

Senior Signal Integrity Engineering Position at NESAS

Job Description: North East Systems Associates, Inc. (NESA), leading designers of Gigabit systems and interconnects, is looking to fill a full-time senior Signal Integrity engineer capable of working in a fast paced collegial consulting design environment. The position requires in-depth knowledge of high-speed design, transmission-line theory, field-solving methods, noise analysis and EMC techniques. The principal duties of this position are as follows:

1. Perform signal integrity analysis using simulation and field-solving software. Perform worst case SPICE and/or other SI tool based simulations of boards and systems, including but not limited to reflections, impedance, delay, connector effects, crosstalk, ground-bounce and termination effects.
2. Procure simulation models and perform model verification to ensure accuracy and suitability for use.
3. Document test plans and analysis results for backplane and logic card PCB trace fabrication verification and design rule adherence. Develop correlation studies and perform lab measurements to validate results.
4. Interface with client hardware engineers, EMC and CAD designers to implement solutions resulting in high quality right-by-design products.

Job Requirements: Candidate should demonstrate a knowledge of modeling methods and requirements for Timing and Signal Integrity analysis of PCB and semiconductor components. Candidate must have the ability to develop simulations to ensure accurate and complete models. Candidate should understand the impact that differential Gigabit signaling quality has on the design and layout technologies and be able to recommend feasible solutions. Lab experience with high speed TDR/TDT/VNA measurements and data analysis and the ability to verify simulations and performance predictions is essential. Candidate should be able to help define and implement strategies and processes for analyzing signal integrity at different stages of the design process. Experience integrating commercial software and developing scripts/programs (Perl, cshell, C) to facilitate the Signal Integrity Analysis flow in a Windows, LabView and/or Unix/Linux environment is a plus.

Educational and Experience Requirements: Ideally, the position will be filled by an engineer with an MSEE/CS combined with 5 - 7 years of related experience, or a BSEE/CS combined with 7 - 10+ years of hands on experience performing Signal Integrity analysis for ASICs, PCBs, and/or backplane systems from the design phase to production. Extensive experience with HSPICE (Avanti Star SPICE), and one other signal integrity analysis tool such as HyperLinx, Quad/Innoveda XTK/TLC, Interconnectix, Ansoft, Apsim, or Spectraquest is required.

NESA is an equal opportunity employeeer and is located at 5 LAN Drive, Suite 200, Westford, MA. Look at our web site www.nesa.com for further information.