Auto cell placement in mixed signal ICs

Springsoft (**www.springsoft.com**) has been busy this spring with a number of introductions to its suite of software automation products. These include a power-aware debug module for the Verdi automated debug system, and the latest release of the Certitude functional qualification system.

Perhaps of most interest are two new products aimed at addressing the increasing challenge of designing custom chips that contain both analogue and digital circuitry. Building on its expertise in automated custom design with its Laker suite of custom IC design solutions, the company unveiled its Laker Custom Row Placer and Laker Custom Digital Router. The tools are fully compatible with the Laker Custom Layout Automation System, allowing designers to work within a single custom IC layout environment to efficiently place-and-route both digital custom cells and standard cells for either mixed-signal or custom digital designs.

As with the existing Laker system, the new tools are fully compliant with the industry standard OpenAccess (OA) database, providing a truly interoperable platform for designers to develop heterogeneous tool environments for their complete custom IC design flow. The new place-and route solutions are tuned for custom IC layout with custom digital and mixed-signal blocks, eliminating the need for hand-layout or exporting design data to a traditional digital place-and-route tool. The solutions also allow precise design of custom digital blocks to meet the critical size and power requirements that often times can not be achieved through general purpose automated place-and-route tools.