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Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PEILIN CHOU

Appeal No. 2002-1109
Application 09/316,436¹

ON BRIEF

Before KRASS, BARRETT, and RUGGIERO, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-26.

We affirm-in-part.

¹ Application for patent filed May 21, 1999, entitled "Accessing A Database Using User-Defined Attributes," which claims the foreign filing priority benefit under 35 U.S.C. § 119 of Taiwan (ROC) Application 87,108,378, filed May 29, 1998.

OPINION

Claims 1-12

Claim 1

We begin by discussing how claim 1 reads on the disclosure. The "attribute" in step (a) of claim 1 can be a word, a symbol, a specific term, a number, name, location, organization, etc. (spec. at 10, lines 15-17). The "first logging segment" of step (a) corresponds to the table 10 in Fig. 1, where the "attribute" consists of an "attribute name" entered by the user and a unique "attribute number" (automatically generated when the "attribute name" is entered by the user, spec. at 12, lines 16-20) and where "information which indicates subordinate relationships between attributes" refers to the "relative attribute number" which is used to indicate subordinate relationships (spec. at 11, lines 13-14). The "data lot" of step (b) refers to a grouping of data, such as a document or data file (spec. at 4, lines 18-19), which is linked to an "attribute." The "second logging segment" of step (c) refers to table 20 of Fig. 2, where each line indicates a "data lot," consisting of a "file number" and "location," and the "relative property number" indicates a "link from data lots to attributes."

Haegle discloses a method for managing listings of indented caption sets in a relational database of complete listings (abstract). The example described is a method for managing

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telephone directory listings. Figure 1 shows a sample listing for the "ABC Department Store." The listing has indents at different levels, e.g., "Apparel" is at the first level of indent (indicated by "(1)"), "Men's" is at the second level of indent (indicated by "(2)"), and "Suits," "Casual," and "Shoes" are at a third level of indent (indicated by "(3)"). The indent has one or more word labels and may have an associated telephone number (note the 4-digit numbers) or other data (col. 5, lines 51-59). The listing in Fig. 1 is used to create the "pre-index table" of Fig. 2, which is used for searching. Each listing, here the listing for the ABC Department store, has a unique "Listing Object Identifier" (LOID); other stores or organizations would have their own unique LOID. Each indent within a listing is uniquely identified by a "Caption Set Object Identifier" (CSOID), which is a varying length string, where each additional three-byte string indicates another level of indentation. Each unique level of indentation, which is the "Indentation Object Identifier" (IOID), is represented by a three-byte string. Haegele discloses that the CSOID "contains the complete hierarchy and navigational tree" (col. 6, lines 20-22). The pre-index is keyed to a relational database of the complete telephone directory listings, including the telephone numbers (col. 3, line 62 to col. 4, line 5). The CSOID and the LOID, and optionally the IOID, are used as numeric keys to index the table

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of Fig. 2 to the relational database to retrieve data from the database (col. 5, lines 46-51).

The examiner finds (FR3; EA3):

With respect to claim 1, Haegele teaches a method for facilitating the access of data using user-defined attributes, comprising the following steps:

(a) storing attributes (col. 1 lines 12-36) in a first logging segment (Fig. 1), entries for the attributes containing information which indicates subordinate relationships between attributes, the subordinate relationships creating an attribute structure (col. 1 lines 12 to col. 2 lines 67);

(b) when a user stores a data lot, allowing the user to specify one or more attributes to be linked to the data lot (col. 6 lines 1-14); and

(c) storing in a second logging element (Fig. 2), entries which show links from data lots to attributes (col. 3 lines 62 to col. 4 lines 60).

Examiner interprets indents as attributes, First logging segment as a [sic, an] Apparel under Men's (Suits, Casual, Shoes) (Fig. 1), Second logging segment CSOID (Apparel, Men's, Suits, Casual, Shoes) (Fig. 2)

Appellant argues that Haegele discloses none of the steps set out in claim 1. As to step (a), it is argued that there are no entries for indents that contain information that indicates subordinate relationships between indents (Br7). It is argued that indents are shown as empty spaces in Fig. 1 and Haegele does not include separate entries for indents and does not contain information that indicates subordinate relationships between indents (Br7).

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In the response to the arguments section (EA8-9), the examiner sets forth a different correlation, as discussed by appellant (RBr2-3).

We find the examiner's different correlation of claim 1 confusing and feel that the examiner could have done a better job of explaining. Nevertheless, we find that step (a) is taught by Haegele. The examiner found that Fig. 1 represents a "first logging segment" and each indent (caption) to correspond to an attribute; e.g., the word "Apparel" in Fig. 1, the caption for an indent, is an attribute. The indents are hierarchical, as indicated by the level of indentation shown in parentheses and visually by the amount of the indentation, where each succeeding level of indentation indicates a subordinate relationship; e.g., "Men's" is in a subordinate relationship to "Apparel," "Suits" is in a subordinate relationship to "Men's," etc. Consider that each line in Fig. 1 of Haegele corresponds to a line in appellant's Fig. 1, so that Fig. 1 of Haegele is a "first logging segment." The "attribute" is the word or words of the indent ("Apparel" or "Men's" or "Suits," etc.) and the "information which indicates subordinate relationships between attributes" is the indentation level shown in parentheses on the line. This meets the limitations of step (a). The indentation information from Fig. 1 is also present in Fig. 2, where the "attributes" are again the word or words of the indent, and the "information which

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indicates subordinate relationships between attributes" is the indentation level for that word as indicated by the number and value of three-byte groups in the "CSOID" column. Thus, Figs. 1 and 2 are both considered "first logging segments."

Appellant argues that column 6, lines 1-14, does not disclose the subject matter of step (b) because it only discusses what happens when a user wants to search listings, not what happens when a user stores a data lot (Br8).

The examiner modifies his explanation by stating that linking the table to the relational database with a Listing Object Identifier (LOID) is "attributes to be linked to the data lot" (EA8-9).

Appellant interprets the examiner's statement as directed to step (b), but argues that the use of the LOID appears to be totally unrelated to the subject matter of step (b) (RBr3-4).

We do not find a good explanation of how Haegele meets step (b) since column 6 is directed to searching, not storing a data lot, as claimed, and since we do not understand the reliance on the LOID. Nevertheless, it is implicit that the user must be able to specify an attribute to be linked to a data lot when the database and table are created or updated, described at column 5, lines 60-67. For example, in Fig. 1, the user must be able to specify "Suits" to be linked to the telephone extension "2030" in the database. As a matter of claim interpretation, we interpret

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the limitation of "allowing the user to specify one or more attributes to be linked to the data lot" (emphasis added) to be met by specification of one attribute because of the alternative word "or." Thus, Haegele implicitly meets step (b).

Appellant argues that step (c) is not shown by Haegele and there is nothing in Haegele that discloses entries with links from data lots to indents (Br8).

Figure 2 of Haegele is considered to contain the information of both the first and second logging segments. The CSOID, LOID, and IOID, are used as numeric keys to index the table of Fig. 2 to the relational database to retrieve data from the database (col. 5, lines 46-51). Thus, the CSOID, LOID, and IOID are links from data lots (data in the relational database) to attributes (words identifying an indentation in Fig. 2), as claimed.

For the reasons discussed above, we sustain the rejection of claim 1.

Claim 2

As discussed in connection with claim 1, Figs. 1 and 2 are both considered "first logging segments." In Figs. 1 and 2, each row is an entry, where the word, e.g., "Men's," is the "identification of an attribute." In Fig. 1, the level of indentation, indicated by the number in parenthesis, is "an indication of any subordinating attribute" because it indicates

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the subordinate relationship. In Fig. 2, the length and number of the CSOID is "an indication of any subordinating attribute" because it indicates the subordinate relationship to specific attributes. For example, in CSOID "001001," the first three digits indicate the ID of the store, the second three digits indicate a first indent under the store, which happens to be "Apparel"; i.e., "Apparel" is in a subordinate relationship to the store. The rejection of claim 2 is sustained.

Claim 3

The examiner points to column 1, line 40, to column 2, line 67 (FR4; EA4), which is not specific enough to be helpful. The examiner later presents a discussion of CSOID and words (EA10), but this only discusses attributes and subordinate relationships, not the claimed "attribute number, an attribute name and a relative attribute number." Nevertheless, we find that Haegele teaches the limitations of claim 3.

As discussed in connection with claim 1, Figs. 1 and 2 are both considered "first logging segments." We consider Fig. 2. In each row, it is clear that the word is the "attribute name." The CSOID indicates a unique "attribute number" for the particular attribute name. Part of the CSOID is considered a "relative attribute number." For example, the first six digits of CSOID "001002001" (for "Repair") and "001002002" (for "Tires")

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are "001002," which is considered a relative attribute number because it is an attribute number for the subordinating attribute of "Auto." Claim 3 does not preclude the relative attribute number from being part of the attribute number. Accordingly, the rejection of claim 3 is sustained.

Claim 4

The CSOID, IOID, and LOID are used as numeric keys to index the table of Fig. 2 to the relational database to retrieve data from the database (col. 5, lines 46-51). Thus, the CSOID, LOID, and IOID are "an identification of a data lot" in the relational database and the word in the row is "an identification of an associated attribute." The rejection of claim 4 is sustained.

Claim 5

We do not find a "file number" and a "file location" in Fig. 2 of Haegele. The examiner's reliance on column 3, line 62, to column 4, line 60 (EA4) is not specific enough to be helpful, and the reliance on the LOID and CSOID (EA11) is not persuasive because these are keys to the relational database, not file numbers or file locations. The rejection of claim 5 is reversed.

Claim 6

Haegele discloses that the CSOID "contains the complete hierarchy and navigational tree" (col. 6, lines 20-22). The user

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can traverse these attributes in Fig. 2. The rejection of claim 6 is sustained.

Claim 7

The examiner's reliance on column 1, line 39, to column 2, line 67 (EA4) is not specific enough to be helpful. The examiner then points to column 6, lines 1-19 (EA12). This portion of Haegele should have been pointed out in the first instance. Nevertheless, Haegele is short enough that appellant is responsible for all its teachings. We agree that column 6 discloses a text search to locate an attribute and then retrieve a data lot. The rejection of claim 7 is sustained.

Claim 8

When the table of Figs. 1 and 2 in Haegele is created, updated, or revised to add a new row entry, the user must be able to specify a name for the attribute (the word in Figs. 1 and 2) and must be able to specify to which attribute the new entry is subordinate. This information is put into a row entry. Column 5, lines 60-67, discusses updating or revising the pre-index table. The rejection of claim 8 is sustained.

Claim 9

Haegele permits searching by specifying an attribute to retrieve data lots from the relational database (col. 5,

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lines 41-59; col. 6, lines 1-27). The rejection of claim 9 is sustained.

Claim 10

Haegele discloses that the CSOID "contains the complete hierarchy and navigational tree" (col. 6, lines 20-22). The user can traverse these attributes stored in Fig. 2 to specify an existing attribute. The rejection of claim 10 is sustained.

Claims 11 and 12

The user can present a SQL (structured query language) query to search the attributes (words). An SQL query is a logic combination of elements as recited in claim 11. In addition, Haegele discloses an example query of "Mens' Shoes" which is a union of two attributes (col. 6, lines 1-14), as recited in claim 12. The rejection of claims 11 and 12 is sustained.

Claims 13-22

Claim 13

Claim 13 recites a database system having first and second logging segments. Figures 1 and 2 of Haegele disclose a first logging segment for the reasons discussed in connection with claim 1. Figure 2 represents a second logging segment for the reasons discussed in connection with claim 1 and for the reasons

to be discussed. Appellant argues that since Haegele discloses only a single table with a single segment, it does not disclose the two logging segments set out in claim 13 (Br13). However, nothing in claim 13 precludes the two segments from being part of the same table, e.g., there is no limitation that the logging segments are stored separately. The only question is whether Fig. 2 meets all the limitations for both the first and second logging segments.

The main difference between claim 13 and claim 1 has to do with the claiming of the second logging segment. Claim 13 recites: "second logging segment for storing file references, each entry in the logging segment specifying a data lot and an attribute designated for the data lot." Referring to Fig. 2, each "entry in the logging segment" reads on a row of the table. The "file references" and part of the entry "specifying a data lot" read on the CSOID, LOID, and IOID, which are used as numeric keys to index the table of Fig. 2 to the relational database (file) to retrieve data from the database (col. 5, lines 46-51), where a "file reference" is interpreted to be a reference to the relational database. Claim 13 does specifically claim "a file number" and a "file location" as in claim 5. The part of the entry "specifying . . . an attribute designated for the data lot" reads on the word in the word column. Thus, we find that

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claim 13, as broadly claimed, is anticipated by Haegele. The rejection of claim 13 is sustained.

Claim 14

The examiner refers to column 1, line 39, to column 3, line 14 (EA6), which is not specific enough to be helpful. The examiner then points to column 2, lines 56-62 (EA14). Although this is more precise, it still does not address the claim limitations. Haegele only discloses a one-to-one correspondence between attributes and data lots, i.e., between each row entry and the data lot in the relational database. Claim 14 is limited to the case of more than one attribute for a single data lot, which we do not find described, expressly or implicitly, in Haegele. The rejection of claim 14 is reversed.

Claim 15

For the reasons stated in connection with claim 3, the rejection of claim 15 is sustained.

Claim 16

For the reasons stated in connection with claim 5, the rejection of claim 16 is reversed.

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Claims 17 and 20

For the reasons stated in connection with claim 6, the rejection of claim 17 and 20 is sustained.

Claim 18

For the reasons stated in connection with claim 7, the rejection of claim 18 is sustained.

Claim 19

For the reasons stated in connection with claim 8, the rejection of claim 19 is sustained.

Claim 21

For the reasons stated in connection with claim 11, the rejection of claim 21 is sustained.

Claim 22

For the reasons stated in connection with claim 12, the rejection of claim 22 is sustained.

Claims 23-26

Claim 23

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When the table of Figs. 1 and 2 in Haegele is created, updated, or revised to add a new row entry, the user must be able to define an attribute by giving it a name to the attribute (the word in Figs. 1 and 2), must be able to specify to which attribute the new entry is subordinate by the level of indentation, and this information is put into a row entry assigned to a data lot. Column 5, lines 60-67, discusses updating or revising the pre-index table. Thus, steps (a) to (c) are implicit in Haegele. Haegele discloses allowing the user to retrieve data lots from the relational database using the attributes (col. 5, lines 46-51; col. 6, lines 1-27), as recited in step (d). Thus, we find that claim 23 is anticipated by Haegele. The rejection of claim 23 is sustained.

Claim 24

For the reasons stated in connection with claim 10, the rejection of claim 24 is sustained.

Claim 25

For the reasons stated in connection with claim 7, the rejection of claim 25 is sustained.

Claim 26

For the reasons stated in connection with claim 11, the rejection of claim 26 is sustained.

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CONCLUSION

The rejection of claims 1-4, 6-13, and 15-26 is sustained.
The rejection of claims 5 and 14 is reversed.

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 CFR
§ 1.136(a).

AFFIRMED-IN-PART

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Administrative Patent Judge)	
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