

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

**Date:** May 21, 2008  
**Location:** Teleconference Only  
**Time:** 1:30pm – 3:00pm (PDT)  
**Participants:**

Chelsea Boone – GSA  
Ed Pausa - PricewaterhouseCoopers LLP  
Roger DeAmicis - ChipX, Inc.  
Matt Cheatham – Grant Thornton  
Eelco Bergman - Vietnam-Chipscale Advanced Packaging Services  
Bill Chatterjee - Zilker Labs  
Alex Delcea - PMC-Sierra, Inc.  
George Wu - PMC-Sierra, Inc.  
Joe Holt - Integra Technologies LLC

### **Meeting Purpose:**

- To discuss the Q2 2008 Wafer/Back-End Pricing Survey Results
- Review participant comments – identify additional outliers
- Address new concerns/modifications

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

- Are there any outliers in the Q2 2008 interactive results (wafer, mask, test, assembly, wafer bump) that need to be deleted?
- Should any of the data that was confirmed by Grant Thornton 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 Excel Spreadsheet of outliers identified by Grant Thornton, keep lines 10 and 11. When sorting by 300mm, last 4 Qtrs there is a max value of \$13000, a very high max when compared to previous quarters. GSA will make sure this is noted in the executive summary. The response was verified, and Grant Thornton (GSA's audit firm) was given the following explanation: "Price per wafer is high due to prototype volumes and multi-layer mask (MLM) reticles."
- Mask Section: When sorting by 200mm, last 4 qtrs the average cost per mask drops significantly. Why? When GT reviewed the raw data they found a nummask value of 105,000, with the next closest value being 48, which affected results. The 105,000 value was deleted.
- Test Section: In the Excel Spreadsheet of outliers identified by Grant Thornton keep line 3 if consigned and delete line 12. GSA will see if it is possible to have the "Tester Consigned" field in the interactive results site default to "non-consigned." GSA will also see if it is possible to select larger regions such as "Asia" in addition to the smaller regions – China, Hong Kong, etc. – under the "Supplier Location" field. When sorting by Wafer Sort, last 4

- qtrs the average hourly rate jumps to \$211, GSA needs to make a note of why this happened in the executive summary.
- Assembly Section: In the Excel Spreadsheet of outliers identified by Grant Thornton delete lines 6 and 9. Keep lines 7, 8 and 17. When sorting by last 4 qtrs, flip-chip BGA/LGA(<1.0 pitch), there is a significant increase in avg price/lead. GSA needs to make a note of why this happened in the executive summary.
  - Wafer Bump Section: In the Excel Spreadsheet of outliers identified by Grant Thornton delete line 3.
  - Other items discussed: (1) After further review by GT, the tester platform field in the Q1 and Q2 Interactive Report will be deleted, as no company names should be mentioned. (2) A few GSA members have voiced that the data in the Wafer & Back-End pricing report are not representative of the industry. An additional meeting will be held on June 5<sup>th</sup> to discuss the validity of our results.
  - The next subcommittee meeting to discuss the Q3 2008 results will be held in the **middle of August 2008**. A meeting time will be announced soon.