

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner,

v.

TRACBEAM, LLC,
Patent Owner.

Case IPR2015-01696
Patent 7,525,484 B2

Before KEVIN F. TURNER, RICHARD E. RICE, BARBARA A. PARVIS,
and MATTHEW R. CLEMENTS, *Administrative Patent Judges*.

CLEMENTS, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. Background

Apple Inc. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) to institute an *inter partes* review of claims 25–28, 31, 36–43, 45, 47–51, 55–57, 60–61, 63, and 72 of U.S. Patent No. 7,525,484 B2 (Ex. 1001, “the ’484 patent”). TracBeam, LLC (“Patent Owner”) filed a Preliminary Response (Paper 6, “Prelim. Resp.”).

Upon consideration of the Petition and Preliminary Response, we conclude, under 35 U.S.C. § 314(a), that Petitioner has not established a reasonable likelihood that it would prevail with respect to at least one challenged claim of the ’484 patent. Accordingly, under the standard of § 314, we deny the Petition and decline to institute an *inter partes* review of the challenged claims 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. 1; Paper 5, 1–2.

The ’484 patent also is the subject of *Apple Inc. v. TracBeam, LLC*, Case IPR2015-01697 (PTAB), *T-Mobile US, Inc. v. TracBeam, LLC*, Case IPR2015-01708 (PTAB), and *T-Mobile US, Inc. v. TracBeam, LLC*, Case IPR2015-01711 (PTAB). Pet. 1; Paper 5, 3.

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

C. The '484 Patent

The '484 patent describes location systems for wireless telecommunication infrastructures. Ex. 1001, 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:

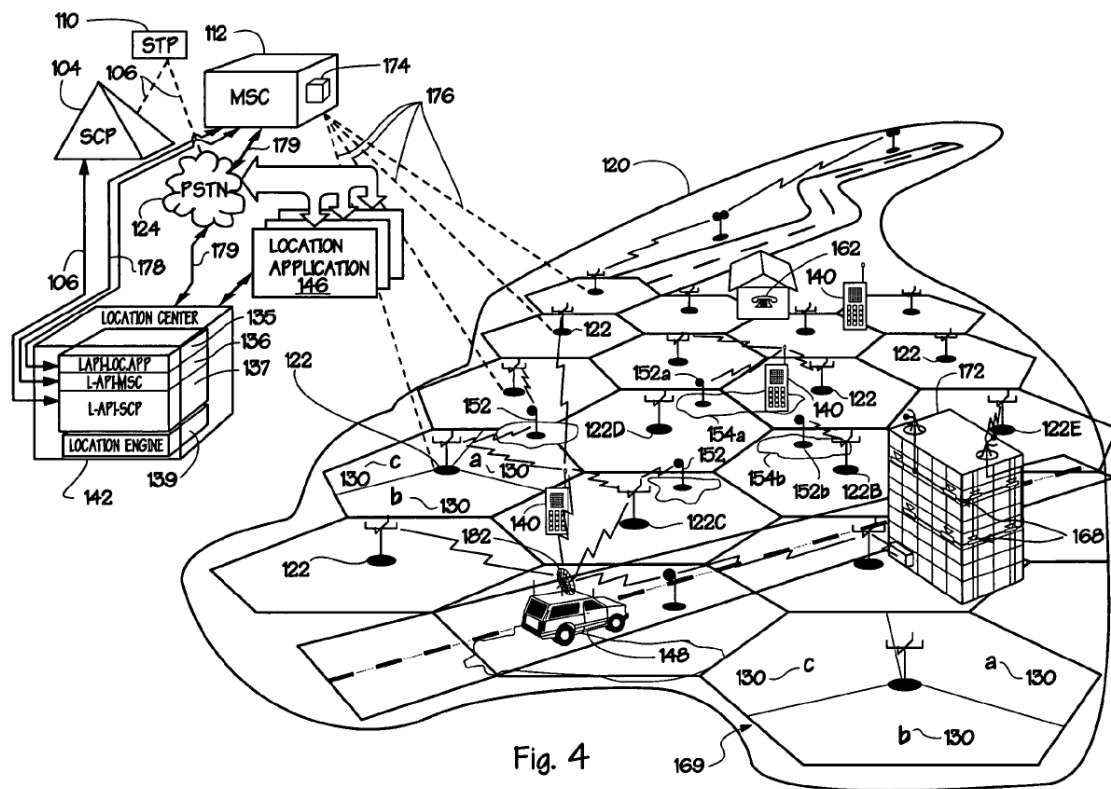


Figure 4 is an overall view of a wireless radio location network architecture. *Id.* at 21:66–67. The network includes a plurality of mobile stations (“MS”) 140, a mobile switching center (“MSC”) 112, and a plurality of wireless cell sites forming radio coverage area 120, each site including a fixed-location 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

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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 a 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.

D. Illustrative Claim

Of the challenged claims, claims 25, 27, 45, 49, 51, 57, and 63 are independent. Claim 25, reproduced below, is illustrative of the claimed subject matter:

25. A method for estimating, for each mobile station M of a plurality of mobile stations, an unknown terrestrial location (L_M) for M using wireless signal measurements obtained via transmissions between said mobile station M and a plurality of fixed location terrestrial communication stations, wherein each of said communications stations is substantially co-located with one or more of a transmitter and a receiver for wirelessly communicating with said mobile station M, comprising:

initiating a plurality of requests for information related to the location of said mobile station M, the requests provided to each of at least two mobile station location evaluators, wherein there is at least a first of the requests provided to a first of the location evaluators and a second of the requests, different from the first request, provided to a second of the location evaluators, such that when said location evaluators are supplied with corresponding input data having values obtained using wireless signal measurements obtained via two way wireless communication between said mobile station M, and the communication stations, each of said first and second location evaluators determine corresponding location information related to L_M , and

wherein for at least one location L of one of the mobile stations, said first location evaluator and said second location evaluator output, respectively, first and second position information related to the one mobile station being at L wherein neither of the first and second position information is dependent upon the other;

obtaining a first collection of location information of said mobile station M, wherein the first collection includes first location information from the first location evaluator, and

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