

MSD I Deliverables Checklist

Individual/Team: **P08003**

1/3/2008

Total Score: **17**

* Scores: use whole points only (no partial points)

| Deliverable (weight) | Max. Score | Score* | Excellent/Very Good | Good/Acceptable | Barely acceptable | Unacceptable | Comments, Target, Date | |
|--|------------|--------|--|---|--|---|---|---------------------|
| Customer Needs (expectations should be defined with sponsor/advisor during weeks 1-3). (TEAM GRADE) | 3 | 3 | Customer needs are complete and prioritized, are not solutions, and have been logically grouped. (3 points) | | | Customer needs are incomplete or involved little customer input, or do not accurately reflect customer desires. (0 points) | very easy to follow on website! | Planning |
| Design Specifications (expectations should be defined with sponsor/advisor during weeks 1-3). (TEAM GRADE) | 3 | 3 | Complete list of measurable outcomes, mapping of needs to quantitative specs. (3 points) | | | Design specifications are not complete, are not defined in engineering terms, or poorly mapped. (0 points) | OK - 1/10/08 | |
| MSD I Project Plan (includes finalized schedule and associated deliverables such as Roles & Responsibilities, 1-Page Project Summary, and Organizational Chart). (TEAM GRADE) | 3 | 3 | All items are included and complete, including task delegation. (3 points) | | | Items are missing or incomplete. (0 points) | revised 1/26/08 | |
| Concept Generation and Evaluation (TEAM GRADE) | 3 | 2 | Creative concepts were generated at the system & subsystem level, and evaluated against customer-oriented criteria and competing products. (3 points) | Valid concepts were developed but some customer criteria were not addressed or competitive benchmarking was sketchy at best. (2 points) | Key customer needs were addressed but many were left unaddressed, or evaluation process was not followed. (1 point) | Minimal concept development or key customer needs unaddressed, reliance on only a few ideas; evaluation process not defined or followed. (0 points) | 1/24/2008 | Concept Development |
| Concept Improvement and Selection (TEAM GRADE) | 3 | 1 | Team clearly took advantage of the evaluation process to improve or combine existing concepts or to uncover fixable weaknesses, and the selection process was structured and effective. (3 points) | The team showed some ability to use the evaluation process to improve on original concepts or combine one or more concepts, and a selection process was structured and followed. (2 points) | The team made minimal efforts to improve on original concepts during evaluation process, or the selection process was adhoc. (1 point) | The team did not take advantage of any opportunities to use concept evaluation to improve existing ideas, and a selection process was not followed. (0 points) | pretty much just evaluated the original round of concepts generated 1/24/2008 | |
| System-Level Design | 4 | 2 | Systems architecture, subsystems, and interfaces are clearly defined and consistent with selected concepts. (4 points) | Architecture is defined and consistent with selected concepts, but some subsystems and/or interfaces are not well defined. (3 points) | Architecture is incomplete, and many subsystems and/or interfaces have yet to be defined. (1-2 points) | Architecture is undefined and subsystems are questionable; system design is nonexistent. (0 points) | revised 2/1/08, but you still have a lot of details to work out for the overall system. | System Level Design |
| Engineering Analysis | 4 | 0 | Modeling and/or simulation necessary for system-level design is complete, including accurate operating conditions and input parameters. (4 points) | Some modeling/simulation still remains incomplete or must be re-run. Critical work is complete or nearly complete. (3 points) | Some critical analysis still remains unfinished or is questionable. (1-2 points) | Engineering analysis has not been done or results have been interpreted inaccurately; functionality is in doubt. (0 points) | | |
| Risk Assessment (high technology) and Proof-of-Concept | 4 | 0 | High-risk technologies have been identified, and breadboard/ simulation has demonstrated feasibility of system-level design. Risks for cost and schedule have been identified and assessed. (4 points) | High-risk technologies have been identified, but some work remains to demonstrate feasibility. Risks for cost and schedule have been identified and partly addressed. (3 points) | Some high-risk technologies have not been identified, or concepts have not been proven. Cost and schedule risks have not been identified. (1-2 points) | Many risks have not been identified; feasibility work is questionable. (0 points) | | |
| Concept/System Design Review Execution | 3 | 3 | Design review(s) held with appropriate attendees, all key issues were discussed, notes and action items are documented. (3 points) | | | Design review was not held or did not address key issues. (0 points) | | |
| Bill of Materials | 3 | 0 | BOM is complete, and long lead time items and vendors have been identified. (3 points) | BOM is partly complete - some specifics still remain to be defined. (1-2 points) | | BOM is incomplete, most items not specified. (0 points) | | Detailed Design |
| Drawings/Schematics | 5 | 0 | All drawings for parts to be manufactured are complete, assembly drawings demonstrate that system assembly is feasible. (5 points) | Most drawings or schematics are complete, assembly drawings are nearly done. (3-4 points) | Some drawings are complete, others are not done or require modification. (1-2 points) | Few, if any, drawings or schematics exist beyond hand sketches or concept drawings. (0 points) | | |
| Feasibility Analysis | 7 | 0 | Significant analysis has been done to demonstrate feasibility of all systems/components. (6-7 points) | Most design features have convincing support, some require further work. (4-5 points) | Many design features require further analysis to demonstrate feasibility. (2-3 points) | Little analysis has been done to demonstrate feasibility. (0 points) | | |
| Risk Assessment/Mitigation | 3 | 0 | Risks have been thoroughly (re)assessed and mitigation plans are in place for all key (high tech) risks. Impact to cost & schedule are clear. (3 points) | Mitigation plans are in-place for most of the key risks but a complete risk analysis has not been done. (0-1 points) | | Mitigation plans are not in place and risks have not been adequately (re)assessed. (0 points) | | |
| Knowledge & Understanding of Design | 7 | 0 | Thorough and in-depth understanding is evident of the design (system & relevant subsystems) and rationale for design decisions and tradeoffs. (6-7 points) | Good understanding is evident of the design and rationale for most design decisions and tradeoffs. (4-5 points) | General comprehension of the design is evident but rationale for decisions is not solid and tradeoffs are not well understood. (2-3 points) | Superficial understanding of the design is evident at either the system or subsystem level. Rationale for specific design decisions and tradeoffs is poorly understood, if at all. (0 points) | | 4-Project Review |
| Plan to Meet Customer Needs/Engineering Specifications | 5 | 0 | Sufficient evidence is presented to demonstrate that customer needs and design specs will be met. (5 points) | Team demonstrated that most customer needs and design specs will be met. (3-4 points) | Team demonstrated that some needs and specs will be met, but others require significant further analysis. (1-2 points) | Many questions remain as to whether needs and specs will be met. (0 points) | | |
| Detailed Design Review Execution | 5 | 0 | Design Review was very well planned and executed with appropriate attendees. All subsystems discussed, key issues addressed, notes and action items documented. (5 points) | Design Review execution was acceptable but was weak in one or more areas: breadth of participants, preparation, thoroughness, or documentation. (1-4 points) | | Design Review was not held or was poorly executed: key subsystems were not reviewed, key issues were not addressed, little/no preparation or documentation. (0 points) | | |
| Project description and high level customer needs (TEAM GRADE) | 2 | 0 | The team provided a clear summary of the project, including high level customer needs. (2 points) | Aim of the project is unclear, or customer needs are not outlined at an appropriate level. (1 point) | | Team did not explain what is to be accomplished with the project. (0 points) | | |
| Description of selected concept (TEAM GRADE) | 2 | 0 | The team provided a clear, concise outline of the selected concept. (2 points) | Selected concept is presented, but key features are not clear. (1 point) | | The team did not make it clear what the final concept would be. (0 points) | | |
| High risk assessment and summary of design review(s) (TEAM GRADE) | 2 | 0 | The team provided a concise summary of prior design reviews and analyses with key results - risks identified, problems noted, solutions proposed, etc. (2 points) | The team provided design review summary information, but not appropriately (e.g., too much detail, incomplete summary). (1 point) | | The team did not provide any summary of prior design reviews. (0 points) | | |

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|---|------------|-----------|--|---|-------------------|--|------------------------|---------------|--|
| Current State of Design (TEAM GRADE) | 2 | 0 | Audience has a clear picture of where team is - specs met? On budget? On time? Problems & proposed solutions? (2 points) | Team addressed some concerns of meeting specifications, schedule, and budget. (1 point) | | Team did not address current state of design. (0 points) | | Mkt | |
| Ability to communicate detailed design information effectively (written, graphical, and oral) | 2 | 0 | Very effective written and verbal communication. (2 points) | Acceptable but could have been more effective slides or verbal communication. (1 point) | | Poor preparation and ineffective communication. (0 points) | | | |
| Schedule for MSD II (TEAM GRADE) | 2 | 0 | Schedule is complete and accounts for ordering, assembly, test, revision, and documentation. (2 points) | | | Schedule is not addressed or is missing important tasks, or is unrealistic. (0 points) | | Documentation | |
| Preliminary Test Plan (formal document) (TEAM GRADE) | 2 | 0 | Preliminary test procedures are defined for key specs, along with equipment needed. (2 points) | | | Test plan has not been specified. (0 points) | | | |
| Design History File on EDGE (TEAM GRADE) | 5 | 0 | All documents and files are up-to-date, complete, and available on EDGE. (5 points) | Most files are up-to-date and complete. (3 points) | | Many files are missing, incomplete, or not up-to-date. (0 points) | | | |
| Class and Within-Team Participation | 16 | 0 | Grade based on weekly status reports, logbook, and weekly contributions to team activities (10 points) ; plus peer reviews and Guide assessment of participation and contribution (6 points) . | | | | | | |
| Total: | 100 | 17 | | | | | | | |