

## **SUPPLY-CHAIN PERFORMANCE SUBCOMMITTEE MINUTES**

**Date:** September 15, 2008  
**Location:** Teleconference/WebEx Only  
**Time:** 1:00pm – 2:00pm (PDT)  
**Participants:**

Ron Jones – N-Able Group International  
L.T. Guttadauro – Wafer Foundry Services, Inc.  
Ed Pausa – PricewaterhouseCoopers LLP  
Roger DeAmicis – ChipX  
George Wu – PMC-Sierra, Inc.  
Kasim Mahmood – Qualcomm  
Andreas Torsy – Infineon Technologies AG  
Eelco Bergman – Vietnam-Chipscale Advanced Packaging Services  
Larry Sladewski – NVIDIA  
Babu Jain – NavSemi Inc  
Steve Kidd – HIFN  
Jack Day – Analog Devices, Inc.  
Marcel Dinnissen – SiTel Semiconductor BV  
Santhosh Kumar – Bristlecone  
Chelsea Boone – GSA

### **Meeting Purpose:**

- To discuss the Q3 2008 Wafer/Back-End Pricing Survey Results
- Review outliers identified by Grant Thornton
- Address new concerns/modifications

### **Actions Completed/Items Discussed:**

- Grant Thornton has not yet received any response from those participants that submitted questionable data, but are there any outliers in the Q3 2008 interactive results (wafer, mask, test, assembly, wafer bump) that need to be deleted?
- What new concerns/requests have been voiced by our participants/subscribers?
- Are there any additional questions/features that need to be added to the Survey/Report?

### **End Result/Conclusions:**

- Wafer Section: In the spreadsheet, the committee identified lines 2-4, 13 and 16 as questionable records. In the interactive results (150mm, Last 4 Qtrs, 3M) there is a minimum value of \$25, however, this is not identified as an outlier in the spreadsheet. Will contact Grant Thornton to find out why. At 150mm, Last 4 Qtrs, 0.80um the max value jumped from \$650 to \$2550, which is also questionable. In the executive summary, GSA will be sure to segment the wafer data by development stage (production or engineering). We decided that the "shuttle service" section of the wafer survey should be taken out for the next survey and made into its own survey. We will discuss implementing this new survey at our next meeting in December.

- Mask Section: At 200mm, Last 4 Qtrs, SiGe in the interactive results, the median jumps from \$91806 to \$199040 – might want to note why in the executive summary. GSA will notify its programmer that the geometry selection  $>1.0\mu\text{m}$  should be  $\geq 1.0\mu\text{m}$  in the interactive results.
- Test Section: Lines 2-13 in the spreadsheet are really all questionable, but they could still be valid, so we need to see what the participants' responses are before they are deleted. When looking at the interactive results, there are maximum and minimum values all over the board. At Last 4 Qtrs/Wafer Sort in the interactive results, the average hourly rate drops from \$211 to \$78, but the median value remains fairly steady. The Committee would like to be able to segment the data by engineering and production (development stage), which might help clear up the data. Grant Thornton needs to add a "tester consigned column" to the spreadsheet.
- Assembly Section: In the spreadsheet, lines 7,9,13 and 14 are questionable. Also, in the interactive results (last 4 qtrs) there is a max value of \$1,200,000. Why is this not in the outlier spreadsheet? Is it a programming error?
- Wafer Bump Section: None
- Other items discussed: Still deciding if it is worthwhile to have a back-end survey, as it is not representative of the industry. We will discuss this further and make a decision at our December meeting.

The next subcommittee meeting to discuss the Q4 2008 results will be held in November. We will also hold a meeting in December (around the GSA Annual Awards Dinner) to discuss the changes we want to make to the 2009 Survey/Report.