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(54) **Title:** ULTRA WIDEBAND (UWB) LINK CONFIGURATION METHODS AND SYSTEMS

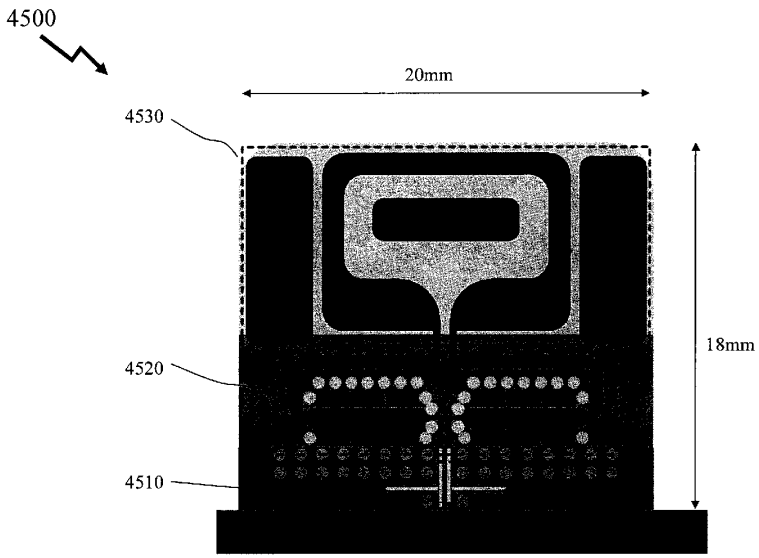

Figure 45

(57) **Abstract:** Ultra-Wideband (UWB) technology is a wireless technology for the transmission of large amounts of digital data as modulated coded impulses over a very wide frequency spectrum with very low power over a short distance. However, to support their deployment in a wide range of applications it would be beneficial to provide solutions which: exploit multiple directive antennas oriented in different directions to ensure spatial filtering of undesired signals and increase signal strength; exploit dynamic configuration of the multi-pulse bundles employed to transmit the bits/symbols within the packets to enhance link quality of service; exploit dynamic configuration of the band or bands which the transmitter operates upon; and exploit antenna sub-systems providing omnidirectional radiation patterns with implementations offering filtering and balun functions with small footprint and low cost.

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