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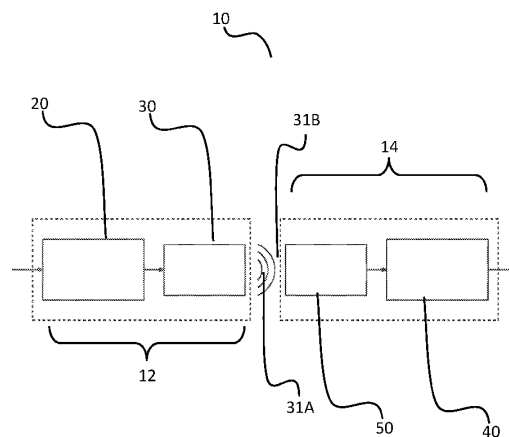


FIG. 1

(57) Abstract: A system and associated method transfer power between a DC source and a variable load. Two power signals are extracted from the DC source at an HF frequency via two self-synchronous radio frequency rectifiers/amplifiers switched by two corresponding HF switching signals having between them a phase difference controlled by a duty cycle and overlap controller. The two HF power signals are mixed in a wired, wireless, or bimodal wireless HF power link system to produce a transferred power signal based on the mixing and on manipulating the phase difference. An unfolded output power signal is created from the transferred power signal by means of a power signal conversion circuit in communication with the HF power link system. The system and method allow transfer to the load of at least one of an adjustable DC power signal and an AC power signal phase locked to an existing power signal in the load.

[Continued on next page]

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