

Project Life Cycle

- **The Project Idea**
- **Defining the Project (Definition Stage)**
- **Project Approval**
- **Project Execution (Implementation Stage)**
- **Ending the Project**
- **HDP User Group Implementation Projects**

The Project Idea



A project idea can be generated by:

- Any member
- Any potential member
- The Staff
- Board of Directors

Definition Stage

The HDP User Group Staff works with the Project Team of 2 or more companies including non-members, to complete the project proposal containing:

- Project description (Statement of Work)
- Project Execution Plan
- A list of project team participants
- Team Leader
- HDP User Group Staff facilitator
- Resources needed that Participants can't provide
- A plan for sharing the project results

Project Approval



Board of Directors acting on behalf of all members:

- Evaluates the value of the project with respect to the mission of HDP User Group
- Determines that the project plan is complete and thorough
- Approves the project if in line with the HDP mission and makes efficient use of resources

Implementation Stage

The project team consisting of only Members and special guests executes the project plan

- The progress of the project is reported to the membership on a regular basis
- The HDP User Group facilitator is monitoring progress and providing assistance

Ending of the Project



Key activities:

- Board of Directors approves the project as finished
- The project report is posted on the member website
- The project results are made available to the public
 - Presentation at a conference
 - Sold as an HDP report
 - Made public after a period of time

Component Terminal Finishes Phase 2

- Finish date late 2006
- Reliability characterization of Nickel/Palladium type terminal finishes, particularly moisture level sensitivity

BMPS (Board Mounted Power Supply) Guideline

- Finish date late 2006
- Establishing a comprehensive guideline for using Board Mounted Power Supplies

GPLF (General Purpose Lead Free) Reliability Characterization

- Finish date end 2007
- Comprehensive reliability characterization of solder joint reliability using a test vehicle with many different types of components

Lead-free Acceleration Factors

- Finish date end 2007
- Comprehensive characterization of lead free solder joint reliability using different testing conditions

SAC Microvoids

- Finish date early 2008
- Establishing an understanding of the cause and reliability impact of microvoids in lead free solder joints

Lead-free Board Materials Reliability

- Finish mid 2008
- Comprehensive reliability characterization of FR4 and Halogen-free boards using lead-free processing

SAC Reliability - Mild Acceleration Project

- Finish mid 2008
- Evaluate reliability of SAC mounted devices vs tin/lead in mild temp cycle to test hypothesis: Field condition ΔT (and thus strain) is significantly $< \Delta T$ (and thus strain) of industry accelerated tests, accelerated test conditions are (may be) introducing failure modes that don't exist in the field, and therefore high strain component types will (may) perform better in actual field conditions.

Halogen Free Guideline

- Finish early 2008
- Create a guideline containing the current status and options for halogen free materials, components, and hardware in the electronics industry. Provide the background and categories for the Database.