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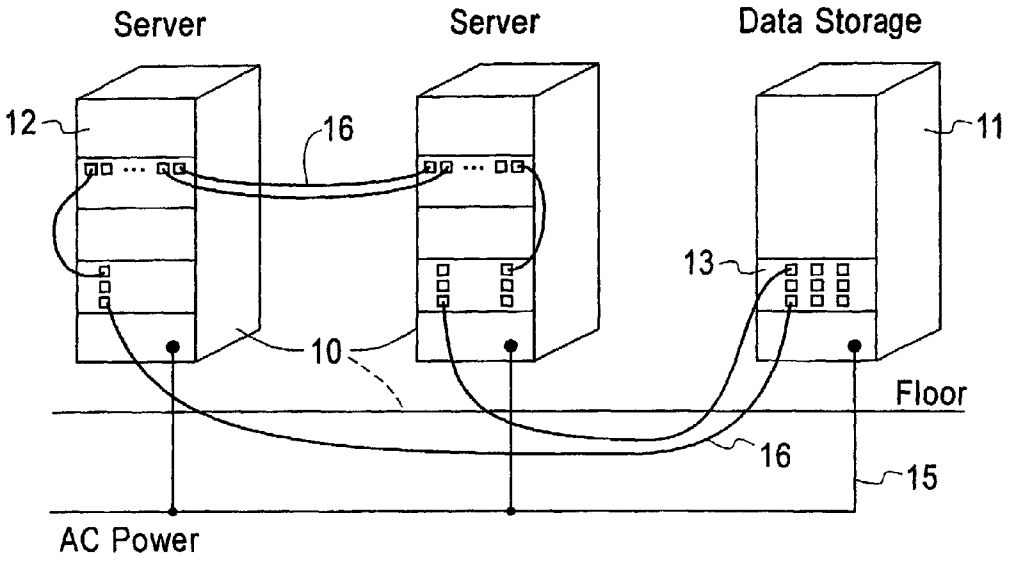
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(54) Title: A SCALABLE COMPUTER SYSTEM HAVING SURFACE-MOUNTED CAPACITIVE COUPLERS FOR INTER-COMMUNICATION



(57) Abstract: A scalable and compact computer system of three-dimensional subsystems each having capacitive couplers of its external surfaces for transmitting and receiving electrical signals to and from adjacent subsystems. Each surface having an electrically non-conducting substrate, one or more electrically conducting pads on the substrate, and electrical leads for coupling the pads to the subsystem's circuits. Two adjacent pads, each from a different subsystem, form a capacitive coupler to carry the signals between the subsystems. The pads are covered by a low-loss dielectric constant for improved signal transmission. A differential signal may be supported using two capacitive couplers to respectively carry the positive and negative signals of the differential signal. The systems might be replaced or left in place when they failed. Additional subsystems might be added to the system to expand its capacity.

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European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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