



# Detecting Defects in Software Models of Small Teams

Small Teams Helper: Extension for Sparx Enterprise Architect

Jakub Ondik <jakubondik@gmail.com>, supervisor: Karol Rástočný

## Parsing rules

- check, if there are any new rules and download them
- parse all available rules
  - if there is a problem with parsing a rule, skip it

## Register event watchers

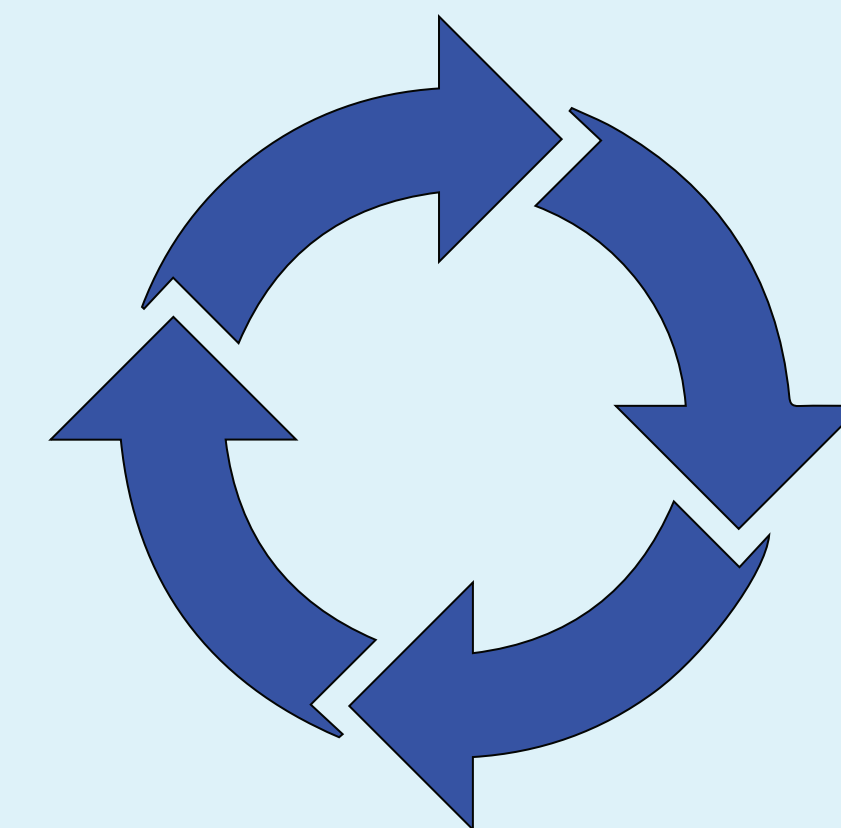
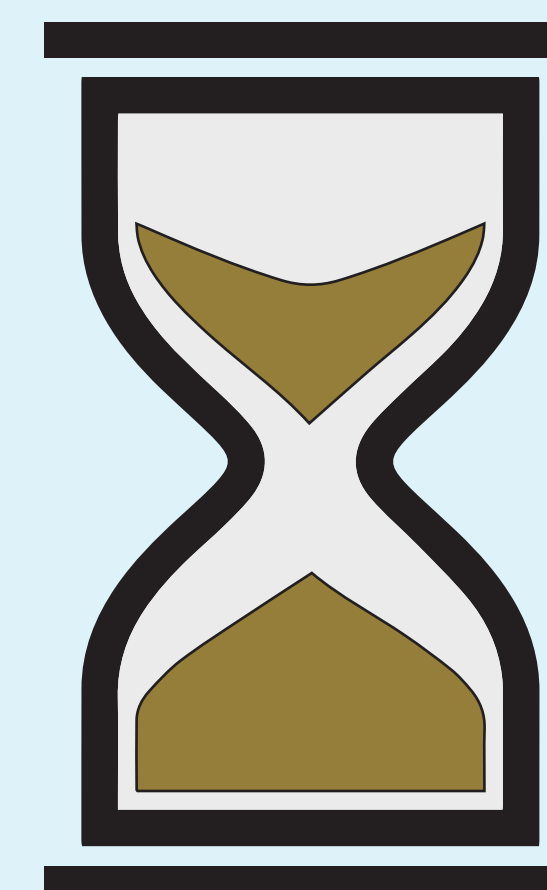
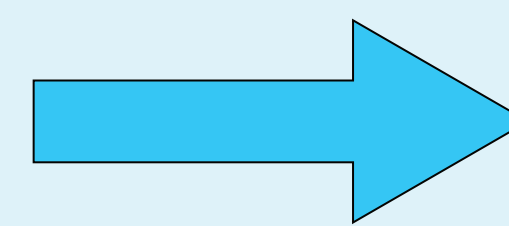
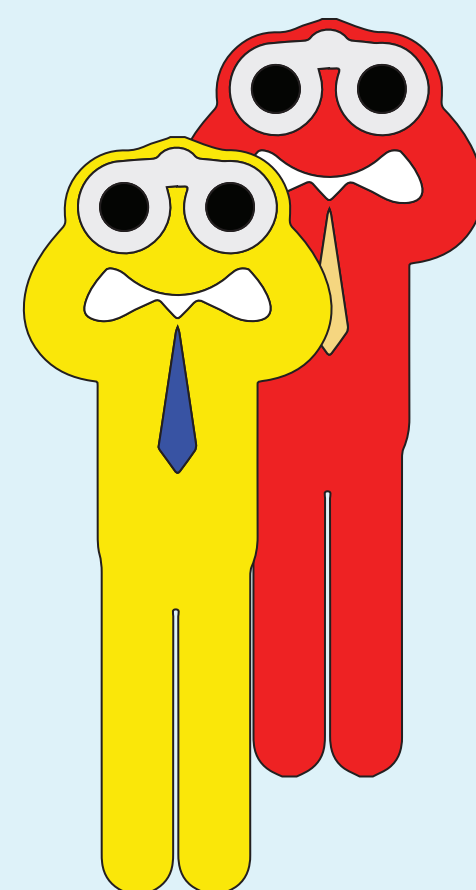
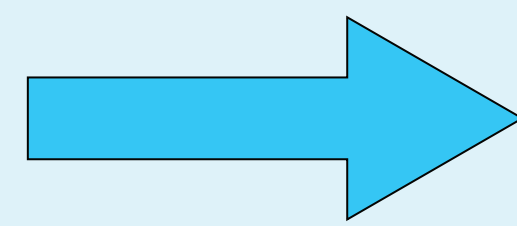
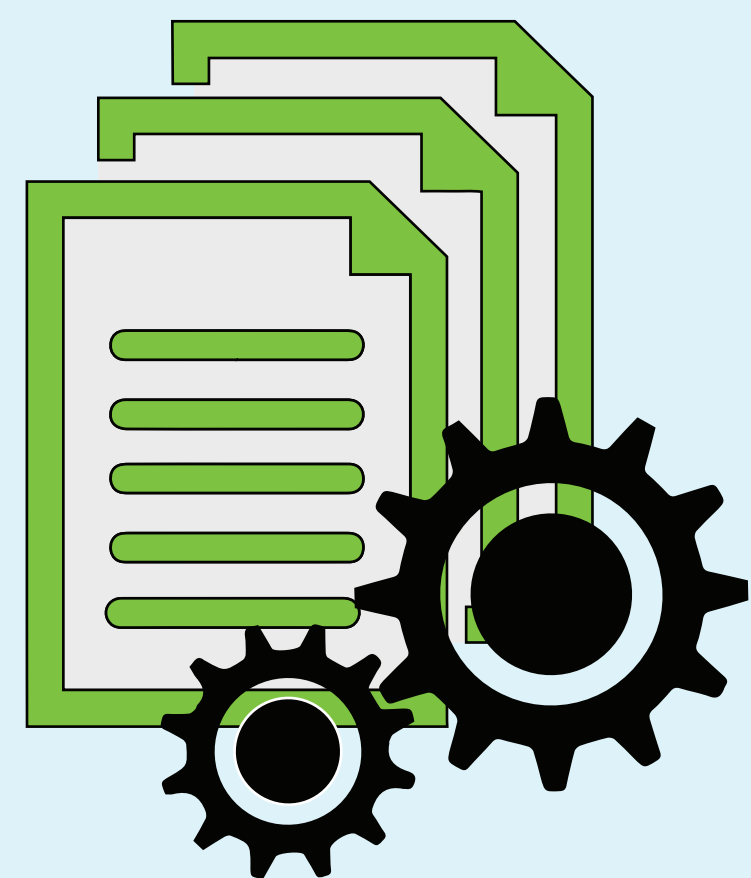
- iterate over a list of rules and register watchers
- watchers wait for a modification of the element they are registered to

## Wait for a change

- wait for any change in the model
- this change event is broadcast by Sparx Enterprise Architect Interop

## Process a change

- categorize broadcast model change
- create a message for tracking changes
- save this message to the local database
- if a change results in a defect, save a defect tracking message to the local database



Parse existing rules

Register event watchers

Wait for a model change

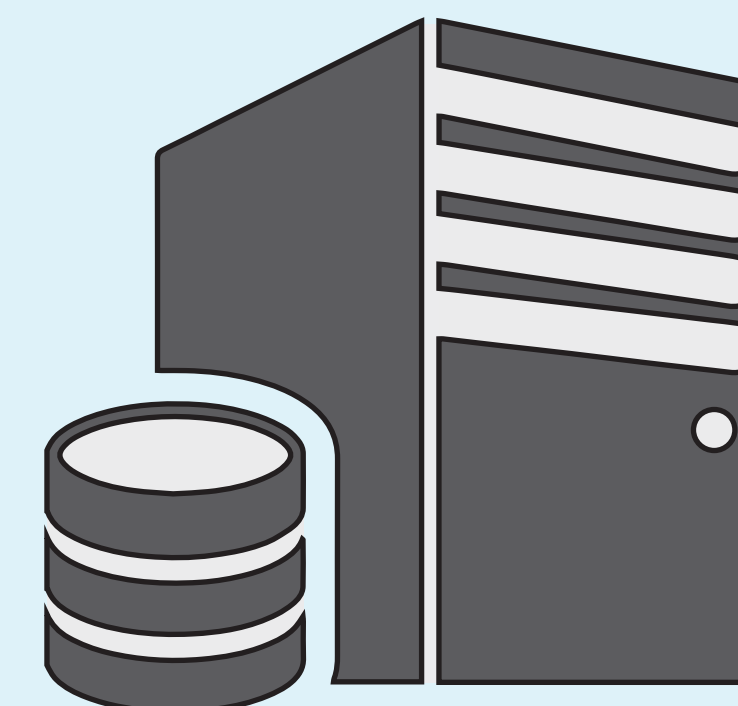
Process the model change



## Notify of a defect

- if a change resulted in a defect, notify the user
- offer the options
  - automatic defect correction
  - hide the defect notification
  - highlight the defective element

Notify of model defect



Save information about the change and the defect

## Save information

- send the change tracking message to the server application and save it
- if a change resulted in a defect, check, if this defect hasn't already been reported and if it was, update the counter
- if this defect hasn't already been reported, save the message