TSP REquirements Checklist

Personal Software Process for Engineers

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | |  | Date |  |
| Product | |  | Product # |  |
| Instructor/Coach | |  | Checklist # |  |
|  |  | | | |
| Purpose | To guide a TSP requirements inspection | | | |
| General | There are so many possible types of requirements errors that a generic checklist would be too large to be useful.  For specific application environments and system types, however, defect categories should be included when project data warrant.  To maximize the usefulness of the REQI checklist, update it whenever defect data are available from system and acceptance testing or user feedback. | | | |
| Using the Checklist | In conducting the inspection, follow the TSP INS script.  In each inspection, check off the right-hand checklist column for each defect found with that entry.  When updating the checklist, examine the checkmark data.  If an entry has not been checked for several inspections, consider deleting it.  Make an entry to identify each requirements defect or defect category found in development, test, or use.  Limit the checklist to about 12 to 15 items.  When more items are needed, requirements problems are likely: review and update the requirements scripts and methods. | | | |
| Notes | A requirements entry is a specific requirements statement that is verifiable. It can be of any length, from a sentence to several pages.  Judgment is required in assessing many requirements aspects. The key is for the requirements authors, designers, implementers, and testers to have a common understand of the meaning of all requirements items. | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item | Description | √ | √ | √ | √ |
| Available Materials | Copies of up-to-date versions of all relevant requirements and reference materials have been supplied to each inspection participant. |  |  |  |  |
| Clarity | Each requirements entry is error free, clear, and precise and can only be interpreted in one way. |  |  |  |  |
| Consistency | No requirements item conflicts with any other item in the requirements. |  |  |  |  |
| Pertinence | Every item is pertinent to the problem, and there are no extraneous entries. |  |  |  |  |
| Verifiability | During product development and testing, it will be possible to determine if each requirements entry has been satisfied. |  |  |  |  |
| Traceability | Each item in the requirements can be traced to its original source, either in a problem statement, a proposal request, or a defined customer need. |  |  |  |  |
| Implementability | Each requirements item can be implemented with the available tools, techniques, and resources. |  |  |  |  |
| Implementation Flexibility | The requirements documents state the requirements that must be satisfied without specifying a specific implementation solution. |  |  |  |  |
| Independence | The requirements are specified in such a way that each item is independent of the others. Thus some requirements can be implemented independently of whether or not others are included. |  |  |  |  |
| Changes | Changes in the final implemented product can be controlled and traced to their sources in the requirements documents. |  |  |  |  |
| Understanding | All requirements defects and proposed changes have been reviewed with the requirements authors either during the inspection or at its conclusion to ensure that the changes are correct and properly understood by everyone involved in system design, implementation, and testing. |  |  |  |  |

Document Markings

Copyright 2020 Carnegie Mellon University. All rights reserved.  
  
This material is based upon work funded and supported by the Department of Defense under Contract No. FA8721-05-C-0003 with Carnegie Mellon University for the operation of the Software Engineering Institute, a federally funded research and development center.  
  
Any opinions, findings and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the United States Department of Defense.  
  
NO WARRANTY. THIS MATERIAL IS FURNISHED ON AN “AS-IS” BASIS WITH NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTY OF FITNESS FOR PURPOSE OR MERCHANTABILITY, ANY WARRANTY WITH RESPECT TO FREEDOM FROM PATENT, TRADEMARK, OR COPYRIGHT INFRINGEMENT, OR THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.  
  
[Distribution Statement A] This material has been approved for public release and unlimited distribution. The United States Government has Unlimited Rights in this material as defined by DFARS 252.227-7013.

The text and illustrations in this material are licensed by Carnegie Mellon University under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

The Creative Commons license does not extend to logos, trade marks, or service marks of Carnegie Mellon University.