

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

METARAIL, INC.,
Patent Owner.

Case No. IPR2024-01270
Patent No. 9,633,378

**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 map*” (herein “UVM”). Petition (“Pet.,” Paper No. 2), 48, 71-72. The map is created via crawling Internet websites and/or applications to identify parameters whose values users might re-enter across different webpages, *e.g.*, travel locations or dates. Pet., 10-11; Fox (EX1003), ¶¶34-35; EX1001, 2:49-51, 8:43-56. The patent refers to such parameters as “*variables*” or “*programing variables*.” Pet., 14-15 & n.3; Fox, ¶37 & n.1; EX1001, 4:21-22, 9:20-27, 9:41-45, 13:25-31. The variables are archived in a database as the UVM. Pet., 11, 15; EX1001, 9:41-45, 9:60-61, 13:59-14:7. The UVM also “link[s]” each “variable” to a “*normalized variable*” that other variables from other websites/applications may also be linked to, thereby linking variables from different websites/applications are linked to each other; *e.g.*, if variables “Orig” and “Depart_City” on different websites both refer to a departure city, both would be linked to the normalized variable “from,” so that the user need not re-enter the same data over and over again. Pet., 11; Fox, ¶¶34, 37; EX1001, 5:11-15, 9:60-10:8.

Halevy’s “form database” meets the claimed *universal variable map* because it is a database that links variables from different websites to each other in the same manner described above. Pet., 48-50. Halevy’s “form database” stores the names of form fields found on different websites. Pet., 28; Halevy, [0044-49];

Fox, ¶66. Halevy’s form database also stores a “mapping between the fields...and [] SO-properties.” Halevy, [0049]; Pet., 28. Differently-named fields on different sites can map to the same SO-properties, and thereby be linked to each other; *e.g.*, fields on different sites for car make would map to the same SO-property. Pet., 47-48; Halevy, [0035], [0037], [0067], [0095], [0098-101]; Fox, ¶105.

II. PO’S CONSTRUCTION IS IMPROPERLY NARROW

PO’s arguments for why Halevy’s “form database” is not a *universal variable map* are all premised on improperly narrowing the term’s scope by adding restrictions that are unsupported by the intrinsic record.

First, PO discusses the “exemplary illustration of how normalized variables are stored in a...[UVM]” in the ’378 patent’s Table 1 and argues that “[t]here is no such mapping of form fields from different sites using normalized variables in Halevy.” POPR, 21-22; EX1001, 9:66-10:8. But Table 1 illustrates “[a] non-limiting example of one embodiment of a [UVM]”; such an example cannot “narrow a claim term that is otherwise broader in its ordinary meaning.” EX1001, 9:66-67; *Promptu Sys. Corp. v. Comcast Corp.*, 92 F.4th 1372, 1379 (Fed. Cir. 2024). PO cites nothing in the intrinsic record or claim language—because there is nothing—requiring a particular structure for the UVM database (nor does PO’s expert—see EX2001).

Second, PO argues that “Halevy makes no mention of creating any relationships between different forms in the form database.” POPR, 20. PO similarly argues that “[t]he mere fact that fields in forms for different websites might have the same SO-properties does not mean that the SO-properties are performing any ‘mapping’ between field identifiers of different websites or applications” because Halevy’s SO-properties do not “establish any relationship between different websites or applications.” POPR, 24. However, PO ignores the entire point of Halevy, which is to classify and relate multiple forms across different websites in a database. Specifically, Halevy links forms on different websites together in a database by mapping fields in forms on different websites to common SO-properties. Pet., 47-49; Halevy, [0095], [0098-101]; Fox, ¶¶105-108. Moreover, Halevy performs the mapping using the same exemplary techniques described in the ’378 patent. For example, the patent describes mapping variables to normalized variables using “heuristics,” *i.e.*, rules, and Halevy likewise discusses using rules to predict a “mapping” between “fields” and “SO-properties.” EX1001, 4:28-32, 14:52-56; Pet., 64-65; Halevy, [0062]-[0066]; Fox, ¶142. Additionally, Figure 12 of the ’378 patent shows that mapping is performed using Halevy’s process of crawling forms and classifying them by content. Pet., 26-31 (describing Halevy’s process); EX1001, 6:66-7:2 (Figure 12 describes “organizing and mapping” of “variables” in the UVM database), 11:4-18 (“mapping” involves

crawling websites, identifying and storing variables, and mapping them to normalized variables), 13:8-12 (similar).

In any event, there is no specific requirement of the claims to do more than relate common variables across forms or websites. *E.g.*, EX1001, 22:21-25 (claim 1 reciting “mapping...field identifiers to one another using a set of normalized variables stored in a normalized variable data database, the normalized variable data database representing a [UVM]”), 11:9-12 (“universal variable map may then be completed...by mapping the variables...to their normalized versions”), 13:8-12 (similar). Indeed, the patent’s purpose is providing deep links based on data entered into **variables** on a publisher’s page. Pet., 10-11.

Nor is there support for PO’s apparent construction that the UVM cannot be “used to return results.” POPR, 19; *see also* POPR, 24 (similarly arguing that “SO-properties are simply used by Halevy’s search engine”). Firstly, the ’378 patent also describes mapping the composite text string of a search field to variables on advertiser websites in order to provide search results. *E.g.*, EX1001, 4:61-66, 6:60-65, 17:50-53. Moreover, what is relevant is whether the Petition’s Grounds, which all include Belanger+Halevy, meet the challenged claims, which they do; whether Halevy can also be used for other things is irrelevant to the claims.

There is likewise no support for PO’s apparent construction that the claim excludes Halevy’s use of a “‘query analyzer’...prior to searching the form database.” POPR, 25-26. The claims require “utilizing a [UVM]” for a certain purpose—“generating...a deep-linked ad”—but the intrinsic record and claim language nowhere restrict what preliminary steps can be taken before using the map. EX1001, 22:29-30. Moreover, the ’378 patent describes the very same thing. *E.g.*, 4:63-66 (“the composite text string can be parsed into its component values that can then be passed into the corresponding normalized variables through a real-time parsing module”), 17:54-57, 18:15-25. And, of course, the claims of the ’378 patent are open-ended in any event.

Tellingly, PO’s litigation position does not impose any of the claim restrictions PO now advocates. PO contends that Google uses the claimed *universal variable map* simply because “Google’s search index is used to map the web,” without alleging that Google’s index meets any of the above-discussed restrictions. EX1021, 12-19.

Date: February 12, 2025

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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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