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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MICHAEL SCHNEIDER, PAUL GARTSIDE,
DAVID OXLEY, and RAMON PEYPOCH

Appeal 2018-006207
Application 14/494,723¹
Technology Center 2400

Before CARLA M. KRIVAK, ERIC B. CHEN, and
PHILLIP A. BENNETT, *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, 2, 4, 5, 7–9, 11, 12, 14–18, 20–24, and 26–31. Claims 3, 6, 10, 13, 19, and 25 have been cancelled. (Final Act. 2.) We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

¹ Real party in interest McAfee, Inc.

STATEMENT OF THE CASE

Appellants' invention relates an electronic device that can be configured to receive data in a data flow, extract a data visa from the data flow such that the data visa is related to the data, and determine a reputation of the data from the data visa. (Abstract.)

Claim 1 is exemplary, with disputed limitations in italics:

1. At least one computer-readable medium comprising one or more instructions that, when executed by at least one processor, perform a method comprising:

receiving data in a data flow;

extracting a data visa from the data flow, wherein the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow;

determining a reputation of the data based on the data and the reputation determination information;

storing the reputation of the data in the data visa; and

communicating the data visa and the data to a next network element in the data flow.

Claims 1, 4, 9, 11, 17, 20, and 24 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi (US 2014/0282867 A1; Sept. 18, 2014) and Official Notice.

Claims 2 and 18 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Kumar (US 2015/0138973 A1; May 21, 2015).

Claims 5, 12, and 21 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Penta (US 2013/0036466 A1; Feb. 7, 2013).

Claims 7, 14, and 22 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Reed (US 2012/0290427 A1; Nov. 15, 2012).

Claims 8, 15, 16, and 23 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Buchanan (US 2015/0256431 A1; Sept. 10, 2015).

Claims 26 and 29 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Rieschick (US 2012/0233656 A1; Sept. 13, 2012).

Claims 27, 28, and 30 stand rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Elzur (US 2010/0287262 A1; Nov. 11, 2010).

Claim 31 stands rejected under 35 U.S.C. § 103 as unpatentable over Choi, Official Notice, and Bourdelles (US 2014/0293787 A1; Oct. 2, 2014).²

ANALYSIS

First, we are unpersuaded by Appellants' arguments (App. Br. 7) that the combination of Choi and Official Notice would not have rendered obvious independent claim 1, which includes the limitation "receiving data in a data flow."

The Examiner finds the DNS (domain name system) controller 108 of Choi, which is in communication with a number of network devices 102-N,

² Appellants do not present any arguments with respect to the rejection of claims 2, 5, 7, 8, 12, 14–16, 18, 21–23, and 26–31 under 35 U.S.C. § 103. Thus, any such arguments are deemed to be waived.

corresponds to the limitation “receiving data in a data flow.” (Ans. 4–5.)
We agree with the Examiner’s findings.

Choi relates to network security applications, “[f]or example, a network security application [that] may block DNS (domain name system) traffic that is seeking resolution of a domain name, such as those reportedly involved in a malicious activity.” (¶ 1.) Figure 1 of Choi illustrates computing system 100, which includes Domain Name System (DNS) controller 108 and network devices 102-1, 102-2, . . . , 102-N. (¶ 14.) Choi explains that “incoming DNS data units, e.g., packets, frames, etc. received by a network device in communication with the DNS controller [108], are routed from the network device to the DNS controller.” (¶ 6.) Because Choi explains that the DNS data units are routed from network devices 102-1 to 102-N to DNS controller 108, Choi teaches the limitation “receiving data in a data flow.”

Appellants argue that “Choi and the taken Official Notice, whether taken alone or in combination, fail to disclose or suggest ‘receiving data in a data flow,’ . . . as recited in Claim 1.” (App. Br. 7.) In particular, Appellants argue that

Because the Office Action relied solely on para. [0029] of Choi as describing that ‘the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow,’ the Office Action did not rely on Official Notice as describing those features.

(*Id.*) However, as discussed previously, the Examiner also cited Choi’s paragraph 6 for teaching the limitation “receiving data in a data flow.” (Ans. 4–5.) Appellants have not provided persuasive arguments or evidence rebutting this finding.

Thus, we agree with the Examiner that the combination of Choi and Official Notice would have rendered obvious the limitation “receiving data in a data flow.”

Second, we are unpersuaded by Appellants’ arguments (App. Br. 7–8; *see also* Reply Br. 3–4) that the combination of Choi and Official Notice would not have rendered obvious the limitation in independent claim 1 of “extracting a data visa from the data flow, wherein the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow.”

The Examiner finds that the DNS data unit of Choi, which is received by DNS controller 108 and inspected for a particular reputation score, corresponds to the limitation “extracting a data visa from the data flow, wherein the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow.” (Ans. 5.) We agree with the Examiner’s findings.

Choi explains that “[a]fter the DNS controller has received a DNS data unit from the network device, the DNS controller may inspect the data unit” and “[t]he DNS controller may block the DNS data unit if the domain name in the DNS data unit has a particular reputation score, e.g., a large reputation score.” (¶ 6.) Choi further explains that “network devices 102-1, 102-2, . . . , 102-N can receive and forward network traffic, e.g., data units, as illustrated by traffic flow 106-1, 106-2, . . . , 106-N” and “[e]xamples of the present disclosure provide that the network devices 102-1, 102-2, . . . , 102-N can communicate with components of the system 100 and/or

components of another system.” (¶ 13.) Because Choi explains that DNS controller 108 inspects the DNS data unit and may block the DNS data unit based on a reputation score, and because network devices can receive and forward data units, we agree with the Examiner that Choi teaches the limitation “extracting a data visa from the data flow, wherein the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow.”

Appellants argue that

Choi and the taken Official Notice, whether taken alone or in combination, fail to disclose or suggest . . . ‘extracting a data visa from the data flow, wherein the data visa travels with the data through the data flow and includes reputation determination information,’ . . . as recited in Claim 1.

(App. Br. 7.) Particularly, Appellants argue that “the Examiner provided no basis for finding that the specific facts of the case require a holding that ‘the data visa travels with the data through the data flow and includes reputation determination information’ does not limit Claim 1.” (*Id.*) Appellants also contend “the Examiner provided no basis for concluding the recited data and data visa are printed matter.” (Reply Br. 4.) However, even if Appellants are correct that that printed matter doctrine is inapplicable, the Examiner also cited to paragraph 29 of Choi for teaching this contested limitation. (Ans. 5.) Appellants have not provided persuasive arguments or evidence rebutting this finding.

Thus, we agree with the Examiner that the combination of Choi and Official Notice would have rendered obvious the limitation “extracting a data visa from the data flow, wherein the data visa travels with the data

through the data flow and includes reputation determination information from at least one previous hop network element in the data flow.”

Third, we are unpersuaded by Appellants’ arguments (App. Br. 7) that the combination of Choi and Official Notice would not have rendered obvious the limitation “determining a reputation of the data based on the data and the reputation determination information.”

The Examiner finds that the reputation score for the domain name of Choi, which is stored in the DNS data unit and inspected by DNS controller 108, corresponds to the limitation “determining a reputation of the data based on the data and the reputation determination information.” (Ans. 6.) We agree with the Examiner’s findings.

As discussed previously, Choi explains that “[a]fter the DNS controller has received a DNS data unit from the network device, the DNS controller may inspect the data unit” and “[t]he DNS controller may block the DNS data unit if the domain name in the DNS data unit has a particular reputation score, e.g., a large reputation score.” (¶ 6.) Moreover, Choi explains that “[a] reputation score can indicate whether or not a domain name is likely to be associated with a malicious activity.” (¶ 18.) Because Choi explains that the reputation score indicates if a domain name is associated with a malicious activity and the DNS controller can block the DNS data unit, Choi teaches the limitation “determining a reputation of the data based on the data and the reputation determination information.”

Appellants argue that “Choi and the taken Official Notice, whether taken alone or in combination, fail to disclose or suggest . . . ‘determining a reputation of the data based on the data and the reputation determination

information,’ as recited in Claim 1.” (App. Br. 7.) Particularly, Appellants argue that

Because the Office Action relied solely on para. [0029] of Choi as describing that ‘the data visa travels with the data through the data flow and includes reputation determination information from at least one previous hop network element in the data flow,’ the Office Action did not rely on Official Notice as describing those features.

(*Id.*) However, as discussed previously, the Examiner also cited paragraphs 6 and 18 of Choi for teaching this contested limitation. (Ans. 6.) Appellants have not provided persuasive arguments or evidence rebutting this finding.

Thus, we agree with the Examiner that the combination of Choi and Official Notice would have rendered obvious the limitation “determining a reputation of the data based on the data and the reputation determination information.”

Last, we are unpersuaded by Appellants’ arguments (App. Br. 8–9) that the combination of Choi and Official Notice would not have rendered obvious the limitation “communicating the data visa and the data to a next network element in the data flow.”

The Examiner finds that the reputation score for the DNS data unit of Choi, which can be forwarded to a next hop, corresponds to the limitation “communicating the data visa and the data to a next network element in the data flow.” (Ans. 7.) We agree with the Examiner’s findings.

Choi explains “the reputation score action applied to the DNS data unit may be forwarding the DNS data unit to a network device, e.g., the network device that forwarded the DNS data unit to the DNS controller, such that the DNS data unit can be forwarded to a next hop.” (¶ 29.)

Because Choi explains that the DNS data unit can be forwarded to the next

hop, Choi teaches the limitation “communicating the data visa and the data to a next network element in the data flow.”

Appellants argue that “Choi and the taken Official Notice also do not disclose or suggest ‘communicating the data visa and the data to a next network element in the data flow,’ as recited in Claim 1.” (App. Br. 8.) Particularly, Appellants argue that “[t]he Office Action went on to cite seven references for evidence of forwarding reputation information/scores generally but did not rely on any of them as describing the recited communicating.” (*Id.* at 9.) However, as discussed previously, the Examiner also cited to paragraph 29 of Choi for teaching the limitation “communicating the data visa and the data to a next network element in the data flow.” (Ans. 7.) Appellants have not provided persuasive arguments or evidence rebutting this finding.

Thus, we agree with the Examiner that the combination of Choi and Official Notice would have rendered obvious the limitation “communicating the data visa and the data to a next network element in the data flow.”

Accordingly, we sustain the rejection of independent claim 1 under 35 U.S.C. § 103.

Claim 4 depends from claim 1. Appellants have not presented any additional substantive arguments with respect to this claim. Therefore, we sustain the rejection of claim 4 under 35 U.S.C. § 103 for the same reasons discussed with respect to independent claim 1.

Independent claims 9, 17, and 24 recite limitations similar to those discussed with respect to independent claim 1. Appellants have not presented any additional substantive arguments with respect to these claims. Therefore, we sustain the rejection of claims 9, 17, and 24, as well as

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dependent claims 11 and 20, for the same reasons discussed with respect to claim 1.

DECISION

The Examiner's decision rejecting claims 1, 2, 4, 5, 7–9, 11, 12, 14–18, 20–24, and 26–31 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