EMA

RF Interference

Radio frequency interference (RFI) occurs when a threat signal causes degradation or malfunction in a receiver's performance. Cosite interference is a specific subset of RFI, where the source of interference comes from the platform itself. RFI consideration is crucial throughout the design process and must be accounted for as early as possible.

RFI analysis is required for all platforms that incorporate antennas, including those in the following industries:

- Aerospace & Defense
- Automotive
- Electronics
- Space Environment

EMA addresses the following questions:

- Is cosite interference present, and which channels are affected?
- How severe is the interference?
- What mitigation strategies can reduce or eliminate the problem?

RF Cosite analysis procedure:

Define the RF Architecture

Specific radios, filters, diplexers, and any other RF component should be specified.

Gather Component Information

Should be started as early as possible. Measured data is ideal, EMA can make assumptions if needed.

Construct Initial EMIT Simulation

A full channel model is developed using Ansys EMIT. If interference is predicted, the model is refined with antenna-to-antenna coupling information.