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**Locascio**

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(54) **VOICE-DATA ACCESS CONCENTRATOR FOR NODE IN AN EXPANDABLE TELECOMMUNICATIONS SYSTEM**

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(51) **Int. Cl.**<sup>7</sup> ..... **H04L 12/66**

(52) **U.S. Cl.** ..... **370/352; 370/401**

(58) **Field of Search** ..... **370/352, 353, 370/354, 355, 356, 465, 466**

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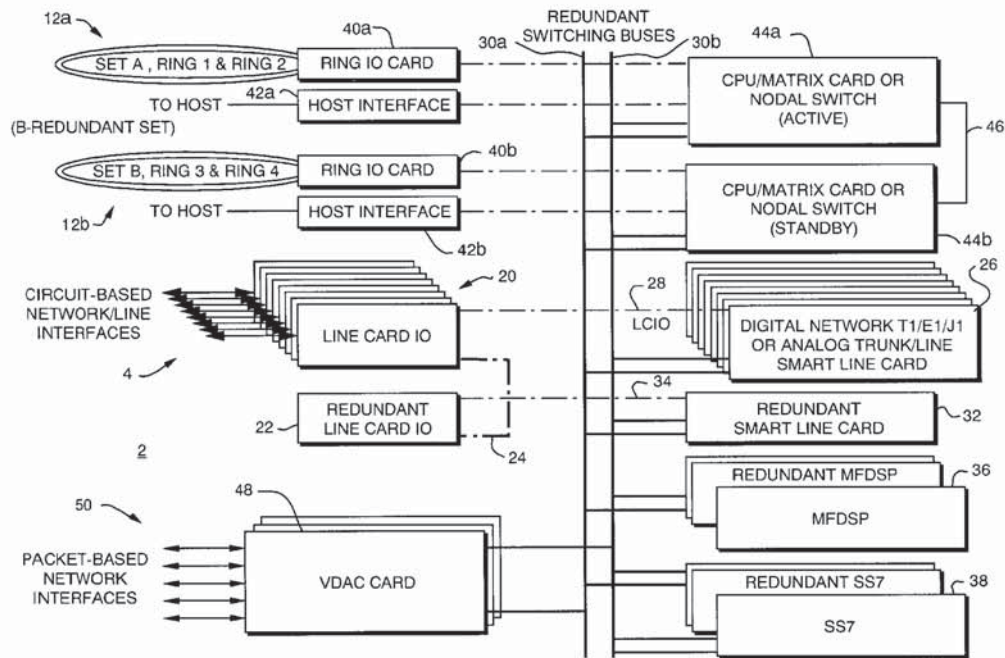
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(57) **ABSTRACT**

Apparatus operable as a standalone, open programmable switch, a node an expandable telecommunications system, or a gateway includes a voice/data access concentrator (VDAC) card for providing voice over IP (Internet protocol) capability. The VDAC card includes an array of digital signal processors (DSPs) which may be programmed to perform desired protocol conversions between circuit-based protocols, such as T1, E1 or J1, and packet-based protocols, such as IP. The apparatus is scalable and may readily incorporate other cards which provide both subscriber supplementary services and network signalling as required to meet the needs of a particular application.

**4 Claims, 4 Drawing Sheets**



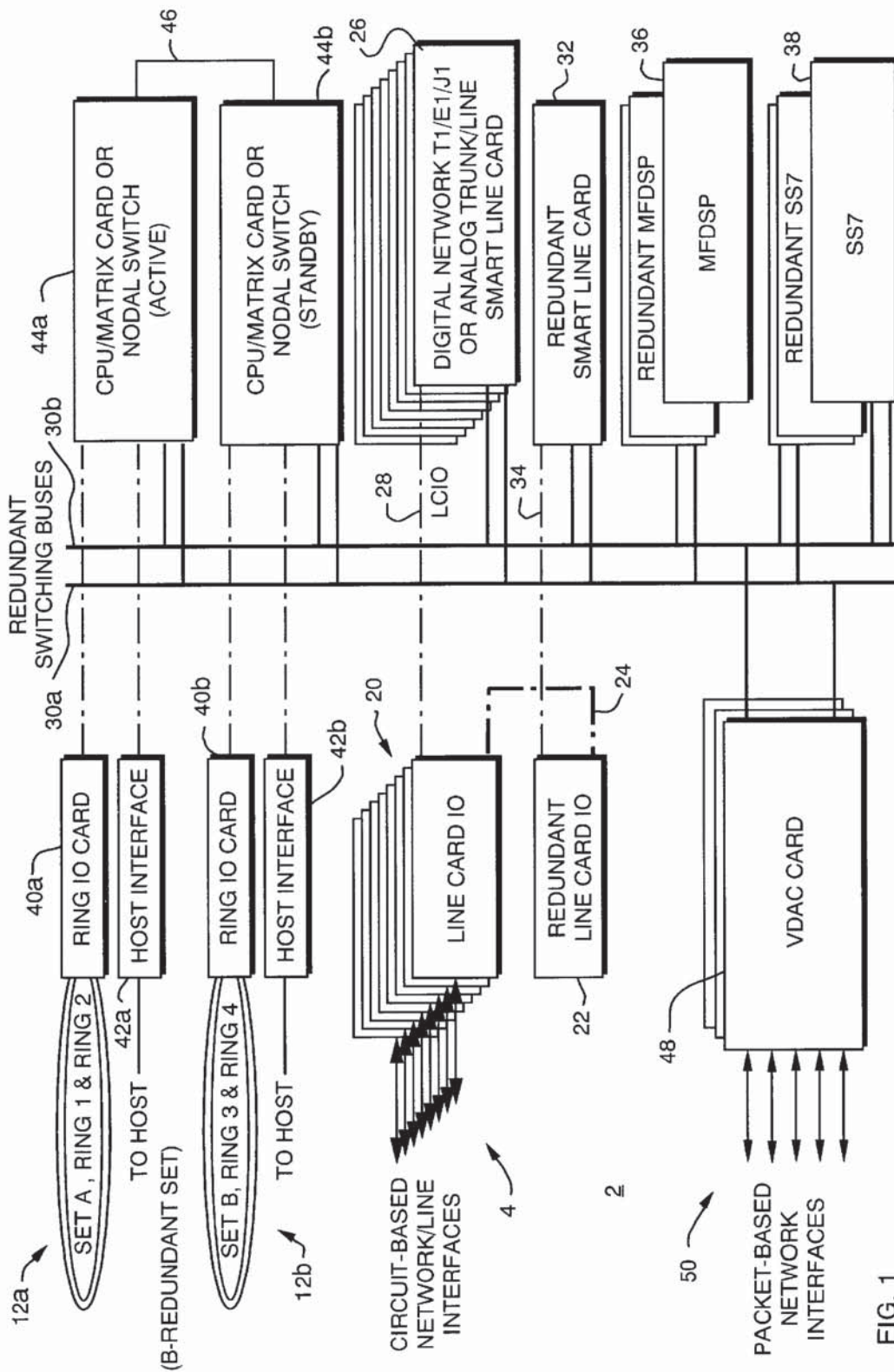


FIG. 1

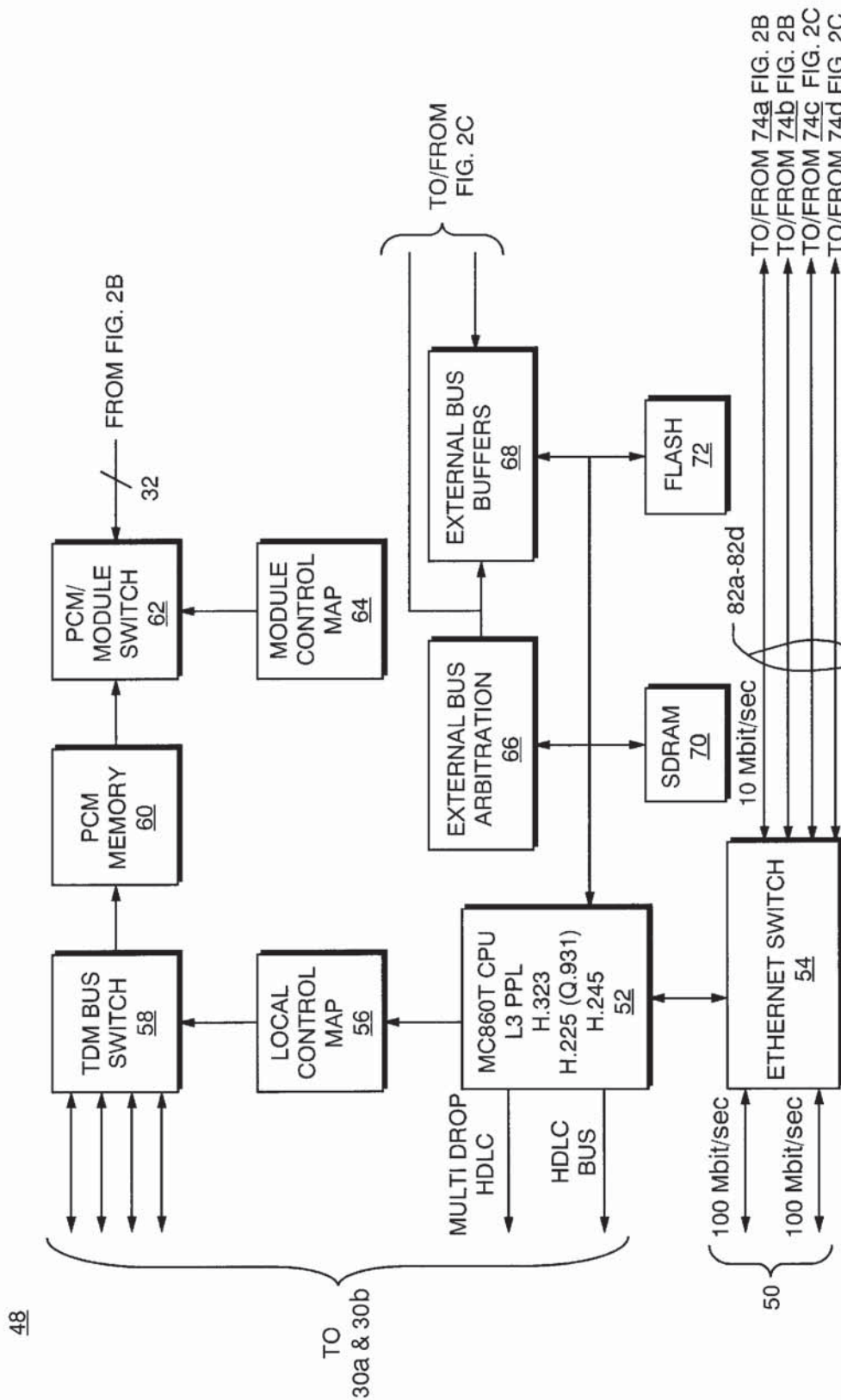
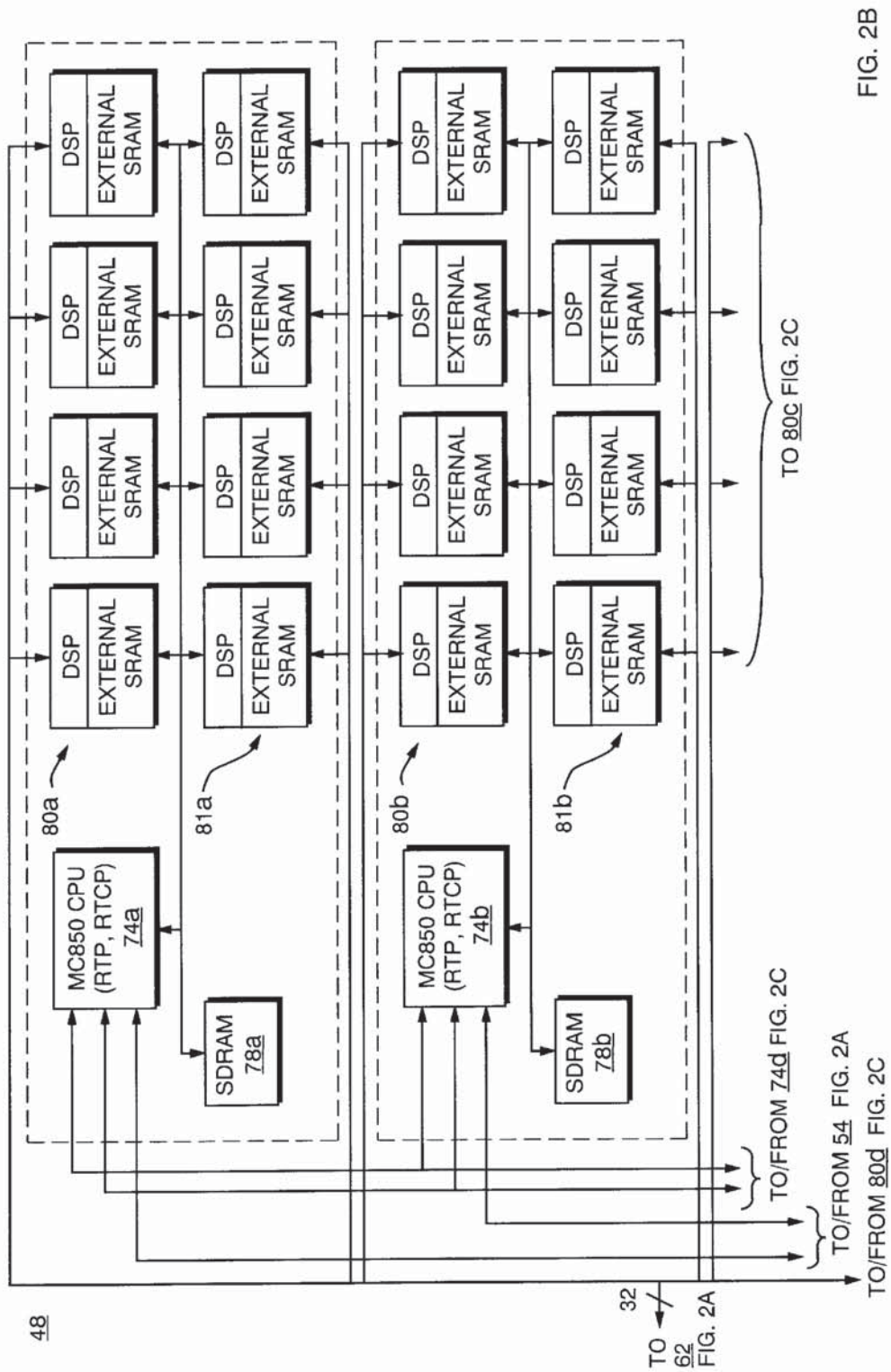
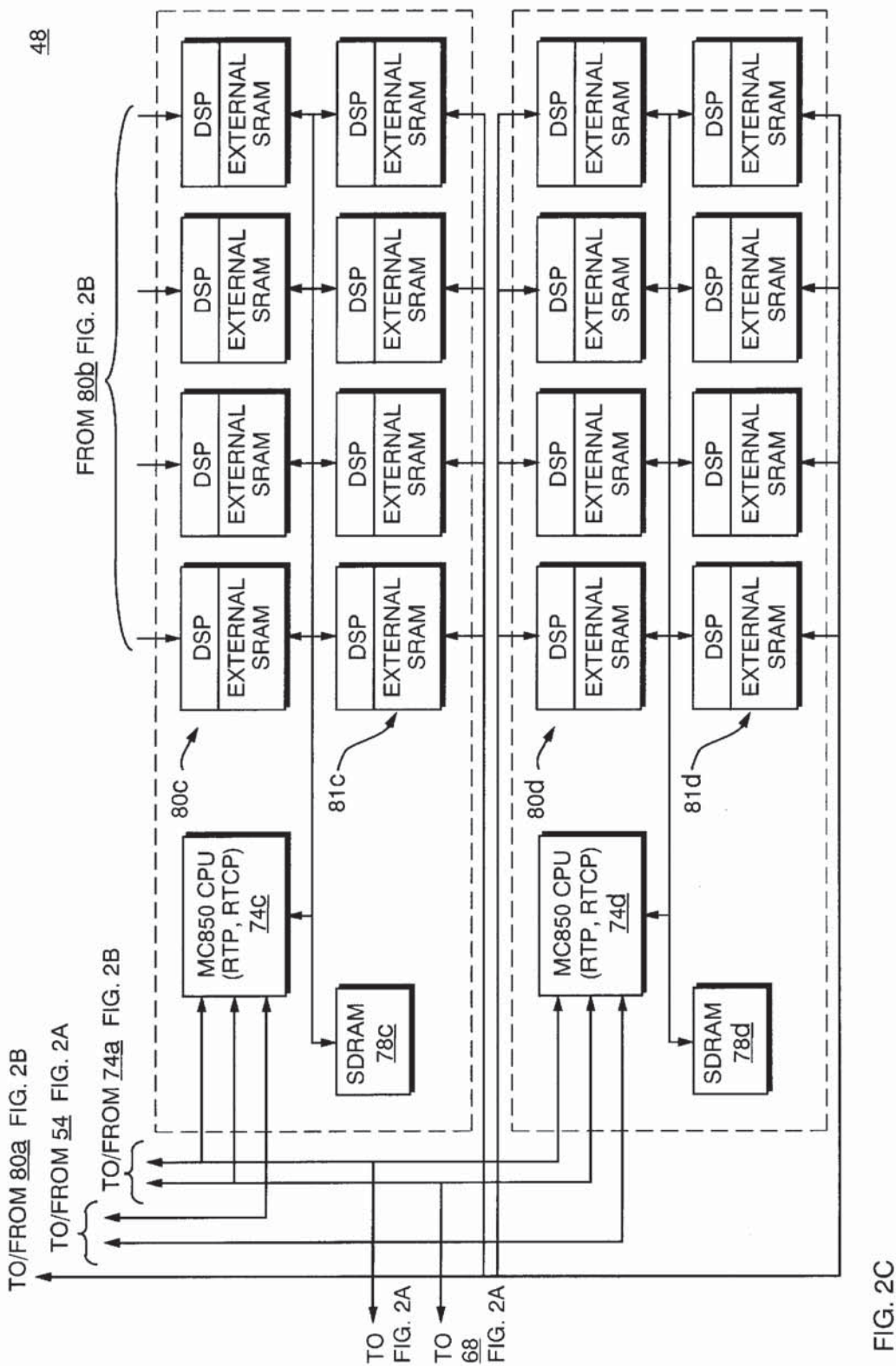


FIG. 2A





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