UWB antennas modeling using DGTD method

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Ultra-wideband (UWB), a radio transmission technology which occupies an extremely wide bandwidth exceeding the minimum of 500MHz or at least 20% of the centre frequency is a revolutionary approach for short-range high-bandwidth wireless communication. Differing from traditional narrow band radio systems (with a bandwidth usually less than 10% of the centre frequency) transmitting signals by modulating the amplitude, frequency or phase of the sinusoidal waveforms, UWB systems transmit information by generating radio energy at specific time instants in the form of very short pulses thus occupying very large bandwidth and enabling time modulation. In modern industry numerical methods are often used to investigate effectiveness and behavior of antennas in EMC applications.   This presentation shows modeling of Ultra-wideband (UWB) antennas using Discontinuous Galerkin Time Domain (DGTD) method.