|  |  |  |
| --- | --- | --- |
|  | Does the design support both product and project goals? |  |
|  | Is the design feasible from a technology, cost, and schedule standpoint? |  |
|  | Have known design risks been identified, analyzed, and planned for or mitigated? |  |
|  | Are the methodologies, notations, etc. used to create and capture the design appropriate? |  |
|  | Does the design support proceeding to the next development step? |  |
|  | Have proper fallback consideration been made? |  |

General Design

Considerations

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| --- | --- | --- |
|  | Does the design have conceptual integrity (i.e., does the whole design tie together)? |  |
|  | Can the design be implemented within technology and environmental constraints? |  |
|  | Does the design use standard techniques and avoid exotic, hard-to-understand elements? |  |
|  | Is the design unjustifiably complex? |  |
|  | Is the design lean (i.e., are all of its parts strictly necessary)? |  |
|  | Does the design create reusable components if appropriate? |  |
|  | Will the design be easy to port to another environment if appropriate? |  |
|  | Does the design allow for scalability? |  |
|  | Are all time-critical functions identified, and timing criteria specified for them? |  |
|  | Are the hardware environment completely defined, including engineering change levels and constraints? |  |
|  | Are the pre-requisite and co-requisite software and firmware clearly identified, including release levels and constraints? |  |

Requirements

|  |  |  |
| --- | --- | --- |
|  | Does the design address all issues from the requirements? |  |

Review Checklist

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| --- | --- | --- |
|  | Does the design add features or functionality, which was not specified by the requirements (i.e., are all parts of the design traceable back to requirements)? |  |
|  | If appropriate, has requirements coverage been documented with a completed requirements traceability matrix? |  |
|  | Are all of the assumptions, constraints, design decisions, and dependencies documented? |  |
|  | Have all reasonable alternative designs been considered, including not automating some processes in software? |  |
|  | Have all goals, tradeoffs, and decisions been described? |  |
|  | Has the Risk Plan been modified with any new risks posed by the design? |  |
|  | Have all interfacing systems been identified? |  |
|  | Are the error recovery and backup requirements completely defined? |  |
|  | Have the infrastructure e.g. backup, recovery, checkpoints been addressed? |  |

Consistency

|  |  |  |
| --- | --- | --- |
|  | Is the design consistent with related artifacts (i.e., other modules, designs, etc.)? |  |
|  | Is the design consistent with the development and operating environments? |  |

Capacity Planning

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| --- | --- | --- |
|  | Is scalability development into the plan and is maintainable? |  |
|  | Is Total Cost of Ownership (TCO) controlled or reduced? |  |

Maintainability

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| --- | --- | --- |
|  | Does the design allow for ease of maintenance? |  |
|  | If reusable parts of other designs are being used, has their effect on design and integration been stated? |  |
|  | Does the design resist erosion in the correctness of its content over time? |  |

Compliances

|  |  |  |
| --- | --- | --- |
|  | Does the design follow all standards necessary for the system? (i.e., date standards) |  |
|  | Have legal/regulatory requirements been assessed and accounted for? |  |

Modeling and Design Views

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| --- | --- | --- |
|  | When appropriate, are there multiple, consistent, models and/or views that represent the design (i.e., static vs. dynamic)? |  |
|  | Where there are multiple models of the software (i.e., static and dynamic) are those models consistent with each other? |  |