

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

COMMWORKS SOLUTIONS, LLC,
Patent Owner.

IPR2021-01297
Patent 8,923,846 B2

Before THU A. DANG, KEVIN C. TROCK, and
JOHN R. KENNY, *Administrative Patent Judges*.

KENNY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Unified Patents, LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1–6, 9–13, and 16–20 (“the challenged claims”) of U.S. Patent No. 8,923,846 B2 (Ex. 1001, “the ’846 patent”). Paper 1 (“Pet.”). CommWorks Solutions, LLC (“Patent Owner”) filed a Preliminary Response. Paper 7 (“Prelim. Resp.”).

On February 14, 2022, we instituted an *inter partes* review of all challenged claims. Paper 8. Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”), and Petitioner filed a Reply (Paper 15, “Pet. Reply”). Patent Owner did not file a Sur-reply. A transcript of an oral hearing held on November 16, 2022 (Paper 21, “Tr.”) has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6. For the reasons discussed below, we determine that Petitioner has shown, by a preponderance of the evidence, that claims 1–6, 9–13, and 16–20 are unpatentable.

A. *Related Proceeding*

The parties identify *CommWorks Solutions, LLC v. Comcast Cable Communications, LLC*, Case No. 6:21-cv-00366-ADA (W.D. Tex.) as a related matter involving the ’846 patent (“Related Litigation”). Pet. 62; Paper 4, 1.

B. *’846 Patent*

The ’846 patent, titled “Recovery Techniques in Mobile Networks,” was filed on October 21, 2013,¹ and issued on December 30, 2014. Ex. 1001, codes (22), (45), (54). Embodiments of the ’846 patent relate to

¹ The ’846 patent claims priority, through a series of continuation applications and a divisional application, to application No. 09/802,861, filed on March 12, 2001. Ex. 1001, code (60).

“technique[s] for recovering location information of a subscriber in a mobile network.” *Id.* at 1:54–2:16; *see also id.* at code (57) (“A technique for protecting location information of a subscriber in a mobile network is disclosed.”).

The specification of the ’846 patent (“Specification”) explains that “Mobile IPv6^[2] allows a subscriber to move from one link to another without changing its IP address.” Ex. 1001, 3:11–12. “While a subscriber is attached to some foreign link away from home, it is also addressable by one of more care-of-addresses, in addition to its home address.” *Id.* at 3:30–32. The ’846 patent describes that a “care-of address is an IP address associated with a mobile node while the subscriber is visiting a particular foreign link.” *Id.* at 3:30–34. For this to work, “a mobile subscriber registers one of its care-of addresses with a router on its home link, requesting this router to function as the ‘home agent.’” *Id.* at 3:49–51. The home agent then “intercept[s] any IPv6 packets addressed to the subscribers’ home address (or home addresses) on the home link and tunnels each intercepted packet to the subscribers’ primary care-of address.” *Id.* at 3:59–62.

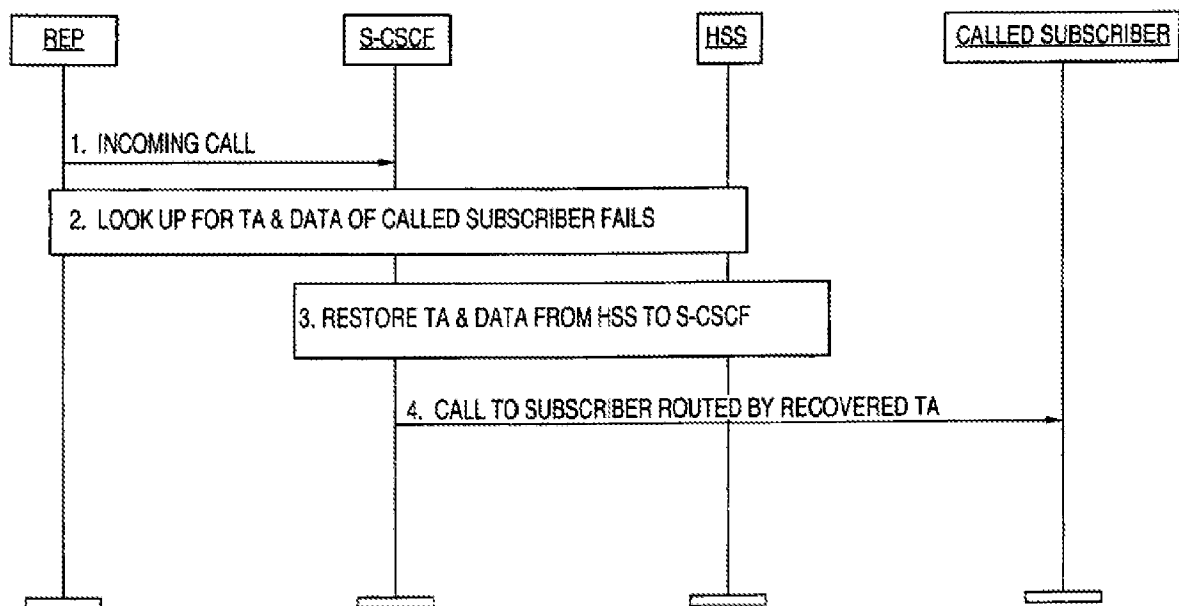
The ’846 patent “relates to protecting the Transport Address (TA) which is a current Care of Address of a mobile subscriber is reachable from loss and after Call State Control Function (CSCF) crashes and after reset situations of a network element realizing CSCF functionality.” Ex. 1001, 1:22–27. The Specification describes embodiments in the context of a 3G All-IP mobile network. *See id.* at 6:22–26. In a 3G All-IP network, the “S-CSCF [servicing-CSCF] that the subscriber is currently registered to and the TA of the roaming subscriber . . . must be known to and maintained by

² Internet Protocol Version 6. *See* Ex. 1001, 4:30–31.

the network.” *Id.* at 2:63–67. Specifically, “[k]eeping the address of the S-CSCF ensures that a call to a subscriber can be routed to the destination node,” and “[k]eeping the current TA of the subscriber ensures that a call made to the subscriber which arrives at the S-CSCF can finally reach the subscriber.” *Id.* at 3:66–4:3. But, “the information of the current S-CSCF (stored in the HSS [Home Subscriber Service]) is insufficient to reach the subscriber upon the loss of the subscriber TA.” *Id.* at 4:15–17. The Specification proposes several options to remedy this problem, including that “[t]he TA of the subscriber should be forwarded to the HSS at registration and downloaded from the HSS to the S-CSCF during recovery.” *Id.* at 4:27–29.

Figure 4A of the ’846 patent, reproduced below, illustrates an embodiment for “sending subscriber TA to S-CSCF and then forwarding it to HSS at registration” (*id.* at 2:39–40):

FIG. 4A



Ex. 1001, Fig. 4A. In the embodiment shown in Figure 4A above, “‘a safe copy’ of the subscriber’s TA is forwarded to the HSS for storage and protection” so that “[t]he TA and other data can then be restored to the S-CSCF upon the earlier loss of data by the S-CSCF.” *Id.* at 4:37–42. In particular, in step 1, “[a]n incoming call from an REP (Remote End-Point) is received by the S-CSCF.” *Id.* at 4:43–45. “In step 2, the S-CSCF looks for the subscriber’s TA so as to route the call but fails to find the subscriber’s TA.” *Id.* at 4:45–46. The S-CSCF then initiates restoration of the TA in step 3, and the call is routed to the subscriber using the recovered TA in step 4. *Id.* at 4:46–51.

C. Challenged Claims

Of the challenged claims, claims 1, 9, and 16 are independent.

Ex. 1001, 6:31–8:18. Claims 2–6 depend from claim 1; claims 10–13 depend from claim 9; and claims 17–20 depend from claim 16. *Id.*

Independent claim 1 is reproduced below.

1. [1P]³ A method comprising:

[1.1] receiving, from a first server at a second server, a transport address and an address of the first server;

[1.2] receiving, at the second server, a request from the first server to restore the transport address; and

[1.3] in response to the request from the first server to restore the transport address, communicating the transport address to the first server from the second server.

Id. at 6:31–38.

³ For ease of reference, we use the designations set forth in the Petition for the preambles and limitations of the challenged claims.

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