S.RHEPD:

RHE Process Design

“TELECO” HIGH CAPACITY TRANSMISSION GROUP

WORKING DOCUMENT

MARCH 27 1998, Euro Edition. 1 PM edition (2 forms commented) NOT metrics and Logging Form. Minor edit 13Apr98 tg

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S.RHEPD: RHE Process Design: Design. ID:S.RHEPD

Version: 0.4 (after approval of Rules, Etry Exit, includes forms comments))

Rules (for writing technical documents and for checking them)

RPS: Rules for 'Process Standards' ID: S.RPS

Headers for RPS

ID Tag: RPS

Version: 0.2

Date: 25 Mar 98 0930

Owner: Mike Fitzgerald

Rules: Generic Rules "GEN"

QC Status: Draft, Not Exited

Intended Readership: (all categories of potential readers of this document, so we can judge suitability of language used).

Note: these may be written serially to save lines on a page)

RPS.0 Process Standards: Defined:

Any standards which define a work process.

They include {Rules, Entry Criteria, Exit Criteria, Procedures, Templates, Forms, Quality and performance levels, good practice models}

RPS.1: Obligatory Header Information

ID Tag:

Version:

Date:

Owner: (who or which group is responsible for updates to this process)

Rules: (which rules it is subject to, the Rule tags)

QC Status: (default: Not Exited, or 'Exited', Maximum Remaining Major Defects=xx)

Intended Readership: Anyone making, modifying or Inspecting a Process Standard.

RPS.2: Tagging

All statements shall be identified by a tag or number which is unique when coupled with the ID Tag of the standard itself.

For example: RPS.2 is the unique ID of this statement.

All Standards can be classed with one superior tag to distinguish them from any other tags, ”S” so this is S.RPS.2

In addition to the tag, an optional convenient ”descriptor” may be added for independent convenient reference, like this ”RPS.2 (Tagging):”

Note: It is intended for headline summary and local reference when working with the document.

RPS.3: Brevity, One page.

All standards shall be organised into modules who do not exceed one physical page.

RPS.4 Justification

Whenever necessary (because it is not obvious to all) , a rule should be justified in writing, by explanation on a separate document, intended for process Owners, and others evaluating the rules, or who are teaching them.

Note: The ’Comments On …<Rules>’ are used below for this purpose.

RPS.5

RFR: Rules Set for writing 'Rules' ID:S.Rules.RFR

Headers

ID Tag: RFR
Version: 0.2
Date: 23 Mar 98
Owner: MF
Rules: RPS
QC Status: draft
Intended Readership: anybody making or inspecting Rules.

RFR.0 Rules:Defined

'Rules' are any statement intended to guide our engineers as to how the company wants them to write an engineering specification, or any related product or project documentation.

Note: Rules are official best practices.

Note: Violation of a Rule is officially classified as a "Defect".

Note: Rules are used in Inspections as a checklist of things to look for in order to identify defects.

Note: Rules are one class of Process Standard governed by Rules for Process Standards (RPS).

RFR.1 (Exit)

All Rule sets, and all updates of them, shall have Exited from an Inspection against this Rule set and any other applicable Rules sets. (like RPS).

RFR.2 (Unique Eternal Code)

All New Rules shall allocate a unique tag and avoid reusing old tags of deleted rules for at least 5 years from deletion.

RFR.3 (Rules Generic Tag).

The Generic Tag "Rules" will be used to group all Rule sets hierarchically. *Example this set is "Rules.RFR" or "S.Rules.RFR"*

Note: see extensive separate comments for justification of these Rules, tag C.RFR

Generic (Engineering Specification) Rules ID:S.Rules.GEN

Headers

ID Tag: GEN (S.Rules.GEN)
Version: 0.21
Date: 25 Mar 98
Owner: MF
Rules: S.Rules.RFR
QC Status:
Intended Readership: any engineer writing or Checking any (software) engineering specification.

GEN.0 Generic Rules: Defined:

Generic Rules are engineering specification rules applying to all engineering documents as required best practices. They are separated from related Specific Rules so as to avoid repeating them, and to permit learning them well.

GEN.1 (Consistency)

Specifications must be consistent with all other related specifications in the same document, and in all related documents {Sources, Kin and Children}, otherwise potential defects are to be suspected.

GEN.2 (Unambiguous)

All specifications must be unambiguous to the Intended Readership, as practiced or implied, for that document.

GEN.3 (Notes)

All manner of comment, notes, suggestion or ideas which are not themselves the actual engineering specification, but merely background, shall be clearly distinguished as such by suitable devices.

Suggested Devices: italics, "double quotes", Note:…, Comment:…., use of footnotes, use of separate commentary pages.

In particular defects in a note should never result in a Major Defect.

GEN.4 (Brevity)

All specification shall be as brief as possible, in order to successfully support their purpose, for the defined Intended Readership.

GEN.5 (Clarity of Purpose)

All specification shall result in clarity to the Intended Reader regarding it's purpose or intent.

Note: it is not enough that the statements are unambiguous. They must contain clarity of purpose: why is this here?

GEN.6 (Elementary)

Specification statements shall be broken up into their most elementary form.

Note: this is so that they each can be unambiguously cross-referenced externally.

Note: an elementary specification can be refered to by its tag (or global tag), and within that, any unique combination of Parameter (for example Meter, Past) and/or Qualified (for example "[UK, 1999]") may be used to refer to or distinguish an elementary idea.

GEN.7 (Unique)

Specifications shall only have a single instance in the entire project documentation.

Note: there is some debate about whether this is practical to apply to 'design' in current culture, due to lack of tagging. <-AS

GEN.8 (ID Tags)

All specifications statements must have some unique and unambiguous cross-reference capability, which is stable (independent of sequence and changes).

Statements may be directly tagged.

Statements may be referenced by a hierarchy of tags

Statements may be referenced in detail using Parameter names (like Meter, Plan) and Qualified (like [Euro, 2001])

References may have defined synonyms for convenience.

GEN.9 (Reuse)

Tagged Ideas shall be 'reused' by cross-reference to their unique tag, or their tag and version information.

GEN.10 (Source)

Specifications shall contain detailed (paragraph, unique tag level) references about their exact and detailed sources.

Note use: 'Spec <- Source' format or 'Source:……'

GEN.11 (Hierarchy)

Specifications shall be logically organised into a useful hierarchical structure.

The tagging system shall reflect that structure (example A.B.C)

Note: this may be partly done through templates.

GEN.12 (Auditability)

All changes to specifications shall be done in such a way as to permit us to know who changed things, what the previous version was, perhaps even justification for the change.

GEN.13 (Risk)

The specification Author must clearly indicate any information which is uncertain or poses any risk to the project whatsoever, using a variety of available devices such as {<fuzzy brackets>, ??, ?, ranges (60->70, 60±10%), suitable comments or notes}.

GEN.14 (Template)

The relevant electronic template shall be used, for specific headings and guidance under each heading.

GEN.15 (Model)

A 'best practice' model shall be defined and available. It shall be used to help interpret the intent of these rules in practice.

Note: see extensive separate comments for justification of these Rules, tag C.GEN

REQ: (Generic) Requirements Rules: ID: S.Rules.REQ

Headers

ID Tag: RHE or S.Rules.REQ
Version: 0.21 , (Version 0.1 March 13), Date: 25 Mar 98, Owner: MF, Rules: S.Rules.RFR, RPS
QC Status: draft, Intended Readership: Any (software) engineer generating or updating any type of requirements specification, or Checking one.

REQ.0 ('Requirements' Defined)

Requirements are any 'desired future end-state' input to our design-engineering process, which we must consider in order to derive, and evaluate, any architecture or other technical design (how to meet requirements).

Note: anything not of this nature (e.g. implementation or design) is 'defective' in a 'requirements specification'. See REQ.3 for another formulation.

REQ.1 (Classification)

Requirements shall be classified as {Function, Quality, Cost, Generic Constraint} and specified under these separate main headings.

REQ.2 (Scalar)

All requirements which can be expressed measurably, shall be expressed with defined "Scale" of measure, and with all necessary additional information, using <our version of 'Planguage'>, including at least one 'Target' {Must, Plan, Wish}.

(Minimum) The Scalar specification shall minimally include {unique 'scalar specification Tag', Scale, Meter, Past, Must, Plan}

(Options)The Scalar specification may include {Trend, Record, Wish, [any interesting 'Qualifiers']; also Source information, Comments, and any other language device defined in the <"TELECO" Planguage version> may be used in any relevant context. Website [Planguage]: <to be specified>.

Note: Scalar requirements include all 'Quality' requirements (def. 'any how well the system should do its function'), all "Cost" requirements (def. 'any notion of input resources in order to perform at specified Quality Levels'), and some Generic Constraints (particularly Quality and Cost Constraints).

REQ.3 (No Means)

Requirements specification shall not contain any design or other 'means' to the requirements ends, unless they are intentionally imposed "Design Constraints" or "Functional requirements"

(If defective) When 'means specified as requirements' is inadvertently done, the requirement dictating the 'means' shall be specified, and a cross reference to the 'means' (a design) may be made. But, the design *itself* must be specified in the 'HLD' section of the RHE.

REQ.4(<next rule here>)

HLD: High Level Design Specification Rules ID: S.Rules.HLD

HLD.0 Definition

'High Level Design' (HLD) is the design at an architectural level for a [defined slice or component of a system] based on the requirements.

Note this specifically excludes detail such as actual specific module code structures and logic design.

HLD.1 (REQ Ref)

Each HLD design specification must explicitly cross reference the requirement(s) which it primarily was intended to support.

The primary cross-reference device will be the Source arrow:

"Design-Tag: Some design spec here. <- {Rqt1, Rqt23}."

Note: all known side effects and costs do NOT have to be referenced here. They should be accounted for in an Impact Estimation table (HLD.2).

HLD.2 (Impact Estimate)

A [Defined Set] of specified Design Ideas will be analysed using an Impact Estimation Table. The discipline is specified by Rules "IE".

2. The Defined Set will minimally include:

a. All Major Design or Architectural Components.

Note: 'Major' being defined as having more than 10% influence on any quality or cost attribute of the project or product concerned.

b. Any Design Component where the degree of negative variance accounts for more than 10% of any given quality or cost.

c. The Entire Set (as one unit) of Design Specification, shall be estimated against the Top "ten" quality and cost requirements. This can be done by breaking the total design into no more than about 10 major components.

Note: Other sources of Rules for Impact Estimation will be found in:

Gilb:Software Inspection, page 428 {Quality Estimation, Evidence}. This is easily available but is improved upon in the RDM-Planguage manuscript.

Gilb: Requirements Driven Management (Planguage 1996 Edition, @ www.result-planning.com), 8.3 "Rules for Impact Estimation Tables

IE: Rules for Impact Estimation Tables. S.Rules.IE

Header, **Tag=IE, Version: 0.21, Date: 25 Mar 98, Owner: Mike Fitzgerald, Rules: RFR (Rules For Rules), RPS (Rules for Process Standards), QC Status: Draft, Not Exited. Source: Gilb: Planguage Manuscript 8.3**

Intended Readership: Anyone writing or Checking an Impact Estimation Table.

A. Rules for IE table Objectives/Design specification. Tag: OS

RELIABILITY
300 hours →30,000 hours [USA, 2010]

:DESIGN: the tag of the **design idea** shall be specified, at the top of the vertical columns. Multiple tags may be specified as a {*set* of esign ideas}. The tag should be supported by a specification, elsewhere, detailed enough to determine the 'order of magnitude' of at le ne attribute impact (like a *money* cost).

B. Rules for basic impact specification Tag: IS

:SOMETHING: All **cells** (intersections of a design idea and an attribute requirement) must have some non-blank statement of impact [**MPACT-ESTIMATE)**.

:**IMPACT-ESTIMATE**: The basic impact statement is a number. Zero (0%, implied or explicit %) means the impact of the *incremen his* design idea would be *equal* to the **benchmark** level of attribute, a specified PAST RECORD or TREND level. '100%' means the pecified **target:0% IE** (PLAN or MUST) level goal would probably be met *exactly*. All other % numbers are in *relation* to these two oints. It is acceptable to specify *either* percentage numbers and/or numbers on the *defined SCALE* of measure. *Example [60%, 4 minut 60%±20%], [2 min.]*

:DOUBT: The ± **uncertainty** of the main estimate shall normally be made. *Exception*, when some overall uncertainty (like ± 50%) is *eclared* for the whole table or specified parts of it). *Example [60%±20%].*

C. Rules for IE Table Calculations based on impact estimate. Tag: IETC

:**SUM-Q**: An *algebraic sum* of quality-attribute impacts shall be developed for each column's 'set of design ideas'.

:**ATTRIBUTE-TOTAL**: a *horizontal algebraic attribute sum* of both *impacts* and (separately) *doubt ± estimates* will be developed fo ach attribute row (See RDM Planguage for example section Note IE (next page), **9.**).

:**SUM-COST**: the algebraic sum of all *cost* elements in each vertical column shall be calculated.(Note IE (next page), **13.**)

:Q/C-RATIO: The ratio (**SUM-Q**/**SUM-COST**) shall be calculated. (Note IE (next page), **14.**)

:SAFETY-DEVIATION: The **ATTRIBUTE-TOTAL** deviation, from stipulated safety margin, shall be calculated. For example the equired safety is 200% and ATTRIBUTE TOTAL is 110 the "-80%" is the deviation to be displayed. A default of safety factor two 200%) will be used, when no other is specified. (Note IE (next page), **11.**)

D. Rules for IE Table supporting documentation Tag: TSD

:CELL-DOC: For each **cell**, in supporting pages or sub-cells, the following supporting documentation is required, for individual cells, or groups of several cells: {**EVIDENCE, SOURCE, CREDIBLE**}

:**EVIDENCE**: facts to support the estimate, and credibly show how it was derived. Numbers, dates, places are expected. If no **evidenc** clear statement of lack of it is expected (like : "Random Guess").

:**SOURCE**: A written, or oral/person, **source** where the *evidence* was obtained, and which could be cross-checked, is required. *Exact* aragraph or statement identification, in source, is expected, not merely name of a large document.

:**CREDIBLE**: A **credibility** estimate which considers the quality of the evidence and the source shall be stipulated. Use a scale of 1.0 perfect) to 0.0 (random guess, based on no knowledge). As the estimates move towards 1.0 there is more credible-and-relevant xperience-and-data available, so the probability of our estimate being correct is higher.

See "S.Rules.IE.Credibility Rating" for detailed suggestion for Credibility categories.

Generic Rules (RULES.GEN) apply together with this set of rules.

Note IE: Impact Estimation Table Example (a Comment to the IE Rules)

Attribute Tag	**0%** Ref-erence Point	**100%** PLAN or MUST	**IDEA-1**	**IDEA-2**	± Sum **(10.)**	Impact Sum **(9.)**	Safety Factor 'Two' Difference **(11.)**
RELIABILITY	300 hrs.	3000 hrs.	50%±0	20%±80	±80	70%	-130% *
USABILITY	20 mins.	10 mins.	10%±40	60%±90	±130	70%	-130% *
= Sum Qualities		**(12.->)**	60	80			** 200% minus column (9.)*
CAPITAL	0	1 mill.	50%±20	10%±20	±40	60%	-10% **
MAINTENANCE	1 mill/year	100,000 per yr.	0±20	100%±80	±100	100%	-50% **
= Sum Costs		**(13.->)**	50	110			*** 50% minus column (9.)*
Quality/cost ratio		**(14.->)**	1.2 (60/50)	0.73 (80/110)			

Key to examples of *calculations* on an Impact Estimation table.

9. *Sum of impacts* on a single objective (rough approximation of total effect of all).
10. Sum of plus/minus ***uncertainties*** of impacts on a *single* objective.
11. Statements of *deviation* from required ***safety margins***.
12. Sum of all *quality* impacts for a *single design idea*.
13. Sum of *cost* impacts for a single design idea.

Note IE Core. Language core: Impact Estimation.

This is a note to illustrate the components of an Impact Estimation Table, in support of the Rules "IE".

Source: Gilb, "Requirements Driven Management" manuscript 8.2.

The '*inputs*': to Impact Estimation are:

• an **objective**, consisting of *Scale*, a *Benchmark point* (a PAST, Record or TREND) and at least one *Target* (a PLAN, Wish or MUST level specification),

• a **design idea**, and any experience data about that design idea.

We put '*inputs*' in quotes because, the result of an Impact Estimation process is usually to *improve* these specifications. So, updates of them are also 'outputs' from the Impact Estimation process.

Outputs from the Impact Estimation process, for *all* critical objectives are:

1. an estimate of the resulting *impact*, either in direct SCALE-defined terms **'SCALE Impact'** and/or in terms of percentage ability to meet the specified goal on time '**Percent Increment Impact'**
2. an estimate of the ***uncertainty*** of the basic estimate. Plus and minus. Based on the range of known experience and any **uncertainty** factors with the design.
3. the statement of the ***evidence*** available for making the estimate, if necessary a clear statement of a personal guess being made. Evidence for uncertainties.
4. a reference to the ***source*** of any of the above estimates and evidence, a written document or person.
5. a numeric **credibility** estimate for the quality of the impact estimate. This is on a scale of 1.0 (perfect credibility) to 0.0 (totally random number guess).
6. any background comments, useful or necessary
7. improved goal specification (bi-product leading to better estimates)
8. improved design specification (bi-product leading to better estimates).

In addition, a number of *derived* ***outputs*** can be calculated: (see previous page "Note IE" for detail)

9. *Sum* of all listed design *impacts* on a *single* objective
10. Sum of plus/minus ***uncertainties*** of impacts on a single objective
11. Statements of deviation from required *safety margins*
12. Sum of all *quality* impacts for a *single* design idea
13. Sum of ***cost*** impacts for a *single* design idea
14. Calculation of the ***quality to cost*** **ratio** for a *single design idea*
15. *Graphical* representation of the results (3-dimensional bar chart created by spread sheet is usual).

Design idea->	**A**	**B[A]**	**B [NOT A]**	**C**
LEARNING PAST=10, PLAN=1				MUST=5 [end this year]
1a. Impact (SCALE)	4.5 min.	1 min.	8 min.	4.0 min
1b.Goal %increment	50%	100%	22% (2/9)	120% (6/5)
2. ± Uncertainty	±40%	±50%	±80%?	±20%
3. Evidence	Project Ajax, 1996	Competitor Beta **EVID-B**	Guess	Contract Guarantee
4. Source	Ajax report, pg.6	World Report p.17	John B.	Supplier Delta
5. Credibility	0.8	0.6	0.2	0.6
6. Comments	**A [NOT B]**	Assumes **A**	**B** alone	high cost

Table example: In this example the facts for design B's impact is given in a separate statement defined elsewhere as '**EVID-B**'. Notice the use of the qualifier to define design ideas with and without other design ideas. Notice the separate evaluation of a MUST level, with a separate time qualifier. As the reader of this book will know from previous chapters, this example above is but one of many possible formats and uses of an Impact Estimation table. The main idea is to rigorously analyze the relationship between the ends and the means.

S.Rules.IE.Credibility Rating

Credibility Rating	Meaning
0.0	wild guess, no credibility
0.1	we know it has been done somewhere
0.2	we have one measurement somewhere
0.3	there are several measurements in the estimated range
0.4	the measurements are relevant to our case
0.5	the method of measurement is considered reliable
0.6	we have used the method in-house
0.7	we have reliable measurements in-house
0.8	reliable in-house measurements correlate to independent external measurements
0.9	we have used the idea on this project and measured it
1.0	perfect credibility, we have rock solid, contract-guaranteed, long-term, credible experience with this idea on this project and, the results are unlikely to disappear

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S.{E/X}: Entry/Exit Work Process Control.

Entry: purpose ”Danger signals”

The Entry Criteria are critical factors which <u>need</u> to be evaluated so as to proceed with a defined process into <u>execution of a procedure.</u>

They are designed to <u>prevent wasted time</u> by carrying out the Procedure before the conditions are met.

They are not to be confused with Procedure itself.

S.GEI: General Entry Conditions to Inspections: Version 25March98 TG

GEI.1 (Author Checks)

The Product Author (or updater, or proposed Editor; essentially the current owner of the Product) agrees to participate fully as a Checker on the Inspection Team. Someone MUST be assigned this role.(Note: this is implied at "TeleCo")

GEI.2 (*General* Veto Power)

Both the Team Leader and the Product Author must agree to decide that we will enter the Inspection process, and later to continue the Inspection process beyond initial Entry to Planning.
Note: This does not excuse the Author from the ultimate responsibility of successfully Exiting their Product document sometime, as required by Exit Criteria.

GEI.3 (Sources Exited)

All Source documents for the 'Product document to be Inspected', shall themselves have Exited from their own Insection.
This means Sources shall have met all valid Generic and Specific Exit Criteria pertaining to them.
Conscious and Documented Failures to meet the Source's Exit criteria *can* be accepted, when the Team Leader is able to make provision for the exceptions. Example by sampling them, or special roles to Check them.

GEI.4 (Formal Rules)

There must be one or more sets of Formal Rules for writing the Product Document, which the Author and Leader agree apply to the Quality Control Process of Inspection.

Note: such Rules are the only valid criteria for identifying a Defect in the Product document, or in other associated documents, such as Sources.

GEI.5 (Master Plan)

A written Master Plan for the Inspection has been faithfully completed, and is reasonable in all critical respects, so as to ensure 'probable success' of the Inspection effort expended, with regard to the stated Inspection Purposes.

Note: this includes people, timing, documents, optimum rates, special roles.

GEI.6 (Team Leader Capability)

The responsible team leader has been thoroughly trained in the correct practice of Inspection, and has got current Certification attesting to that fact.

Note: if not, a Certified Leader can take formal responsibility for a 'Co-Leader' when they are being trained or evaluated for Certification through practical work.

GEI.7 (Cursory Check)

The Leader, or competent expert they assign, shall do cursory checking, of at least 15 minutes duration, and of 100 Non-commentary words, of the Product document, against a selection of applicable Rules, trying to identify Major defects.

If the quantity of Major defects per Logical Page exceeds the Maximum remaining Majors at Exit, then the situation will be discussed with the Author, with a view to correcting the Product document before proceeding to use Team time.

GEI.8 (Automatic Pre-Clearance)

The Author shall demonstratably have applied all available and valid automated checking tools prior to submission, and shall have cleaned up any diagnostics.

Note: this means Spell Checkers, Source Code Diagnotic Compiles, "lint" (depth diagnostic for C).

S.GXI: General Exit Conditions from Inspections.

Version 25March98 TG

---------- Process Validation Conditions ----------

GXI.1 (Optimum Checking Rate)

The Average Team Checking Rates (at both Checking and Logging) are within 20% of the established optimum for that Product type.
In default of an Estabished Optimum Checking Rate, a similar document type Rate can be used.
In no case is an average Team checking rate greater than 600 Non-Commentary words per hour (2 logical pages/hr.) acceptable.

GXI.2 (Team Leader OK)

The Team leader evaluates the entire inspection process in relation to taught, and defined process and is willing to state and be held personally accountable, that an acceptable process has been carried out, and that the numeric results are valid for the stated Inspection Purpose.
Note: the 'deadly sin' here is allowing non-optimum rates, and then drawing false conclusions about Remaining Major Defects (below) to be the basis for Exit.

GXI.3 (Facts Captured)

The Inspection data Summary sheet is competently filled out and the data is transmitted to the Inspection Database, and accepted as Valid.
Note: This is so that we can learn about our real process and improve it and our own practices. It is necessary to have Exit pressure here to get it done at all!

----------Product Exit Validation Conditions.----------

GXI.4 (Remaining Majors)

An estimate of Maximum Average Remaining Major Defects per Logical Page (300 NC words) is made, based on known Effectiveness of a Valid Process (assume 30% in default of positive knowledge).
The Remaining Majors shall not exceed the Standard Limit for the Document Type.
The default Limit is 3 Majors/Logical page for immature Document Processes and 0.3 Majors/Logical Page for Mature Document Processes.

GXI.5 (Author OK).

The Responsible Product Document Author/Editor approves Exit.

GXI.6 (Majors Edited)

The Edit Checking Process, conducted by the Leader, has satisfactorily verified that the intended Editing work has been completely and competently completed.
There are no Known Majors unresolved through lack of time or effort.

GXI.7 <to be determined sometime>.

S.E.RHE: Specific Entry Conditions to RHE Inspections

S.X.RHE: Specific Exit conditions from RHE Inspections

S.E.FN:

S.X.FN

S.E.SDD:

S.X.SDD:

I.RHE: Implementation Plan ID: I.RHE

Training

Motivation

Announcements

Motivation

Negative Motivation

"Inspection" Code has negative vibes

Can maybe be reduced to Sampling now

Tactic: Call it QC Quality Control

Theme:

Defect Prevention <-MF

Need enthusiasm (from the same troops who did Code Insp)

Option: train whole other set of people <-MF

Make it more difficult to become moderator <-LR

C: Comments for Process Owners. ID:Global Prefix Tag 'C"

Note: these comments about standards are primarily intended for the Owners (rather than Intended readership generally), and other swho must necessarily have a deeper insight as to the intent to the standards.

The intent of these Owner Comments is to avoid people not using the rules, or not taking them seriously, because they do not understand the intent.

The intent might be somewhat hidden to the novice observer. It could be uses in related processes, which do not meet the eye immediately (such as Inspection or Evolutionary project management.

We want to avoid the danger that people will delete these rules out of ignorance of their 'laudible' intent and purpose

These comments can be used in training in the rules, both for student and teacher information.

C.RPS: Comments on Rules for Process Standards.

RPS.2: Tagging.

Tagging serves a variety of purposes: <- added by TG 24 3 98

Allows cross-reference to any specification from anywhere in the project documentation

Allows systematic Configuration Management, Traceability, Risk Analysis

Improves the probability that Inspection Checking will find it economic to check a cross reference at all, thus increasing the probability of detecting Major Defects.

Permits automation (Like Hypertext, HTML) of reference to the item.

By giving a distinct identity to a specification we facilitate individual analysis with respect to:

Impact estimation (quality and cost impacts)

Test readiness (are there corresponding test plans and cases, and are these updated)

It becomes easy to implement Rules like 'GEN.7 (UNIQUE)' AND 'GEN.9 (REUSE)' which avoid redundant specification, and consequent updatingproblems and confusion as to the proper specification.

RPS3: Brevity, One page

The intent of this rule is to help avoid verbose rules, to force us to be concise, to force us to stick to the essentials, to force us to delete unneeded standards in order to get space on the one page to fitr in new ideas. <-TG

C.RFR: Comments on Rules for Rules

RFR.2 (Unique Eternal Code)

The purpose of this is to avoid any confusion in the short term when tags are referenced in Inspections and Inspection statistics. It must be possible to know exactly which rule is being referenced and not confuse it with a previous rule. <-TG

C.GEN: Comments on Generic Rules

Source: The general source for these Rules is Gilb: Software Inspection page 424-5

Terms not defined here may be assumed to be defined in either

Gilb and Graham: Software Inspection (Glossary)

Gilb: Requirements Driven Management (aka Planguage) Glossary

Available at www.result-planning.com

GEN.1 (Consistency)

Lack of consistency between information internal to a document, or between related document, is a sure sign of some problem in one or both documents, as well as a potential sign of need of process improvement in Rules and Courseware. <-TG at request of MF Update 24/3/98

Any perceived inconsistency needs to be logged as an 'issue' in Inspections, and the problem needs resolution. Often there is no objective defect. But clarification so that there is no perceived inconsistency, will hopefully avoid potential misunderstandings by later users of the text. <-TG at request of MF Update 24/3/98

GEN.3 (Notes)

The purpose of this rule is several: <-TG

To ease reading of a document in general

To permit readers to scan quickly less important specification

To make the document Author more aware of important specification and background

To avoid confusion on the the part of the reader, about what is a specification, and what is mere background or speculation.

To enable automatic calculation of logical pages (the non-commentary part of a document) so that more precise undertanding and planning of Optimum Checking Rates is possible.

To help distinguish between a Major Defect (large downstream consequences) and a minor defect (trivial downstream consequences); the minor being the only possible severity classification in any form of notes.

GEN.6 (Elementary)

The purpose of this is to allow separate things to be done to each elementary statement for example:

Separate test cases

Separate costing

Separate source references

Separate implementation (Evolutionarily)

Any form of cross referencing from any other specification or document, without any inadvertent inclusion of other nearby specifications

Separate deletion or modification

Separate design impact estimation (see Gilb: Planguage, Impact Estimation) of all quality and cost impacts

GEN.8 (ID Tags)

This promotes reuse of specifications, traceability, Configuration Management, avoids misunderstandings.

GEN.9 (Reuse)

The intent of this rule is:

To avoid superfluous effort in writing, evaluating and updating a single specification idea more than once

To avoid any confusion as to which specification is valid.

To avoid a situation where one version of the same specification is updated and the others are not.

To avoid a situation where one instance of the specification is used for code and another for test and a third for writing user manuals (for example).

GEN.10 (Source)

The intent of this rule is to permit acccurate and economic quality control (Inspection Checking) of a statement, without the Checker having to search or guess as to the source.

The assumption is that if a specification is sufficiently easy to look up, it will more likely get checked and defects will more likely be found, and the Inspection process will be cheaper and more capable of help by automation.

We assume the specification Author is well aware of the exact sources they are using and can far more cheaply document it than can any checker guess at it later.

This is also generally useful for any specification reader so as to understand the level of authority of a specification (contract, policy, personal whim).

This is intended to assist in 'Configuration Management', 'Risk Analysis' and 'Traceability' in general.

GEN.12 (Auditability)

The purpose of this is to

Prevent unathorized changes

Permit auditing and justification of change

Quality control (inspection) of changes

Note: that an automated tool such as 'DOORS' would automatically permit regression and track all changes by authorised person identity.

GEN.15 (Model)

The Best Practice model is a device to try to avoid people copying randomly available models which might contain bad practices.

C.RHE: Comments on Requirement Rules

Scope:

this is an attempt to write a requirements set of Rules in on single set. In the longer term we believe that more specialised set of rules might be better (for Function, Quality, Cost, Generic Constraints). These are illustrated in the Planguage manuscript {0.3, 2.3, 3.3,4.3, 5.3}. <-TG

Justification

REQ.1 (Classification)

The requirement-type classification is necessary because of the different process required for each type of requirement (some design, some tradeoff)

Functional requirements are simply to be noted and implemented

Quality requirements must be 'design-engineered', and they must be 'traded-off' against other quality requirements, and against limited cost resources

Cost requirements are 'budgets for designers' which might require modification, if quality rerquirements are to be given prioirity. But, this is only possible when the design engineering has shown what designs are possible, and an 'Impact Estimation' (Planguage, Chapter 7) has been made

Generic Constraints are not specific requirements. We do not aim directly at them usually. We can regard them as 'fences' which our development effort must stay within. They are of wide variety: example {Quality, Cost, Design, Legal, Standards, Cultural, Past Products, Market, Customer Imposed etc.}

REQ.2 (Scalar)

Quality requirements in particular must be expressed with Scales, Musts , and Plans. Otherwise they would be misinterpreted (Examples (bad) 'High Performance', Improved Security, etc.)

The "Meter" minimum requirements is included to force people to think up front about how to test their requirements. <-AS "We are supposed to design for testability!"

The art of quantitative specification cannot realistically be fully explained to the uninitiated in a 'Standard'. It must be taught, given in handbooks (such as 'Planguage' or 'Principles of Software Engineering Management', or shown in a 'Best Practice Model'.

Someone in the local environment must understand this practice to a reasonable level, so as to guide others.

Any attempt to give complete instruction here will fail and degenerate into bad practice.

REQ.3 (No Means)

It is a persistent habit of engineers and others to express their requirements in the guise of a 'technical means to achieve their real aims. We 'forbid' it with this Rule.

It is important that we ascertain the true needs of the 'customer' and leave the question of the means (the engineering design) to the design engineer.

One reason for this is that the design must satisfy a number of {generic constraints, quality requirements and cost requirements} at the same time. Therefore any attempt to prematurely specify a design for a single quality requirement (for example a ”Graphical User Interface” for ”Usability”) runs a high risk of being a ’bad’ design with regard to all other simultaneous considerations of quality and cost.

Background

Future Plans

Relationships

Unresolved Problems

C.RHE.process: Comments on RHE Process (Objectives, Strategies..)

Result Objectives

To improve the requirements/design process for Software

Faster

More accurate

Less human effort (less rework)

Process Objectives

For Week 23-27 March 1998 Harlow

To have a defined process and plan for teaching and implementation.

C.IMP (Inspection Master Plan Form)

General Comments from Tom Gilb

1. I appreciate the attempt to simplify the form. Always good as long as things of value are not inadvertently dropped.
2. I can also appreciate the idea of reducing complexity in the form initially, to keep the start simple, with a view towards addiing things later should the need be perceived in practice, and through a continuous improvement process.
3. I am aprehensive about the following inn the case of these suggestions:

a. they are not made based on a deep knowledge or experience of what is in the forms, and why things are done. (you have not had the opportunity to hear me explain most of it, but I will try to compensate here with comments)
b. b. I 'fear' that we might only slowly or never recover from a situation where we start off with a severly reduced form.

4. We need to take a look at improved versions over the ones in the book (in the slides for example).
5. I believe we should depart from the tested and developed versions, perhaps making some initial "TELECO" tuning, and then modify through time by a process of systematic Continuous Improvement.
6. You should **try out** existing developed forms before making wholesale changes in them! They are far from perfect, and we have inproved versions you have not yet studied, but you risk losing years of time learning why we have many things in the forms.
7. We appreciate your keen and critical minds on this and other issues. We see it is the fact that this is our first opportunity to discuss these matter with each other.
8. My experience is that you will sooner or later move to versions which are electronic interfaces to your inspection database (not just a form template)
9. You might consider using the tools made by Ed Kit in California which can be tailored for all forms and data collection

A. Detailed Comments on the Master Plan Form Suggestion as you have suggested it for my feedback.

1. The comment below the heading is a good addition. <-TG

2. Documents :There is no notion (it is new for me too) of 'Kin' Documents (those derived from same source as product, such as test cases or manuals compared to Code).

3. Data Collection [Severity]: You need Majors and Minor HERE categorised by Checkers, based on severity categories in Rules, Checklists and their judgement. Remember the Editor can 'reverse the ruling' during editing. We do NOT want discussion of severity during the meeting!

4. Data Collection[Other issues categories]: you have excluded I (Process Improvement suggestion), "?" Questions of Intent to the author, and N (new issues detected by this Checker at the Meeting).

They all have their reasons which you are not aware of due to lack of training

5. Data Collection [no calculated Checking Rate]: it is a healthy thing for each checker to calculate checking rate and include it here and report it. This is one of many small tricks

to create a culture where the checking rate is taken seriously (a serious shortcoming of the current Inspection process). We want to creat awareness at the checker level that we take these things seriously and so should they.

6. **Foonote 6: False. They can and should decide, and the Meeting should NOT. Why? To force them to be aware of their harvest of Majors, and to avoid wasting time at the meeting.**

7. **HEADINGS:We have a new standard for all process documents:**

Headers for RPS

ID Tag: S.Form.IMP

Version: 0.2

Date: 27 Mar 98 0930

Owner: Mike Fitzgerald

Rules: RPS

Sources: Gilb:Sw Insp book page 408, Team Leader Course Slides Version 9.00 Dec. 15th 97 Tailored update at www.result-planning.com, slide 28 (An example of a well matured real customer master plan).

QC Status: Draft, Not Exited

Intended Readership: Inspection Team Members

Some of these (sources rules) are not necessary for daily users but need to be available to process owners

B. Comments on the justification for dropping things (your back of your page comments)

1. **Date Inspection requested: the reason is to encourage us to track and be aware of real calendar time from request to exit. Experience shows that delays can become endemic, and the process needs to be improved.**

2. **Tel leader: a local telephone or email of course can be looked up in directories but the intent was to make it really easy to give feedback to the Leader, written once nobody has to look it up.**

3. **No. Pages: this is used to make sure that the number of physical pages is known for several reasons:**

A check that checkers have them all, and have the intended version

Information to be compared against Logical page count so we see how much commentary is in the document

Information to be used in judging the size of the sample

Information to be used when allocating document chunk roles.

4. **Entry Exit Criteria and entry status: false statement, You have to evaluate the entry criteria during the planning! We want to create awareness of the criteria for the Leader and others. We want to create awareness of compromises. We want this documented for process improvement purposes (so we can see why inspections are failing because people are not taking the criteria seriously enough).**

This is of course one of those areas we have strengthened with adoption Thuirsday, after your form was designed, by the entry criteria)

This is precisely one of the weak areas in todays system.)

5. **Process Brainstorming meeting;**

It is OK to drop this if you do not intend to do them yet in the process.

But if you do intend to do them it should be in the form.

6. **Product sample chunk: you have not merely moved (chunk) but you have eliminated 'sample'. It is a critical idea and needs to be explicit! I should not have to explain why (but I will happily!).**

7. **Checklists and Rules: this part of the form is for specific assignment of these or parts specified of them to each individual checker. This in NOT in the process, but is individual tailoring for this round of inspection.**

8. **Participant Table: some versions of this table have been confusing (if you have not been on our course and had it explained!). So this is why you need to look at upgraded versions by our clients and by Kai (found in Team Leader Slides). Just because something is confusingly formulated, you do not necessarily eliminate it! Try improving it. We do. One client complained to me during a process assessment that "Checkers keep on discovering the same defects as their colleagues" (too much overlap of result). I was amused and saddened to see that their version fo this form had simply dropped the table of roles!!! That is its function, to improve the net productivity of the team by allocating special roles in various ways.**

This inculdes defining roles using special checklists.

9. **Logging Rate: The use of listing the logging rate is to make it directly and immediately available to the Checkers. Of course it is in the process definition, and that is the leaders basis for determining which rate to use.**

The leader may use some judgement to alter it (example because the team is far more or less experienced than the average teram, which is the basis for the rates)

Your consistent arguments that 'it is in the process' are beside the point. People do not look things up. This is too critical a factor to leave to the forlorne hope that they will. This is one the the MANY SMALL GILB TRICKS to make people aware of the importance of checking rates. This is a diffucult battle and every device must be employed to win it. This is the most critical single thing (optimum rates) which your previous process is not doing right.

10. Logging Meeting Rate: same remarks as above. In addition, the fact that they know how long the meeting is supposed to be is irrelevant to the cause.

They have multiple tasks at the meeting (like Logging) and the point is to emphasize how much time is allocated for double checking itself, and to make sure the allocated time is REALLY used as intended, not for other purposes like (your earlier suggestion of determining Major minor at the meeting and many other wasteful practices).

11. Estimate Effort in Individual checking:

This is designed to 'create correct expectations' on the part of the checker as to how much time the Leader is expecting them to use for their special role assignment, at optimum rates. It is by direct confrontation of the checker with this number of hours that we are tyring to avoid persistent problems of people assuming they can use whatever arbitrary time that have leftover to do the checking. It is is type of behavior which threatens optimum checking rates (and you do have a severe problem there!)

One of our clients has even gone as far as to have a separete column in the role allocation table for this.

It is also possible for different checkers to have radically different time allocations depending on their personal cirecumstances.

It is intentional that this info is displayed on the master plan to all to see,

12. Number of pages studied at optimum rate:

NO! This is a calculation of what they REALLY DID, as opposed to the PLAN. It is not in the process and it is not in the plan. It is data capture of the reality!

13. Improvements and Questions

Is the checkers count of the Process Improvements they have noted and the Questions of intent to the author they propose to ask.

This is so that in the entry part of the logging meeting the Leader can decide how, when and if to tackle these things

This is to create awareness on the checkers part that these things are expected and exit.

They are of course addressed at the logging meeting, but they are prepared to some degree during checking, and we are creating awareness and getting the basic data early intentionally.

C. Notes on items in newer versions of the form which are not mentioned in A and B above

1. Inspection Objectives

2. Creates awareness of which ones of the 2 dozen objectives for an inspection this one has, and documents it for all to be aware of now and when analysing the process later (see Team leader course for list of objectives, like training, meansurement, cleanup)

---

3. Team Objective for this Inspection

Devised by May for DPP

Allows a team to inject the fun (which is noticably absent for you company culture where Inspection is considered boring) of improving their own professional ability to do inspection. Just like athletes trying to set personal best records.

Sets up for allowing creativity to flow in trying ourt any members ideas. (see next item below which is related)

4. Team Strategy for this Inspection

Devised by May for DPP

This (with the above team objective) is a way to develop the inspection process by grass roots experiments.

It makes inspection fun.

It can also be used by the Team Leader to gradually teach principles of inspection so that the team (and somethines the Leader themselves) get practical insight as to which tactics work and how well they work, and is their time justified.

For example we copuld experiment with checker role allocation , kin documents as tools to find Majors, optimum rates, running around the building to get the blood pumping through to brain, rewards for performance… etc.

This is an example of a design by Kai, from which improvement ideas can be gleaned compared to the book forms Software Inspection page 408

Inspection Team Master Plan

Inspection ID _____ Inspection Leader _____ Mail/tel. code _____.

Author(s) _____ Mail/Tel. Code_____ Date Inspection was requested _____.

Product Title _____ Total physical pages _____ Version _____.

Intended purposes of this Inspection_____.

Entry Criteria which apply (tags)_____. [_] EC
(Generic Entry Conditions SI pg. 64-66, Slide 25)

Current **Entry Status** (met, waived) _____. Why? _____.

Exit Criteria which will be applied (tags) _____. [_] XC
(Generic Exit Conditions SI pg. 202, slide 29)

Meetings

Kickoff: Date_____ Location _____ Start Time_____ End time____.

Logging: Date_____ Location _____ Start Time_____ End time____.

Process Brainstorming: Date__ Location _____ Start Time_____ End time____.

Documents (specified parts to be used by checkers)
Sources (relevant pages)

Product document(s) samples or chunk(s)

Rules ; Generic [ ] SI 424-5 or [ ] slide 35 or [ ] in house_____.

Specific (Product &?) _____.

Checklists ; For Product: _____.

For other Documents:_____.

Team Setup

Team Member **Name**	Tel. Ext.	**Inspection Role** Soft. Insp. page 362-73, e.g. Author, Checker	**Product Document Part** (The Specific section or pages of the product)	**Source Documents** and Sections you are responsible for	**Rules & Checklists**	**Checking Procedure** & other tactic	Individual **Checking** Effort in **hr.**

Recommended Average Team Checking-Rates, Inspection Goal and Strategy

Numeric Inspection Goal set during Kick-off: _____.

Strategy to meet goal: _____.

Optimum Individual Checking Rate, for this type of product document, is _____ Pages per Hour, of non-commentary text.

Logging-meeting checking-rate: ___ page(s) (300 words, Non-Commentary) per hour (optimum rate of checking)

_____ ***this is the end of the Master Plan.***

_____ ***Individual Data Collection*** (filled in by you, after your checking and before the logging meeting)

Actual **work-hours** (tenths) spent ___. No. of (300w NC) **pages** checked at optimum rate ___.

Major issues ___, [incl. **Super-Majors** (project threat) ___]. **minor** issues ___.

(Process) **Improvement** suggestions___. **?s** of Intent (to author) ___.

My Checking **Rate was**: ___ pages/hour. How does this deviate from your planned rate? Why?

_____ ***end of Individual Data Collection***

Example of Master Plan form redesigned

C.IDS (Inspection Data Summary Form)

B. Comments on the form as it is.

1. The purpose of the form is good, maybe a heading "Purpose" ?

2. Table 1 Individual checking results

3. Why did you put in inspector role? We are trying to avoid identifiying people here and this effectively does it.

4. This table needs to be synchronized(same sequence and content of data item) with the data collection set at bottom of master plan (so that people collect and report in the same sequence as they orally report at entry to logging process, for capture on this data summary form

5. Numbers of Major and minor (&? & Improvements) are VITAL info for the procees entry evaluation (your lack of appreciation of this must be due to not going on our course or studying our slides, where these things are brought out better than to book. Sorry, but here is where we point this out, then

There is more I would remark but perhaps it needs to be covered in comment to your comments about changes (you did not specify what you used as sources so I guess the book (not the best source! Slides and real examples are more mature).

C. Comments on **"Parts Removed from TG.."** your reasons for removal of ideas from book forms.

1. General: most of the removals are arguably done without understanding of their purpose. Detailed argument can and will be given below as time permits.

2. I fully respect the effort to cut down and simplify. People should not be burdened with things not truly useful for them and the company. My main contribution is to keep to the one page limit, and I may have some irrelevant habits for you which should be dropped, But I will at least explain motivation for things and let you then make the decision.

3. If you 'don't see the requirement', do not assume there is none. It would be safer to assume you do not know what it is. Everything has a purpose!

4. Things that can be calculated automatically from the data, can be removed, but they also serve as intentional redundancy checks on correct input of data! I would suggest it is smarter to retain them for that reason, but only if you care about data quality.

5. Total Pages: is used to create awareness of what chunk of sample was done.

6. Data Inspection requested: purpose as argued in master plan, create awareness and give process data for delays in getting inspections exited. There have been substantial probllems in this respect in omse organizations.

7. Date entry criteria passed: false assumption (assume to be current date) based perhaps on lack of understanding of the entry criteria. This can take lots of time (consider getting

source documents exited before proceeding!). It could be done with a default assumtion if it is same day!

8. Entry Time. It can be lumped if it is trivial, but it can be substantial if you are following the entry criteria we have now adopted seriously. So, we could fill it out by exception when large: viz

Entry Evaluation time (if it exceeds 30 minutes):

9. Improvements: not useful to track you say!

I have technical directors who make it a major campaign! You are obviously not focussed on improving a process, Just suffering the old one year after year! Please learn something about the defect prevention process (SI book 7 & 17 for example): there is a 15 to 1 payback from this effort according to IBM, 8 to 1 according to Raytheon. Is that not useful? Note that the outdated and discredite doption (Fagan) is to let such matters be decided by our beeters (managers, consultants) this is part ofan effort to empower the grass roots engineer who must suffer the system to easily speak out and be head about stupid processes (such as the one we are designing in absence of using it ourselves initially). Surely you care about the right of the system victims to voice displeasure?

10. Question Noted. "not useful" you claim

This was invented by one of my customers (Douglas) for several purposes.

To diplomatically indicate that engineers did not understand the specification, without insulting senior engineers by using the term defect to describe their specification

A way for juniors to learn on the job

It is popular and has stayed for 10 years by usage and demand. Try it before you judge it.

11. about next 12 items about automatic calculation see note above C 4. It serves as a control. Ensures dayta input quality.

12. Logging Time. "logging duration good enough"

These are two entirely different things. Duration is clock time for a set of individuals doing a variety of tasks.

Logging Time (see formal definition Sw Insp book page 379) is the cost to the company work-hours excluding activities in the clock time interval which are NOT accepted as valid parts of Inspection Logging Meetings (according to my definitions) such as arbitrary discussions outside the scope of defined Inspection process.

13. Major/minor issues

"Not known at logging meeting, ;et author decide " <- your comment

Absolutely NOT!

Checkers must (as explained above) be conscious of major minior during checking (reason so they focus on Majors and do not otherwise waste 90% of their time on minors) see Sw Ins page 75-76 for considerable detrail re this issue.

Of course the Editor shall reclassify if necessary but that has little to do with the Checker effectiveness and self-awareness.

The decision and the count must be made before author editor deals with them in order to decide how to manage the entire logging meeting and whether it is worth logging, logging only majors, logging only samples, doing the double check etc. you canot put this off!

14. Improvement Suggestions ”Not useful to track”

I am shocked anyone could say this in writing!

Please learn about continuous improvement and its usefulness (see Raytheon tripling productivity etc, SEI report 1995)

I have commented on this earlier (master plan form)

15. Questions of Intent

Please learn what this is before judging it.

Commented earlier master plan

The value is not as critical as many other things but it is an indicator of a certain activity

For example people many be hiding real Majors as Questions because they fear offending colleagues. This number might help explain apparently low abnormal defect counts, a warning signal to the properly trained learer or process owner or assesor of process.

16. Exit Time:

Maybe not critical to track, unless it exceeds some norm. so it could be improved by”

Exit Time (if it exceed 30 minutes ____ , Reason for this _____.

17. Development time probably saved.

”too difficult to estimate” <- Your comment for removal

Difficult is neither true nor relevant.

The purpose is to remind the team of the relative profitability of finding and removing Major defects.

The idea is to get them to react when time saved does not correspond to time used, because they

Took too but a sample of a clean document

Or focussed roo much on minors

This is not a enstimate to predict real time saved by a feedback and awareness mechanism for the Team and Leader!

It should be based on known average savings for removing Majors and should be statistically reliable.

See data about this in The book esp chapter 2 benefits and the cases example page 315 (9.3 hours saved per major was proven for 1,000 Majors, vs cost of removal one hour apiece).

18. Form owner and version ”not applicable”

Of course it is applicable and more see our header standards

(I am not sure as I comment this draft of the form who I am speaking to, which sources they used, if I have latest versions, and even who is the owner, precisely because the commenter has failed to include any such header info on the form!! This makes my task unneessarliy difficult. <-TG

C. Comments on things outside of the above A and B

CILOG (Inspection Logging Form) NONE SUBMITTED, THIS DESIGN IS VERY IMPORTANT!

Little details like Occurs, referencing the exact Rule for the Issue

Awareness of NEW (defect found at meeting really count.

Glossary of Terms

***Default Glossary*.**

See 'Planguage'

Terms are to be understood as defined in the handbook Gilb "Requirements Driven Management (Planguage)" available at www.result-planning.com - unless otherwise defined here. <-TG

Useful supplementary Glossaries will be found in

Gilb: Software Inspection (book) pages 433-449.

Gilb: The Evolutionary Project Management Process (manuscript on web www.result-planning.com) which is based on the Planguage Glossary but where some terms have been added , especially for Evo method.

Entry:

The Entry Criteria are critical factors which need to be evaluated so as to proceed with a defined process, into execution of a procedure.

They are designed to prevent wasted time by carrying out the Procedure before the conditions are met.

They are not to be confused with Procedure itself.

They are a class of standards, owned by theprocess owner, and subject to continuous improvement.

High Risk:

A Design Component which is estimated to have more than 30% uncertainty of delivering any Impact Estimated quality or cost attribute on [time, place and conditions] in the Qualifier

HLD: Higher Level Design

'High Level Design' (HLD) is the design at an architectural level for a [defined slice or component of a system] based on the requirements.

Note this specifically excludes detail such as actual specific module code structures and logic design.

***Intended Readership*:**

The readership of a type of document, which is defined in the mandatory 'Intended readership' heading for the document, or which is implied by the type of document, or which is necessary in practice.

Note: the purpose of the concept is to remind the document Author to 'write down' to that level, and to allow the document Inspectors to judge whether the level of writing satisfies the defined readership.

***Major Design* *(or Major Architectural)* *Components*.**

defined as having more than 10% contribution on any quality or cost attribute of the project or product concerned. As measured by the Impact Estimation process, where 100% is budget or Plan level.

Note: the purpose of this definition is to define a 'threshold level' where deeper analysis of the idea is mandatory, than for less important design components.

***Process Standard*:**

any standard for definition of a process including the set {Rules, Entry Criteria, Exit Criteria, Training Materials, Procedures, Templates, Models}. <-TG

Participants

March 23rd Week
Mike Fitzgerald:MF
Trevor Corkum:TC
Beth Martin:BM
Andrew Sciascia:AS
Leslie Rodrigues:LR
Kai Gilb:KG
Tom Gilb:TG Gilb@acm.org

Diverse Issues in working paper

Unresolved Issues for Our team

Design Rules
Impact Estimation Rules
Degree of adoption of RDM Planguage as a guide/text/standard
Are the new requirements detailed enough at the level of must etc (as per Planguage rules)?? TG

Possible contents, here in this document, ideas

Requirements Model
Design Model
Impact Estimation Model
Template
Inspection Checklists to Backup the rules
Course ware
Motivation
Expected results

Needs in the package

Background: High Capacity University 26 week course of study. <-MF

Courseware Requirements

Maximum Half Day modules <-MF

Clear Entry and Exit from modules

How do we make it fun (Game ideas) <-MF

How do we make it intellectually challenging <-KG

Tests Open Book <-MF KG

Experiments or questions that will drive experiments <-MF

COURSEWARE Contents or Sets.

Teach the trainers: what are the fundamentals <-MF

A one hour managers Inspection module <-MF

General Inspection module for everybody

Team leader Model one day the team leader differntial <-MF

Team leader's Course designed in Increments

Based on Incremental tests to enter each stage <-KG

A Module on How to Write an RHE <-MF

Rules

Models

Even a Checker's perspective inspecting it