

Minutes of TMAG Test Economics Committee Meeting
November 12, 2009

Attendees:

Scott Davidson, Sun
Gordon Eckhardt, BAE
Jack George, BAE
Bill Gerstein, Hamilton Sundstrand
Louis Ungar, A.T.E. Solutions

1. Future Meeting Times, Frequency

Thursday at 10 am Pacific Time is okay with everyone. We decided to meet every two weeks.

2. Summary of Test Economics Tutorial, Panel at ITC

Scott described the tutorial and the panel, and gave a short description of behavioral economics, including examples of the Endowment Effect and Anchoring, with their application to testing.

3. Committee Goals

Tests Cost vs Test Benefits

There was a discussion of the cost of test, in particular the cost of boundary scan. It is not clear if these costs are very well known, however they are not that hard to find.

Louis put “test costs” into Google and got 158K hits. He put in “test benefits,” and got 54,000 hits. When the word “electronics” is added to the queries, the results were 42,300 hits on costs vs 2,000 hits on benefits. The original query had lots of hits on medical test costs. It seems the benefits in this area are much clearer.

Proposal: Have the committee focus on test benefits. The justification for this is that there has clearly been a lot more work on the costs. Scott mentioned a test costs model being started by the Global Semiconductor Alliance (GSA) which references many already existing test cost models. There is less work in the systems area, but it is clear that there is much less work on value.

We brainstormed the following benefits of test.

Benefits of test:

- Less test program development cost
- Improved time to market
- Better quality, lower escapes
- Lower test equipment costs
- Making debug faster
- Improved validation and verification

- Improving diagnosis
- More accurate repair
- Better support in general
- Increased customer satisfaction

We need to address the consumer market vs the specialty market, like avionics. However since the people in this committee work at the high end, we will focus on the specialty markets, but hope that a model could still be used at the low end.

Homework: what information is required or useful in computing benefits? Don't be constrained by what is actually available. Examples are field failure rates, no fault found rates, field service costs, etc. The results will determine which inputs are reasonable to expect for a benefits model. If an input to this model has very little data behind it, it will have a large amount of uncertainty and the projected benefit from a proposed test method would also have a lot of uncertainty.