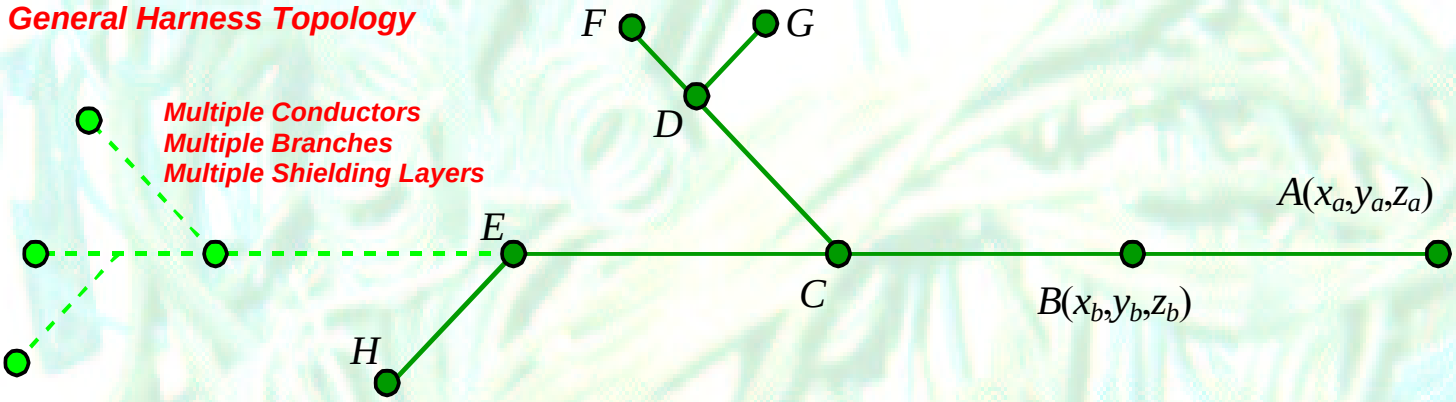
∇MHARNESS

Electromagnetic Simulation of Complex Wiring Harnesses

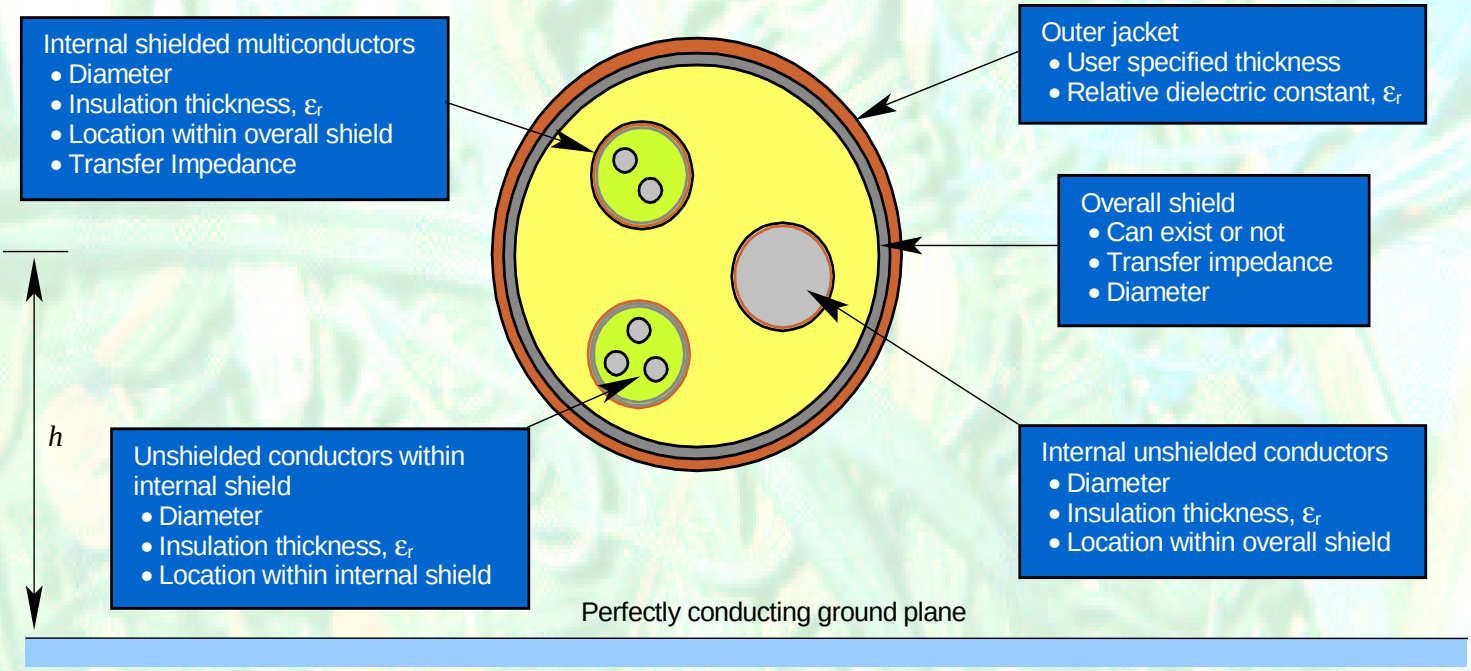
Applications

- EM Field Coupling to Complex Wiring Harnesses
- HIRF (High Intensity Radiated Fields) Evaluation
- Lightning Evaluation
- EMC/EMI Simulation
- MIL-STD-461 RS and CS Simulations
- DO-160 RS and CS Simulations
- Radiated Emissions
- Cross Talk Evaluation
- Signal Propagation
- Shielding and Bonding Studies

General Harness Topology



Each segment can have properties defined in the diagram below.



Terminations

- A variety of passive *RLC* terminations available
- Optional SPICE Interface (UNIX only) allows application of complex non-linear terminations.

Sources

- Plane wave of arbitrary angles of incidence and polarization
- Measured or numerically derived electric fields, bulk currents
- Voltage sources at ends of conductors
- Voltage sources, electric fields, anywhere on any conductor
- Library of user specified waveforms

Notes

- User specified or MHARNESS computed **L** and **C** matrices
- Connector transfer impedances can be included.
- Each shield has individually specified transfer impedance.
- User specified or MHARNESS computed transfer impedances
- The number of wires, branches, shields limited only by computer resources
- Computation in time domain; frequency domain information generated by supplied Fourier post processing tools