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(54) Title: SYSTEM AND METHOD FOR DYNAMIC BALANCING POWER IN A BATTERY PACK

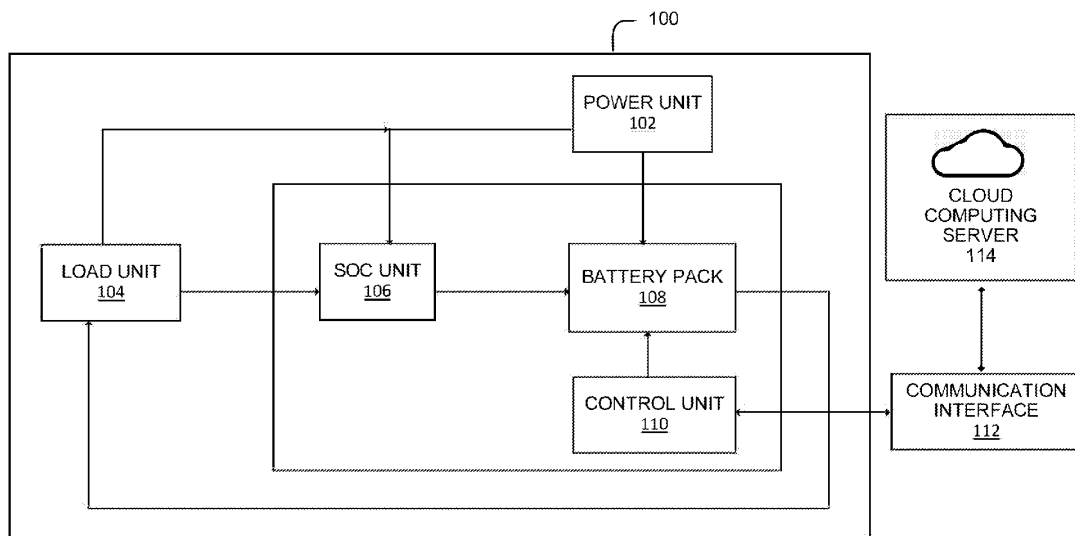


FIG. 1

(57) Abstract: One example provides a system for dynamically balancing power in a battery pack during charging and discharging. The system includes a battery pack, a control unit, and a load unit. The battery pack includes one or more modules. Each module includes one or more bricks. Each brick includes one or more blocks connected either in a series configuration or in a parallel configuration. Each block includes one or more cells. The control unit is connected with the battery pack across each of the blocks for processing power from each of the blocks irrespective of a power mismatch between the blocks. The control unit dynamically balances the power in the battery pack by controlling a differential current from a block with higher state of charge (SOC) to a block of lower SOC, using one or more converters and thereby maximizing available energy of the battery pack during charging and discharging.

[Continued on next page]

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