

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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GOOGLE LLC,  
Petitioner,

v.

METARAIL, INC.,  
Patent Owner.

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Case No. IPR2024-01272  
Patent No. 10,152,734

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**PETITIONER'S REPLY  
TO PATENT OWNER'S PRELIMINARY RESPONSE**

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## **I. HALEVY DISCLOSES THE UNIVERSAL VARIABLE MAP AS PROPERLY CONSTRUED**

The Challenged Claims require a “*universal variable data database representing a universal variable map*” (herein “UVM”). Petition (“Pet.,” Paper No. 2), 27, 49-50. The UVM is created via a process that starts with crawling Internet websites to identify parameters whose values users might re-enter across different web pages, *e.g.*, car make or model. Pet., 1, 5; Fox (EX1003), ¶¶34-35; EX1001, 2:57-59, 9:27-34, 12:32-47. The ’734 patent refers to such parameters as “*variables*” or “*programing variables*” which the patent also uses interchangeably with “*identifiers*.” Pet., 6-7 & n.4; Fox, ¶37 & n.1; EX1001, 5:5-8, 12:12-19, 12:32-36, 16:23-27. The variables are stored in a database that represents the UVM. Pet., 2, 7; EX1001, 12:51-52, 16:59-17:19. The UVM “link[s]” each “*variable*” to a “*normalized variable*”; *e.g.*, two fields on two different websites that both representing a car’s make might be linked to the same normalized variable “*make*” so that the user need not re-enter the same data over and over again. Pet., 5-6; EX1001, 5:48-52, 12:50-65; Fox, ¶34.

In operation, keywords of a search query can also be indexed to the normalized variables of the UVM and used to create deep-links; *e.g.*, “Honda” in a query would be linked to the “*make*” normalized variable. Pet., 6; EX1001, 16:59-60, 17:16-19; Fox, ¶37-38. As illustrated in Fig. 11B (annotated below), by enabling linking of query keywords to form fields, the UVM enables search engine

users to be presented with deep-links that take users to pages showing the results of entering values into forms and submitting them. Pet., 7-8; EX1001, 16:59-17:8.

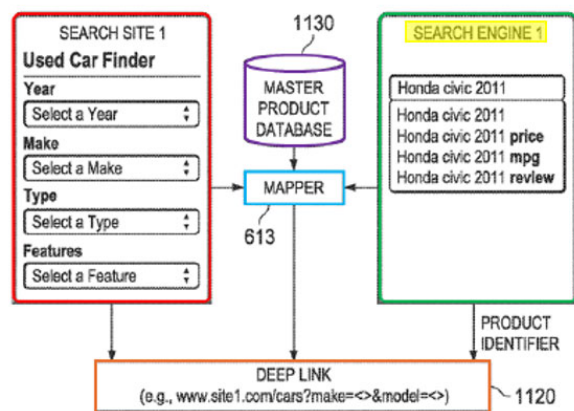


FIG. 11B

Halevy’s “form database” meets the claimed UVM because it is a database that links variables from different websites and facilitates providing deep-links in response to keyword searches, in the same manner as the ‘734 patent. Pet., 28-32. Halevy’s “form database” stores normalized fields of a collection of forms in association with each other through “SO-properties.” Pet., 16-17; Halevy, [0016], [0037], [0044-49]; Fox, ¶¶56-57. Halevy’s form database also stores mappings between the fields and “SO-properties.” Halevy, [0044]-[0049]; Pet., 18; Fox, ¶58. Fields from different websites are mapped to the same SO-properties, and thereby linked to each other; *e.g.*, fields on different sites for car “make” would map to the same SO-property. Pet., 29; Halevy, [0035], [0037], [0067], [0095], [0098-101]; Fox, ¶91. Additionally, keywords in a user’s search query are mapped to SO-properties in the form database, thus enabling a lookup of forms that can be filled

in with the search query data just like the '734 patent Pet., 33-34; Fox, ¶101; Halevy, [0112], [0136-0138].

## II. METARAIL'S CONSTRUCTION IS IMPROPERLY NARROW

The POPR notes that “the '734 depicts an exemplary embodiment of a universal variable map/database” as shown in Table 1. POPR, 5 (citing EX1001, 12:56-66). This table, which the patent calls a “non-limiting example of one embodiment of a [UVM]” (EX1001, 12:56-57), shows form fields on different websites (Search Sites) being mapped to normalized variables. The POPR then states that “[f]igure 11A in the '734 patent depicts an example of how the universal variable map/database is used to transfer user-inputted information in a form on a first site to a form on a second site.” POPR, 6. But nowhere does the POPR (nor PO's expert, *see* EX2001) distinguish the above-discussed Figure 11B embodiment that was cited in the Petition. The POPR thus improperly attempts to limit the claims to exclude the Figure 11B **Search Engine implementation**. The POPR does this to support its arguments against Halevy's “form database” meeting the UVM, which all depend on this exclusion.

For instance, the claims require “*determining...field identifiers of the networked data source stored in the universal variable data database,*” where the database represents the UVM as discussed above. POPR, 16; *see also id.*, 1-2, 5-6 (referring repeatedly to “universal variable map/database”). The Petition showed

that in the Oldham+Halevy combination, when the user enters a query into Oldham's engine, the query keywords, which are mapped to SO-properties (per Halevy's teachings), are the claimed *field identifiers of the networked data source*. Pet., 32-35. Determining field identifiers from search query keywords is expressly disclosed in the '734 patent. Pet., 6; EX1001, 17:13-16 ("Deep-linking can be set up whether field identifier values come from a **composite text string (as in Search Engine 1) or explicit identifier value (as in Search Site 1).**") (emphasis added), 20:49-55 (describing "pars[ing] out and link[ing]" a text search string), Fig. 16 (showing steps including "split query string" and "identify values").

Arguing with its own specification, the POPR nevertheless insists that keywords of a search field (which are mapped to SO-properties in Oldham+Halevy) cannot be field identifiers as they are merely "search filters." POPR, 18, 25. But, as noted above in bold, the specification of the '734 patent explicitly states that field identifiers can be derived from composite search strings. PO's allegation that "Petitioner fails to present a consistent and coherent theory" also fails when the UVM is accorded its proper scope. POPR, 19. As explicitly explained in the petition, the '734 patent embraces a different embodiment. Pet., 1 n. 2. In the search engine context, the field identifiers are identified by a composite text string (query keywords) of a search field (not Search Site form fields such as used in Fig. 11A), the SO-property that a search field keyword maps

to is **both** an identifier for the keyword and the normalized variable corresponding to that keyword. Pet., 33-34; Fox, ¶101; Halevy, [0112], [0136-0138]. In this regard the '734 patent is indistinguishable from Halevy. *See, e.g.*, EX1001, 10:60-11:7.

The claims also require “*determining...field identifiers of a networked data target that are mapped to the field identifiers of the networked data source in the universal variable data [database/map].*” Pet., 35; POPR, 21. The Petition showed that this requirement is met because the parsed keywords from the query are mapped to field identifiers of web form fields via the normalization process (SO-properties). Pet., 35-37. PO argues that “keywords of a user query are not ‘field identifiers.’” POPR, 22. But as discussed above, the specification describes *field identifiers* as both Search Site fields and as parsed keywords of a Search Engine search field, and PO cannot limit the claims to Fig. 11A only. PO also argues that the “Halevy does not teach that the SO-properties establish any relationship between different websites” because they are “simply used...to identify forms relevant to the user’s keyword search.” POPR, 23. But this point is essentially unsupported attorney argument that Halevy does not work as described.

Date: February 12, 2025

/Scott A. McKeown /

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**CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (E)(4)**

I certify that on February 12, 2025, I will cause a copy of the foregoing document, including any exhibits filed therewith, to be served via electronic mail, as previously consented to by Patent Owner, upon the following:

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