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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte HARUMI ANNE KUNO, MICHAEL J. LEMON,
and ALAN H. KARP

Appeal 2010-008408
Application 10/255,818¹
Technology Center 2400

Before MARC S. HOFF, STANLEY M. WEINBERG, and JOHN A.
EVANS, *Administrative Patent Judges*.

EVANS, *Administrative Patent Judge*

DECISION ON APPEAL

¹ The real party in interest is the Hewlett-Packard Development Company, LP.

This is an appeal under 35 U.S.C. § 134(a) involving claims to network service systems and mechanisms for searching service registries. The Examiner has rejected the claims as obvious and as directed to non-statutory subject matter. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

Rather than reiterate the arguments of Appellants and the Examiner, we refer to the Appeal Brief (filed Dec. 8, 2009), the Answer (mailed Mar. 9, 2010), and the Reply Brief (filed May, 10, 2010). We have considered in this decision only those arguments Appellants actually raised in the Briefs. Any other arguments which Appellants could have made but chose not to make in the Briefs are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

STATEMENT OF THE CASE

The claims relate to systems, methods, and apparatus for processing both structured and unstructured queries pertaining to registered services. The claimed structured queries permit retrieval of particular information by designating specific data structures internal to a service registry and can be used to determine security protocols and transport protocols supported by a given registered service. App. Br. 7.

Claims 1, 6, 8-15, 20-33, 36, 37, 40, 41, 50-64, 66, and 68-71 are on appeal. Claims 1, 15, and 50 are independent. An understanding of the invention can be derived from a reading of exemplary claim 1, which is reproduced below with some paragraphing added:

1. A network service system comprising
a service registry interacting with a registry client, said service

registry including a service registry interface operatively coupled to (i) a service data registry for processing structured queries from said registry client regarding registered services and (ii) a metadata registry for processing unstructured queries from said registry client regarding said registered services,

wherein said structured queries permit retrieval of specific information regarding said registered services by designating specific data structures internal to the service data registry,

wherein said structured queries permit said registry client to determine at least one of security protocols and transport protocols supported by a given registered service, and

wherein the service registry interface is configured to receive an input unstructured query and then, based on the input unstructured query, at least one of: (1) process a call into the metadata registry, in which case the metadata registry includes an index on service descriptions within the service data registry, or (2) process calls into both the service data registry and the metadata registry.

The claims are rejected as follows:²

1. Claims 1, 6, 9-15, 20-37, and 40 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Ans. 3-4.
2. Claims 1, 6, 8-15, 20-33, 36, 37, 40, 41, 50-64, 66, and 68-71 are rejected under 35 U.S.C. § 103(a) as obvious over Zhang (US 2003/0187841 A1 filed September 13, 2002) and Salmenkaita (US 2004/0176958 A1, filed February 4, 2002). Ans. 4-15.

² Based on Appellants' arguments in the Appeal Brief, we will decide the appeal on the basis of claims as set forth below. *See* 37 C.F.R. § 41.37(c)(1)(vii).

STATUTORY SUBJECT MATTER

CONTENTIONS AND ISSUE

The Examiner has rejected claims 1, 6, 9-15, 20-37, and 40 under 35 U.S.C. § 101 as directed to non-statutory subject matter. Ans. 3-4. The Examiner finds that although reciting a “system,” independent claims 1 and 15 are directed to non-functional descriptive material (*i.e.*, software, per se), which fails to establish a statutory category of invention.” Ans. 3, 4. The Examiner finds that “the claims are not ‘tied to a particular machine or apparatus’ nor do the claims ‘transform[] a particular article into a different state or thing.’” (Ans. 4) (Citing *In re Bilski* 545 F.3d 943, 954 (Fed. Cir. 2008)).

Appellants argue claims 1, 6, 9-14, 31-33, 36, and 40 as a first group (App. Br. 10-11) and separately argue claims 15, 20-30, and 37 as a second group (App. Br. 11). However, Appellants present substantially identical arguments for each group. We, therefore, consider claims 1, 6, 9-15, 20-37, and 40 together as a single group.

Appellants contend that each claim is tied to a particular machine or apparatus. Appellants argue that each claim recites “a service registry interacting with a registry client,” wherein the service registry includes a “service data registry for processing” and “a metadata registry for processing.” Appellants argue that “a ‘service registry,[]’ such as a UDDI registry, ‘is a logically centralized, *physically* distributed service with multiple root nodes (UDDI registry servers).” Appellants contend that this expressly states that the registry has a physical presence and, as such, encompasses or is tied to at least one physical device. App. Br. 11 (citing

Specification, p. 6 last paragraph).³ Appellants further contend that a “service data registry” is necessarily tied to a physical storage device because it “stores data.” App. Br. 11 (citing Specification, p. 6 last paragraph). Similarly, Appellants contend that the “metadata registry” also “stores information,” thus, it too is a physical storage device. App. Br. 11 (citing Specification, ¶ [0027]). Appellants further contend the Specification and claims recite the service data registry and the metadata registry “process’ calls.” Appellants argue that to process calls, the various registries must of necessity, include a physical processing device. App. Br. 11 (citing Specification, ¶ [0031]).

The Examiner’s Answer finds that “the claims merely recite different types of registry clients that are software modules.” Ans. 16. The Examiner cites the Specification as disclosing that the registry client may be a software agent. Ans. 17.

Appellants’ Reply contends that the Examiner has cited the registry client which may be a software agent, but has not found that the service data register and the metadata register, themselves, are software. (Reply Br. 1).

The issue with respect to this rejection is whether independent claims recite apparatus in addition to reciting software.

ANALYSIS

The Examiner finds that “the claims merely recite different types of registry clients that are software modules.” Ans. 16. However, the Examiner does not make any findings with respect to either the service data register or the metadata register. Appellants contend that the Specification

³ Appellants note this paragraph is incorrectly labeled “0001.”

and claims recite the service data registry and the metadata registry “‘process’ calls.” Appellants contend that to process calls, the various registries must, of necessity, include a physical processing device. App. Br. 11 (citing Specification, ¶ [0031]). Appellants further contend that the various registries store information, and therefore must be physical devices. App. Br. 11 (citing Specification, ¶ [0027]). The Examiner does not address these contentions. Appellants are persuasive that the service data registry and the metadata registry are physical devices. In view of the foregoing, we decline to sustain the rejection of claims 1, 6, 9-15, 20-37, and 40 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

THE OBVIOUSNESS REJECTIONS CONTENTIONS AND ISSUE

The Examiner has rejected claims 1, 6, 8-15, 20-33, 36, 37, 40, 41, 50-64, 66, and 68-71 under 35 U.S.C. § 103(a) as obvious over Zhang and Salmenkaita. Ans. 4-15. The Examiner finds that Zhang teaches each claimed limitation except that Zhang does not teach a metadata registry for processing unstructured queries from a registry client. The Examiner relies upon Salmenkaita for this finding. Ans. 4-5.

Appellants argue claims 1, 6, 8-14, 31-33, 36, 40, 56, 57, 58, 59, 66, and 69 as a first group, claims 15, 20-30, 37, 41, 55, 61-64, 68, and 70 as a second group; and argue claims 50, 51, 52, 53, 54, and 71 as a third group. App. Br. 18-20. Appellants present substantially similar arguments relating to the first two claim groups. App. Br. 13-15 and 15-18. We, therefore, treat the first two groups as a single group. We treat the third group separately.

With respect to groups 1 and 2, Appellants contend that the claimed service registry has an interface that is coupled to both a service data registry and a metadata registry. Appellants contend that the metadata registry, that the Examiner finds to be missing in Zhang, is not taught by the cited portion of Salmenkaita. App. Br. 13-14. Appellants contend that the claims relate to a service registry having an interface that is coupled to *both* a service data registry and a metadata registry, wherein, based on an unstructured query, the interface processes calls into either the metadata registry or both the metadata registry and the service data registry. Appellants contend that cited passages of Salmenkaita do not disclose or suggest an interface that is coupled to both a metadata registry and a service data registry. Appellants allege that Salmenkaita teaches,

alternative methods for *maintaining and generating* the voice short-cuts associated with a particular digital service. It does not disclose processing calls into a metadata registry or both a metadata and a service data registry based upon an input unstructured query, as recited in claim 1.

App. Br. 14. Appellants contend that Salmenkaita's voice short-cut scheme does not involve an interface that in response to receipt of an unstructured query, such as a voice command, either (1) processes a call into a metadata registry that includes an index on service descriptions within the service data registry, and/or (2) processes calls into both the service data registry and the metadata registry, as required by claim 1. App. Br. 14.

With respect to group 3, claims 50, 51, 52, 53, 54, and 71, Appellants traverse the finding that Salmenkaita teaches the finding missing from Zhang: “[A] service registry that, based on an unstructured query, searches service descriptions that are used in response to structured queries.” App.

Br. 18 (citing Final Action 13). Appellants contend that none of paragraphs [0052], [0055], or [0056], cited by the Examiner, teach “a metadata registry for processing unstructured queries nor, based on an unstructured query, searching service descriptions that are used *in response to structured queries*, as recited in claim 50.” App. Br. 18-19.

The Examiner answers with respect to each group, that Salmenkaita is relied upon for teaching processing an unstructured query and that Salmenkaita teaches an “unstructured” query because a query derived from a natural voice command is clearly “unstructured.” (Ans. 18)

Appellants reply that “Zhang teaches that queries that are input into Zhang's system must be in USML format (a format that Zhang created) so that the Zhang's goal of dramatically improving the efficiency of queries can be realized.” Reply Br. 2 (citing Zhang ¶¶ [0018-0020], [0034], [0055], and [0060]). Moreover, “Zhang states that each query has a format and that USML ‘was developed to *standardize* the search query format.’” (Reply Br. 2 (citing Zhang ¶ [0037])). Appellants contend that where Zhang expressly developed USML to standardize a search query format, there is no motivation to modify Zhang to permit unstructured queries.

ANALYSIS

Appellants’ claims are directed to both structured and unstructured queries. The Examiner finds that Zhang does not teach unstructured queries. Appellants’ argument is convincing that where Zhang expressly developed USML to standardize search query format, it would not have been obvious to modify Zhang to add unstructured queries. In view thereof, we decline to sustain the rejection of claims 1, 6, 8-15, 20-33, 36, 37, 40, 41, 50-64, 66, and 68-71 under 35 U.S.C. § 103(a).

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SUMMARY

We reverse the rejection of claims 1, 6, 9-15, 20-37, and 40 under 35 U.S.C. § 101 as directed to non-statutory subject matter.

We reverse the rejection of claims 1, 6, 8-15, 20-33, 36, 37, 40, 41, 50-64, 66, and 68-71 under 35 U.S.C. § 103(a).

REVERSED

gvw