

(12) **United States Patent**  
**Deo et al.**

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(54) **METHOD AND APPARATUS FOR PROVIDING REAL-TIME CALL PROCESSING SERVICES IN AN INTELLIGENT NETWORK**

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(75) **Inventors:** **Ajay P. Deo**, Lewisville, TX (US); **Sami Syed**, Tervuren (BE); **Henry Wang**, Irvine, CA (US); **Wendy T. Wong**, Dallas, TX (US)

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(73) **Assignee:** **WorldCom, Inc.**, Clinton, MS (US)

*Primary Examiner*—Robert B. Harrell  
*Assistant Examiner*—Farzaneh Farahi

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(57) **ABSTRACT**

System and methodology for providing real-time call processing services received at a switch in an intelligent network having one or more service nodes having originating switches for receiving a call event. The system includes a platform-independent communication system for enabling communication between object instances executing at service nodes in the intelligent network. An operating system agent object instance executing in an execution environment associated with an originating switch communicates call origination information corresponding to a call event received at the switch to one or more object instances executing in an execution environment provided at a service node in the network; the object instances including a line object instance for maintaining the state of a communications line associated with a call origination, and, a service object implementing methods for performing a service according to a customer request. A first database storage device accessible by the service object provides call routing information according to a customer's subscription. A second database storage device is accessible by the service object to provide a corresponding terminating switch location address at a node in the network for the call based on the retrieved call routing information. The platform-independent communication system communicates call routing commands between the service object and at least the line object instance, for enabling call connection between originating and terminating switches independent of their location in the network.

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**Related U.S. Application Data**

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(51) **Int. Cl.<sup>7</sup>** ..... **G06F 15/173**

(52) **U.S. Cl.** ..... **709/224; 709/218; 709/223; 709/224; 709/226; 709/249; 379/201; 379/207; 379/219; 379/220; 379/230; 379/266; 340/201; 340/219; 340/220; 340/522; 340/585**

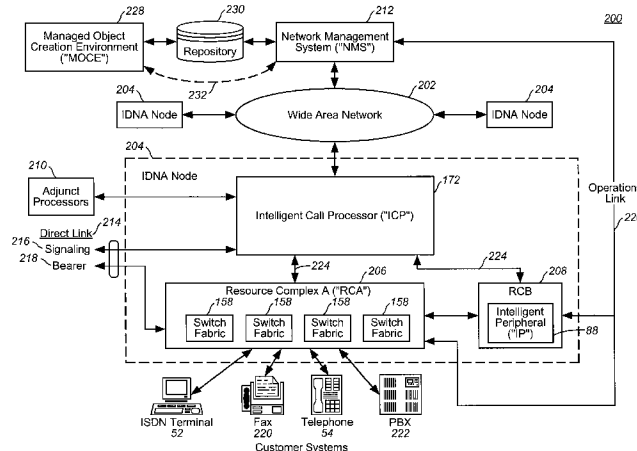
(58) **Field of Search** ..... **370/201, 219, 370/220, 585, 522; 379/201, 219, 220, 266, 207, 230; 709/224, 218, 226, 223, 249**

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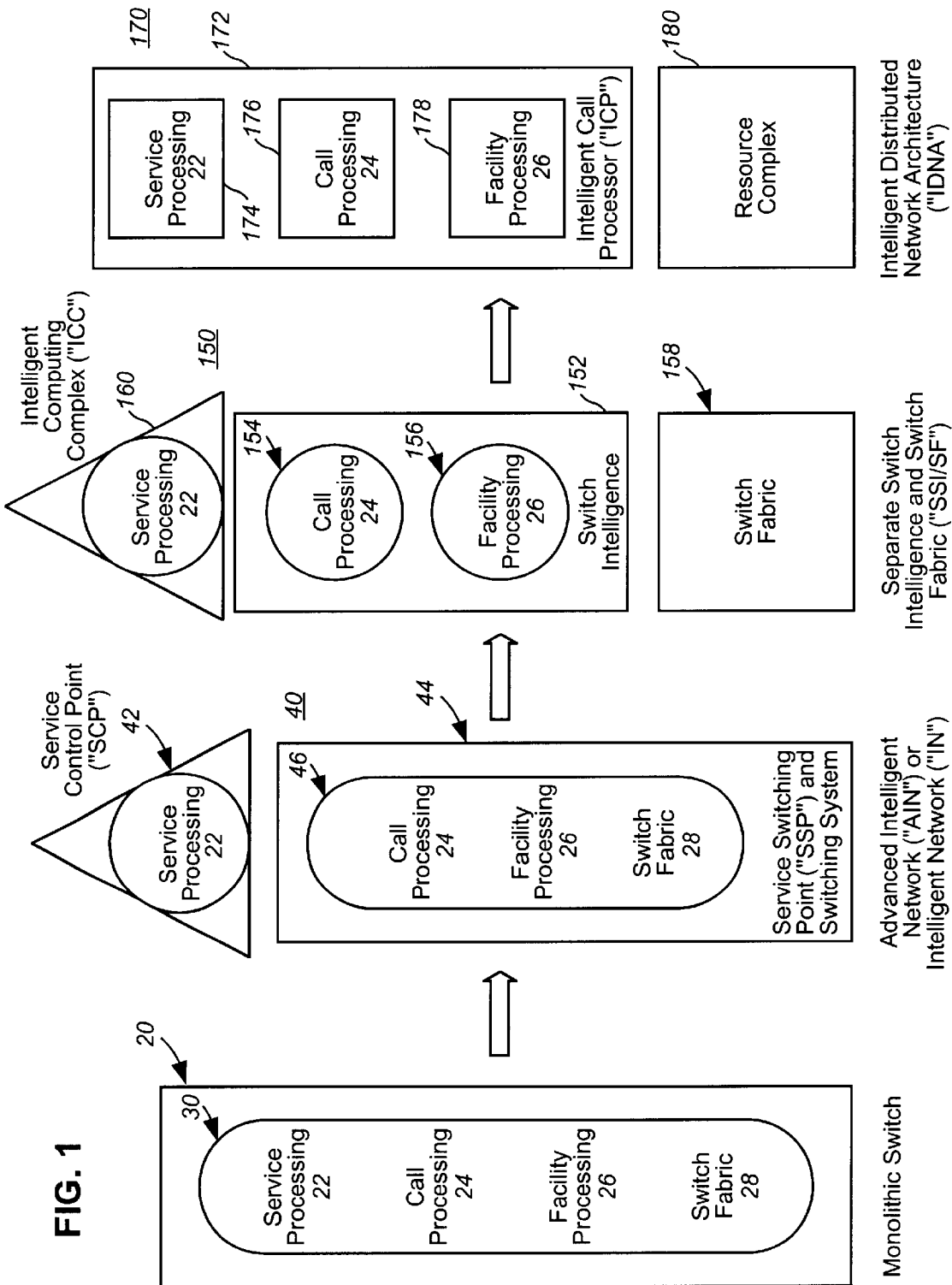
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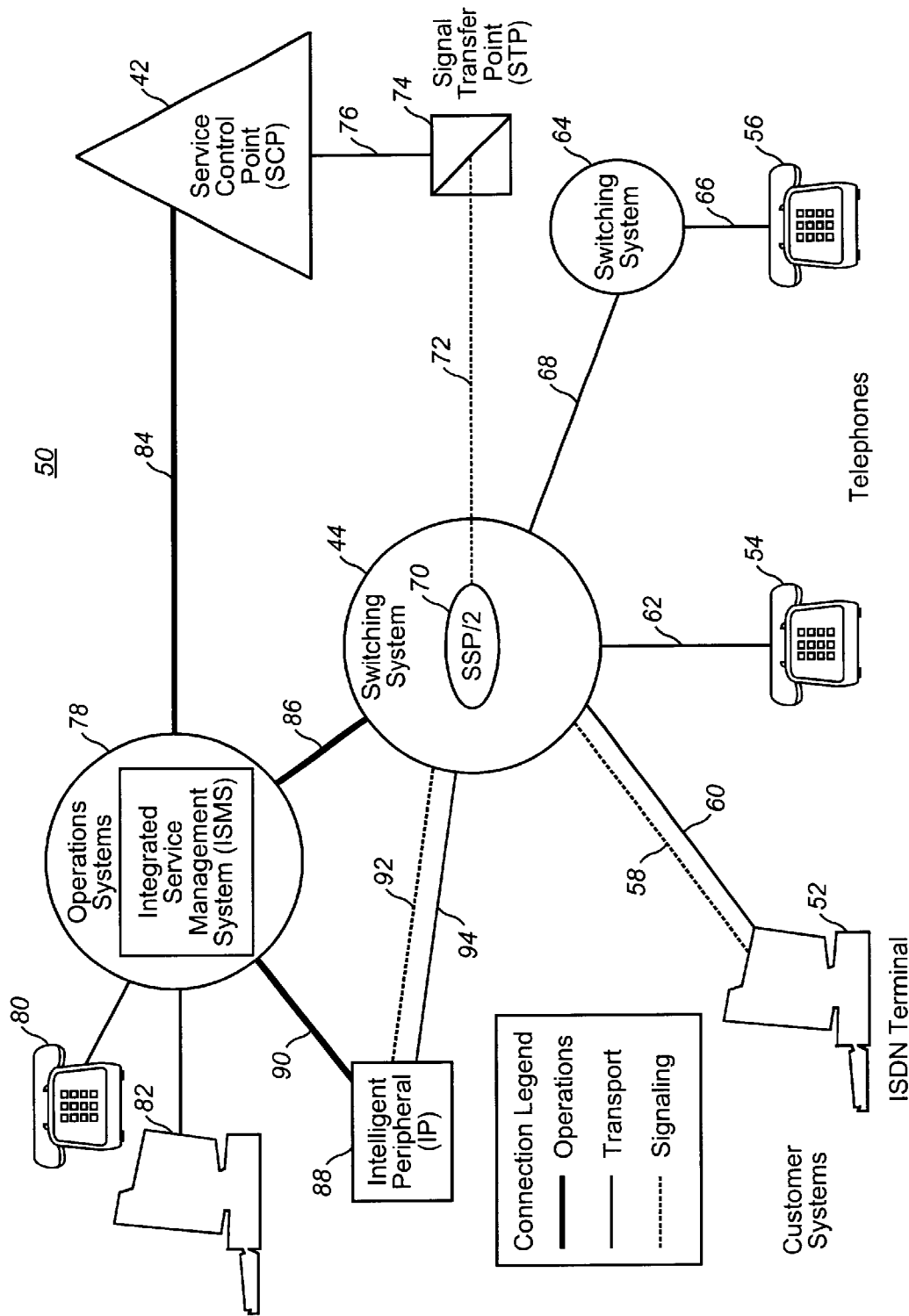
**16 Claims, 22 Drawing Sheets**



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(Prior Art)  
FIG. 2

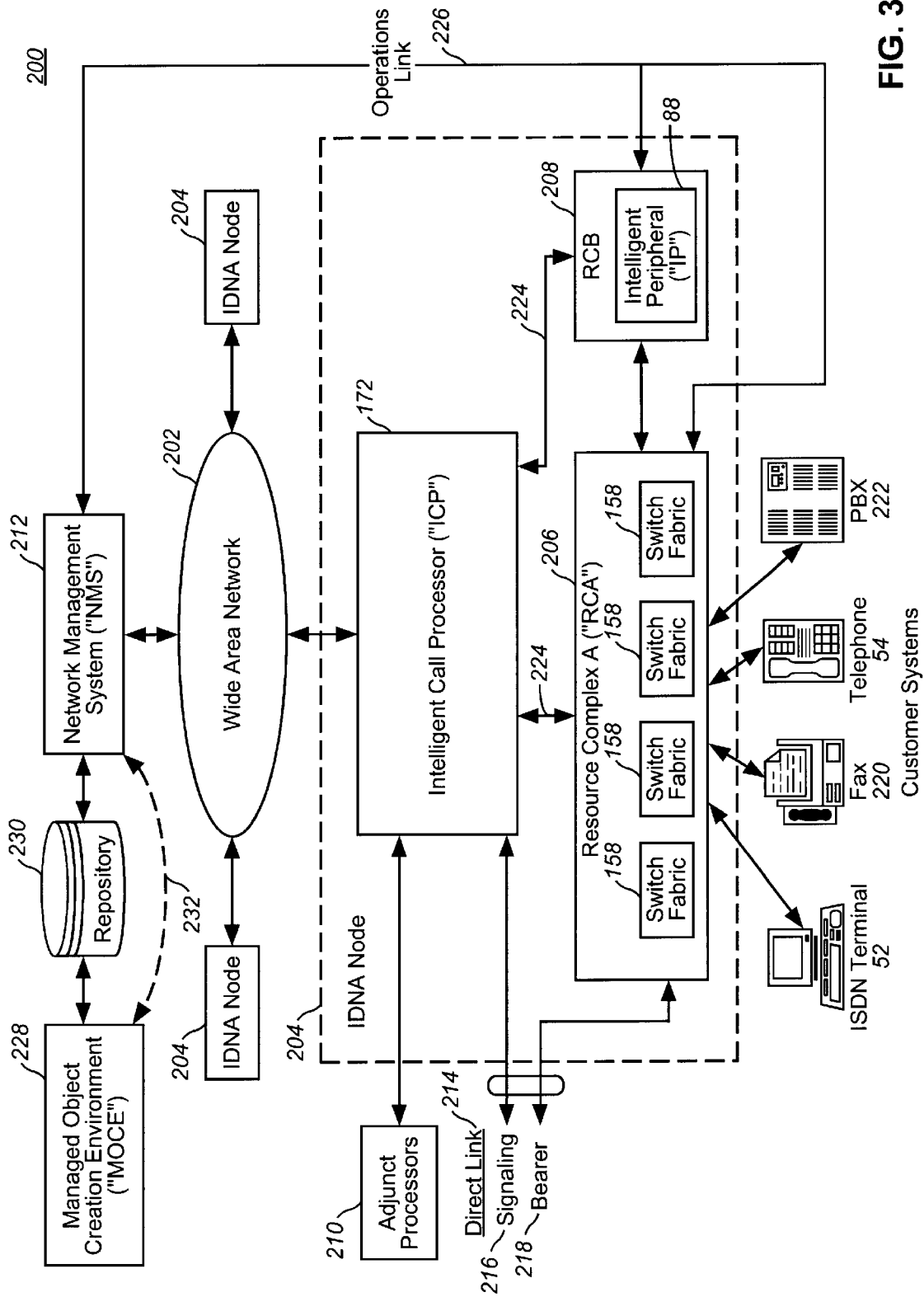


FIG. 3

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