

Managing for Maximum Performance
UCSD Extension Business & Technology
Chapter 4 – Decision Making Skills – Spring 07

Decision Making

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Problem Statement

- Evaluation of tools from different vendors in order to achieve test generation for new semiconductor chips manufactured through new technologies inside Qualcomm
- My team is responsible for ensuring quality devices reach the hands of our customers to use in their handsets.
- To do so we generate a variety of tests.

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Expectations

- Variety of standard tests should be available.
 - Custom tests should be easy to create
- Tool must integrate into current flows.
- Manual setup of tool should be minimal
- Generation of tests should be possible in standard IEEE formats
- Debug tools available from the vendor
- Memory resources and Disk requirements from the tool
- Cost of the tool

Process of Evaluation

- Choose different projects for evaluation.
- The projects should have distinct complexities so that we can evaluate the tool for a wide spectrum of issues
- Assign resources to ensure evaluation does not burden employees workload on critical projects.
- Assign timelines and ensure vendor support is available for the period of the evaluation
- Obtain necessary licenses and sign any required Non-Disclosure Agreements with the various vendors.
- Use of a Decision Matrix but I decided to stick with a simple table of the pluses and minus

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The Contestant

- In house tool which has been there for nearly 8+ years

The Competition

- A vendor with an industry experience of over 12 years

The goods of In-House tool

- Requirements are placed by people within
- Who best knows the design than people inside.
 - Hence custom tests are created accurately
- People are already familiar with the tool and hence no learning curve/ delay in implementing tests for current projects
- Tool expenses are free even though there was an initial load since engineers were employed to write up the tool apart from their normal work routine.
- Load on memory and disk space requirements is minimal since the tool is quite efficient.

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The ills of In-House tool (The advantages of using vendor tools)

- Precious Internal Resources are used for bug fixes.
- Support might not always be available immediately.
 - This is true for vendor tools but at least there we can demand
- Request for feature changes take time to implement.
- Not very flexible/intuitive for new users.
 - Age old users who were there since day 1 of the tool development know its quirks and work around which is not documented

Decision Made

- We decided to go with the vendor tool primarily for support reasons and available features.
- The cost of this change comes in the form of training and learning curve.
- During the evaluation the learning curve was found to be close to a week.
- Affordable to spend up to 2 weeks to get up to speed with it.
- Person who evaluated will be the lead to deploy the tool to production and point of contact for all support internally.

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I decided now what about the team

- With change comes a natural resistance to it
- I was one of the first to appose the new tool but ended up evaluating it.
- Weighing out the factors I made a similar presentation to the team as a marketing personnel.
- Team bought the idea and were happy to note I would be responsible for all the documentation and training.

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