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United States Patent [19]

Ota et al.

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[54] **CELLULAR COMMUNICATION NETWORK AND ITS COMMUNICATION METHOD**

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[30] Foreign Application Priority Data

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Feb. 10, 1997	[JP]	Japan	9-026263

[51] Int. Cl.⁷ **H04B 7/26**

[52] U.S. Cl. **455/553; 455/552; 455/445**

[58] Field of Search 455/554, 555, 455/426, 445, 432, 552, 463, 462, 437, 440, 553; 370/338, 328; 359/118, 145

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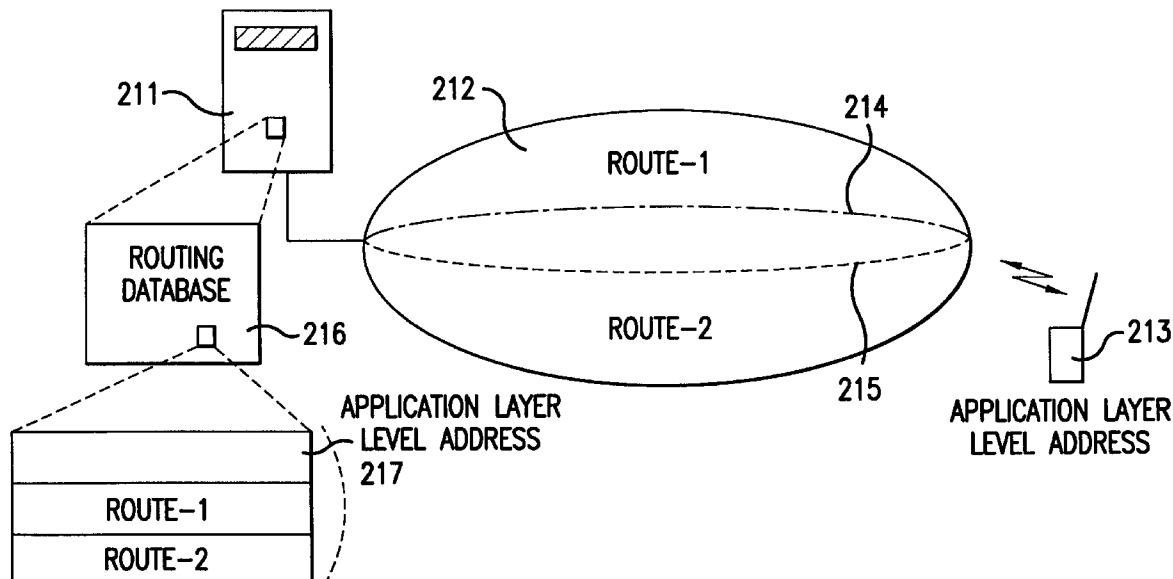
Primary Examiner—Salvatore Cangialosi
Attorney, Agent, or Firm—Oliff & Berridge, PLC

[57] ABSTRACT

An overlay cellular communication network, which includes a first base station for providing a first cellular communication network having a first cell size, and a second base station for providing a second cellular communication network which covers the first cellular communication network and has a second cell size, is provided to determine a proper transmission route immediately and to cover a broad area communication network with certainty.

A mobile station belonging to an overlay communication network, which includes a micro cell having a first cell size and a macro cell having a second cell size, has a mobile station identification address in the application layer defined by the OSI reference model, and also has a plurality of addresses, each of the plurality of addresses belonging to one of the data link layer through the presentation layer defined by the OSI reference model, which represent routes to reach the mobile station. A transmitting route is determined by combining properly the mobile station identification address and the address representing a route.

20 Claims, 19 Drawing Sheets



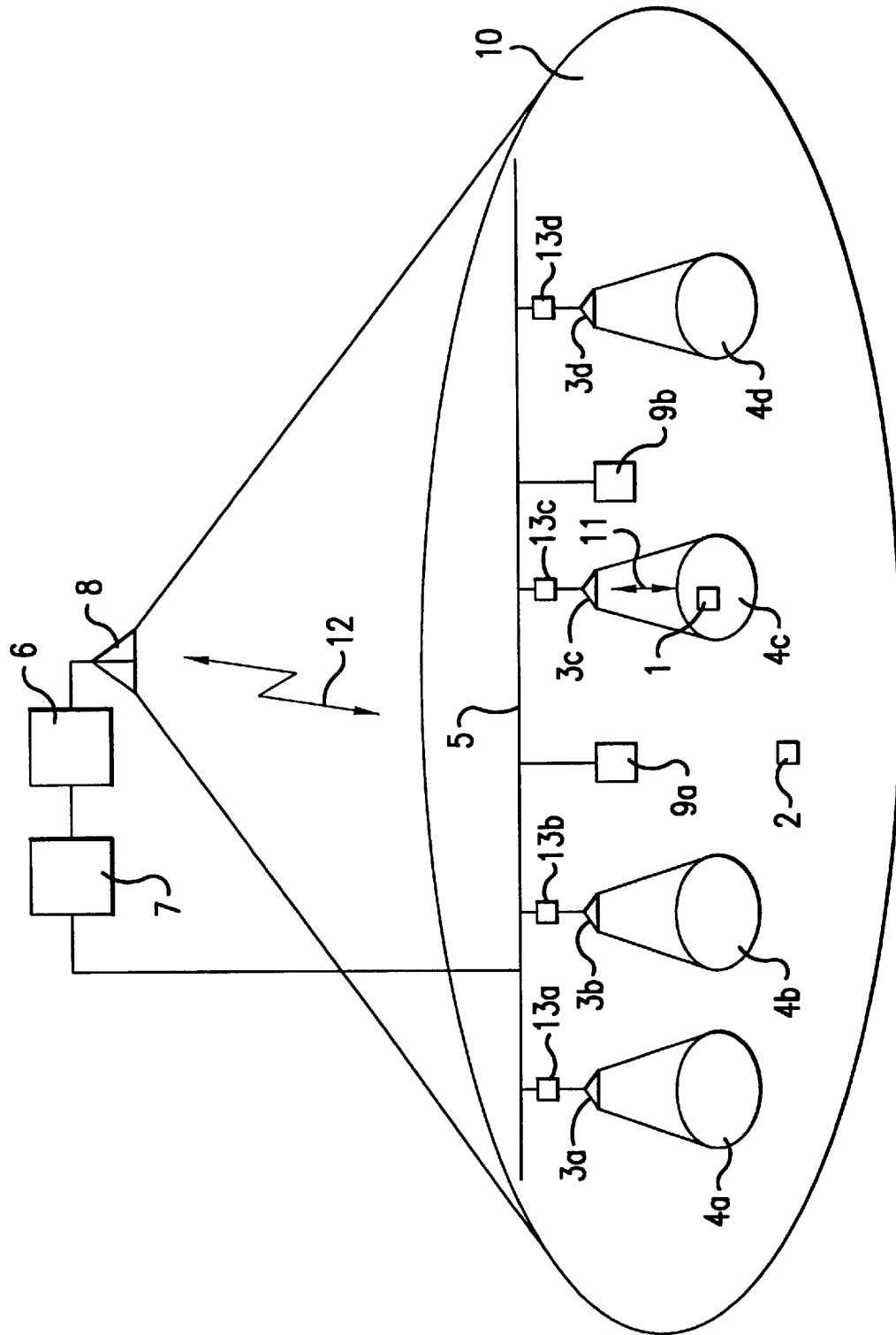


FIG. 1

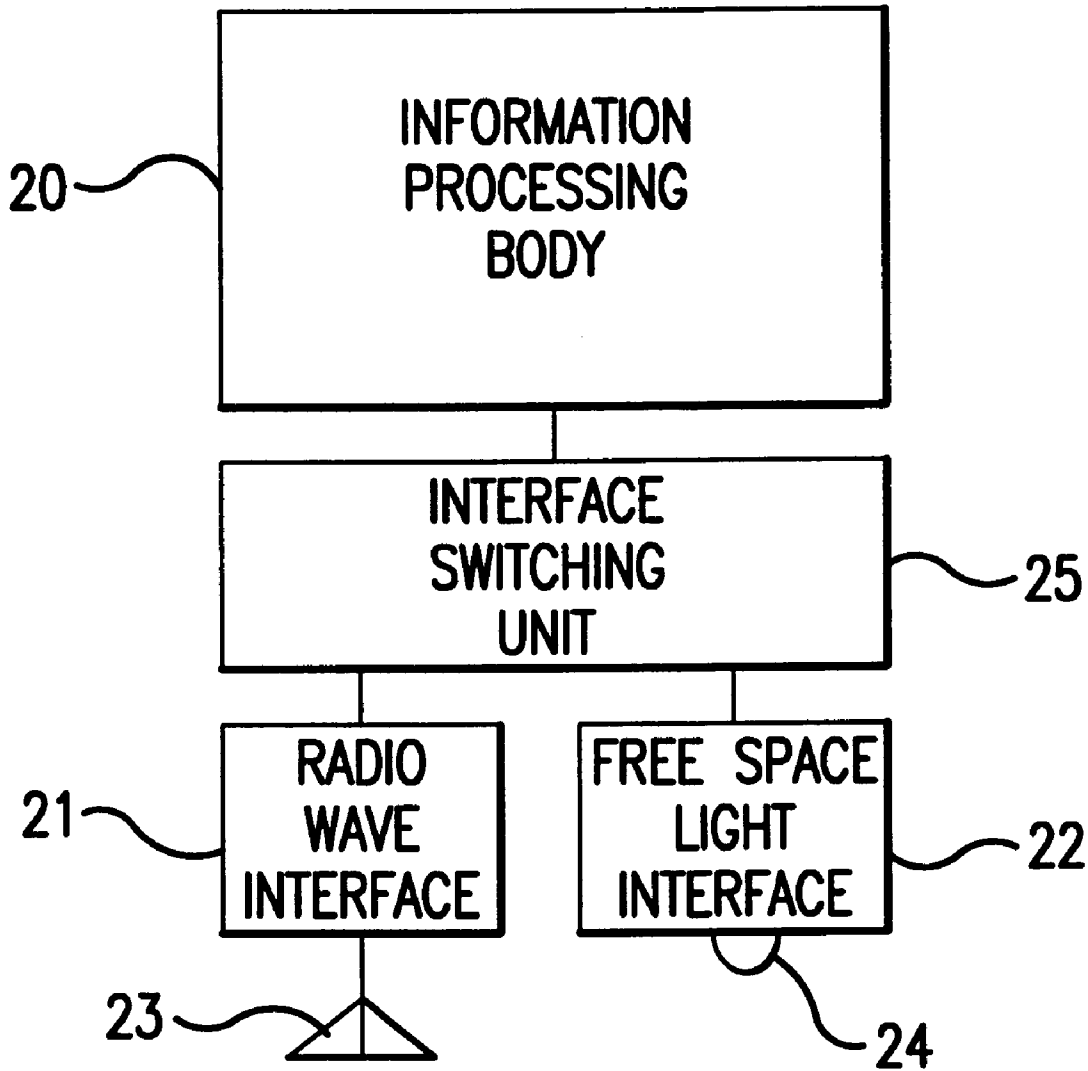


FIG.2

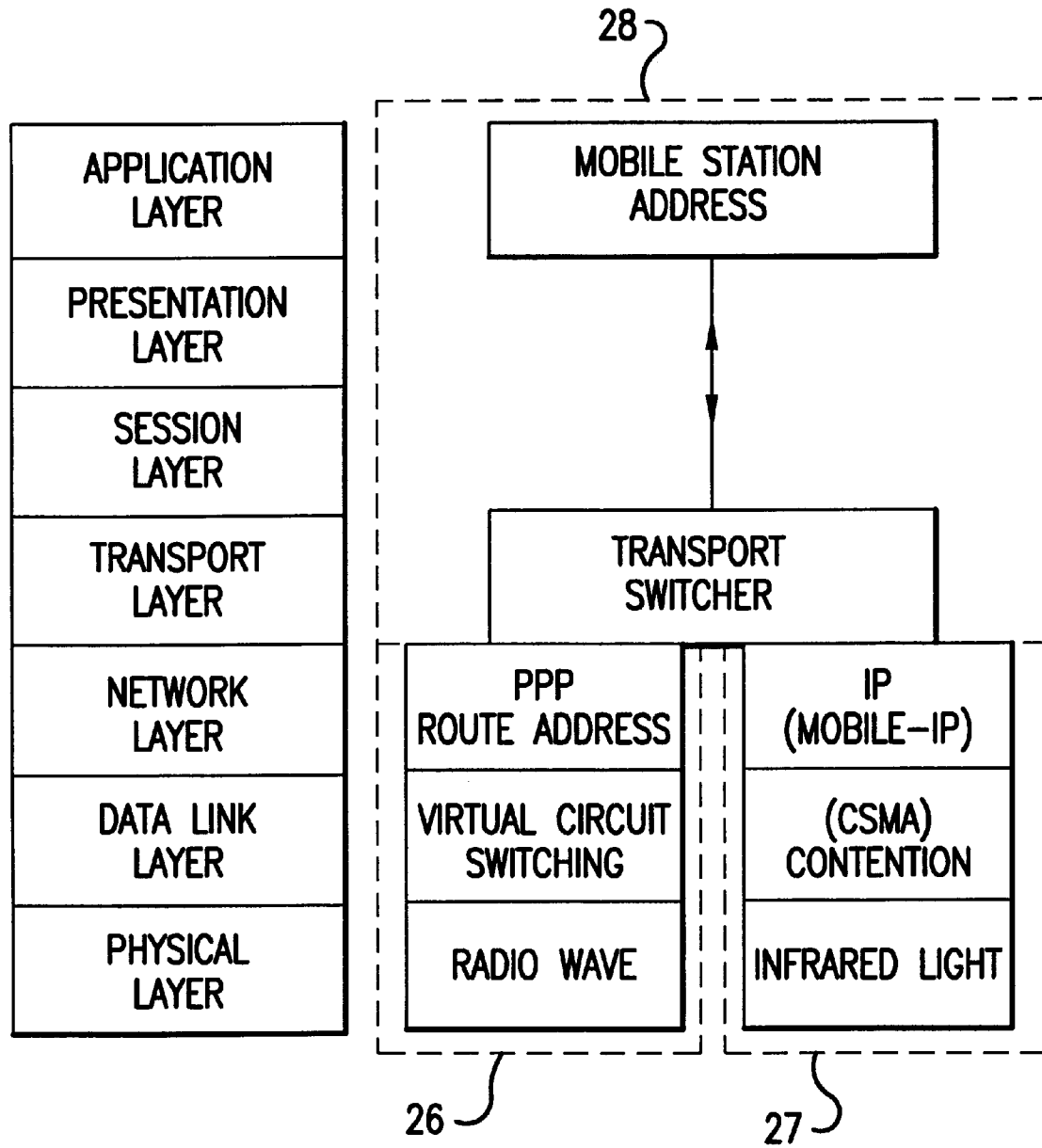


FIG.3

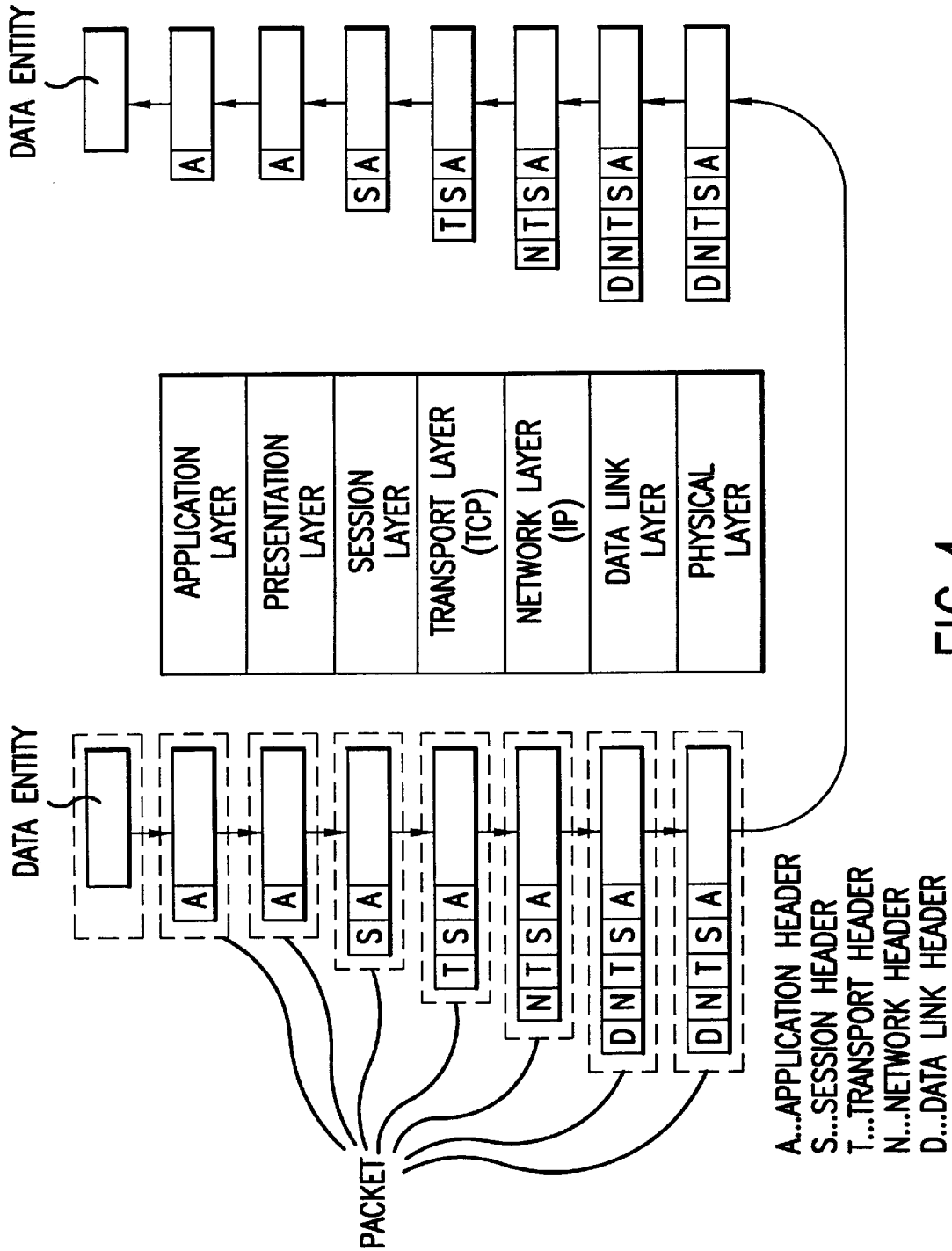


FIG.4

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