FIG. 9

(57) Abstract: A transmitter provides fast settling times, slew rate control, and power efficiency while reducing the need for large external capacitors. The transmitter typically includes a pre-driver, driver, and replica circuit. The pre-driver can shift the voltage level of an input signal to produce a shifted signal. The pre-driver can shift the voltage level in response to a selectable load resistance circuit and a voltage regulation feedback signal. The driver receives the shifted signal and generates a driver output signal in response to the received shifted signal. The replica circuit can be a scaled replica of the pre-driver and the driver using scaled components from the pre-driver and driver circuits. The scaled components can be used to generate the voltage regulation feedback signal. The generated voltage regulation feedback signal represents, for example, whether the output voltage of the driver output is above a reference voltage.