



Delivering Freedom from Terminal Sameness

Aug 2, 2006

Seminar: Managing Excellence in Design Team Execution

SYNOPSIS

Many IC design project teams find themselves struggling with unexpected delays to their production plan. Intense time to market pressures demands an environment that prescribes improvement to both the predictability and length of design timelines. This seminar specifically targets those essential improvements through several thought provoking concepts that will enhance the predictable nature of IC design teams by expanding the scope of the design management landscape.

Emphasis will be on enriching the IC design process a team uses by means of a revitalizing design management perspective. Participants should have an open mind, be willing to listen and talk, share design experiences and frustrations and participate in discussing ideas about doing things differently. The seminar takes a refreshing journey beyond the routine CAD and tool flow activities of design thus opening the door to possibilities for change in the way a design project is managed.

Upon completion participants will be armed with concepts to develop comprehensive plans, tools to improve the design workflow and an expanded vision of managing design in a predictable manner.

OBJECTIVES – WHAT WILL YOU LEARN

- Concepts that will Yield a New Level of Predictability in Design Team Execution
- How "Feature Creep" steals Productivity and what you can do About it
- Sources of schedule slips and how you can prevent them
- Six Simple Rules of Design Team Management
- Unknown/Unmanaged activities and how to Mitigate their Project Impact
- How Key Documentation will Improve your Timelines and Predictability
- Identifying and Communicating Critical Delivery Requirements for a Design Block
- Management of Design Requirements Closure
- Concepts to Facilitate the Generation of Realistic Schedules
- Removing Roadblocks to Internal IP Reuse
- Leveraging Design Reviews to Align Design Team Deliverables
- Best Practices - What is it and What Should it Include
- An Expanded Breadth of the Design Landscape that must be Managed

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TARGET AUDIENCE

Primary

- IC Design Team Members
- IC Design Team Managers & Directors
- Program Managers

Secondary

- IC Product Line Managers & Directors
- IC Product Managers
- IC Product Engineers
- Test Engineering

AGENDA

Introduction

- About the Instructor
- Participant Introductions
- Course Objectives
- Agenda Review

Current State of Design Execution

- Business concerns
- Metrics – Where are we at in IC design?
- A Business View of Ideal Design Execution
- Areas of focus for design execution improvement

The “ideal” goal

- What would constitute an ideal goal regarding design execution?
- What is an Ideal goal for design that will enhance their execution predictability
- Deficiencies that prevent a team from attaining the “ideal” goal

Anatomy of a Schedule Slip

- Getting to the root cause of schedule slips
- A simplified view of schedule slips
- The key process issues that are responsible for slips
- **Small Group Exercise** – what has caused slips on your projects and how can they be prevented?

A few Simple Rules of Design Management

- Six rules that are key to managing design projects
- How these six rules should be applied in managing design

The design process

- What is the “IC Design Process”?
- What are the components of an IC design process?

- Benefits of a focus on the “total” process
- Management vs. ownership of process components
- Additional process components to be considered
- How a design process is utilized to minimize schedule slips

Documentation

- What is the goal of “documentation”?
- What typical documentation is in use today
- How can documentation improve timelines/predictability
 - Smashing the concept that there is no time for documentation
- Documentation types and their role in predictability
 - Travelers/checklists
 - Best Practices
 - Design specs
- Design Guide Concept
 - Design Guide definition & benefit
 - Hierarchical guide concept
 - What information is critical to a designer performing design work?
 - **Small Group Exercise** – define critical, essential information needs for an analog block
 - Guide scope
 - Block level guide major section content
 - Example analog block TOC

Design Reviews

- Objectives of design reviews
 - Attendees
 - A two phase approach to reviews
 - Covering details and the business needs
- Establishing consistency in review expectations and content
- Making use of the design guide in the review process

Feature Creep (Scope Change)

- Potential project impact if not formalized
- Awareness of the self supporting aspect of feature creep
- Develop a process for dealing with change
 - What team interfaces are prone to generating change
 - Keeping the team off focusing on potential changes
- The role the business must play in managing feature creep

Requirements Closure

- What are requirements?
- How requirements closure impacts the total project timeline.
- Expected impact of not managing closure
- Techniques for managing closure

Enabling Internal IP Reuse

- Factors that inhibit reuse – Must understand these

- The reuse “Marketing” concept
- Repository vs. content focus
- Can you tweak reusable IP?

Unknown/unmanaged task impact on Predictability

- What is an unknown task?
 - Design Management rule #2
- Why unknowns keep their hidden status
- A process for finding the unknowns
- **Small Group Exercise** – Identify tasks on your projects that are unknown or unmanaged

Schedule building

- What must be included in a schedule?
- Environment for ideal task breakdown
- Key concepts about predecessors for design activities
- **Small Group Exercise** – Defined all required predecessors for an analog block.

Keeping the process tuned up

- Continuous improvement mindset
- Lessons learned

Summary

TESTIMONIALS

“Jorvig Consulting Inc.’s seminar on design execution is an excellent overview of the important issues that product development teams face in IC development. The seminar specifically addresses key areas such as managing the product definition process, risk management, and IP reuse. Jeff Jorvig is a knowledgeable presenter and was able to answer the design teams detailed questions.”

Greg Waterfall
Product Line Director
Texas Instruments (2006)

“Jeff Jorvig’s seminar on design execution was very well received by my team. It was very engaging and thought provoking. Jeff presented the material well and did a good job of handling the questions and concerns. I am quite pleased with the overall results.”

Bob Atwell
Design Manager
Texas Instruments (2006)