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HOW TO MEET A DEMANDING SCHEDULE FOR AN ADVANCED TECHNOLOGY MULTI-BOARD AEROSPACE PROJECT

AVID Technologies was recently contracted to perform the concurrent design of a complex multi-board project for a large international aerospace corporation. AVID was chosen for its depth of experience, large staff for throughput and proven track record on complex designs requiring 1st pass success.

After initial consultation on board level concerns for SI performance, EMC compliance and special customer requirements, AVID performed design efforts with up to 4 boards in parallel along with the most complex PCBs being designed with up to three designers concurrently utilizing data segmentation techniques and custom VB scripting to meet schedules. Different senior designers focused on key technologies including LVDS signaling, DDR memory, PCIe and others. Design review was performed by AVID layout engineers throughout the project and many suggestions implemented by the customer.

AVID's experience includes DDR planning and routing at DDR rates up to 1600MHZ, countless large FPGAs and well versed strategies for signal/power planning on dense complex designs.

These design efforts were strategized using simulation tools for key aspects including viable stack-ups for up front manufacturing review, approved material geometry selection and general floor-planning for impedance control and signal integrity.

The PCB's routing was simulated at various stages during the design development for crosstalk and adjusted accordingly. Post layout routing was also verified with simulations to meet expected performance. Many aspects of routing including general length matching, relational DDR byte lane matching and expected crosstalk thresholds were provided in spreadsheet format for verification and approval. Our customer's remote design team was kept abreast of progress and given opportunity for design reviews through daily data submittals and web based data reviews as needed.

Design efforts were completed on or ahead of schedule enabling our customer to meet their commitments.

Our ability to provide a large highly skilled design staff for peak loads or advanced technologies for over 24 years enables our customers to meet their business objectives by having a proven partner for on call services when needed.

AVID's website can be reviewed at www.avid-tech.com. Inquiries may be made at 330.487.0770.