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(71) Applicant *(for all designated States except AE, AU, CN, ID, IL, IN, JP, KR, KZ, MN, NZ, SG, TJ, TM, US, UZ, VN)*: **DESKIN RESEARCH GROUP, INC.** [US/US]; 2270 Agnew Road, Santa Clara, CA 95054-1571 (US).

(71) Applicant *(for AE, AU, CN, ID, IL, IN, JP, KR, KZ, MN, NZ, SG, TJ, TM, UZ, VN only)*: **COCOMO MB COMMUNICATIONS, INC.** [JP/JP]; 3F Sakurada Touri Building, 1-2-10, Toranomon, Minatoku, Tokyo 105 0001 (JP).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **CHADWICK, George, G.** [US/US]; 424 Sand Hill Circle, Menlo Park, CA 94025 (US).

(74) Agent: **HUGHES, Michael, J.**; Intellectual Property Law Offices, 1901 South Bascom Avenue, Suite 660, Campbell, CA 95008 (US).

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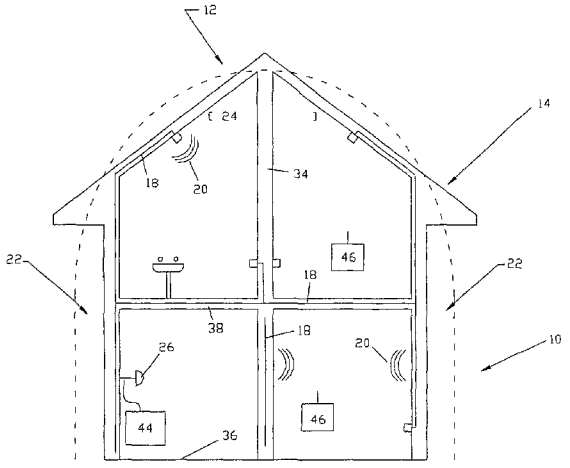
(54) Title: EXCITER SYSTEM AND METHOD FOR COMMUNICATIONS WITHIN AN ENCLOSED SPACE



(57) Abstract: An exciter system (10) is provided for use in facilitating electromagnetic communication within an enclosed space (12). The system (10) includes an exciter (26) which may be in the form of a three dimensional hemispherical exciter (28) or a two dimensional planar sector exciter (30) depending on the size of the associated structure and the power requirements of operation. The exciter system (10) operates in conjunction with a hub/controller network (44). The exciter system (10) is adapted to induce a quasi-static evanescent field (20) within the space and to thereby enable communications using the evanescent field (20) at frequencies within an operational frequency range determined by the characteristics of the space. The exciter (26) is mounted in opposition to a portion of a conductive framework (18) within the enclosed space, and is separated therefrom. In operation, a coaxial connector (48) connects the exciter (26) to the hub/controller network (44) with the center conductor (50) connecting at a feed point (66) to the exciter (26) while the shield conductor (52) is connected to the opposing conductive framework (18). In some embodiments a post (40) acts as a curtain to enhance performance at lower frequencies.

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