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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte CALEB SIMA and WILLIAM M. HOFFMAN

Appeal 2010-008256
Application 11/560,929
Technology Center 2100

Before ERIC B. CHEN, JOHNNY A. KUMAR, and
TREVOR M. JEFFERSON, *Administrative Patent Judges*.

CHEN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) from the final rejection of claims 1-20, all the claims pending in the application. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Appellants' invention relates to analyzing a web application by identifying sub-applications used to generate various web pages available at the web application. A vulnerability assessment is limited to a subset of the web pages generated by each sub-application. (Abstract.)

Claim 1 is exemplary, with disputed limitations in italics:

1. A method for conducting a parameter based audit of a web application, the method comprising the steps of:

identifying a plurality of markup language web pages generated by the web application;

identifying zones in or more of the plurality of markup language web pages;

grouping web pages created by a common sub-application within the web application and by commonality in structure identified by having common zones;

grouping zones based on commonality in functionality and user interface structure of the zones; and

conducting the parameter based audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.

Claims 1-10 and 12-14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Lucca (Giuseppe Antonio Di Lucca et al., *An Approach to Identify Duplicated Web Pages*, PROC. 26TH ANN. INT'L COMPUTER SOFTWARE & APPLICATIONS CONF. 481-86 (2002)) and Sima (U.S. Patent Application Publication No. 2005/0251863 A1; Nov. 10, 2005).

Claims 11 and 16-19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Lucca, Sima, and Fasolino (Giuseppe A. Di Lucca & Anna Rita Fasolino, *Testing Web-based Applications: The State of the Art and Future Trends*, 48 INFO. & SOFTWARE TECH. 1172-86 (2006)).

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Lucca, Sima, and Meredith (U.S. Patent Application Publication No. 2005/0203934 A1; Sept. 15, 2005).

Claim 20 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Di Lucca, Sima, Fasolino, and Rachman (U.S. Patent Application Publication No. 2006/0074621 A1; Apr. 6, 2006).

ANALYSIS

§ 103 Rejection – Di Lucca and Sima

We are unpersuaded by Appellants' arguments (App. Br. 12; *see also* Reply Br. 2-3) that the combination of Di Lucca and Sima would not have rendered obvious independent claim 1, which includes the limitation “grouping web pages created by a common sub-application within the web application.”

The Examiner found that the Web Applications (WA) of Di Lucca, having the same template and control component, corresponds to the claim limitation “grouping web pages created by a common sub-application within the web application.” (Ans. 5, 21; Di Lucca, §2, col. 2.) We agree with the Examiner.

Di Lucca relates to detecting duplicated Web pages, based on implementing HTML language and Active Server Pages (ASP) technology. (Abstract.) Di Lucca explains that “Web developers, when coding Web

pages, usually create some initial pages, and then generate other pages by reusing the code of the initial ones, especially the code implementing the page control component.” (§2.2, col. 1, para. 3.) Di Lucca further explains that “[e]ach page template may be considered as the control component of each actual page built from that template” by “identify[ing] groups of duplicated pages in a WA [Web Applications], [with] each page deriving from the same template, having the same control component” (i.e., the claimed “common sub-application”). (§2.2, col. 2, paras. 3-4.) Therefore, Di Lucca teaches the limitation “grouping web pages created by a common sub-application within the web application.”

Appellants argue that “the cited passages in *Di Lucca* describe web page features (e.g., templates, control functions) that can be compared to identify web page clones with no discussion of how the web pages are created.” (App. Br. 12.) Contrary to Appellants’ arguments, Di Lucca explains that “[e]ach page template may be considered as the control component of each actual page built from that template” (§2.2, col. 2, para. 3) and accordingly, teaches the limitation “web pages created by a common sub-application within the web application.”

Appellants also argue that “[i]dentifying a group of web pages as in *Di Lucca* is not the same as ‘grouping web pages’ as in claim 1” because “*Di Lucca* appears to use the term ‘group’ to indicate that there are duplicate web pages rather than to describe a grouping operation.” (Reply Br. 3.) However, the claim language “grouping web pages” is broad enough to encompass “identify[ing] groups of duplicated pages in a WA,” as taught by Di Lucca (§2.2, col. 2, para. 4).

Thus, we agree with the Examiner that the combination of Di Lucca and Sima would have rendered obvious independent claim 1, which includes the limitation “grouping web pages created by a common sub-application within the web application.”

We are also unpersuaded by Appellants’ arguments (App. Br. 15-16; *see also* Reply Br. 4) that the combination of Di Lucca and Sima would not have rendered obvious independent claim 1, which includes the limitation “conducting the parameter based audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.”

The Examiner found that the detection of duplicate pages or clones of Di Lucca corresponds to the claimed “audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.” (Ans. 6, 22; Di Lucca, §2.2, col. 2.) The Examiner acknowledged that Di Lucca does not disclose the claimed “parameter based audit” and thus, relied upon Sima for teaching an audit for detecting an attack by pushing invalid parameters. (Ans. 6; Sima, ¶ [0040].) The Examiner concluded that “[i]t would have been obvious . . . to modify the method as taught by Di Lucca with the method as taught by Sima” (Ans. 6.) We agree with the Examiner.

Di Lucca explains that “[t]he identification of clones in a [Web Application] is a valuable activity to effectively support and reduce the effort for testing, maintaining and evolving it.” (§2.2, col. 2, para. 11.) Furthermore, because duplicated pages increases software complexity, “the detection of duplicated pages represents a feasible way to carry out testing or maintenance processes more efficiently.” (§1, col. 2, para. 3.) Therefore, Di

Lucca teaches an “audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.”

Sima relates to “Web application testing and, more specifically, to crawl-and-attack routines for testing Web applications.” (¶ [0004].) Sima states that a hacker can manipulate a Web application, for example, by changing the parameters of a Common Gateway Interface (CGI) script to search for a password file. (¶ [0015].) In one example, Figure 4 of Sima illustrates a sequence diagram for a recursive crawl-and-attack routine (¶ [0038]), including an adaptive agent runner 450 that attempts various attacks on the link including “running password breaks, pushing invalid parameters at the target, or the like” (¶ [0040]). Upon completion of the analysis, the adaptive agent runner 450 notifies an audit 430. (*Id.*) Therefore, Sima teaches the limitation “conducting the parameter based audit.”

A person of ordinary skill in the art would have recognized that incorporating the parameter audit of Sima with the analysis of Di Lucca, for detecting duplicated pages in Web sites and applications, would improve Di Lucca by analyzing vulnerabilities of a Web site. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Thus, we agree with the Examiner (Ans. 6) that modifying Di Lucca to include parameter audit of Sima would have been obvious.

Appellants argue that “*Sima* appears to describe an auditing process similar to that described in the Background of Appellants’ specification (see e.g., paragraph [0024]), but does not teach limiting the audit to a subset of grouped web pages and a subset of web page zones.” (App. Br. 13.)

However, the Examiner cited to Di Lucca, rather than Sima, for teaching the claim limitation an “audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.” (Ans. 6, 22.)

Appellants also argue that “*Di Lucca* is not even related to auditing” because “*Di Lucca*’s clone detection is described as being useful for storing the most cloned pages into a repository for later access or for detecting plagiarism.” (App. Br. 12.) Similarly, “Appellants submit that *Di Lucca*’s statement ‘identification of clones in a WA is a valuable activity to effectively support and reduce the effort for testing, maintaining and evolving it’ is so vague that it does not teach or suggest the specific limitation . . . as is required in claim 1.” (Reply Br. 4.) However, the Examiner cited Sima, rather than Di Lucca for teaching the limitation “parameter based audit.” (Ans. 6.)

Thus, we agree with the Examiner that the combination of Di Lucca and Sima would have rendered obvious independent claim 1, which includes the limitation “conducting the parameter based audit on a subset of the web pages in each group and a subset of the zones in each zone group such that sub-applications within the web application are tested.”

Accordingly, we sustain the rejection of independent claim 1 under 35 U.S.C. § 103(a). Claims 2-10 depend from claim 1, and Appellants have not presented any substantive arguments with respect to these claims.

Therefore, we sustain the rejection of claims 2-10 under 35 U.S.C. § 103(a), for the same reasons discussed with respect to independent claim 1.

Independent claim 12 recites limitations similar to those discussed with respect to independent claim 1, and Appellants have not presented any

substantive arguments with respect to this claim. We sustain the rejection of claim 12, as well as dependent claims 13 and 14, for the same reasons discussed with respect to claim 1.

§ 103 Rejection – Di Lucca, Sima, and Fasolino

Although Appellants nominally argue the rejection of dependent claims 11 and 16-19 separately (App. Br. 14-15), the arguments presented do not point out with particularity or explain why the limitations of these dependent claims are separately patentable. Instead, Appellants argue that claims 11 and 16-19 are patentable because “partitioning input sets into different groups as in *Fasolino* is not the same as grouping web pages based on the inputs accepted by the web pages as in claim 11” (App. Br. 14) and “[f]or much the same reasons as given for claim 11, *Di Lucca, Sima* and *Fasolino* do not teach or suggest the above limitations of claim 16” (*id.* at 15). We are not persuaded by these arguments for the reasons discussed with respect to claims 1 and 12, from which claims 11 and 16-19 depend. Accordingly, we sustain this rejection.

§ 103 Rejection – Di Lucca, Sima, and Meredith

Although Appellants nominally argue the rejection of dependent claim 15 separately (App. Br. 14), the arguments presented do not point out with particularity or explain why the limitations of this dependent claim is separately patentable. Instead, Appellants argue that claim 15 is patentable because “*Meredith* does not overcome the previously discussed deficiencies of *Di Lucca* and *Sima* with respect to claim 12.” (*Id.*) We are not persuaded

by these arguments for the reasons discussed with respect to claim 12, from which claim 15 depends. Accordingly, we sustain this rejection.

§ 103 Rejection – Di Lucca, Sima, Fasolino, and Rachman

Although Appellants nominally argue the rejection of dependent claim 20 separately (App. Br. 15), the arguments presented do not point out with particularity or explain why the limitations of this dependent claim is separately patentable. Instead, Appellants argue that claim 20 is patentable because “[t]he prioritization criteria described in *Rachman* is not the number of web pages in a group as in claim 20.” (*Id.*) We are not persuaded by these arguments for the reasons discussed with respect to claim 16, from which claim 20 depends. Accordingly, we sustain this rejection.

DECISION

The Examiner’s decision to reject claims 1-20 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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