

PRESS RELEASE

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ApsimSPE, New Signal, Power and EMI Simulator

San Jose, California-April, 2006. Applied Simulation Technology is announcing the introduction of its latest software product the ApsimSPE simulator. ApsimSPE combines Signal Integrity, Power Integrity and EMI simulation into one tool. ApsimSPE has some significant features, advantages and improvements over other such tools.

One of the issues facing Signal Integrity engineers is the interaction of the IC, IC package and PCB on electrical performance. Typically the CAD information for each design comes from different databases or software programs. Simply combining the electromagnetic models of each stage does not always yield the correct results because the coupling between each stage is ignored. ApsimSPE overcomes this issue by using a common database (AAIF). The AAIF files for each design are extracted from the original CAD tools. Then they are easily combined into one AAIF file. ApsimSPE is then used to simulate the unified data.

Another challenge facing engineers is delivering clean power at high switching speeds. To accomplish this Power Integrity tools are needed to model the Power and Ground system. Ideally, simultaneous switching output noise (SSO), and resonance analysis are needed. But modeling of imperfect PWR/PWR systems can lead to huge computation times and large LCR circuits. ApsimSPE uses new techniques such as Model Order Reduction (MOR) and parallel processing through sectioning to speed up and simplify the modeling and simulation. ApsimSPE can be used in the time domain or frequency domain. Non-linear simulation using SPICE or IBIS models can be used for SSO simulation. In the frequency domain impedance (Z), scattering (S) parameters or admittance (Y) parameters are plotted. ApsimSPE uses an efficient Super Linear Solver (SLS) for increased capacity and shorter solve times than traditional methods. ApsimSPE has four color coded display modes that give a visual map of the board electrical characteristics. The high frequency (AC) or DC current and voltage distribution feature visually shows hot spots and problem areas allowing engineers to quickly find and correct CAD designs. The impedance (ZO) profile points to trace mismatch and SI concerns. The fourth mode displays the far field electric field intensity with profiles the board for EMI.

ApsimSPE is tightly integrated with ApsimRADIA, the company's EMI solution. Using ApsimSPE makes EMI simulation of the whole board possible. Imperfect modeling of the PWR/GND system allows accounting for both common mode and differential mode EMI. ApsimRADIA can use non-linear SPICE, IBIS or simplified behavioral models, for fast and/or accurate analysis.

Applied Simulation Technology is an EDA industry pioneer in the area of Electromagnetic modeling, extraction and simulation. The company was established in 1996 to offer Engineers novel but accurate solutions to tough Electromagnetic problems. Apsim's products are used world wide for the electrical design and analysis of IC packages and PCB.

The product is available on both Windows and Sun Workstations (Solaris) operating systems. For more information contact:

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