**

*Article 52(1)(2)(3) EPC - Eligibility for patent protection*

2. The apparatus according to claim 1 comprises a technical data processing infrastructure (including storage means, for example). The method according to claim 6 implies a technical use of such infrastructure.
Hence, the subject-matter of both claims is technical and, thus, represents an "invention" within the meaning of Article 52(1)(2)(3) EPC, see e.g. T 258/03-Auction method/HITACHI (OJ EPO 2004, 575, Headnote I).

**Article 56 EPC - Inventive step**

3. Regarding the problem and solution approach applied in the decision under appeal, the appellant disagrees with the Examining Division's way of attributing most of the claimed concept to a marketing expert whose knowledge is handed over to a technical expert who has to implement it. According to the appellant, the concept includes technical considerations which must not be included in a marketing scheme. In particular, the idea of targeting customers more efficiently at a checkout terminal (POS) presupposes a technical understanding of the POS so as to identify the POS as a potential point of intervention and improvement.

4. The Board first notes that the idea of utilising the POS infrastructure as a marketing environment is conventional, see D2 (e.g. column 2, lines 1 to 12). The Board concurs with the decision under appeal in considering the apparatus of D2 as the closest prior art with respect to the automatic dispensing of discount coupons for a product other than a triggering product (D2, column 1, lines 65 to 68). The apparatus of D2 comprises the technical infrastructure of a POS computer system defined in claim 1 (see D2, column 2, lines 1 to 32; Figures 1 and 2 and associated parts of the description, in particular column 8, lines 17/18). The coupon, when issued, is selected according to rules pertaining to a coupon deal the details of which are
stored in a coupon deal file (D2, column 2, lines 21 to 29). The coupon is created by extracting the coupon information from the coupon deal record and printing the coupon (D2, column 3, lines 12 to 16). Additional marketing rules which may inhibit the issuing of a coupon are specified in claims 38 to 42 of D2. D2 mentions that most POS systems have terminals capable of reading a code printed on a product package to retrieve the price of that package from an internal file (column 1, lines 14 to 24).

The appellant has not disputed that the apparatus of claim 1 differs from that of document D2 by its functions and not by its hardware (see e.g. page 10, paragraph 3 of the statement of grounds of appeal).

5. In the Board's judgment, the appellant's main contribution resides in a refined marketing scheme which bases the coupon issuing process on commercial and/or psychological assumptions about consumer behaviour in the light of price differentials and brand loyalty. The application as filed does not indicate any technical reason for basing the incentive on those two aspects. While the appellant argues that an efficient incentive policy may finally control the flow of materials (by helping to sell certain commodities first) and may help to reduce the consumption of resources, those effects, even if achieved, would not be sufficiently direct to confer a technical character to the incentive policy.

It may be added that the Board has doubts about the appellant's assertion that the teaching of the application, when applied to the apparatus of D2,
reduces the amount of printing. In fact, even a higher number of incentives may be finally printed since coupons are produced even when customers buy the promoted product (in contrast to the policy of D2). Hence, while an increased redemption rate may render the claimed apparatus more efficient in terms of commercial success, savings in print resources are not apparent.

6. The mere idea of basing the coupon issuing process on commercial and/or psychological assumptions about consumer behaviour does not require any technical knowledge or consideration.

Moreover, a purely non-technical idea, i.e. an idea that does not contribute to the technical character of the subject-matter claimed, cannot enter into the examination for inventive step, see T 641/00-Two identities/COMVIK (OJ EPO 2003, 352, Headnote I) and T 531/03-Discount certificates/ CATALINA (Headnotes 1 and 2).

The non-technical idea rather belongs to the non-patentable motivation phase preceding in principle any invention. It may therefore be included in the formulation of the technical problem (see T 641/00, Headnote II) and, thus, is disregarded in the inventive step assessment. Hence, the technical problem amounts to implementing a new incentive concept in the conventional hardware system known from D2.

7. The general idea of processing commercial data automatically is technical but is obvious for the general purpose of increasing the efficiency of data
processing. The appellant has not provided any specific reason why this general finding might not apply to the present case. The application as filed is silent on promising technical contributions by implementing details, and the Board has not identified any candidate. For example, storing data in discrete sets associated with a corresponding plurality of items represents a common database technique, and calculating a price difference of two items does not require inventive programming, either.

8. In summary, the overall concept of claim 1 does not provide a non-obvious technical contribution over D2: the technical aspect of the concept is obvious (see point 7 supra), and the potentially non-obvious aspect is purely intellectual (see point 6 supra).

**Appellant's alternative argumentation**

9. By way of an alternative argumentation (grounds of appeal, paragraph bridging pages 15/16), the appellant has submitted that decisions T 26/86-\textit{X-ray apparatus/KOCH \& STERZEL} (OJ EPO 1988, 19), T 769/92-\textit{Financial management computer/SOHEI} (OJ EPO 1995, 525) and two decisions of the German Bundesgerichtshof (BGH X ZB 15/98-\textit{Sprachanalyseeinrichtung} [language analysis apparatus]; BGH X ZR 43/91-\textit{Tauchcomputer} [diving computer]), "render it impermissible not to consider the contribution of the non-technical person in the assessment of inventive step, especially bearing in mind Trips Art. 27(1) and that the word "technical" is not used in relation to assessment of inventive step in the EPC."
9.1 These arguments have been dealt with in substance by the earlier Catalina decision T 531/03, see in particular points 2.6 to 2.8 of the Reasons.

9.2 Regarding the two BGH decisions mentioned by the appellant, the Board first notes that it is only bound by the European Patent Convention (Article 23(3) EPC).

Secondly, in the Board's view, the BGH jurisprudence does not support the appellant's general assertion that non-technical features are to be admitted unconditionally into the inventive step examination.

10. Consequently, the incentive generation apparatus according to claim 1 (main request) does not involve an inventive step, contrary to the requirements of Article 56 EPC.

**Auxiliary request 1**

11. Claim 1 has been amended to specify that the apparatus is a sales transaction recording system and that its functions are carried out during a consumer transaction.

D2 already suggests to record transaction details (see column 1, lines 14 to 16 and column 2, lines 33 to 34) and discloses a coupon log file (Figure 1: file 34). Carrying out a marketing policy during a consumer transaction represents a self-evident choice in a conventional setting where the discount coupon is produced and handed out to the customer at the checkout terminal as part of the incentive policy (D2, column 10, lines 30 to 48).
Therefore, the subject-matter of claim 1 of the first auxiliary request lacks an inventive step over D2.

**Admissibility of late-filed auxiliary requests 5 to 7**

12. According to Article 10b(1) of the Rules of Procedure of the Boards of Appeal (RPBA), the Board has a discretion to allow amendments depending *inter alia* on their complexity, the current state of the proceedings and the need for procedural economy. In addition, according to Article 10b(3) RPBA, amendments after oral proceedings have been arranged shall not be admitted if they raise issues which the Board cannot reasonably be expected to deal with without adjournment of the oral proceedings.

In the current case, the late-filed requests 5 to 7 are based on (and supersede) former auxiliary requests 2 to 4 submitted with the statement of grounds of appeal and introduce only minor amendments to deal with objections pursuant to Articles 123(2) and 84 EPC that the Board had raised in the summons. Hence, the Board admitted the appellant's late-filed auxiliary requests 5 to 7 into the proceedings.

**Auxiliary request 5**

13. Amended claim 1 of this request further specifies means for storing the incentive in a queue for outputting for customer use (see also Figure 2 of A1). The appellant argues that the additional features assure unconditional printing of coupons which can be conducted in parallel and not conditional upon the rest of the process (grounds of appeal, page 13, paragraphs
3 and 4). Therefore, the features of claim 1 are said to enable incentives to be printed during the transaction, which is not possible according to D2 where coupons are printed at the end of a transaction.

13.1 However, D2 likewise describes an output queue including wait states (see Figures 3 and 4a, 4b) which is not limited to printing at the end of a transaction. So-called high priority coupons can be printed before a transaction ends (D2, column 10, lines 20 to 28 and 55 to 61), which already achieves the advantage asserted by the appellant, i.e. more time for printed coupons to cool down or to fix ink.

In any event, conventional printer spoolers representing a skilled programmer's common knowledge are well-known to release computer resources in order to process tasks in parallel to printing operations.

13.2 Therefore, the subject-matter of claim 1 of auxiliary request 5 lacks an inventive step over D2.

**Auxiliary request 6**

14. Amended claim 1 of this request essentially introduces means for storing and arranging sales prices in the form of an incentive matrix file (see in particular the "incentive decision matrix" of Figure 6 and the corresponding text of A1). The content of such an incentive matrix according to the application "can be designed to meet any desired marketing goals or strategies" (see page 13, lines 5/6). The Board therefore judges that the primary effect achieved by such an incentive matrix is a further refined incentive
policy which is considered to be a non-technical contribution.

It is not a technical person's task to find out about commercial or psychological ways of motivating customers to redeem incentive coupons according to different incentive terms (laid down in a table or matrix). The technical person only implements a non-technical person's incentive policy which may be innovative but cannot enter into the inventive step examination. Only the technical person's contribution, i.e. the technical implementation, could be non-obvious in the sense of Article 56 EPC. However, using a database as a look-up table in the form of a matrix represents a common programming technique. The advantage emphasised by the application (convenient change, see page 13, lines 6 to 8 and lines 17 to 20; page 14, lines 11 to 13) is one of the well-known advantages of look-up tables (speed, simplicity, flexibility) which usually have to be balanced against the cost of a large data memory.

Therefore, the subject-matter of claim 1 of auxiliary request 6 lacks an inventive step over D2.

**Auxiliary request 7**

15. Amended claim 1 of this request essentially adds that a customer profile is estimated based on at least three values depending on whether the price of the purchased item is lower, higher or the same as that of the competitive item, i.e. based on an increased profile granularity as argued by the appellant.
In the Boards judgment, categorising a customer in terms of "setness", "preferences" and "loyalty" (A1, page 11, paragraph 2) on the basis of his purchasing choice is not a matter to be decided and refined by a technical person but by a marketing expert, consumer psychologist or the like. The technical person readily expands the incentive matrix or database to any complexity considered useful by the marketing manager. While this is an implementation issue (acknowledged by A1, page 11, lines 5 to 9), the application is silent on programming details and, thus, implicitly confirms that the implementation can be left to the technical person without providing any explicit guidance.

Therefore, the subject-matter of claim 1 of auxiliary request 7 also lacks an inventive step over D2.

**Order**

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

The appeal is dismissed.

The Registrar: The Chairman:

D. Sauter S. Steinbrener