

## Perceive

updateFunctionGroundingInternalStatus

set of spec.error

faults : set of fg  
[fg.error()]

updateHierarchyStatus

rh

propioception: a function grounding is in internal status if for any of its bindings the spec is in error (not achievable) by the ComponentsECL

the final result of the perception is the error status of the objectives

integration of external perception (none) and proprioception  
\* an objective is in the state its realizing fg is  
\* an fg not in internal error is in external error if any of its required objectives is in error

## Evaluate

updateRelevance

objectives2fix

o : set of Objectives  
[o.error() &&  
o.relevance > 0]

rh

the final result of the perception is the error status of the objectives

propagates downstream the relevance of the objectives

gathers all the objectives that need fixing because they're in error and they are relevant

## Control

generateRequiredDesign

new\_fgs : Set<OMFGrounding>

generateComponentSpecs

o : Set<Component Specification>

rh

selects the best available FunctionSpecification for each objective and instantiates it as a FunctionGrounding

set of function groundings, i.e. the designs to instantiate for maximising root objectives fulfillment. That is, in the bindings there are no realisers in the bindings (binding=<role, realiser>)

this, once the realisers are created in the next activity, is the efferent copy, which directly translates into the predicted state at the functional level, which in turns directly translates to the estimated state, in which only the state of the realisers is updated from the ComponentsECL

produces the minimal set of component specifications that fulfill all the roles required by the function groundings

the set of specs of components is the goal for the ComponentsECL