



ImQuSo Review Tool manual





IMproved QUality SOlutions

MANAGEMENT SUMMARY

Manual for the ImQuSo Review Tool





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Document History

Date	Vers.	Status	Author	Change
2002/03/22	0.1	Draft	Peter van de Kerkhof	First draft
2002/03/25	0.2	Draft	Peter van de Kerkhof	Fixed miNor typos
2002/03/26	0.6	Draft	Peter van de Kerkhof	Added Configuration appendix and filled scenario appendix
2003-06-29	0.7	Draft	Peter van de Kerkhof	Added: Add action & Add error button/form
2003-07-25	0.8	Draft	Peter van de Kerkhof	Adapted to the new worksheets and added role specific action chapter
2003-07-30	0.9	Draft	Peter van de Kerkhof	Added text related to Extract Word button.
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2005-08-16	0.B	Draft	Peter van de Kerkhof	Added some more info to appendix
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2009-02-22	4.1.2	Proposal	Peter van de Kerkhof	Fixed some typos.
2009-04-15	4.1.3	Proposal	Peter van de Kerkhof	Fixed some typos and company images

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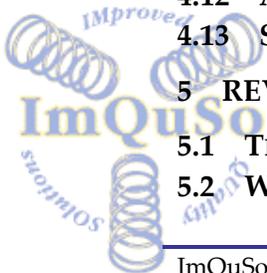
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1 Purpose

1.1 Purpose

This document describes the purpose of the review tool and how it can be used in specific 'review' processes.

1.2 Scope

All users of the review tool.

1.3 Terms, Definitions and Abbreviations

Table 1 Terms & Definitions.

Terms & Definitions	Meaning
Author	Responsible for initiating a review and updating the document.
Logger	Review secretary during the meeting
Moderator	Chairman of the review (meeting)
Reviewer	Someone who examines the subject to be reviewed.
Rework Verifier	Someone who verifies the rework of the 'Author'
Scribe	Review secretary during the meeting (See also logger)
Subject	Item to be reviewed

Table 2 Abbreviations.

Abbreviation	Description
IRT	ImQuSo Review Tool

1.4 References

The contents of this document is controlled by the following documents:

Table 3 Controlling Documents.

Reference	Description
1. [Demo]	Title: Review tool specifications Document ID: ? Authors(w): Peter van de Kerkhof Version: ? Version Date: ? Status: To be written

The following documents supply information to support the contents of this document:

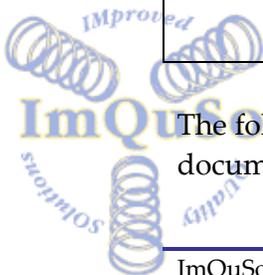




Table 4 Background Documents.

Reference	Description
2. [Gilb]	Title: Inspection process according Tom Gilb References: http://www.result-planning.com (Tom and Kai Gilb) Book: Software Inspections by Tom Gilb a& Dorothy Graham
3. [Fagan]	Title: Design and Code inspection to reduceby Michael Fagan References: http://www.research.ibm.com/journal/sj38-23.html

2 Reviews and the review tool

2.1 Introduction

This document is the review tool manual, and as such it will not describe a review process.

However some things need to be said on the review process to understand and comprehend were the review tool will have the biggest benefit in your applied review process.

2.2 Reviews: the concept.

There are many different types of reviews, inspections, walkthroughs, or other review processes.

If looked at in an elementary form, they all come done to the same basic steps.

- Persons are requested to look at a subject.
- The subject is distributed.
- People study the subject to find possible 'improvements'.
- Comments found are collected.
- The document is reworked to fix 'apparent' problems.
- The status of the subject is updated.

2.3 Review tool support for a review process

The review tool is an MS Excel workbook that can be used in all of the above steps no matter which kind of review process you use.

The use of the review tool can lead to a redefinition of the process to optimize the efficiency of the review.

Some improvements (already used) are described in review scenarios in the appendix: Review process scenarios with the IRT





2.4 The usage of colours in the review tool.

The background colours of the fields in the review tool define a specific purpose of the field.

Yellow	These fields are headings and/or for layout purposes and should not be changed.
Red	These fields consist of formulas or values. Don't change these fields.
White	The author should fill in these fields. In the Review Preparation Form the reviewer should fill in the white fields.
Green	Fields filled in by the review tool, but can be manually modified. However the tool can overwrite these manual entered values again.
Purple	To be filled in by the Moderator (or scribe/logger) during and after the review meeting.
Blue	To be filled-in by the Author/Moderator after the rework is finished.

2.5 Help information

Most fields have a comment text that explains the purpose of the field.
(It will be visible when the mouse pointer moves on the field)

3 The roles and their interaction with the Review Tool

Note: The description of the roles is based on the review process as defined in this document.

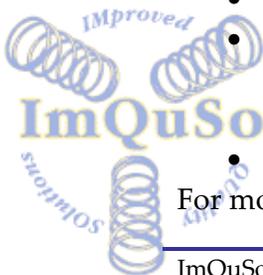
3.1 The author

The author is responsible for:

- Initiating the review and distribution of the review package.
For that he uses the 'Review Report' and the 'Commands' worksheet.
Buttons: Browse and Generate sheets.
- Data collection of the individual reviewer logging.
For that he uses the 'Review Report' and the 'Commands' worksheet.
Button: Summaries
- For logging which defects are reworked (or not reworked).
- Metrics collection (of new updated document).
For that he uses the Commands' worksheet.
Button: Metrics

- For storing all review related files in the 'review repository'.

For more details on the actions to perform see: the "Author_read-me" worksheet.





3.2 The moderator

The Moderator takes care (with the author) of the logging defects and metrics of the process summaries in the 'Review Report' worksheet like, meeting time, due dates, review closure date, etc. But the moderator discusses with the 'project' or 'department' manager how the actions points collected (except the rework verification) are handled or transferred to the responsibility to the new responsible.

The Moderator also does a sanity check on the document to see if it has enough quality to startup the review process.

3.3 The scribe

The scribe is involved in the review meeting. The Scribe needs to log the defects mentioned there and any actions points.

This is done in the "Review Preparation Form" using the buttons: Add Action Point and Add Error.

If a beamer is used he also makes sure that the error pointer is located at the correct line (View windows).

3.4 The rework verifier

At the beginning of the meeting the rework verifier is assigned for Rework verification. It is recommended that the verifier make some independent notes in case the 'logged' error description is not 'clear'.

After the author does the rework the verifier verifies (all or some of the) defects fixed and places a 'Mark' in the appropriate column/cell. See section: 4.6 Review Preparation Form

3.5 The reviewer

The reviewer uses the 'Invitation' worksheet to get informed on the specifics of this review. See section: 4.3 Invitation

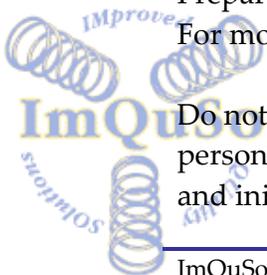
The reviewer logs all his findings in the "Review Preparation Form" worksheet.

For MS Word subjects there is another option. Here you can enter the defects as 'inline comment' into the MS Word file at the location of the defect.

All comments can then be extracted from the MS word file into the Review Preparation Worksheet".

For more details see: 4.6.1 Button: Extract Comments from MS Word file.

Do not forget to log the time spend on the personal preparation and your personal judgment regarding the status of the reviewed subject. (And your name and initials if they are missing.).





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The worksheet has four segments:

1. The first and top segment holds information about the subject to be reviewed
2. The second has some metrics on the subject to be reviewed.
3. The third segment holds information on the review meeting and review type.
4. The fourth segment holds information on the participants of the review.

The information is 'read-only' and this worksheet is protected.

4.4 Review report

This worksheet is meant as summary and report of the review (meeting).

Administrative issues and metric issues about the review are mentioned here.

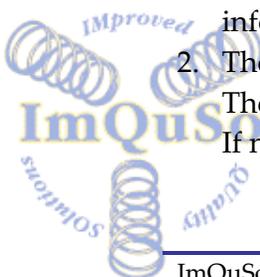
Review Report (summary)												
1												
2	1	Title subject :	QnAp iT Review Tool Manual					Document ident :	Docid:?			
3		File location :	C:\kerkhof\qart\GRT_manual_0.7.doc					Document Type :	type			
4		Version :	0,7	Date subject :	29-6-2004		Status :	Draft		Subject source :	MS Word	
5	2	Number of pages :	21		Number of lines :	855		Project :				
6		Meeting Location :	AA			Review date :	5-5-2003		Review Type :	Review		
7		Review Report ident :	BB			Hour :	13:00					
8		Participants:					Metrics:					
9		Role	Present	Name	Concentrate on	Initials	Prep. Effort	#Critical	#major	#minor	#Questions	Review Proposal
10		Author	ikke		bb	ik	10	0	0	0	0	Rejected
11	4	Moderator/Reporter										
12		Reviewer										
13		Reviewer										
14		Reviewer										
15		Reviewer										
16		Reviewer										
17		Reviewer										
18		Reviewer										
19		Reviewer										
20		Reviewer										
21		Reviewer										
22		Rework verifier :	0		Total of preparation :	10	0	0	0	0	0	Rejected log linesV
23		Review result :	Rejected		Current defect count :	0	1	0	0	0	0	0
24		Effort to organise Review :			min		Actual date Review meeting :				date	
25		Duration review meeting :			min		Actual Rework Done date :				date	
26		Creation Review report effort :			min		Actual Rework effort :				min	
27		total review effort :	10		min		Rework Verification effort :				min	
28		Planned rework ready date :			date		Grand total review effort :	10			min	
29		Estimated rework effort :			min		Actual Review Close date :				date	

Figure 2 The Review Report worksheet

Usage of colours see: 2.4 The usage of colours in the review tool.

The worksheet has five segments:

1. The first and top segment holds information about the subject to be reviewed
First you define the Subject Source and then you can use the browse command button to extract the subject information. If no or limited information is extracted you have to fill the fields manually
2. The second has some metrics on the subject to be reviewed.
The browse command button should have extracted this information. If not or limited information is extracted you have to fill the fields manually.





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3. The third segment holds information on the review meeting and review type. Fill these fields when you have the data available. (But before you generate reviewer workbooks.)
4. The fourth segment holds information on the reviews, their findings and summary calculations
Then Name, Concentrate on and Initials have to be filled in by the Moderator/and/or Author
New rows can be inserted (below the Moderator) if needed. DO NOT DELETE unused reviewer lines.
(These fields have to be filled before you generate reviewer workbooks.)
A Present 'tick mark' is set for every participant that was/is present in the review meeting.
Metrics should be filled when the Summaries button has been activated.
The moderator defines the 'Review Result' at the end of the meeting or together with the Author if no meeting is held.
5. The fifth segment holds summary and other review information.
This has to be filled in by the Author and Moderator during the execution of the review.

The review tool can automatically fill some information in this worksheet.

4.5 The Commands worksheet

4.5.1 Button: Browser

Button text: Browse

Goal: Retrieve information from subject is collected and it will be displayed in the appropriate field

Action: Via a browser the exact filename of the to be reviewed subject is asked.

Result: The file location field and following information fields are filled in (in segment 1):

- ⇒ Title Document
- ⇒ Status
- ⇒ Date document
- ⇒ Version
- ⇒ Document Indent.
- ⇒ File location
- ⇒ Project
- ⇒ Document Type
- ⇒ "Author name" in segment 4





4.5.2 Button: Generate sheets

Button text: Generate sheets

Goal: Generates each reviewer individual excel sheet

Action:

The macro asks for each review (and moderator) a filename and copies the active workbook to a dedicated file. It stops at the first empty name and then the active workbook is saved as summary to be used the author.

(The summary workbook becomes the active workbook.)

During this operation the specific:

- ⇒ Reviewer name, Initials, Concentrate on.
- ⇒ Concentrate on
- ⇒ Initials

is copied into fields of the 'reviewers specific version of the "review preparation form'.

The proposal for the filename is based on the reviewer initials or name if initials are empty, but can be modified by the author.

In the summary workbook an action point is defined: Review verification.

Result: Each reviewer (and the author) has an individual excel workbook, which he should use.

4.5.3 Button: Summaries

Button text: Summaries

Goal: Gather all issues and metrics from all reviewers into one sheet.

Action:

The macro will ask for an excel sheet and add the logging issues to the existing logging issues in the review preparation form.

Next items will also be copied from the "Review Preparation Form" sheet into the 'Review Report' of the summary worksheet.

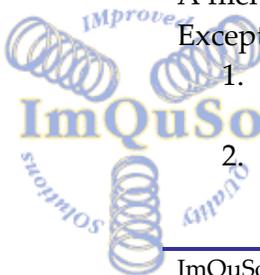
- ⇒ Reviewer Name
- ⇒ Preparation time (min)
- ⇒ # The number of errors found: Critical, Major, minor, Remarks, Questions, Typos, others
- ⇒ Review Proposal. result (Rejected, Accepted or Accepted with remarks.)

Also action points are copied to the Action point list in the summary workbook

A filename is asked until the cancel button is pressed.

Exceptions: (In case of an summarize error a message is displayed!)

1. If there is no reviewer name specified in the "Review preparation form" the workbook is ignored.
2. If there is an error line in the "Review preparation form" that has no initials the workbook is ignored.





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3. If the workbook belongs to another review (different document title) the workbook is ignored.
4. If the workbook is created with a different review tool version the workbook can be ignored.

If a filename/workbook of an uninvited reviewer is selected, the information is added to the 'Review Form' on the next empty reviewer line. (If none is available a new empty line will be created.)

Result: All issues are collected in one excel sheet. And all individual metrics are gathered.

4.5.4 Button: Metrics

Button Text: Metrics

Goal: Collect subject statistics and add them to the metrics worksheet.

Action:

- ◆ If the subject is a word file the following metrics will be put into the metrics worksheet:

If the subject has used the defined document properties, the following extra information is also collected:

This information should be extracted twice

- Once prior to the review
- Once after the rework

If there is a 'Rework Ready date' or 'Rework effort' defined, the later cases is assumed

Result: Subject metrics are collected in put in the metrics worksheet.

4.5.5 Button: to hide sheets for Reviewer

Button Text: Hide Sheets for Reviewer

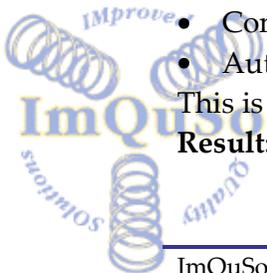
Goal: Hide worksheets that are not needed by the reviewer, so that the acceptance level is higher.

Action: The following worksheets will be hidden

- Review Report
- Commands
- Metrics
- Setup
- Analysis
- Comment
- Author_Read-Me

This is automatically executed when the button: "Generate sheets" is activated.

Result: Only a limited set of worksheets will be visible for the reviewer.





4.5.6 Button: To Un-hide sheets for the reviewer

Button Text: Un-Hide Sheets for Reviewer

Goal: Un-do action of “Hide sheets for Reviewer”.

Action: With this button ‘all’ worksheets will be made visible again.

In the case that you need this functionality the worksheet “Commands” will probably NOT be visible.

There are two options to execute:

1. Un-hide the worksheet “Commands” using standard Excel commands and then execute this command.
2. Execute the macro “Button_UnHide” using standard Excel commands.

Result: “All” worksheets are visible again.

4.6 Review Preparation Form

This excel sheet is meant for each individual reviewer.

1					Reviewer Name :						
2					Concentrate on :						
3	Sort Defects on Reviewer				Initials :					Findings	
4					Preparation effort (min) :						
5	Sort Defects on Severity				# Critical errors found :	D					
6					# Major errors found :	D					
7					# miNor errors found :	D					
8	Sort Defects on Page				# Questions :	D					
9					Proposal review result :	Rejected					
10					# others :	D					
11					Total :	D					
12	>>> Fill in your Preparation effort please! <<< List of Defects										
13	*Page	*Line	*Severity	*Initials	*Defect	Add Action Item	Add Error	*Review comment How solved Motivatio ns	*Review cc		*Updated Duplicate
14											
15											
16											
17											
18											
19											

Figure 3 The Review Preparation Form worksheet

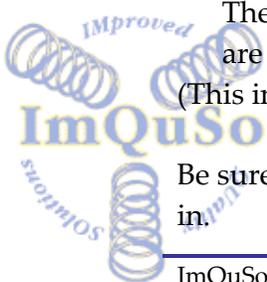
For each remark found during personal preparation the reviewer fills in a line:

- Page. The number of the page were the remark was found (Use page 0 for a remark on the entire document.)
- Line. The number of the line were the remark was found (Use line 0 for a remark on the entire page.)
- Severity. The severity of the remark
See appendix: Used codes
- Reviewer.

The initials of the reviewer. (To make distinction when all review comments are gathered in one form.)

(This info can also be extracted from inline comments in an MS Word file.)

Be sure that the reviewer name and spend effort on personal preparation is filled in.





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There are some checks build in that will in form the user that some information is missing.

The buttons “Add Action Item” and “Add Error” are initially intended for usage during the ‘review meeting’ but can be used by the reviewer. (Actions are performed in the background!)

4.6.1 Button: Extract Comments from MS Word file

The macro invoked by the button will open a browser to locate a MS word file. If a file is selected all word (inline) comments are extracted and logged as review errors.

Each individual comment is logged on single line as an error.

There is a possibility to specify the defect type as part of the comment.

Syntax for MS Word inline comment:

<Severity><Cr><Defect>

<Severity> must be ONE token. (Will be: ? if it is omitted or if it contains multiple tokens)

<Cr> is just an Enter (key)

<Defect> can be any text (incl. enter keys)

So for any comment in word:

Start with the severity character, hit Enter and then type your defect, remark, question, etc.

Initials, Page number ands Line number are automatically extracted.

(Line number counting is reset for every new page so it always starts with 1 on a new page!)

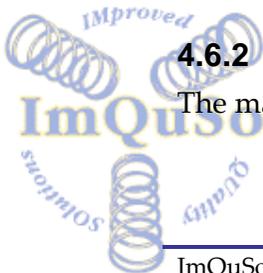
Note: Be aware of problems when mixing online word comment imports and regular filled in forms. For some reason the internal line numbering of word is different from the line numbers show with the option: line numbers on.

With ‘line numbers on’ e.g. lines in tables are not counted but with the comments notation they are also counted.

Best solution for reviewers is when they have used the word extract option to handover that word file also to the author as a fallback option.

4.6.2 Button: Sort Defects on reviewer

The macro invoked by the button sorts all defects on reviewer initials.





4.6.3 Button: Sort defects on severity

The macro invoked by the button sorts (alphabetical) all defects on severity. First Critical, then Major, then minor, etc.

4.6.4 Button: Sort Defects on page

The macro invoked by the button sorts the defects on page, then on line and then severity.

4.6.5 Button: Add Action

This button pops-up an 'Action entry form' that can be filled to generate an action (to be logged) in the 'Action Items' worksheet.

The advantage of this button is that the focus remains on the same error line in this worksheet.

There are some checks executed after submitting the new action point.

- A description of the action has to present
- If a date is entered it has to have the correct format. yy-mm-dd.

4.6.6 Button: Add Error

This button pops-up an 'Error entry form' that can be filled to generate an error (to be logged at the bottom of the list in this worksheet).

The advantage of this button is that the focus remains on the same error line in this worksheet.

There are some checks executed after submitting the new action point.

- All fields must be filled.
- The page number must be numerical.
- The line number must be numerical.

4.7 Legend

The legend worksheet explains the use of colours and gives translations for codes used.

4.8 Comment

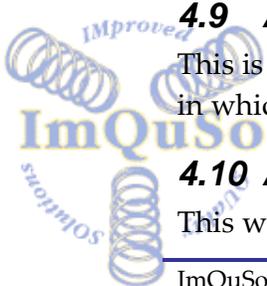
The moderators and/or Author can add some specific review comments here on e.g. the process, the review result, behavior of the participants, etc. etc, can use this worksheet.

4.9 Author_read-me

This is a help sheet for the author that explains all the activities and the workflow in which they should be executed.

4.10 Analysis

This worksheet shows some analysis made on the current review.





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The information can be used after personal review preparation but is more useful after all review results are 'Summarized', but better yet after the review is closed.

There are too many values shown there to describe here. Please see the notes for explanation of the metrics and used formulas.

4.11 Metrics

This is the worksheet where all metrics on this review and subject are gathered. This worksheet provides an easy access for a data collection tool when (at a certain point in time) the organization wants to analyze the review results of all reviews.

For a detailed explanation on the metrics collected see: Appendix: Metrics collected during the review

4.12 Actions items

Worksheet to collect all actions raised during the execution of the review.

In case the review result is not 'Rejected', there should be at least one action: Rework verification.

Nr.	Action Items				
	Description	Assigned to	Planned Ready date	Checked by	Actual Ready date
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

Figure 4 The Action items worksheet

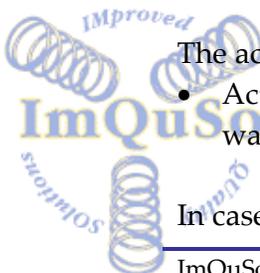
For each action defined the following items should be filled in a line:

- Description The nature and purpose of the action.
- Assigned to Who should be responsible for this action.
- Planned ready date When should this activity be completed.
- Checked by Who should verify if this action is done.

The action verifier fills in (for action verified by him):

- Actual ready date Date on which the activity was verified and the action was considered a success

In case of any disagreement the moderator must take appropriate action.





4.13 Setup

In this worksheet some options are mentioned that influence the execution of some of the commands.

But also to make the review 'more' in depended of layout changes in the other worksheets.

The details are not discussed here but there are four sections

1. The magic keyword.
This word/value is used to prevent mixing old versions of the tool in case of a 'structural' change.
2. Setup keywords
They can modify some functionality of the buttons
3. IRT Variables
Define some internals of the review tool
4. Subject Info
Define which information to extract from the subject (if possible) and where to store it.

5 Review procedure using the review tool

5.1 The Review Repository

To facilitate the logging and storing of all review related files a special directory (as part of the project repository) needs to be created. See an example in Appendix D Review Analysis

5.2 When to plan a review.

When the subject has reached status 'Proposal' a review can be planned.

5.3 How to Plan/ Organize Reviews.

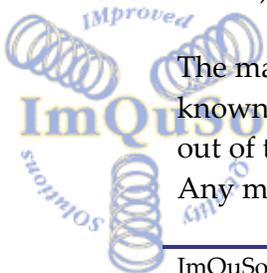
The procedure how to do reviews is defined in a separate review procedure. Here only the relation with the review tool is specified.

Define who should review the subject, request moderator en scribe and fill-in the review report.

The Author/Moderator will execute the 'browse' action (button to invoke a macro).

The macro will ask for the filename of the subject to be reviewed (only if it isn't known yet.) and if the subject is a word file, the macro will extract information out of the document (and. place it mostly in the top segment).

Any missing information needs to be entered manually in segment 1





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The next fields still have to be filled in manually (segment 2):

- ⇒ Review date, hour, review type, meeting location and review report identification.

The next fields still have to be filled in manually (segment 3):

- ⇒ Author (Can already be filled by the Browse actions)
- ⇒ For each individual reviewer and moderator/Reporter
- ⇒ Name
- ⇒ Concentrate on (optionally)
- ⇒ Initials

The last field has to be filled in manually (segment 4):

- ⇒ Effort to organize the Review

5.4 Distribute review package

The Author/Moderator will execute the 'Generate sheets' action (button to invoke a macro).

The macro will make a copy of this workbook for each mentioned reviewer (including the Moderator/Reporter)

The review package including the logging workbook is distributed (or the location of the files) to all participants.

The Author/Moderator will execute the 'metrics' action (button to invoke a macro) to store all subject metrics so that they can be compared later after the subject has changed due to rework.

5.5 Collect comment of all reviewers

Store the returned excel files in the defined location and process all comments.

The Author/Moderator will execute the 'Summarize' action (button to invoke a macro).

5.6 Prepare for the review meeting

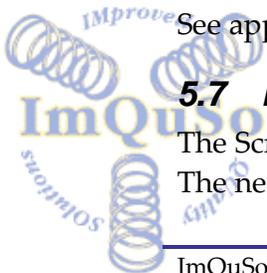
The Author/Moderator analyses the comment so that he is prepared for the meeting.

See appendix: Review process scenarios with the IRT

5.7 During the review meeting

The Scribe will enter the summary in the 'Review report' worksheet.

The next fields still have to be filled in manually (segment 3):





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⇒ Who are present in the meeting, Actual date Review Meeting, Duration of the Meeting, Review result, Planned rework ready date. Creation review report effort.

The next fields still have to be filled in manually in the 'Action items' worksheet (Create the first action)

⇒ Description: rework verification (Done already by the 'generate sheets' button), Assigned to, Planned ready date, Check by (Default is moderator name filled-in by the 'generate sheets' button),

All additional remarks made in the review meeting are log in the Review Preparation Form' worksheet or 'Action items' worksheet (if needed).

5.8 After the meeting is held.

The Author/Moderator makes sure that the review tool is filled with all the mandatory information.

5.9 After the rework is done

The following information is entered in the 'Review report' worksheet (segment 4) by the Author/Moderator.

⇒ Rework effort, Actual Rework Done date

But also the 'Review Preparation Form' worksheet logging is update by the author during the rework.

⇒ Review code and maybe some comment is added

The author has the responsibility to notify the Moderator that the rework verification can be done, if any.

5.10 After the rework is verified

The following information is entered in the 'Review report' worksheet (segment 4) by the 'Rework verifier'.

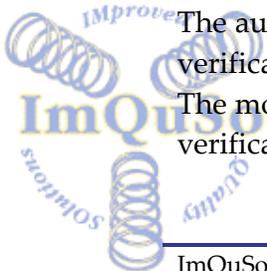
⇒ Rework verification effort

But also the 'Review Preparation Form' worksheet logging is update by the author during the rework verification.

⇒ Updated.

The author has the responsibility to notify the Moderator that the rework verification can be done.

The moderator has also the responsibility to take appropriate action in case the verification failed.





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The Moderator will execute the 'Metrics' action (button to invoke a macro) to add date to the 'Metrics' worksheet on the changed/reworked subject.

5.11 After the document is Signed/Approved

The following information is entered in the 'Review report' worksheet (segment 4) by the Moderator.

⇒ Actual Review Close date

The status of the document must be: Approved (, because all authorities have signed).

The moderator has the responsibility to take appropriate action in case the signoff failed the status stays not approved.

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Appendix A. Used codes and definitions

The codes and definitions used in some parts of the review are also explained in the Legend worksheet.

Status (of the document)

- Draft Still modified by the Author.
- Proposal Author thinks that the subject is ready for review.
- Accepted Subject is authorized by the principal, project or organization.

Review Source

- Word document Word document
- C code C of H file
- Other None of the above

Review Type

- Review Formal review according procedure.
- Walkthrough Walkthrough or pre review.
- Inspection Inspection according Tom Gilb. [Gilb]
- Other None of the above.

Review Result

- Accepted
Subject is accepted as is. Subject status becomes: Accepted.
- Accepted (with remarks)
Subject status becomes: Accepted, after the rework is verified.
- Rejected
Rewrite subject and organize a new review.





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Severity of a remark

- C for Critical
Will lead to a delay in the project or wrong-implemented functionality.
- M for Major
Will lead to a Change Request, Problem Report, or extra efforts spend.
- N for minor
Need to be fixed for clarity and better understanding.
- Q for Question
Unclear if this is a remark or lack of reviewer knowledge.
- R for Remark
A error that can not be quantified as the other types
- T for Typo
A grammatical or spelling error.

Review code

- A for Error Accepted and to be updated.
- R for Error Rejected.
- C for Comment Only. No error.
- D for Duplicate Error. 'Similar' error already mentioned before.
- N for Nice to have. Remark accepted but will not be updated.
- V for Question answered.

Updated

- N for Update NOT performed for this error.
- Y for Update performed for this remark.
- <blank> The same as N, for Update NOT performed for this error.

Page and Line numbers

- Page 0 To indicate that the comment scope is the entire document.
- Line 0 To indicate that the comment scope is the entire page.





Appendix B. Review process scenarios with the IRT

The review scenario basically starts at the review meeting.

Pre Logging: (Gathering of the reviewers remarks before the review meeting)

There are the obvious benefits from submitting reviewer filled log forms prior to the meeting.

- The Moderator/Author knows how many reviewers did actually prepare for this review.
This gives an option to:
 - cancel the meeting if not enough reviewers are prepared
 - send out reminders etc. to persuade the reviewers to submit their findings.
 - Escalate this situation.
- Based on the number and/or severity of the remarks the Moderator/Author can decide on the purpose of the review meeting. The Moderator/Author can:
 - Decide to Reject this subject and cancel the meeting if there are too many severe remarks.
 - Decide to Reject this subject and use the meeting to discuss the major findings to see if solution strategies are available from the reviewers.
 - Cancel the meeting if there are only a few MINOR remarks. (Let's hope for that!)

The change of the purpose of the meeting should be communicated to all participants before the meeting!

(And to the management?)

- The remarks are more descriptive (as personal notes to be deciphered in the meeting)

Pre-Logging impact on the review meeting:

If a review meeting takes place, the meeting flow can be based on the reviewer remarks.

- If there are many remarks, one could start with the Critical, Major, Questions and miNors.

There are some (possible) disadvantages to this solution:

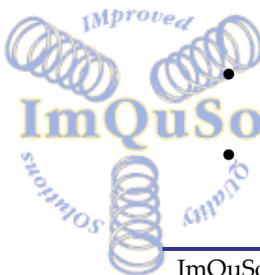
- If the error qualification is not the same by all reviewers. A Major for one can be a miNor by another.

This makes it hard to stick to Criticals only, as people tend to bring their own remarks on the floor.

- You skip thru the subject at least a couple of times.

The logical flow of the subject tends to get lost.

- If one (or more) of the reviewers did not submit his remarks, these reviewers are constantly disturbing the meeting, as it is hard for them to





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synchronize his own remarks.

- The author can scan each individual remark prior to the meeting and decide if he will fix this remark or not. Leaving only the 'not fixed' remarks to discuss in the meeting.

There are some (possible) disadvantages to this solution:

- The decision to fix a remark may not be in the best interest of the subject or to the liking of other reviewers. So they must have a veto right on the 'to be fixed' remarks. The meeting speed should allow them to scan the 'to be fixed' remarks.
- The page speed will be very high, which leads to a big disadvantage for un/bad prepared reviewers.
(They are still reading the document in the meeting and there is no time for that!)

Media to support the meeting:

- Using a laptop and an overhead screen (or and LCD projector) displaying the logging form for all to see makes it easy to control the meeting/flow. But also online editing of the logging by the logger/scribe saves time and improves the communication and commitment.

This is the best way to do it I have seen so far.

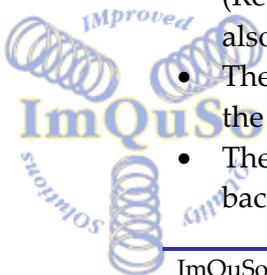
Even better to have a second projector to scroll the word document synchronized with the error logging

- Otherwise making a paper copy (of the processed log form) and distributing this at the start of the meeting is the least you should do.

Both solutions leave reviewers who participate in the meeting using a telephone conference call at a disadvantage, as they do not see or have the processed and updated logging.

The ideal situation: (Is that possible?)

- The review package is distributed to the reviewers at least eight working days in advance.
(Reviewers need at least five working days to prepare for the review. They also have their normal work!)
- The filled in logging forms are returned at least three working days prior to the meeting.
- The author processes the logging and redistributes the pre-processed remarks back to the reviewers at least two working days prior to the meeting.





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In this case everybody is well prepared in the meeting, making it as short as possible.

(But also demands from the reviewers an extra hour [or two] when they participate in a review.)

In practice we assume at least one-week delay for processing the rework by the author and rework verification. Assume at least one day to prepare/distributing the review package and planning of the meeting.

This gives a total lead-time of approx. three weeks for a single review. (For the ideal solution)

For difficult documents e.g. project plans, requirements, architectural documents, you need **at least** two reviews before the document is 'accepted'. (Bases on my personal experience)

(This even if the entire document can be reviewed in a single pass and you don need to split-up the document and have several meetings for it!)

This causes reviews to have a very great burden on the planning (and milestones) especially in a 'short time to market' organization.





Appendix C. Metrics collected during the review

The following metrics is collected during the review execution.

- ◆ This metrics is collected independent of the document type to be reviewed:
(This is not a complete list !)
- ⇒ Review Initiation date, Review closure date (=>review lead time)
- ⇒ Reference number review report
- ⇒ Review planned date, Actual review date (=> Meeting delay)
- ⇒ Review Type, Review result
- ⇒ File location
- ⇒ Number of Reviewers, Number of reviewers that prepared for the review
- ⇒ Number of participants in the meeting
- ⇒ Duration review meeting, Effort to organize the review, Total of preparation effort
- ⇒ Total number of Criticals, Majors, minors, Questions, Remarks, Typos, others
- ⇒ Total number of Rejected remarks marked by the author
- ⇒ Total number of Duplicates marked by the author
- ⇒ Number of Action points
- ⇒ Planned rework ready date, Actual rework ready date (=> rework delay)
- ⇒ Rework effort, Rework verification effort
- ⇒ Grand total effort for this review

The following review information is (at least) available when a review is closed.

Review planning time.

Person preparation time by the reviewers.

Meeting effort (participants * meeting duration).

Meeting closure en report generation effort.

Rework effort of the document after review by the author.

Rework verification effort.

Number of pages in the Object Under Review.

Number of defects found (per category).

- ◆ If the subject is a word file the following metrics can be put into the metrics worksheet:

- #Words
- #Characters
- #Paragraphs
- #Passive Sentences (Not of multiple grammar languages are defined.)





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- Reading Ease (Not of multiple grammar languages are defined.)
- Grade Level (Not of multiple grammar languages are defined.)
- #Pages
- Size
- #Lines
- #characters with spaces
- #tables
- #figures

If the defined (custom) document properties are used, the following information is also collected:

- ⇒ Title document
- ⇒ Author of the document
- ⇒ Document Version
- ⇒ Date document
- ⇒ Status document
- ⇒ Document Identification
- ⇒ Document Type
- ⇒ Project Name
- ⇒ Company name

(or any other property field can be used. For each metrics/value several can be defined.)

0. Date of the info extraction

This information is extracted twice

- Once prior to the review
- Once after the rework

If there is a 'Rework Ready date' or 'Rework effort' is defined, the later cases is assumed

(Or any other formula you specify to define 'After rework'!)





Appendix D. Review Analysis

As the review tool collects a lot of information that can be turned into practical use by calculating/presenting some review analysis information.

The 'Analysis' worksheet is created for this purpose.

The worksheet shows in the top left column some general review metrics (collected as is).

In the top right column some values can be defined that influence the outcome of some formulas used.

The following analysis information is created:

- Average number of issues found (per category) per page
Issues (per category) / number of pages
- Average review time spend on an issues (per category).
Issues (per category) / review time
Review time = grand total of all effort spend in this review
Each category is handled as this were the only issues found)
- Average number of issues (per category) still remaining in a page.
For this calculation we subtract the duplicates and rejects from the logged issues.

The actual average issues (per category) found on a page * (1 – review efficiency factor)

A review efficient of 75% assumes that you find 75 of the 100 issues present in a document by executing the review process.

- Average number of issues (per category) still remaining in the document.
Average number of remaining issues (per category) in a page * Number of pages.
- Average number of Defects still remaining in the document..
Not every issue found results in an actual defect. For each of the issues categories a weight factor is defined that can be used to calculated the 'assumed' defect based on the number of issues.
Number issues for a category * weight factor for that category and that summarize for all categories.

- Grand Total Review effort
Total time of activities spend in/on this review.
- Effort per page.
The total efforts spend on a page.
Grand Total Review effort / number of pages





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- Meeting checking rate.
Number minutes spend on one page during the meeting.
Number of pages / duration of the meeting in minutes
- Logging time meeting effort.
Total effort spend on the meeting
Number of people present in the meeting * meeting duration in minutes
- Total Checking time.
The sum of: the total time spend by reviewers in their personal preparation and the Logging meeting effort
- Control time.
The time needed to plan, arrange, process and control this review.
Can be seen as all time not dedicated to detection and correction.
the sum of: Review planning time and Meeting closure en report generation effort
This does not include the: Rework verification effort
- Detection time
The grand total review effort minus the rework time of the author
- Defect removal time (issue removal time)
The time spend on removing defects.
The sum of: Person preparation time by the reviewers and Meeting effort and report generation effort and Rework effort and Rework verification effort
- Possible document defects.
Not every issue found results in an actual defect. For each of the issues categories a weight factor is defined that can be used to calculated the 'assumed' defect based on the number of issues.
Number issues for a category * weight factor for that category and that summarize for all categories.
This will result in a number of assumed defects detected in this review.
- Possible prevented defects.
There is a chance that a new defect is introduced while fixing a known defect and is called; Repair effectiveness.
The actual defects prevented is: Possible prevented defect * Repair effectiveness
- Net time saved.
For a defect found in development an average fix time is defined.
Net time saved = Possible prevented defects * average fix time - grand total time spend on this review.
(Note: Lead-time loss, product degeneration and spirit loss are even not





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counted.)

- Relative costs of inspection
 $\text{Grand Total Review effort} / (\text{Net time saved} + \text{Grand Total Review effort})$

Used Graphs

- Issue category distribution
The sum of all issues is considered 100% and the graphs shows the contribution of each category to the 100%
- Issue distribution per page
Give an overview how many issues are found on each individual page.





Appendix E. The review repository

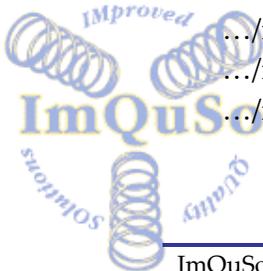
A special directory (as part of the project repository) needs to be created to serve as a file repository for documents that are created for (or during) the review process.

- ◆ The proposed directory structure (inside the repository) is:

```
.../reviews/  
    {Root all review related documents}  
.../reviews/RT-<PROJECT>.xls  
    {The review tool to be used for all project reviews}  
.../reviews/dsubject1/  
    {Directory to store all review files for this review}  
.../reviews/dsubject1/subject1.doc.org  
    {The original word source to be reviewed  
    Renamed to .org after the review meeting}  
.../reviews/dsubject1/subject1.doc  
    {The word source after the rework}  
.../reviews/dsubject1/subject1.doc.pdf  
    {The PDF file to send out to the reviewers}  
.../reviews/dsubject1/subject1.xls  
    {The default invitation for this review}  
.../reviews/dsubject1/summary.xls  
    {The review summary}  
.../reviews/dsubject1/reviewer1.xls  
    {The invitation/returned-logging of reviewer1}  
.../reviews/dsubject1/reviewer2.xls  
    {The invitation/returned-logging of reviewer2}  
...  
.../reviews/dsubject1/reviewerN.xls  
    {The invitation/returned-logging of reviewer N}  
.../reviews/subject2/  
    {Directory to store all review files for this review}
```

- ◆ In case several re-reviews on the document are done, each of the reviews can be stored in a separate sub-directory. Something like

```
.../reviews/dsubject1/00-02-05_1.0/  
.../reviews/dsubject1/00-04-05_1.7/  
.../reviews/dsubject1/00-08-05_2.0/
```





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In most organizations the documents/code to be reviewed is stored in 'version control' repository controlled using a 'configuration management' tool. Even with this review repository this still MUST be the case to comply the e.g. the Capability Maturity Model level 2 Configuration Management Key Process Area.

The word files (or any other 'to be reviewed' files) are stored here just to complete the repository with information to grant complete access to the complete review data.

Keeping the name of the summary file the same (for all reviews) makes is easy for 'automated' data collection program to extract the metrics information.





Appendix F. Review management

The person assigned to handle the review planning (See project plan) will take the appropriate actions.

How to enter a Review Planning

At the project start, some global information is entered about the documents/deliverables (subjects).

During the execution of the project actual information is stored, to make it possible to track the progress of the reviews, deliverable status and action items raised in the reviews

At project start.

The PL-SW has defined the deliverables list (including all documents) in his plan. The list specifies for each document when it should be accepted (at what milestone). The type of review to use on the document unless they are re-defined in the plan. Estimates on document size are done as part of an estimation procedure.

The following information fields have to be known (for each document) to make a planning:

- Title document:
The title of the document/deliverable
- Author / Owner:
Who writes or maintains this document.
- Due Date/ Milestone:
Rough indication when the document should be accepted.
(At project start just use milestone names. Actual dates are filled in later)
- Est. Pages:
Estimated size of document in pages. Used for review effort estimations
- Priority:
Priority of the document. 1=low and 9=high.
This can be used later when there are time constraints.
- Doc Status:
Pick type from the available list. E.g. Draft, Proposal, etc.
If the status is unclear leave it blank
- Review Type:
Pick type from the available list. E.g. Review, Walkthrough, Inspection, etc.
- Template type:
Pick type from the available list. E.g. Word, C-Source, etc.





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- Doc Type:
Pick type from the available list.
E.g. Requirement Specification, Development Plan, Test report, etc.

At (any) project phase start.

All documents that are to be accepted at/before the next milestone (specified in the project plan) must be monitored for status and review progress.

As all subjects to be reviewed are defined and priorities are set the project leader together with the authors decide when these documents should be ready for review.

The reviews should be planned over the complete available time period, to prevent clustering of reviews just before the milestone meeting. (I would even suggest limiting the number of 'planned' reviews just before the milestone, so that you have slack to do the 'delayed' reviews.)

The following information fields have to be known (for these documents) to update the planning:

- Proposal ready date:
This is the date when the document should be ready for review.
- Doc Status
The current state of the document.
Initial this left blank, to indicate an unknown state/progress
As soon as an author starts working on the document the status becomes:
Draft.

Ongoing review activities

When a document is ready for review (a review is requested!):

The following information fields have to be known (for these documents) to update the planning:

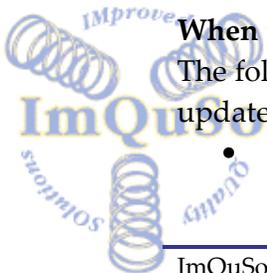
- Review requested date:
The actual date when the review for this document is requested
- Document status:
Becomes: Proposal (Also for Re-Reviews after initial rejection)

The review process using the review tool now starts and is not described here.

When the review is scheduled:

The following information fields have to be known (for these documents) to update the planning:

- Planned review date
The planned date of the review meeting.





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After the review is held:

The planning is updated and the review tool content is updated..

After the rework is completed:

The following information fields have to be known (for these documents) to update the planning:

- Actual date rework ready
This is the date when the rework was finished (and verified)
- Actual date Signed off
This is the date when the accepted document has all the signatures.
(This can be delayed a 'certain' period.)

The planning is updated and the review tool content is updated.

Review Tracking

For each stage in the life cycle of a document and for each stage in the review process a target date and actual date is stored which makes tracking very easy.

There are at least three stages where the progress should be tracked:

- When the document should reach the proposal state.
(E.g. when a review should be requested)
- When the review meeting should have been held.
(The review summary metrics should be available)
- When the rework should have been done.

Actionpoint Tracking

For each action point an owner and target date is defined which make it also easy to track. For ease of use one could decide to collect all action point in a single worksheet and do the tracking centrally in a project. (A sample of the central action point-tracking sheet available.)

Deliverable Overview

Maybe the 'file' use for planning can also be used to generate an overview of the status of all deliverables.

This list could also be copied to e.g. a biweekly project progress report.

Review analysis

The 'Metrics' worksheet gives an overview on all kinds of metrics data for this specific review.

Combining this information of several reviews in one file gives an opportunity to do review data analysis.





Appendix G. Config. & Protection of the IRT workbook

General Protection:

- The workbook structure is protected with a password. (Kodak)
No permission to add or delete worksheets
- The Macro's are protected by password. (Finkers)
No permission to view/edit the macros.

Worksheet: ImQuSo

Protected with a password. (Kodak)

Worksheet: reviewer_read-me, Author_read-me

Protected with a <blank> password to prevent accidental modification.
Feel free to adapt the content to your wishes / process definition.

Worksheet: Setup

Protected with a <blank> password to prevent accidental modification.

Worksheet: Review Form

This worksheet is unprotected.

All macros and calculation depend heavily on the defined location (layout) of fields in this worksheet.

Do not change anything here.

Worksheet: Review Preparation Form

This worksheet is unprotected.

The command: Summarize copies entire rows for this worksheet that may give the impression that columns can be added/modified. There are major dependencies for calculations in this worksheet, which lead to big problems if anything is changed here.

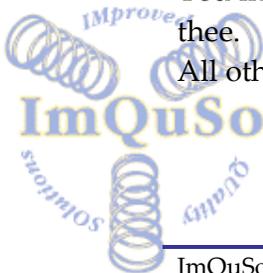
Worksheet: Action Items

This worksheet is unprotected.

The command: Summarize copies entire rows for this worksheet (starting at row three) and no other dependencies exist.

You may modify the number of columns but let the first action item start on row three.

All other worksheets are unprotected.





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