

Minutes
TMAG Test Economics Committee Meeting, 3 December 2009
Revision 1 – 12/4/09
Minutes by Scott Davidson

Attendees:

Scott Davidson
Jack George
Ron Press
Louis Ungar

Agenda:

Discussion of benefit inputs document.

Discussion:

Louis: Look through articles on test at board, system and field level and see what they have to say about these areas.

Ron: We need a way of showing ROI in an effective way, since many ROI arguments get rejected. Scott talked about discount rate issues.

We had a brief discussion about the complexity of the model

Louis: We should start with simple qualitative arguments, to demonstrate that test does have benefits. A simple model would be easier for managers to understand and use. However Scott stated that models in the past may have been too simple, and gave incorrect or misleading results. The model must be complex enough to handle uncertainty in the inputs, and the change of value of the parameters over time.

Ron: Delay test took off after nVidia suffered a disaster from low delay coverage. Other companies started buying in.

How can we convince management that testability is a benefit, even if they accept that test is a benefit?

Louis: Tony Ambler has an article on figuring costs of tests, which includes costs of escapes. This led to a discussion about whether the cost of escapes is a cost of test (or not testing) or a benefit. I think we concluded that these were equivalent.

One part of the model should be allow us to figure out the optimal coverage number.

What kind of defects should we be looking at? Board test can get shorts and opens, but Jack says he thinks he sees these in the field. However he has a problem getting feedback on the root cause of the defect below the LRU level.

Contracts are being written to require them to catch 95% of all failures – but they don't know the failure spectrum, and thus cannot focus on the actual main failure causes and drop the effort to catch the low failure rate ones. They also distinguish between mission critical and non-mission-critical fails.

Jack said that ownership costs are a major factor, contributing more than 50% of lifecycle cost.
Scott said that this should be broken out as a benefit.

Action Items:

Scott: Post a form on the web to solicit a better time for this meeting, since only a small percentage of those contributing can make it.

Scott: Go through the emails and summarize the major points.

All: Send additional inputs to Scott, who will add them to the list.

All: The high level benefit areas in the inputs list are:

Time to Market

Market Benefits: (Increased Sales)

Warranty and Field Service Benefits

Manufacturing Benefits

Design Benefits

We'll add

Total Cost of Ownership Benefits

based on Jack's input. Are there other major areas? Can you give more details on the areas listed if not?

The goal would be to write equations and/or models for each specific area of benefit, with the total benefit being the sum of these.