Ask The Analyst

Question 11:

Given The Delay In The Maturity Of The 40nm Node, Do You Believe That The 28nm Roadmaps Of Both TSMC And IBM/ISDA Are Credible? More Importantly, Do The 28nm Process Roadmaps Correspond To Any Real Product Market Need Or Is It More Like TSMC And IBM/ISDA Playing A Game Of Poker, Constantly Outbidding Each Other?

Answer:

One of the main uses of 40nm was to try to get high-end graphics processors and the DDR3 memories within the power budget available in a PC case. It was never a mainstream process node. The question on 28nm is a good one. The 'real' node is actually at 32nm with 28nm as the follow on squeeze but it seems that the players are going directly to the process sub-shrink. Is this credible? We think so. Is there a market need? Definitely. And the 22nm next process node step beyond? That is less clear, apart from memory and Intel processors. Is it poker/specmanship? No more than normal, but with process-related variances starting to re-enter the equation, cell libraries are likely to be much tighter controlled and process tweaks simply out of the question. Already TSMC has fired the first warning shot by only making encrypted library cells available to its customers which is likely to make it even more difficult for firms to differentiate themselves and make the market even more competitive.