



Figure 6.20 - Coupling Mechanism vs. Circuit Impedance for Low Frequencies

(3) When the circuit impedance products, $300\Omega^2 \leq Z_1 Z_2 \leq 10k\Omega^2$, the coupling may be either magnetic or electric field depending upon relative wiring geometry.

Note that the above relations apply only for parallel-wire pairs as shown in the insert sketch to the figure. If either or both pairs had used twisted-wire geometry, the magnetic-coupling mode would have been substantially reduced and the graph lines in Fig. 6.20 would significantly move to the lower left (the H/E-field crossover then might approximate $1\Omega^2$, more or less). On the other hand, if either or both parallel-wire pairs had used shields, the electric-field coupling mode would have been substantially reduced, and the graph lines in the