

First Time COT, First Time Right

M-Systems and Synopsys Professional Services

“Building in-house physical design capability for a COT manufacturing model was accomplished in just 3 months with the help of Synopsys Professional Services. Functional prototypes from first silicon put us well on the way to meet our important customer deliveries.”

- Michael Mostovoy, Director of ASIC Department, M-Systems



M-Systems is a leading developer of innovative, high volume data storage solutions for consumer applications such as mobile phones, PDA's, set-top boxes, and embedded systems. Possessing mature technology and application expertise in these market segments, M-Systems planned a migration to a foundry manufacturing model (“customer-owned tooling” or COT) for cost efficiencies and volume production capability. The initial chip design for their COT transition – a master device controller for their next-generation of USB Flash Drives supporting the new U3 standard – was on an aggressive development schedule and required a production-ready physical design solution.

Synopsys Solution

- Galaxy™ Design Platform
- DesignWare® USB 2.0 MAC and other DesignWare IP
- Synopsys Professional Services' methodology consulting and design flow deployment

Cooperation Benefits

Deploying a complete, pre-validated RTL to GDSII design flow from Synopsys enabled M-Systems to mitigate the risk of taking over the physical design of their chips. By providing additional design assistance through tapeout, Synopsys Professional Services facilitated a smooth chip implementation and first pass chip success. Synopsys' design flow provided the best optimization in area and power consumption, two critical issues for high-volume chips serving the consumer market.

The collaboration provided the M-Systems team a robust and proven physical design flow, optimized for their design environment, with the knowledge-transfer they required to support future COT projects.

