

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

T-MOBILE US, INC., T-MOBILE USA, INC.,
TELECOMMUNICATION SYSTEMS, INC., ERICSSON INC., and
TELEFONAKTIEBOLAGET LM ERICSSON,
Petitioners,

v.

TRACBEAM, LLC,
Patent Owner.

Case IPR2015-01711
Patent 7,525,484 B2

Before KEVIN F. TURNER, DAVID C. MCKONE, JAMES A. TARTAL,
and BARBARA A. PARVIS, *Administrative Patent Judges*.

MCKONE, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

A. Background

T-Mobile US, Inc., T-Mobile USA, Inc., TeleCommunication Systems, Inc., Ericsson Inc., and Telefonaktiebolaget LM Ericsson (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 27, 39, and 62 of U.S. Patent No. 7,525,484 B2 (Ex. 1002, “the ’484 patent”). The parties reached agreement to remove claims 39 and 62 from the proceeding. Paper 6 (Joint Motion to Limit Petition); Paper 7 (Joint Submission of Narrowing Agreement). We accepted that agreement and limited this proceeding to claim 27. Paper 8.

Upon consideration of the Petition, we conclude, under 35 U.S.C. § 314(a), that Petitioner has established a reasonable likelihood that it would prevail with respect to claim 27. Accordingly, we institute an *inter partes* review of claim 27 of the ’484 patent.

B. Related Matters

The ’484 patent is the subject of several lawsuits filed in the United States District Court for the Eastern District of Texas. Pet. 2; Paper 5, 1–2.

The ’484 patent also is the subject of *Apple Inc. v. TracBeam, LLC*, Case IPR2015-01696 (PTAB); *Apple Inc. v. TracBeam, LLC*, Case IPR2015-01697 (PTAB); and *T-Mobile US, Inc. v. TracBeam, LLC*, Case IPR2015-01708 (PTAB). Pet. 1; Paper 5, 3.

Various related patents also are the subjects of these and other proceedings before the district courts and the Board. Paper 5, 1–3.

C. *The Asserted Grounds*

Petitioner contends that claim 27 would have been obvious, under 35 U.S.C. § 103, over Kauser (Ex. 1007, U.S. Patent No. 5,724,660, issued Mar. 3, 1998). Pet. 6.

D. *The '484 Patent*

The '484 patent describes location systems for wireless telecommunication infrastructures. Ex. 1002, Abstract. According to the '484 patent, the location techniques are useful for 911 emergency calls, vehicle tracking and routing, and location of people and animals. *Id.* at Abstract, 12:11–17.

Figure 4, reproduced below, illustrates an embodiment:

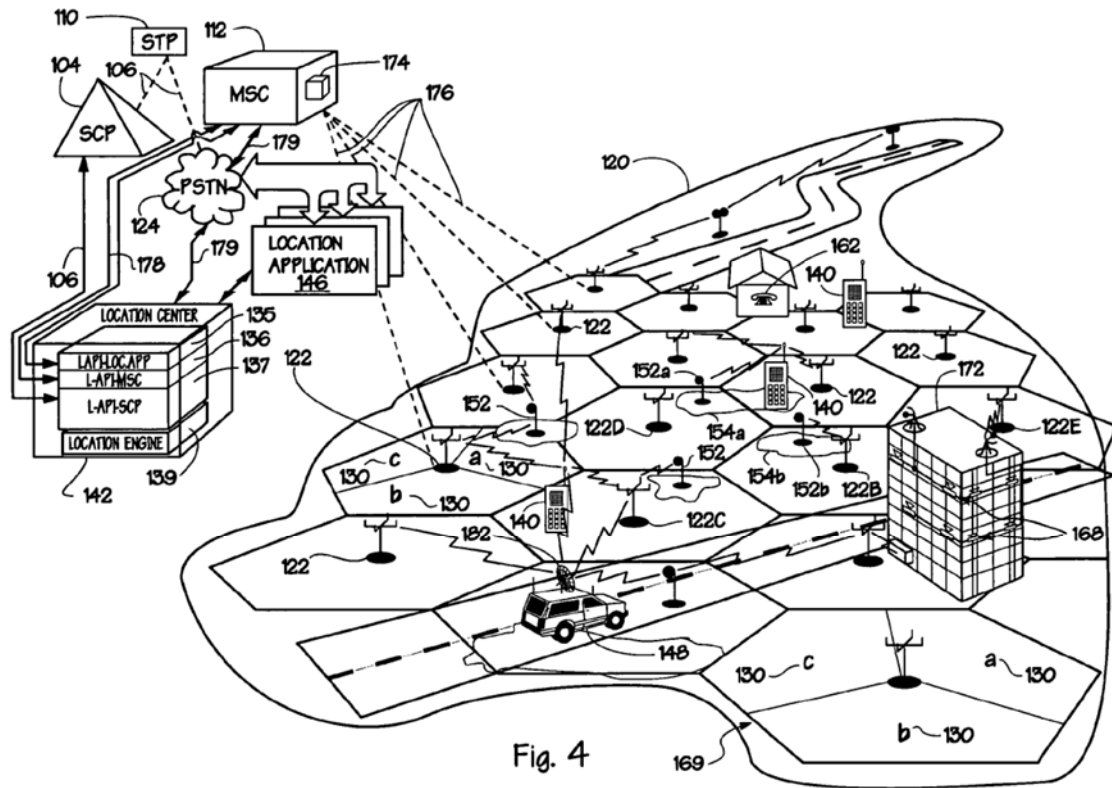


Fig. 4

IPR2015-01711

Patent 7,525,484 B2

Figure 4 is an overall view of a wireless radio location network architecture. *Id.* at 21:66–67. The network includes a plurality of mobile stations (“MS”) 140, a mobile switching center (“MSC”) 112, and a plurality of wireless cell sites forming radio coverage area 120, each site including a fixed-location base station 122 for voice and data communication with MSs 140. *Id.* at 24:41–57. The network also includes location base stations (“LBS”) 152 with wireless location enablement, e.g., with transponders used primarily in communicating MS location related information to location center 142 (via base stations 122 and MSC 112). *Id.* at 24:57–64. LBSs can be placed, for example, in dense urban areas, in remote areas, along highways, or wherever more location precision is required than can be obtained using conventional wireless infrastructure components. *Id.* at 28:29–38.

Location center 142 determines a location of a target MS 140. *Id.* at 25:8–10, 37:43–46. The system uses a plurality of techniques for locating MSs, including two-way time of arrival (“TOA”), time difference of arrival (“TDOA”), and Global Positioning System (“GPS”). *Id.* at Abstract, 9:5–23, 11:7–55, 66:45–50. To determine a location for a MS, the system computes a first order model (also referred to as a hypothesis or estimate) for one or more of the locating techniques, computes a confidence value for each model indicating the likelihood that the model is correct, performs additional computations on the models to enhance the estimates, and computes from the models a “most likely” location for the MS. *Id.* at 12:62–13:20, 38:9–31. The most likely location can be composite of the estimates. *Id.* at 13:22–30, 66:45–50.

Location estimates can be provided to location requesting applications, such as 911 emergency, police and fire departments, taxi services, etc. *Id.* at 8:52–60, 13:20–22, 38:32–34.

Claim 27, the sole claim challenged in this proceeding, is reproduced below:

27. A method for locating mobile stations at one or more unknown terrestrial locations using wireless signal measurements obtained via transmissions between said mobile stations and a plurality of fixed location terrestrial communication stations, wherein each of said communications stations includes one or more of a transmitter and a receiver for wirelessly communicating with said mobile stations, comprising:

receiving, from a plurality of location requesting sources, a plurality of input requests for locations of the mobile stations, wherein for each of the input requests there is a corresponding destination for a responsive output;

for each of the input requests, providing one or more location requests for location information, related to a location of one of said mobile stations, to one or more mobile station location determining sources;

first obtaining, in response to a first of the location requests received from a first of the requesting sources, at least first location information of a first location of a first of said mobile stations, said first location information determined using a first set of one or more wireless location techniques;

first determining, using said first location information, first output location data according to a first output criteria for the corresponding destination for the first request, said first output location data including a representation identifying a first geographical location of the first location;

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.