

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KAREN A. PAPIERNIAK,
JAMES E. THAISZ, LUO-JEN CHIANG,
SUSAN L. WOODFORD,
and EUGENE M. BETZ

Appeal No. 2002-1844
Application 08/975,428¹

ON BRIEF

Before BARRETT, SAADAT, and BLANKENSHIP, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1, 3-22, 28-35, and 37.

We reverse.

¹ Application for patent filed November 20, 1997, entitled "Computer Architecture and Method for Supporting and Analyzing Electronic Commerce over the World Wide Web for Commerce Service Providers And/or Internet Service Providers."

BACKGROUND

The invention relates to method of analyzing electronic commerce data.

Claim 1 is reproduced below.²

1. A method of supporting and analyzing electronic commerce data for electronic commerce service providers using a computer, comprising the steps of:

(a) determining data elements required for analyzing the Internet and/or electronic commerce over the World Wide Web;

(b) providing a decision support user with one or more options for data searching from multiple data sources in the form of operational activities responsive to decision support user specified criteria;

(c) structuring and storing the data elements obtained in said step (b), including parsing, categorizing, indexing, and formatting the data elements;

(d) analyzing the data elements stored in said step (c), including recognizing at least one of patterns, trends, exceptions of the data elements based on statistic and analytic manipulation techniques; and

(e) iteratively performing said steps (a), (b), (c), and (d) to provide at least one of solution navigation, iterative learning, and decision guidance.

The examiner relies on the following references:

Dedrick	5,696,965	December 9, 1997 (filed November 3, 1994)
Gerace	5,848,396	December 8, 1998 (filed April 26, 1996)
Hyodo	5,937,390	August 10, 1999 (filed June 28, 1996)

² In the amendment (Paper No. 23) filed May 21, 2001, the line "of operational activities responsive to decision support user" in paragraph (b) is inadvertently repeated on page 2.

Appeal No. 2002-1844
Application 08/975,428

Claims 1, 3-22, 29-31, 33-35, and 37 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hyodo or Gerace.

Claims 28 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hyodo in view of Dedrick or Gerace in view of Hyodo.

We refer to the final rejection (Paper No. 24) (pages referred to as "FR__") and the examiner's answer (Paper No. 29) for a statement of the examiner's rejection, and to the appeal brief (Paper No. 28) (pages referred to as "Br__") for a statement of appellants' arguments thereagainst.

OPINION

Hyodo

Claims 1, 3-15, 29-31 and 37

The examiner reads steps (a), (b), and (c) on column 3, lines 38-67 of Hyodo, and reads step (d) on column 2, lines 39-46 of Hyodo (FR4; EA3-4). The examiner finds that Hyodo does not expressly disclose that the structuring and storing of data elements in step (c) includes "parsing, categorizing, indexing, and formatting the data elements," but "Official Notice is taken that it is [sic, was] old and well known within the database arts that incoming data must be transformed into the appropriate format before being stored in a database" (FR5; EA4) and concludes that "[o]ne [of ordinary skill in the art] would have been motivated to parse, categorize, index, and map incoming data

Appeal No. 2002-1844
Application 08/975,428

in order to allow more efficient storage, search, and retrieval of data for the subsequent data analysis in the Hyodo and Gerace systems" (FR6; EA5).

Appellants argue: (1) Hyodo is nonanalogous art (Br11-12); (2) there is no suggestion or motivation to modify Hyodo to provide "parsing, categorizing, indexing, and formatting the data elements" as suggested by the examiner (Br13-14); and (3) even if Hyodo were modifiable, it would still fail to disclose or teach all limitations of the rejected claim 1, in particular, the preamble and steps (a), (b), (d), and (e) (Br14-16).

The examiner responds to these arguments (EA16-23).

We address appellants' and the examiner's positions in the context of addressing claim 1.

The examiner has not explained, with the kind of specificity we expect, how claim 1 reads on Hyodo or provided any special claim interpretations. Merely pointing to column 3, lines 38-67, and column 2, lines 39-46, is not helpful. Nevertheless, we read claim 1 onto Hyodo as follows.

Hyodo describes "on-line shopping using the Internet" (col. 1, line 1) and a "method that will enable a service provider to determine the effectiveness of on-line advertising in on-line shopping using a network" (col. 1, lines 63-65). Online advertising and online shopping (without purchasing) on the Internet are broadly considered electronic commerce (e-commerce).

Appellants have provided a definition of "e-commerce" as "[d]oing business online, typically via the Web" and "e-commerce implies that goods and services can be purchased online" where a heading "The First E-Commerce?" discusses sales of watches using the telegraph (TechEncyclopedia definition in Exhibit A). We agree with the examiner that the definition of e-commerce is not so limited that it absolutely requires goods or services to be purchased online, as opposed to advertised online, or purchased using the telephone (see EA17 ¶ 11b). The "service provider" in Hyodo analyzes access information relating to user access to advertising system 21 of the service provider (col. 3, lines 38-43; col. 4, lines 4-7), to provide, for example, a calculation of "hit rate" (col. 5, lines 45-47) and corresponds to the claimed "electronic commerce service provider." Thus, we find that Hyodo discloses a "method of supporting and analyzing electronic commerce data for electronic commerce service providers using a computer" as broadly recited in the preamble.

The access log on the server in Hyodo (Fig. 4, steps S1 & S2; Fig. 5; col. 3, lines 38-47; col. 5, lines 1-21) contains data elements which someone has determined to be "required for analyzing the Internet and/or electronic commerce over the World Wide Web," as recited in step (a). For example, the data elements in the access log are shown in Fig. 5; Hyodo calls this the "1st access information." Appellants argue that there are no

determinations of data elements because data elements are pre-fixed (Br15). The examiner finds that the merchant in Hyodo enters the desired search query, i.e., the desired advertisement and/or product, and so determines the data elements (EA22 ¶ 11h). Nothing in claim 1 precludes the data elements from being determined once and then not changing. In addition, we agree with the examiner that the service provider determining the toll-free telephone number or HTML file name for analysis of the effectiveness of a particular website, as discussed in the next paragraph, is determination of data elements as broadly claimed.

When a customer calls the toll-free number advertised on the web site, an access log is created in the form of a bill which is inputted to the online advertising system 21 (Fig. 4, step S3; Fig. 6; col. 3, lines 52-67; col. 5, lines 26-35); Hyodo calls this data "2nd access information." The online advertising system 21 of the service provider compiles and analyzes the access log obtained from the WWW server (1st access information) according to a program entered in advance and the toll-free telephone service access log (2nd access information) (Fig. 4, step S4) and provides the results to the advertiser (Fig. 4, step S5; col. 5, lines 37-54). The examiner notes that the access logs are two data sources (EA4). There is also a store management file data source (Fig. 9; col. 6, lines 14-19). The claimed "multiple data sources" in step (b) reads on the access

Appeal No. 2002-1844
Application 08/975,428

log obtained from the WWW server (1st access information), the toll-free telephone service access log (2nd access information), and the store management file. Claim 1 does not require the multiple data sources to be on the Internet. The claimed "decision support user" reads on the advertiser who is provided with the analysis results to determine whether the advertising is effective. Hyodo determines whether accesses to an online advertisement were effective accesses by judging that a call that immediately follows access to the advertisement is from the same user (col. 6, line 61, to col. 7, line 4). It does this by using the toll-free telephone number to obtain the HTML file name from the store management file, and referring to the access date and time of each extracted online access log entry, searching the records of the toll-free telephone service access log in a certain time period including those log entries, and determining whether a start time in the telephone service access log is within a specified time of the access time in the online advertising access log so as to determine whether the telephone call was in response to seeing the advertisement (Fig. 7; Fig. 10; col. 6, lines 20-49). Then the "hit rate" is computed (col. 6, lines 50-60). Step (b) requires only one "option[] for data searching from multiple data sources," which we read on searching for a particular HTML file name which will be used to extract access date and time from the logs (col. 6, lines 14-26).

Appeal No. 2002-1844
Application 08/975,428

Note that the "one or more options for data searching" and "decision support user specified criteria," as broadly claimed, can be predetermined and fixed options and criteria, and do not require the ability of a user to perform new queries using different search terms even though that may be what appellants intended. The claimed "operational activities" reads on the "hit rate" for the advertisement. Thus, we find that Hyodo discloses "providing a decision support user with one or more options for data searching from multiple data sources in the form of operational activities responsive to decision support user specified criteria," as recited in step (b).

Step (c) recites "structuring and storing the data elements obtained in said step (b), including parsing, categorizing, indexing, and formatting the data elements." Step (b) does not mention "data elements," but we assume that the data elements are the results of the data searching based on decision support user specified criteria. It is noted that the limitation "structuring and storing the data elements obtained in said step (b)" does not require permanent storage in a database and can read on temporary storage in the computer memory during the calculation and analysis process. The examiner discusses that the data collected at the website must include the number of visits per

Appeal No. 2002-1844
Application 08/975,428

advertisement, the identity of the viewer, the time of viewing, the time of purchase, etc. (EA21). The examiner states (EA21):

When this information is retrieved in Hyodo, it must be parsed, categorized, indexed, and formatted into the proper form for the subsequent analysis by Hyodo. This is inherent in any type of comparison and analysis. Without such pre-processing of the data, it would be impossible to ascertain which part of the data from one source should be compared with which data from the other source. Therefore, the Examiner considers Hyodo's disclosure of retrieving and analyzing the data from these two sources as rendering it inherent that the data is being parsed, categorized, indexed, and formatted.

Thus, the examiner reads the "data elements obtained in said step (b)" on the information collected in the online access log and the telephone service access log which is retrieved during analysis. We note that the examiner's reasoning switches from the obviousness of modifying Hyodo based on Official Notice that "parsing, categorizing, indexing, and formatting the data elements" were well known to finding that "parsing, categorizing, indexing, and formatting the data elements" are inherent.

Appellants argue there is no reason why the web and phone access logs in Hyodo would need to be parsed, categorized, indexed, and formatted before being stored because Hyodo merely counts the number of accesses and phone calls and divides one by the other (Br13). It is argued that there is no teaching of storing data from two data sources into one database (Br14).

We are not persuaded that "parsing, categorizing, indexing, and formatting the data elements" in Hyodo would have been

obvious or inherent. The limitation of "structuring and storing the data elements obtained in said step (b), including parsing, categorizing, indexing, and formatting the data elements" requires all steps of "parsing, categorizing, indexing, and formatting the data elements" where the data elements are obtained from data searching in step (b). The examiner finds the data elements to be taken from information collected at the online access log and the telephone service access log. We find these data elements to be shown in Figs. 5 and 8. This information is analyzed to determine whether a start time in the telephone service access log is within a specified time of the access time in the online advertising access log so as to determine whether the telephone call was in response to seeing the advertisement, and either a "yes" or "no" is entered into the "access/no access" column of Fig. 8. The number of "yes" entries can be divided by the total number of entries to compute a "hit rate." However, the question is whether it would have been obvious or inherent for the data elements retrieved to be parsed, categorized, indexed, and formatted, not how the information is analyzed. We suppose it is possible to say that picking out one or more of the data items from Figs. 5 and 8 could be broadly called "parsing" although, since the records have defined fields, this is not really accurate; i.e., the conventional interpretation of parsing would be to break the string in Fig. 5

into the constituent components, but this has already been done. In any case, we do not see that Hyodo has need for "categorizing, indexing, and formatting" the retrieved data or that this is inherent: using parts of the stored data does not inherently require these steps nor does there appear to be any need for these steps. Hyodo merely uses data which has been stored in a predetermined format which does not need to be categorized, indexed, or formatted. Hyodo is not searching the web for data to be analyzed which needs to be organized and stored for later retrieval. If the examiner had applied a reference that dealt with data mining on the web (web mining), the examiner's finding of inherency would be persuasive (although, for purposes of further judicial review, a reference should be provided). For these reasons, we conclude that the examiner has failed to establish a prima facie case of obviousness as to claim 1 and it is not necessary to address the rest of the limitations of claim 1 or the rest of appellants' arguments. The rejection of claims 1, 3-15, 29-31, and 37 over Hyodo is reversed.

Claims 16-22 and 33-35

The examiner reads the "decision maker station" on column 4, lines 3-11 of Hyodo; reads the "analysis module" on column 5, lines 37-54, and column 6, line 61 to column 7, line 4; reads the "data warehouse" on the log information storage at column 3, lines 6-12; and reads the "mapping module" on column 5,

Appeal No. 2002-1844
Application 08/975,428

lines 50-54 (FR10; EA9). The examiner finds that Hyodo does not explicitly disclose mapping by transforming the data as part of the data storage process, but finds that Hyodo receives data from two sources and must transform the data to conform to the proper storage format (FR10; EA10). The examiner takes Official Notice that it was old and well known in the database arts that incoming data must be transformed into the appropriate format before being stored in a database (FR10; EA10) and concludes that "[o]ne [of ordinary skill] would have been motivated to parse, categorize, index, and map incoming data in order to allow more efficient storage, search, and retrieval of data for the subsequent data analysis in the Hyodo and Gerace systems" (FR11; EA11).

Appellants argue that Hyodo fails to teach the limitation of a data warehouse because the logs of Hyodo are not databases, and are not modifiable to be a data warehouse, and it is not clear how Hyodo would have benefited from having a data warehouse instead of an ordinary storage device (Br19).

The examiner notes that the term "data warehouse" is broadly data storage, which is met by Hyodo (EA18-20 ¶ 11.e).

We agree with the examiner that "data warehouse" is a broad term that does not define over data stored in the online access log and the telephone service access log. While we could, perhaps, limit the meaning of the term to the dictionary definition provided by appellants (Exhibit C), it is not clear

Appeal No. 2002-1844
Application 08/975,428

that appellants intend to be so limited. Any limitations should be added by express claim language.

Appellants argue there is no suggestion to modify Hyodo with a mapping module which transforms received data to be stored in a data warehouse (Br19).

We do not find a response to this argument, so we rely on the examiner's statement of the rejection.

The limitation at issue is "at least one data mapping module, respectively connected to said at least one electronic commerce data warehouse, searching and transforming the electronic commerce data, and transmitting the electronic commerce data transformed to said at least one electronic commerce data warehouse." The "searching and transforming" functions are much broader than the functions of "parsing, categorizing, indexing, and formatting the data elements" in independent claim 1. There is no question that Hyodo searches the online access log and the telephone service access log which correspond to the "data warehouse" in order to compute the hit rate. However, we do not see what examiner considers to be the "transforming" unless that it is equivalent to the "parsing, categorizing, indexing, and formatting" in claim 1. "Transforming" implies converting to a different state or thing, which would be met by parsing, categorizing, indexing, and formatting. It does not appear that the entries retrieved from

Appeal No. 2002-1844
Application 08/975,428

the online access log and the telephone service access log can be said to be transformed and then stored back in the data storage. The data in the access logs are not changed or transformed in any way; the program just uses the data in the logs. And, as stated in connection with claim 1, we do not find the steps of parsing, categorizing, indexing, and formatting to be obvious or inherent in Hyodo. Accordingly, we conclude that the examiner has failed to establish a prima facie case of obviousness as to claim 16 and it is not necessary to address the rest of the limitations or the rest of appellants' arguments. The rejection of claims 16-22 and 33-35 over Hyodo is reversed.

Gerace

Appellants argue (Br23): (1) Gerace is nonanalogous art; (2) there is no suggestion or motivation to modify Gerace as suggested by the examiner; and (3) even if Gerace were modifiable, it would still fail to disclose or teach all limitations of the rejected claims, especially step (b) of claim 1 and the mapping module searching for data of claim 16.

As with the rejection over Hyodo, the determinative issue is whether the functions of "parsing, categorizing, indexing, and formatting the data elements" in claim 1 are inherent in Gerace and would have been obvious, and whether the "transforming" function of the mapping module in claim 16 is inherent or would have been obvious. As with the rejection over Hyodo, we assume

that the examiner equates "transforming" to "parsing, categorizing, indexing, and formatting." The examiner admits that these functions are not expressly taught in Gerace.

Gerace discloses a method and apparatus for collecting and analyzing information about Internet users, in particular, the history of users viewing advertisements, including the number of times viewed by a user ("hits"), the number of times selected for further information by a user ("click through"), and/or the number of purchases initiated from display of the advertisement to a user to provide for automatic targeting of audiences (col. 2, lines 35-52; col. 5, lines 26-40; col. 12, lines 11-15). This information is stored in various objects, such as Ad Package Object 33b (Fig. 5B, last four lines; col. 12, lines 7-21) and is analyzed in various reports (col. 12, line 56, to col. 13, line 33). With respect to step (c) of claim 1, the claimed "data elements obtained in said step (b)" must refer to data elements stored in the various ad packages. However, as with the rejection of claim 1 over Hyodo, we fail to see how at least the steps of "categorizing, indexing, and formatting the data elements" is inherent in Gerace: the data elements are already categorized (e.g., "hit," "clickthrough," and "order" in Fig. 5) and formatted and it is not apparent how indexing applies. Although the examiner is undoubtedly correct that "parsing, categorizing, indexing, and formatting" were all well known in

Appeal No. 2002-1844
Application 08/975,428

the database art, we see no reason why it would have been obvious to provide these functions in Gerace since the functions appear unnecessary. Accordingly, the examiner has failed to establish a prima facie case of obviousness as to claim 1 and the rejection of claims 1, 3-15, 29-31 and 37 over Gerace is reversed.

Similarly, because the examiner appears to equate "parsing, categorizing, indexing, and formatting" in claim 1 to "transforming" in claim 16, and because we do not find any "transforming" of any kind, the examiner has failed to establish a prima facie case of obviousness with respect to claim 16 and the rejection of claims 16-22 and 33-35 is reversed.

Hyodo or Gerace in view of Dedrick

Dedrick is applied to teach open, closed, or registered environments in connection with claims 28 and 32 (EA14-16). We find that Dedrick does not cure the deficiencies of Hyodo or Gerace. Accordingly, the rejections of claims 28 and 32 over Hyodo in view of Dedrick and Gerace in view of Hyodo are reversed.

Appeal No. 2002-1844
Application 08/975,428

CONCLUSION

The rejections of claims 1, 3-22, 28-35, and 37 are reversed.

REVERSED

LEE E. BARRETT)	
Administrative Patent Judge)	
)	
)	
)	
)	BOARD OF PATENT
MAHSHID D. SAADAT)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
)	
)	
HOWARD B. BLANKENSHIP)	
Administrative Patent Judge)	

Appeal No. 2002-1844
Application 08/975,428

JAMES M. STOVER
NCR CORPORATION
1700 SOUTH PATTERSON BLVD, WHQ4
DAYTON, OH 45479