(54) Title of the Invention: Transmission signal shaping systems and methods

Abstract Title: Transmission signal shaping systems and methods

(57) Techniques are disclosed for systems and methods to provide transmission signal shaping for transmission signal-based sensor systems, such as radar and/or sonar sensor systems. A low noise signal shaping transmitter includes a digital to analog converter configured to convert a digital shaping control signal to an analog shaping control signal, a signal shaping circuit configured to convert the analog shaping control signal into a shaped voltage, and a power amplifier configured to provide a shaped transmission signal based on the shaped voltage and a digital transmission control signal. Each element of the transmitter may be formed from relatively slow switching analog and/or digital circuitry components. Resulting shaped transmission signals may be used to excite radar antennas, sonar transducers, sound cells, and/or other elements of sensor systems.