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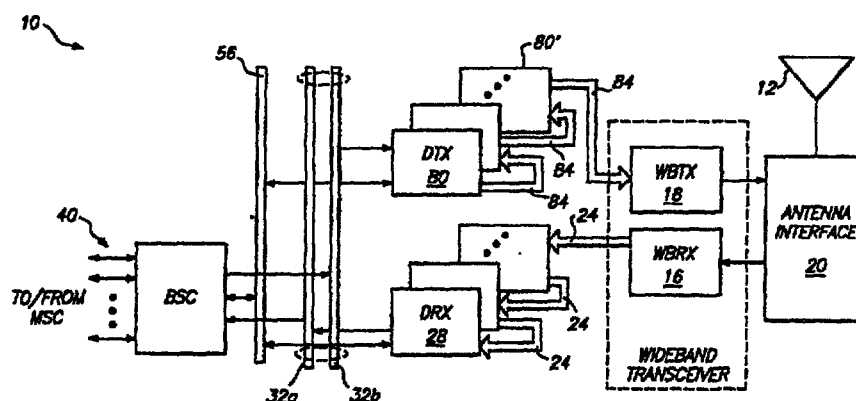


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(54) Title: WIDEBAND BASE STATION ARCHITECTURE FOR DIGITAL CELLULAR COMMUNICATIONS SYSTEM ✓			



(57) Abstract

An open-architecture digital cellular base station readily adapted to support communication over a variety of air interface standards is disclosed herein. The base station includes a wideband digital transceiver system having transmit and receive sections. Within the transmit section, an input line interface operates to couple a plurality of input information signals onto a time-division multiplexed (TDM) transmit bus. A plurality of digital transmitter modules are coupled to the TDM transmit bus, each of the digital transmitter modules generating a set of digital baseband signals in response to a corresponding set of the plurality of input information signals. The set of digital information signals are applied to a wideband summation network disposed to sequentially add the set of digital information signals into a wideband data stream. A wideband transmitter then generates a wideband transmission waveform using the wideband data stream. The receive section includes a wideband receiver for: (i) receiving an incident composite signal, and (ii) generating a digital representation of the incident composite signal in the form of a wideband digital data stream applied to a wideband data bus. A plurality of digital receiver modules are coupled to the wideband data bus. Each digital receiver module functions to recover a set of digital output signals from the wideband digital data stream, as well as to multiplex the set of digital signals onto a TDM receive bus. An output line interface serves to distribute the digital output signals among a plurality of output signal lines.