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United States Patent [19]

Heiman et al.

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[54] **POWER-SAVING ARRANGEMENT AND METHOD FOR MOBILE UNITS IN COMMUNICATIONS NETWORK**

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[73] Assignee: **Symbol Technologies, Inc.**, Holtsville, N.Y.

[21] Appl. No.: **08/747,034**

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Related U.S. Application Data

[63] Continuation-in-part of application No. 08/549,051, Oct. 27, 1995, Pat. No. 5,815,811, which is a continuation-in-part of application No. 08/044,648, Apr. 8, 1993, Pat. No. 5,528, 621, which is a continuation-in-part of application No. 07/799,172, Nov. 27, 1991, Pat. No. 5,280,498, which is a continuation-in-part of application No. 07/635,859, Dec. 28, 1990, Pat. No. 5,142,550, which is a continuation-in-part of application No. 07/374,452, Jun. 29, 1989, Pat. No. 5,029, 183.

[51] **Int. Cl.**[6] **H04Q 7/32**; H04B 1/16; H04B 7/00

[52] **U.S. Cl.** **455/38.3**; 455/38.4; 455/566; 455/574; 455/343

[58] **Field of Search** 455/412, 414, 455/31.2, 31.3, 38.3, 38.4, 466, 503, 507, 517, 526, 566, 434, 343, 574, 500

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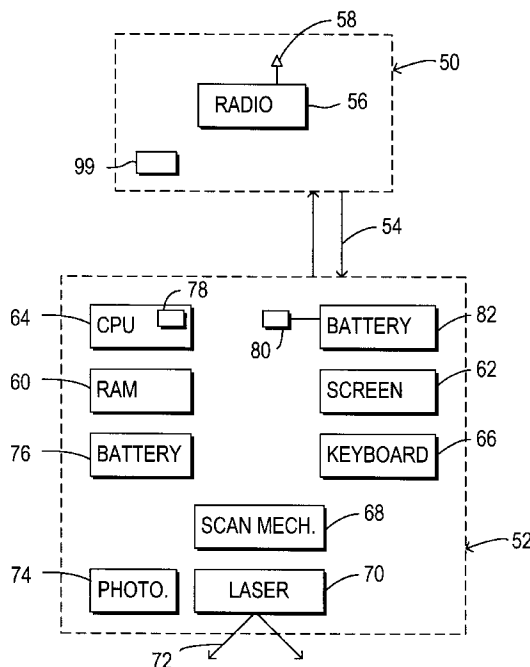|			
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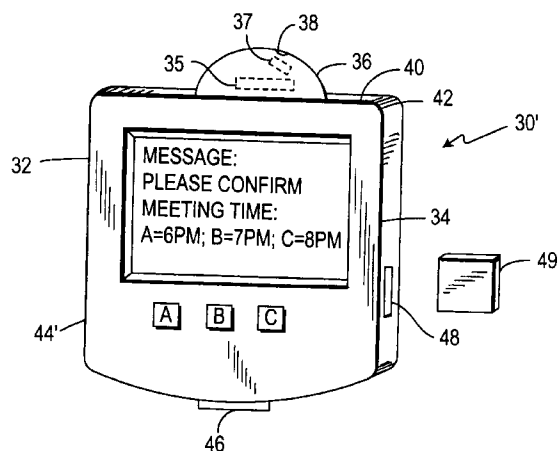
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Wireless LAND Medium Access Control (MAC) and Physical Layer (PHY) Specifications, The Editors of IEEE, p. 802.11, May 20, 1996.

Primary Examiner—Willis R. Wolfe
Attorney, Agent, or Firm—Kirschstein, et al.

[57] **ABSTRACT**

A communications network comprising a cellular local area wireless network includes a plurality of access points connected to a housed computer and each other, and a plurality of mobile units each mobile unit being arranged for association with an access point. The mobile units are arranged to periodically scan for and identify the most eligible access point for association on the basis of the criteria of best quality signal strength and loading factor. In order to identify when m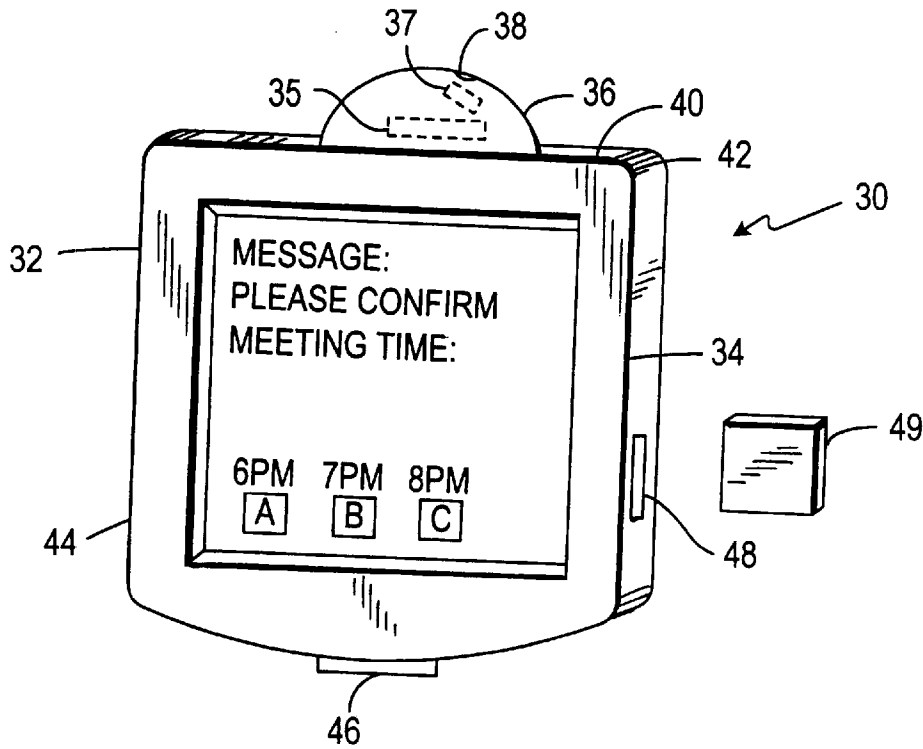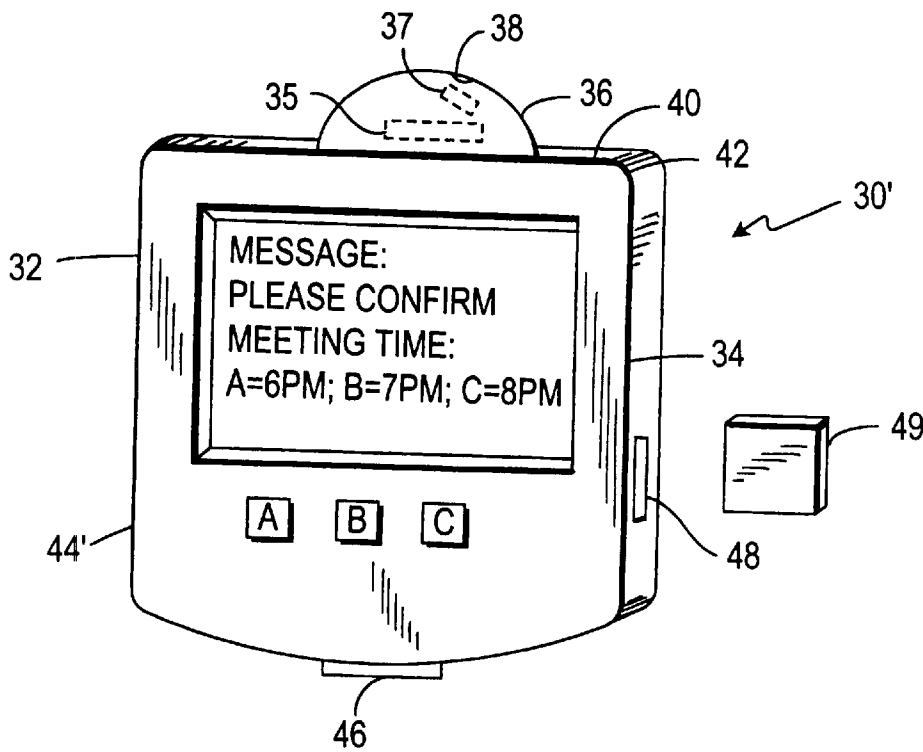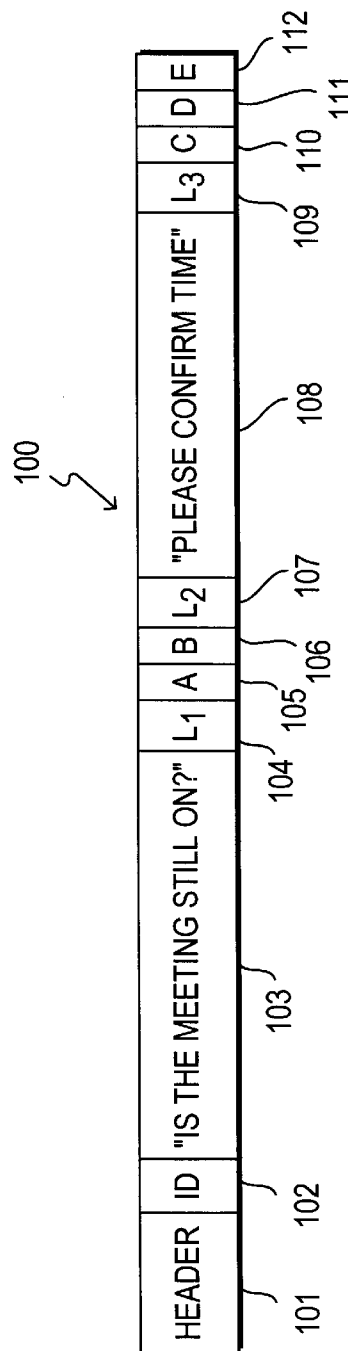obile units are being removed from a predetermined area, access points having directional antennae are situated adjacent exit points to detect when mobile units are in a vicinity. Each mobile unit may include paging facilities, including the capability of transmitting information in a coded form known both to the unit and to a host, and power-saving facilities.

29 Claims, 7 Drawing Sheets

MESSAGE:
PLEASE CONFIRM
MEETING TIME:

6PM   7PM   8PM
[A]   [B]   [C]

FIG. 1

MESSAGE:
PLEASE CONFIRM
MEETING TIME:
A=6PM; B=7PM; C=8PM

[A]   [B]   [C]

FIG. 2

FIG. 1A

FIG. 1B

FIG. 2B

FIG. 3

DOCKET ALARM
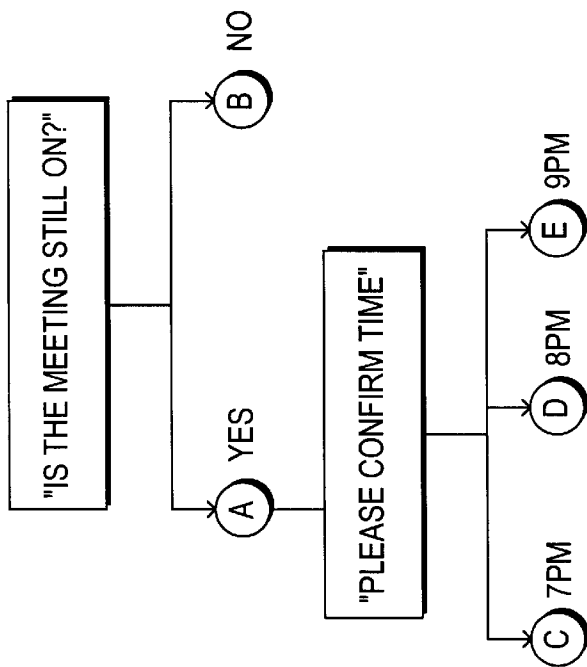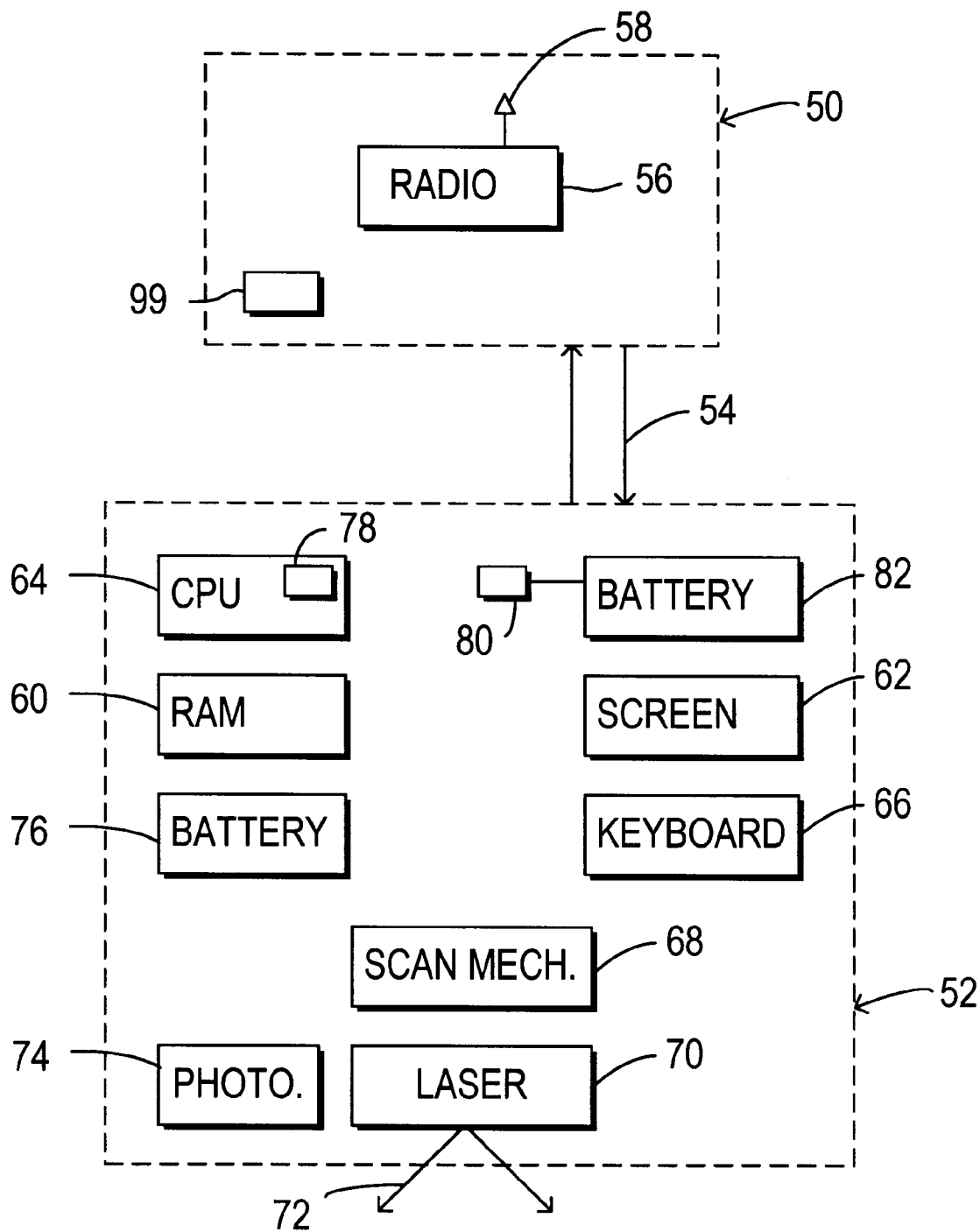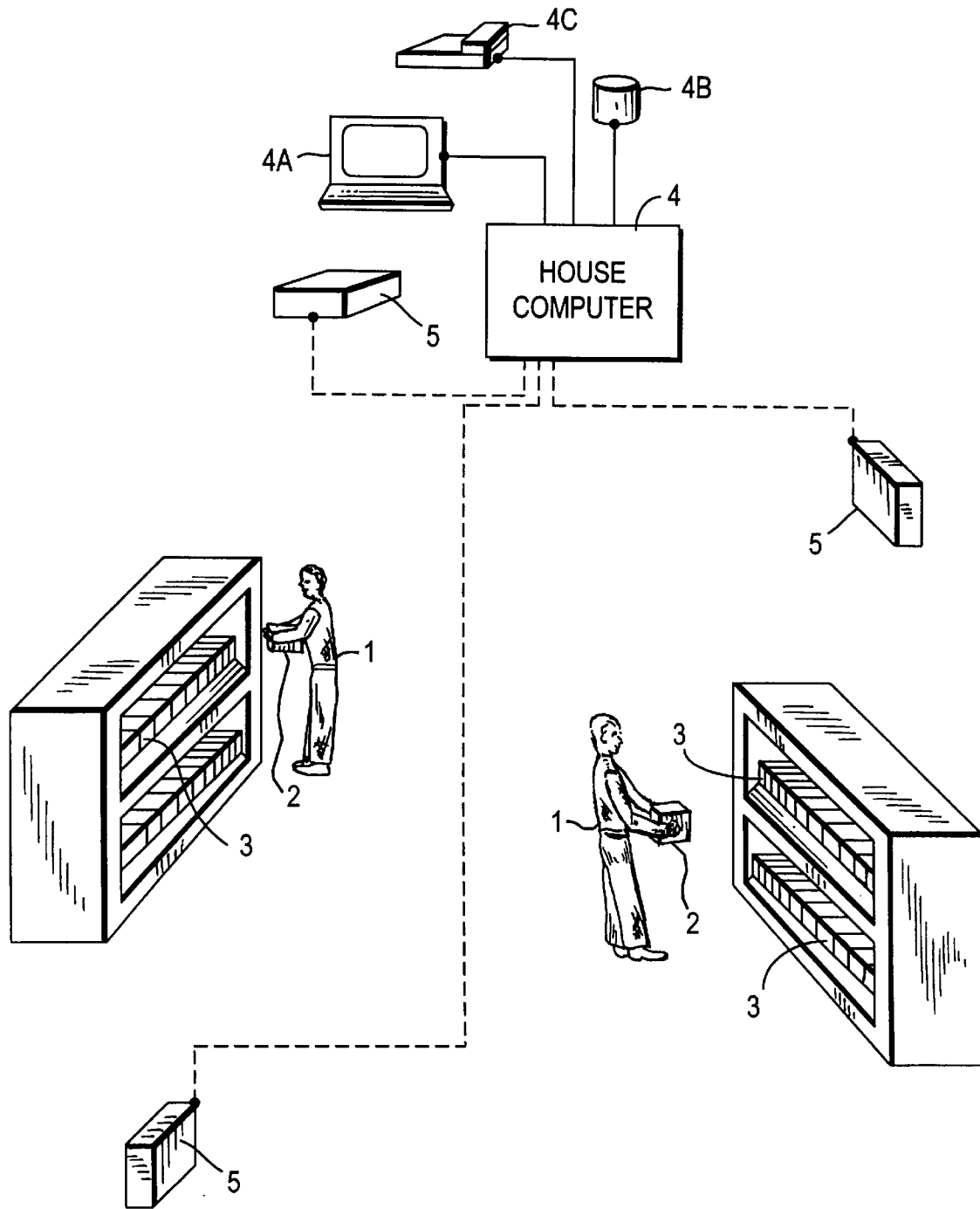
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