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Online Review Phases 1.1 Requirements Specification

1. Scope

1.1 Overview

The Online Review application defines a set of phase types. This component provides the plug-ins to the Phase Management component, whose logic is to check if these phases can be executed. Extra logic to execute the phases is also provided.

Version 1.1 adds a new phase type (Post-Mortem) and some behavioral modifications in certain phases (to automatically create Approval or Post-Mortem phases for finished or failed projects). The new and modified requirements are in blue.

In addition to the functional changes, designers are responsible for migrating the design to TCUML format, and for updating it and the documentation to account for modifications that have taken place since version 1.0. Developers are responsible for correcting any existing tests that are now failing, as well as for adding tests for the new functionality.

1.2 Logic Requirements

1.2.1 Phase Change Emails

Upon any phase change, emails should be sent to the resources associated with timeline notification for the project. The email template should be configurable.

1.2.2 Registration Phase Handler

Registration can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The period has passed;
- The number of registrations meets the required number.

When Registration phase is stopping, if there are no registrations, a Post-Mortem phase is inserted that depends on the end of the finished Registration phase.

1.2.3 Submission Phase Handler

Submission can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The period has passed;
- If manual screening is absent, the number of submissions that have passed auto-screening meets the required number;
- If manual screening is required, the number of submissions that have passed manual screening meets the required number.

When Submission phase is stopping, if there are no submissions, a Post-Mortem phase is inserted that depends on the end of the finished Submission phase.

1.2.4 Screening Phase Handler

Screening can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- If it's primary screening mode, all submissions that passed auto-screening have one screening scorecard committed.
- If it's individual screening mode, the submission that passed auto-screening has one screening scorecard committed.

When screening is stopping, submissions with failed screening scorecard scores should be set to the status Failed Screening. The screening scores should be saved to the submitter's resource properties.
When Screening phase is stopping, if no submissions have passed screening, a Post-Mortem phase is inserted that depends on the end of the finished Screening phase.

1.2.5 Review Phase Handler

Review can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- All active submissions have one review scorecard from each reviewer for the phase;
- All test case reviewers have one test case upload.

When Review phase is starting, all submissions failed automated screening must be set to the status Failed Screening.
When Review phase is stopping, the initial scores should be aggregated and saved to the submitter's resource properties.

1.2.6 Appeals Phase Handler

Appeals can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The period has passed.

1.2.7 Appeals Response Phase Handler

Appeals Response can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- All appeals are resolved.

When Appeals Response is stopping, all submissions with failed review scores should be set to the status Failed Review. Overall score for the passing submissions should be calculated and saved to the submitters' resource properties together with their placements. The winner and runner-up should be populated in the project properties. Submissions that do not win should be set to the status Completed Without Winning.
When Appeals Response phase is stopping, if no submissions have passed review, a Post-Mortem phase is inserted that depends on the end of the finished Appeals Response phase.

1.2.8 Aggregation Phase Handler

Aggregation can start as soon as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The winning submission must have one aggregated review scorecard committed.

When Aggregation is starting and Aggregation worksheet is not created, it should be created; otherwise it should be marked uncommitted, as well as the aggregation review comments.

1.2.9 Aggregation Review Phase Handler

Aggregation Review can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The aggregation review is performed by two reviewers other than the aggregator, and the winning submitter.

When Aggregation Review phase is stopping, if the aggregation is rejected by anyone, another aggregation/aggregation review cycle is inserted.

1.2.10 Final Fix Phase Handler

Final Fix can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The final fix has been uploaded;

When Final Fix is starting and Final Review worksheet is not created, it should be created; otherwise it should be marked uncommitted. Previous final fix upload will be deleted.

1.2.11 Final Review Phase Handler

Final Review can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The final review is committed by the final reviewer.

When Final Review phase is stopping, if the final review is rejected, another final fix/review cycle is inserted.
When Final Review phase is stopping, if final review is approved, an Approval phase is inserted that depends on the end of the finished Final Review phase.

1.2.12 Approval Phase Handler

Approval can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The approval scorecards are committed;
- All approval scorecards must have passing scores;
- At least the required number of Approver resources have filled in a scorecard (use the Reviewer Number phase criteria).

When Approval phase is stopping, if the approval is rejected, another final fix/review cycle is inserted that depends on the end of the finished Approval phase.

1.2.13 Post-Mortem Phase Handler

Post-Mortem can start as soon as the dependencies are met, and can stop when:

- The dependencies are met;
- The post-mortem scorecards are committed.
- At least the required number of Post-Mortem Reviewer resources have filled in a scorecard (use the Reviewer Number phase criteria).

1.3 Required Algorithms

No specific algorithms are required.

1.4 Example of the Software Usage

The Online Review application will plug the phases into the Phase Management component.

1.5 Future Component Direction

None.

2. Interface Requirements

2.1.1 Graphical User Interface Requirements

None.

2.1.2 External Interfaces

None.

2.1.3 Environment Requirements

- Development language: Java 1.4
- Compile target: Java 1.4

2.1.4 Package Structure

com.cronos.onlinereview.phases

3. Software Requirements

3.1 Administration Requirements

3.1.1 What elements of the application need to be configurable?

- Database connection

3.2 Technical Constraints

3.2.1 Are there particular frameworks or standards that are required?

JDBC

3.2.2 TopCoder Software Component Dependencies:

- Configuration Manager
- DB Connection Factory
- Project Phases
- Project Management
- Deliverable Management
- Phase Management
- Review Score Calculator
- Score Aggregator
- Email Engine

- Document Generator

**Please review the TopCoder Software component catalog for existing components that can be used in the design.

3.2.3 Third Party Component, Library, or Product Dependencies:

None.

3.2.4 QA Environment:

- RedHat Linux 7.1
- Informix 10.0

3.3 Design Constraints

The component design and development solutions must adhere to the guidelines as outlined in the TopCoder Software Component Guidelines.

3.3.1 Database Connections

Database connections must not be cached within the component. Connections should be created for each operation and closed afterwards.

3.4 Required Documentation

3.4.1 Design Documentation

- Use-Case Diagram
- Class Diagram
- Sequence Diagram
- Component Specification

3.4.2 Help / User Documentation

- Design documents must clearly define intended component usage in the 'Documentation' tab of TCUML.