SOFTWARE QUALITY ASSURANCE

Lecture 12

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Switch off mobile phones during lectures, or put them into silent mode

TERM PAPER

- Finalize Group Members   26-Feb-2013
- Finalize Topic   12-Mar-2013
- Search Papers and Sort Selected (TODAY)   20-Mar-2013
- Go Through the Abstract and Introduction of Selected Papers   27-Mar-2013
- Submit a Summary and Comments on related papers   09-Apr-2013
- Present Your Work till Today   09-Apr-2013
- Submit Initial Draft   30-Apr-2013
- **Final Paper Submission**   **21-May-2013**
- Feedback on Final Submission + Plagiarism Report   28-May-2013
- Final Presentation   4-June-2013

Please note that Every Phase has Marks

PLEASE CAST YOUR VOTE

CONTENTS

- Software Inspections
- Inspections Process
- Inspections Follow-Up
- Prevention Meeting
- Data Recording and Reports
- Inspection Process Monitoring
- Roles and Responsibilities
- Qualities of Good Moderators

ETVX

- This technique is known as Entry-Task-Validation/Verification-eXit (ETVX) technique

ETVX Representation

- The model expressed as a set of interconnected activities each of which has four sets of attributes
  - Entry (E)
  - Task (T)
  - Validation/Verification (V)
  - Exit (X)

ENTRY

- The Entry section defines the entry criteria that must be satisfied for the process to be initiated, and list the work products that must be available as inputs to the process

TASKS

- The Task section defines work to be carried in performing the process. The order of the task is generally, but not strictly sequential. Some tasks may be concurrent with other tasks
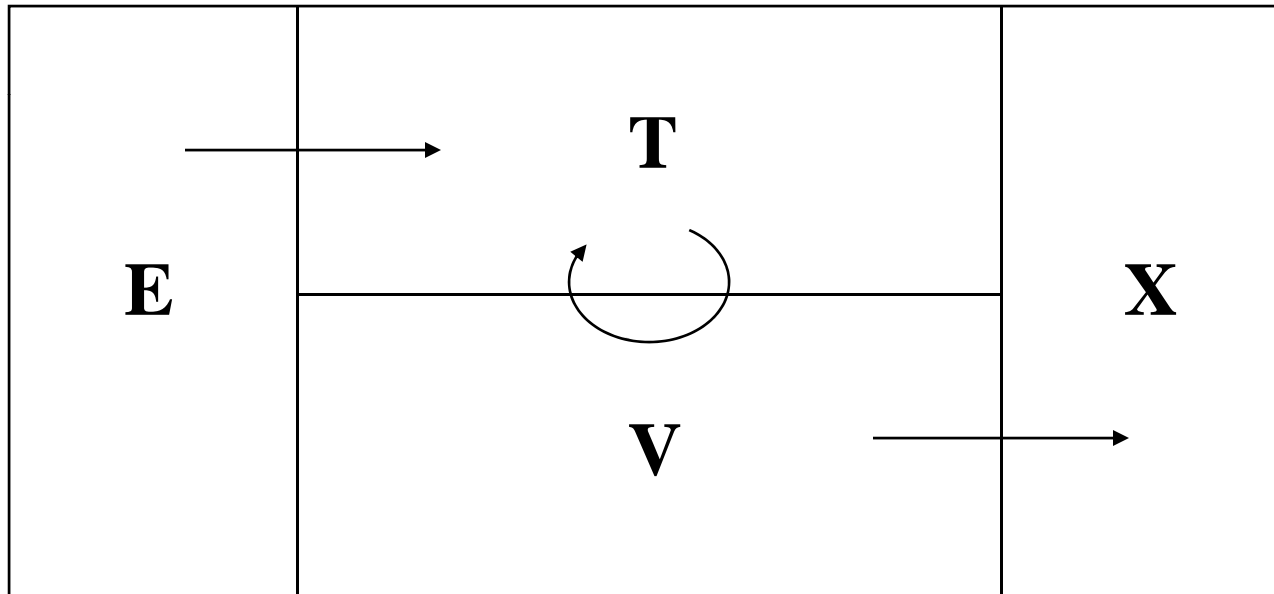
VALIDATION/VERIFICATION

- The validation/verification section defines steps for validating/verifying that the process has been properly executed, and that the associated work products meet project objectives
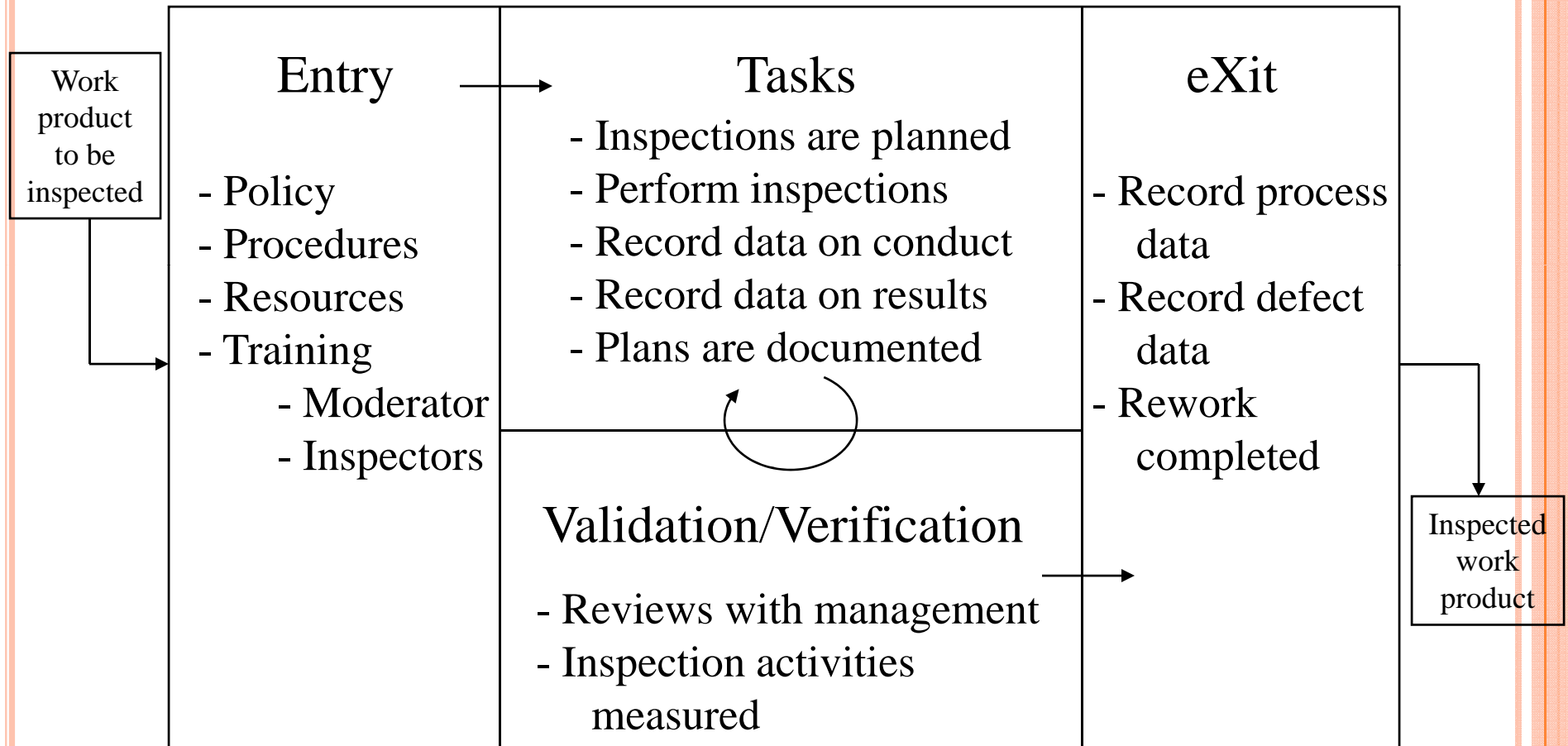
EXIT

- The Exit section defines the exit criteria that must be satisfied for the process to be terminated. The exit criteria usually define completion and verification work products, in terms of qualitative aspects of the products

THE ETVX PROCESS DEFINITION PARADIGM

PRACTICES IN THE INSPECTION PROCESS

Work product to be inspected

Entry

- Policy
- Procedures
- Resources
- Training
    - Moderator
    - Inspectors

Tasks

- Inspections are planned
- Perform inspections
- Record data on conduct
- Record data on results
- Plans are documented

Validation/Verification

- Reviews with management
- Inspection activities measured

eXit

- Record process data
- Record defect data
- Rework completed

Inspected work product

Inspection Process

INSPECTION PROCESS

- Planning and scheduling
- Overview
- Preparation
- Inspection meeting
- Analysis meeting
- Rework
- Follow-up
- Prevention meeting
- Data recording and reports
- Inspection process monitoring

PLANNING AND SCHEDULING - 1

- To ensure adequate time and resources are allocated for inspections and to establish schedules in the project for work products to be inspected, to designate the inspection team, and to ensure the entry criteria are satisfied

PLANNING AND SCHEDULING - 2

- All project plans exist at three levels of knowledge as the project progresses
  - Those things that are unknown
  - Those things that are becoming known
  - Those things that are known
- Plan details reveal themselves to the planner as a rolling wave

PLANNING AND SCHEDULING - 3

- The project lead must plan which inspections are to be performed at the initial stages of the project
- Unknowns become knowns
- Has two sections
  - Inspection planning
  - Inspection scheduling

INSPECTION PLANNING: RESPONSIBILITY

- The project lead or whoever is responsible for managing the work for a specified software project is responsible for performing the activities for Inspection Planning

INSPECTION PLANNING: ENTRY CRITERIA - 1

- A policy exists for inspections in the project's organization
- Planning procedures, including planning for inspections exist
- A project begins and includes the requirement to plan for inspections
- Work product types to be inspected are identified in the project plan

INSPECTION PLANNING: ENTRY CRITERIA - 2

- Well-defined work product completion or readiness criteria are available
- Initial estimates are provided for the size of the work products to be inspected
- Expected project participants have been trained or a training plan is defined
- Goals and targets have been established for the volume or percentage of work products to be inspected

INSPECTION PLANNING: TASKS

- Determine what will be inspected
- Estimate resources for inspections and allocate budget
- Set milestones for the inspections
- Identify dependencies on other groups

INSPECTION PLANNING: VALIDATION/VERIFICATION - 1

- The SQA group in the organization should assure that the project plan has been documented and includes planned inspections as required by the organization policy and procedures

INSPECTION PLANNING: VALIDATION/VERIFICATION - 2

- Data to be gathered during this activity
  - Which work products are planned for inspection
  - The estimated size of work products to be inspected
  - Risks
  - The number of planned inspections
  - Planned effort to be spent on inspections

INSPECTION PLANNING: EXIT CRITERIA

- There is a project plan showing the inspections to be held, including resources and milestones that may be known in the early stages of the project

- Where milestones may not be known a boundary of probable dates should be noted in the plan for the inspections

- Adequate resources are allocated in the project plan for inspections

INSPECTION SCHEDULING: RESPONSIBILITY

- The project lead is responsible
  - For requesting, selecting, or assigning Moderators when a work product approaches inspection readiness
  - For ensuring the work product will be ready for inspection
  - For ensuring that the participants are made available
  - For making known to a qualified Moderator that an inspection is to be scheduled

INSPECTION SCHEDULING: OTHER ROLES

- The moderator with the project lead is responsible for completing inspection scheduling
- This includes
  - Agreement on a specific date
  - Ensuring that entry criteria is met
  - Completing all logistics requirements
  - Scheduling the participants and inspection activitites

INSPECTION SCHEDULING: ENTRY CRITERIA

- A work product is approaching inspection readiness

- Resources are available

- The project lead makes a request to a moderator for an inspection or a set of inspections

INSPECTION SCHEDULING: TASKS

- Send a notification that an inspection will be needed
- Determine the inspection meeting date
- Ensure that the work product to be inspected meets entry criteria
- Schedule the inspection meeting

INSPECTION SCHEDULING: VALIDATION/VERIFICATION - 1

○ The moderator remains actively involved during the inspection scheduling period and is responsible for assuring that all tasks up to completion of the inspection meeting are performed

○ The SQA groups ensures that a moderator has been assigned

INSPECTION SCHEDULING: VALIDATION/VERIFICATION - 2

- Data gathered during this activity includes
  - How much in advance the project lead is sending notification to the moderator
  - How long is the period between notification and the inspection meeting
  - How many inspections required postponement
  - Actual versus planned inspections

INSPECTION SCHEDULING: EXIT CRITERIA

- The inspection activities have been recorded as Performed on the scheduled dates and Closed within the dates determined at the inspection meeting or rework

OVERVIEW - 1

○ Provides the inspection participants a background and understanding, when warranted, of the scheduled inspection material

○ An overview is not an inspection meeting

○ If inspectors are sufficiently familiar with the work product, the overview can be skipped

OVERVIEW - 2

- Another reason for an overview meeting, is to identify any open issues in the work product

- An open issue is an acknowledgement of the fact that a subpart of the work product is not complete for some reason

- The producer may want focus the inspectors on subparts that are problematic or of some concern

OVERVIEW: RESPONSIBILITY

- The producer's primary responsibility for the success of the overview meeting is to deliver the presentation

- If overview material is provided, it is the producer's responsibility to make sufficient copies for the meeting either directly or via the moderator

OVERVIEW: OTHER ROLES

- The moderator determines with the project lead whether an overview is necessary, schedules the overview meeting, obtains the meeting room, and records the time of the meeting, the number of participants, and the results of the meeting

- Inspectors participate during the overview meeting and must concur that the overview met the exit criteria

OVERVIEW: ENTRY CRITERIA - 1

- A project lead has sent notification for an inspection
- The inspection requires a mandatory overview, or criteria for an optional overview has been satisfied; e.g.,
  - Complexity of the work product solution
  - Volume of material in the work product
  - Criticality of the work product
  - Customer requirements

OVERVIEW: ENTRY CRITERIA - 2

- The producer is ready to present the overview
- Open issues and any potential problem areas are highlighted

OVERVIEW: TASKS - 1

○ Producer prepares for the overview using a format and style that will best convey the information to the participants

○ Moderator invites the participants to the overview meeting

○ Producer presents the overview

○ Inspection team members concur that the overview satisfies the needs for preparation and inspection meeting

OVERVIEW: TASKS - 2

- Any open issues are documented in the inspection report
- If the overview is used to familiarize the participants with their roles, the inspection process, or some other aspect key to this inspection, the moderator will provide this briefing
- Defects, if any, are documented

OVERVIEW: VALIDATION/VERIFICATION - 1

- The moderator uses the work product overview meeting entry criteria and procedure to determine if a meeting is necessary
- The inspection team is in concurrence with the decision taken to have an overview or not

OVERVIEW: VALIDATION/VERIFICATION - 2

- The inspectors have the responsibility to state that the overview, when held, is satisfactory for their preparation and subsequent inspection meeting

- The SQA group ensures that the moderator has used the overview meeting criteria and ensures an appropriate decision was made to have an overview or not. This can be done via audits of the process records or sampling of inspections

OVERVIEW: VALIDATION/VERIFICATION - 3

- Data gathered during this activity
  - How much participant time was spent in the overview
  - The clock time for the overview
  - Time between notification and the overview meeting
  - How many overviews required rescheduling
  - How many defects were identified at the overview

OVERVIEW: EXIT CRITERIA

- The overview meeting was determined to be satisfactory by the inspectors and SQA
- Open issues are documented
- Potential problems areas are noted to the participants for preparation and for the reader for the inspection meeting
- Defects, if any, are documented

PREPARATION - 1

- Allows time for the inspection participants to sufficiently prepare for the inspection meeting and list potential defects

PREPARATION - 2

- During preparation the inspectors should:
  - Increase their understanding of the material
  - Inspect the work product using the checklist appropriate to the work product
  - Identify possible defects that will be discussed at the inspection meeting
  - Create a list of minor defects and provide them to the producer
  - Note the amount of time spent in this activity

PREPARATION: RESPONSIBILITY

- Primary responsibility is with the inspectors to ensure they have properly prepared for the inspection meeting
- If an inspector cannot prepare sufficiently, the moderator must be notified immediately and a backup inspector selected
- The inspection meeting may have to be cancelled in those situations if backup inspector is not available
- Decision should be recorded to learn during analysis

PREPARATION: OTHER ROLES

- The moderator should first estimate the preparation time needed for the inspection based on the material to be inspected. These estimates should be verified with the inspection team participants

- The moderator needs to get a commitment from each participant that enough time is allocated and that it will be sufficient for him/her to prepare

PREPARATION: ENTRY CRITERIA - 1

- The overview, if needed, has been satisfactorily completed

- Any open issues identified for the overview have been closed and addressed in the work product or are documented as open issues and provided as ancillary material for the preparation

PREPARATION: ENTRY CRITERIA - 2

- Open issues not closed are documented for tracking within the change control system used by the project
- The producer determines that the work product is ready for inspection
- The work product has reached closure and the code complies with defined standards, style guides, and templates for format

PREPARATION: ENTRY CRITERIA - 3

- All necessary ancillary material have been made available well in advance

- The work product includes all base-lined function and approved changes for this planned work product completion date

- The amount of time needed for preparation has been confirmed with the inspectors and is available to them

- Predecessor and dependent work products are available, have been inspected, and meet exit criteria
- The moderator and producer have defined the coverage of material to be inspected
- The work products allow easy identification of defects by location in the material
- The moderator agrees that the work product is inspectable

PREPARATION: TASKS - 1

- Each inspector uses the scheduled time to complete the preparation in a style and format they are comfortable with

- The material to be inspected is marked with questions, concerns, and possible defects, both major and minor, found during inspection

PREPARATION: TASKS - 2

- The minor defects are either recorded on a separate sheet that will be delivered to the moderator at the start of the inspection meeting or they are clearly noted in the marked material that will be delivered to the moderator at the end of the inspection meeting. Each minor defect should be noted by location in the work product when using a minor list

PREPARATION: VALIDATION/VERIFICATION - 1

- The moderator uses the preparation entry criteria and procedure

- The moderator uses the minor defect information to determine if all inspectors have properly performed preparation

- The inspectors have confirmed that they have prepared

PREPARATION: VALIDATION/VERIFICATION - 2

- The SQA group ensures that the moderator has used the preparation procedure and that the inspectors performed sufficient preparation. This can be done via audits of the process records or sampling of inspections

PREPARATION: VALIDATION/VERIFICATION - 3

- Data gathered in this activity
  - How much time was spent in preparation
  - How long a period between notification of the inspection and the preparation
  - How many inspection meetings required rescheduling due to insufficient preparation
  - The number of major and minor defects found during preparation

PREPARATION: EXIT CRITERIA

○ Each inspector has completed sufficient preparation based on organization and project preparation time criteria

○ Minor defect inputs are complete

○ Preparation notes are recorded on the work product materials or defect lists

INSPECTION MEETING - 1

- Identifies defects before work product is passed into the next project stage
- Some discussions are held in the inspection meeting

INSPECTION MEETING - 2

- The identified defect is agreed to be a defect, or at least a potential defect, by the inspection team, including the producer

- If a discussion item cannot be agreed to be a defect, it should be noted as an open issue to be resolved after the meeting

INSPECTION MEETING - 3

- The defect can be classified by class, severity, and type
- The defect can be described crisply but sufficiently

INSPECTION MEETING - 4

○ The inspection meeting has schedule and entry requirements. If inspectors are late by ten minutes, postponement should be considered

○ The critical inspectors include the moderator, producer, and reader

INSPECTION MEETING: RESPONSIBILITY

- The moderator is responsible for managing an effective and efficient meeting

INSPECTION MEETING: OTHER ROLES - 1

○ The producer is responsible for the inspected work product, answering questions, and concurring on identified defects or adequately explaining to the inspection team's agreement why the identified possible defect is not a defect

INSPECTION MEETING: OTHER ROLES - 2

- The reader is responsible for focusing and pacing the inspection meeting by leading the team through the material
- The recorder is responsible for correctly recording all identified defects and open issues
- All inspectors, including the producer, are responsible for sharing their questions and identified defects found during preparation, and work together to find more defects in meeting

INSPECTION MEETING: ENTRY CRITERIA - 1

 The inspection team members are sufficiently present in number and role assignments

 Inspection materials were available for preparation with sufficient time for study and review before the inspection meeting, including necessary reference material

INSPECTION MEETING: ENTRY CRITERIA - 2

- Inspectors have adequately prepared
- Inspectors have submitted their minor defects list at the start of the meeting or have marked the work products that will be provided at the end of the meeting
- Scope of the inspection meeting has been defined

INSPECTION MEETING: ENTRY CRITERIA - 3

- Recorder and a data recording system are available
- Other roles; e.g., reader have been assigned
- The producer has identified any new potential problem areas

INSPECTION MEETING: TASKS - 1

- Brief introduction (moderator)
- Preparedness check (moderator)
- Read the work product (reader)
- Identify defects (inspectors)
- Record defects (recorder)

INSPECTION MEETING: TASKS - 2

- Determine disposition of material (inspection team)
  - Accept the material
  - Accept the material after verification with follow-up inspector
  - Request the work product to be re-inspected after rework
  - Recommend re-engineering of the work product followed by a new inspection

INSPECTION MEETING: VALIDATION/VERIFICATION - 1

- The moderator, using the inspection meeting entry criteria and procedure, determines if the team has properly performed the inspection
- The inspectors participated in an effective meeting
- The SQA group ensures that inspection meeting procedure and that the inspectors performed sufficient preparation. This can be done via audits of the process records or sampling of inspections

INSPECTION MEETING: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - How much time was spent in the inspection meeting
  - How long a period between the preparation and the inspection meeting
  - How many inspection meetings required rescheduling due to insufficient preparation
  - How many inspections required re-inspection

INSPECTION MEETING: VALIDATION/VERIFICATION - 3

- How many defects were found
- How long the meeting took
- How many inspectors were in attendance

INSPECTION MEETING: EXIT CRITERIA - 1

- The inspection materials have been inspected and coverage of the work product is completed as planned
- The inspection results fall within expected tolerance of performance for
  - Time spent during preparation
  - Time spent at the inspection meeting
  - Defect density

INSPECTION MEETING: EXIT CRITERIA - 2

- The defects and the conduct of the inspection have been recorded and the team concurs with the contents
- Open issues have been recorded for follow-up during rework
- The moderator or a designee has been appointed to perform follow-up with the producer

INSPECTION MEETING: EXIT CRITERIA - 3

o Data is available to update the process data base

o Any associated deviations or risks are noted

o Decisions to re-inspect or not have been reviewed against criteria

o Decision on re-engineering has been addressed

INSPECTION MEETING: EXIT CRITERIA - 4

- Process defects have been recorded, as appropriate, as well as product defects
- The locations of the defects of the inspected work product are clearly noted to facilitate repair
- A decision is taken on the timeframe by which defect repairs and open issues will be resolved
- The inspection satisfies the criteria to be indicated as performed

ANALYSIS MEETING

- Which is held after the inspection meeting, to begin defect prevention activities

- This activity was not part of the original inspections

ANALYSIS MEETING: RESPONSIBILITY

- The moderator with the project lead determines whether this activity will be performed

ANALYSIS MEETING: OTHER ROLES

 The producer should be willing to accept open input from the inspection team regarding the potential causes of the identified defects

ANALYSIS MEETING: ENTRY CRITERIA

- The project lead and moderator have chosen this activity to be performed

- The inspection team has been trained in causal analysis techniques. Training in team dynamics and group behavior can be helpful

- Major defects have been found during the inspection

- A defect taxonomy or set of cause categories has been defined

ANALYSIS MEETING: TASKS

- Select the defects to discuss
- Determine the potential causes of the defects discussed
- The recorder will record the analysis meeting results and provide them to the inspection coordinator or SEPG as input for process improvement consideration within the organization at the prevention meeting

ANALYSIS MEETING: VALIDATION/VERIFICATION - 1

- The moderator uses the analysis meeting entry criteria and procedure to determine if all inspectors have properly participated and the meeting was effective
- The inspectors have participated
  - If they cannot participate, they must notify the moderator at the start of the inspection meeting
- The SQA group ensures that the moderator has used the Analysis meeting checklist and reviews the recorder's report for sufficiency. Audits

ANALYSIS MEETING: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - How much time was spent in the analysis meeting
  - How many defects were discussed
  - How many defects were assigned causes

ANALYSIS MEETING: EXIT CRITERIA

- The analysis meeting records have been completed
- Data is provided to the SEPG or inspections coordinator

REWORK

- Fixes identified defects and resolves any open issues noted during the inspection

- In some cases, the repair may require a Change request to be written because of the nature or impact of the defect

OPEN ISSUES IN REWORK

- The open issue is accepted as a defect and repaired

- The open issue becomes a change request for further investigation

- The open issue was incorrectly identified as potential defect and is closed as a non-defect

REWORK: RESPONSIBILITY

 The producer is responsible for all open issues, fixing all defects, and writing any change requests

REWORK: OTHER ROLES

- The moderator or designee is assigned to discuss open issues with the producer during rework and to come to concurrence with the producer

REWORK: ENTRY CRITERIA

- The list of defects and open issues is provided to the producer for resolution

- The moderator or someone assigned meets with the producer to review rework and open issues

- The inspection report is completed, is on file, and available

REWORK: TASKS

- The producer repairs accepted defects identified during the inspection meeting
- The producer resolves any open issues
- The moderator meets with the producer to discuss resolutions of open issues
- Change requests are written for any open issues or defects not resolved during the rework activity
- Either the minor defect list or marked work products with minor defects noted are used to repair the minor defects

REWORK: VALIDATION/VERIFICATION - 1

- The follow-up activity is scheduled; where the rework will be verified by the moderator or assigned designee
- SQA has reviewed sample results of this activity in the project

REWORK: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - How much time was spent in rework
  - How many open issues were resolved and accepted as defects
  - How many open issues became submitted change requests

REWORK: EXIT CRITERIA

- The producer resolves all defects and open issues
- Inspected work product materials are updated to account for repairs

FOLLOW-UP

FOLLOW-UP

- Verifies that all defects and open issues have been adequately fixed, resolved, and closed out

FOLLOW-UP: RESPONSIBILITY

- The moderator is the individual primarily responsible for reviewing repairs. The moderator will also review the producer's decisions on repairs and change requests. The moderator may delegate some or all of this responsibility

FOLLOW-UP: OTHER ROLES

- The producer is to provide an explanation of the repairs and closures made

FOLLOW-UP: ENTRY CRITERIA

- Rework of defects has been completed; i.e., fixed or identified with a decision to not fix
- The producer has completed the rework for defects and open issues resolved to be defects
- Change requests are written for any defects or open issues not resolved
- The moderator concurs with the producer's decisions on defects, open issues, and change requests

FOLLOW-UP: TASKS - 1

- The moderator and producer discuss and agree on compliance with respect to defects and open issues

- In case of disagreement, the issue would be resolved by the project lead

- The producer updates the work product to reflect the fixes to defects found and open issues accepted as defects

FOLLOW-UP: TASKS - 2

- The producer writes any change requests that may be required
- The moderator completes the inspection report and marks the inspection as closed

FOLLOW-UP: VALIDATION/VERIFICATION - 1

○ The moderator concurs with the defect repairs and open issue closures

○ The producer reviews the final inspection report

○ SQA group reviews the final inspection report

FOLLOW-UP: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - How much time was spent in follow-up
  - How many open issues were disputed

FOLLOW-UP: EXIT CRITERIA

- Any change requests resulting from unresolved open issues have been submitted to the change approval process for handling
- The inspection report is completed and the producer agrees
- If necessary, a re-inspection is scheduled
- If necessary, issues are escalated to the project lead for resolution
- The inspection is noted as closed

PREVENTION MEETING

PREVENTION MEETING

○ Which is held periodically after sets of inspections have been performed to determine probable causes for selected defect types, instances, or patterns

○ Required data about defects

PREVENTION MEETING: RESPONSIBILITY

- The prevention team leader for the prevention meeting will record the results of the meeting and deliver proposals for actions to the organization management

PREVENTION MEETING: OTHER ROLES

- The members of the prevention meeting team will participate to determine actions for probable causes of selected defect types

PREVENTION MEETING: ENTRY CRITERIA

- An inspection meeting was held
- The analysis meeting was held
- Defect data including causes are available to the prevention meeting team

PREVENTION MEETING: TASKS

- Record data from the prevention meeting
- Record proposed actions to be taken for defect prevention
- Initial preparation for the proposals to be presented to management for decision

PREVENTION MEETING: VALIDATION/VERIFICATION - 1

- The prevention team has met based on the defined cycles for the meetings
- SQA reviews sampled reports
- The SEPG reviews proposed actions and resultant actions taken

PREVENTION MEETING: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - Time in the prevention meeting
  - Effort invested at the meeting
  - Number of proposals brought forward to management
  - Number of actions taken from proposals

PREVENTION MEETING: EXIT CRITERIA

- The data is complete and agreed to by the prevention meeting participants

DATA RECORDING AND REPORTS

DATA RECORDING AND REPORTS

- To record the data about the defects and conduct of the inspection
- This activity is held concurrently with other activities, including at the end of the inspection process

DATA RECORDING AND REPORTS: RESPONSIBILITY

- The recorder during the overview, inspection meeting, and optional analysis meeting records data about the defects and the conduct of the inspection
- Alternatively the moderator can enter the data

DATA RECORDING AND REPORTS: OTHER ROLES

- The moderator after the overview and during the follow-up activity ensures that the data has been entered correctly and completely

DATA RECORDING AND REPORTS: ENTRY CRITERIA

- The optional overview meeting was held
- The inspection meeting was held
- The optional analysis meeting was held

DATA RECORDING AND REPORTS: TASKS

- Record data from overview, if held
- Record data at the inspection meeting, including preparation data
- Record data at the optional analysis meeting
- Record data during the follow-up activity, including sign-off to close the inspection

DATA RECORDING AND REPORTS: VALIDATION/VERIFICATION - 1

- The inspection verifies the data at the end of the inspection meeting and optional analysis meeting
- SQA review sampled reports
- The producer reviews the report completed by the moderator

DATA RECORDING AND REPORTS: VALIDATION/VERIFICATION - 2

- Data should be considered for this activity; e.g., how much effort is used for recording and reporting

DATA RECORDING AND REPORTS: EXIT CRITERIA

○ The data are complete and agreed to by the inspection meeting and analysis meeting participants

○ The data gathered during the follow-up activity are complete and agreed to by the producer and moderator

INSPECTION PROCESS MONITORING

INSPECTION PROCESS MONITORING

○ This activity is held concurrently with other activities and after inspections

○ The purpose is to evaluate the results of the inspection process as performed in the organization and to propose suggestions for improvement

INSPECTION PROCESS MONITORING: RESPONSIBILITY

- The inspection process coordinator or SEPG is responsible for monitoring and suggesting improvements

INSPECTION PROCESS MONITORING: OTHER ROLES

- Management ensures that inspection process monitoring is integrated into the inspection process
- The inspection process improvement team proposes actions for inspection process improvements based on the monitoring and analysis of the inspection coordinator

INSPECTION PROCESS MONITORING: ENTRY CRITERIA

- Reports and results from inspections over a period of performance are available
- A coordinator is assigned
- Resources are allocated for inspection process improvement team

INSPECTION PROCESS MONITORING: TASKS - 1

- Gather the inspection process data provided since the last monitoring report

- Review inspection reports and related data for trends and results against objectives

- Interview inspection participants to ensure understanding of results and to gather other inputs

INSPECTION PROCESS MONITORING: TASKS - 2

- Perform analysis using data from the inspection reports, interviews, and surveys
- Provide the analysis to the inspection process improvement team for review and proposal to management for inspection process management

INSPECTION PROCESS MONITORING: VALIDATION/VERIFICATION - 1

- The inspection coordinator performs monitoring actions per agreed periods for analysis
- The inspection process action improvement team meets per agreed periods for recommendations
- SQA reviews monitoring activity on a random basis to ensure it is being performed

INSPECTION PROCESS MONITORING: VALIDATION/VERIFICATION - 2

- Data gathered during this activity
  - How much effort is expended
  - How many proposals for improvement are made
  - How many improvements are put into action

INSPECTION PROCESS MONITORING: EXIT CRITERIA

- Reports of analysis are developed
- Actions for improvements are proposed
- Actions are implemented for inspection process improvements

REFERENCES

- Inroads to Software Quality by Alka Jarvis and Vern Crandall, PH 1997 (Ch. 7)

- Software Engineering: A Practioner's Approach by Roger S. Pressman (Ch. 8)

- Software Inspections by Ronald A. Radice, Tata-McGraw Hill, 2003