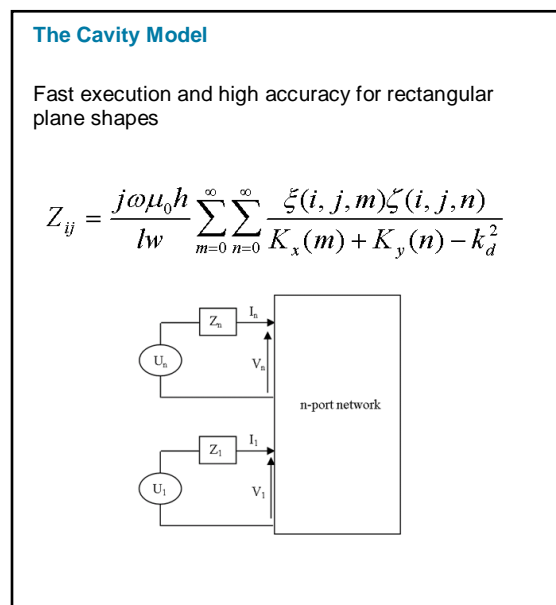
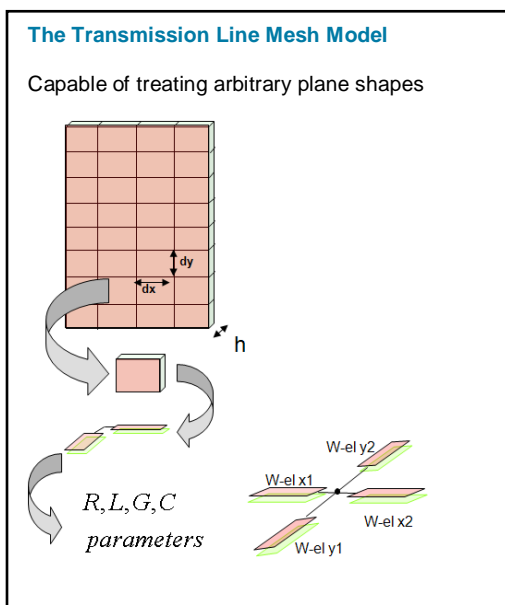
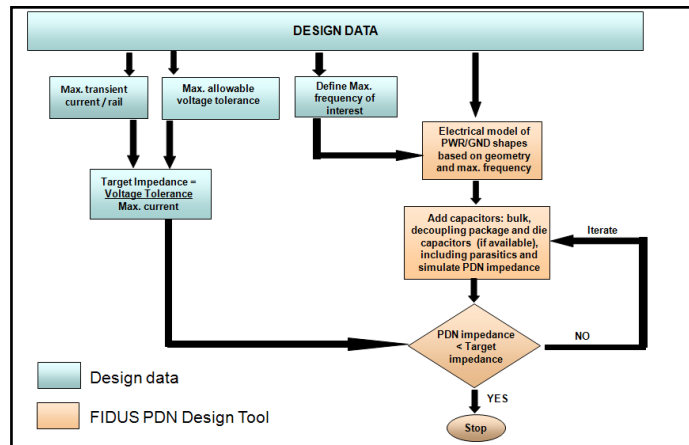


Fidus Systems delivers power distribution network design consulting to meet Power Integrity (PI) requirements in electronics products. Inadequate PI can cause intermittent failures or poor performance. Arbitrary inclusion of a large number of capacitors is not only expensive, but can lead to undesirable resonances defeating the purpose. Further, in mixed signal designs, noise on power rails can increase jitter in clocks and affect sensitive RF signals adversely.

Working closely with customers, Fidus assesses specific power distribution requirements and cost budget. The data is used in a PI simulation tool (developed by the Fidus Signal Integrity team) which can fully analyze a board-level power distribution network based on either the transmission line mesh model or the cavity model. For complex designs and those that include package and board, a full 3D EM simulation is carried out leading to:

- PCB Layer stack-up selection for optimum power distribution
- Minimum required power and ground plane areas
- Number, size, values, and locations of decoupling capacitors

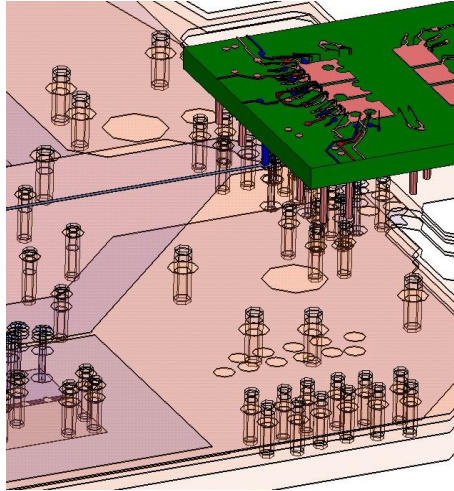
Fidus takes the guess work out of power distribution design, resulting in products that provide clean power delivery to the Integrated Circuits, a low impedance low noise reference path for other signals and reduced electromagnetic emissions. Fidus can also perform experimental characterization of PI through Vector Network Analyzer (VNA) measurement of rail impedance and noise injection into power rails.





3D EM Model for complex designs

- Combine package and PCB interconnects
- Include on-package decoupling



Project Examples include:

- Instrumentation timing modules with less than 1% noise on power rails
- Solid State Hard Drives (SSDs)
- Products containing DDR2 and DDR3 memories
- ASIC emulation platforms

Simulation Software Tools: Fidus maintains licenses for:

- Agilent ADS
- Ansys HFSS
- Cadence Allegro PCB SI (SPECCTRAQuest)
- Cadence PSPICE
- MathWorks MATLAB
- Synopsys HSPICE

Laboratory Facilities: The Fidus laboratory is equipped with:

- Agilent ENA series E5071C 8.5GHz VNA
- Agilent Infiniium DSA 90804 A 8GHz DSA
- Advantest R3765G 3.8GHz VNA
- Advantest R3267 8GHz Spectrum Analyzer

From targeted consulting to turn-key design, Fidus helps you get your product to market.

- System architecture to board design, circuit simulation, PCB layout, schematics and gerbers
- Component & system characterization, measured or simulated including full S-parameters, gain & noise figure optimization
- Fully documented Design Validation & Functional Testing
- Shield designs for both compliance and sensitive signal preservation.

About Fidus Systems

Fidus Systems Inc. develops high-speed electronic products for a wide range of industries including aerospace and defence, consumer, industrial, medical, security, semiconductors and telecommunications. Fidus has extensive design experience in turnkey product development and technical knowledge in System Design & Architecture, Wireless/RF, Signal Integrity/EMC, Hardware, PCB Layout, DSP/FPGA/ASIC, Software/Firmware and Mechanical design. As a trusted design partner, Fidus offers companies greater flexibility and capability in their product development with access to the expertise, process and tools to successfully move their products to market. Fidus has delivered on more than 800 products and projects for 215 customers across North America.

Corporate Headquarters
900 Morrison Drive, Suite 203
Ottawa, Ontario K2H 8K7
Canada

Tel: (613) 828-0063
Fax: (613) 828-3113
Email: info@fidus.com
Website: www.fidus.com

**Fidus Kitchener-Waterloo
Design Center**
121 Charles St. West, Suite C212
Kitchener, ON N2G 1H6
Canada

Tele: (519) 576-0060
Fax: (519) 576-5399

Fidus California Design Center
1900 McCarthy Blvd., Suite 415
Milpitas, CA 95035
USA

Tel: (408) 217-1928 x151
Fax: (408) 899-5822