

PIRRO

From presentation to specification

Difficulties

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Slot 15

Overall difficulties

- ▶ the parts didn't fit like a puzzle (duplicates, missing pieces)
- ▶ difficulties with concepts that changed over time
 - ▶ changing terminology (ex: comments vs annotations)
 - ▶ difficult to identify the last (best) version of definitions, terminology

Difficulties with definitions

- ▶ mostly in natural language so they lack in preciseness
- ▶ unclear definitions
 - ▶ for versioning system state
 - ▶ for workspace
- ▶ unusable definitions
 - ▶ single string used as a set of annotations for composition

Difficulties when combining components

- ▶ no clear connection between compositor and versioning system
 - ▶ the compositor state should be updated when a checkout operation is done in versioning system but this is not explicitly stated anywhere
- ▶ no clear connection between the user actions and the rest of the components

Errors in component specifications

- ▶ the latest specification for the compositor was inconsistent, the piece panel was removed but the transitions were not updated to reflect this
- ▶ the navigation manager allowed transitions to the previous screen even if the user was not logged in

Revised annotations

$Annotation = String$

$Seq_n T = Nat | (< n) \rightarrow T$

$\mathcal{A} = \{s \mid s :: Seq Annotation\}$

Operations on annotations

$++ :: Seq_n Annotation \rightarrow Seq_m Annotation \rightarrow Seq_{n+m} Annotation$

$$(a++b)(i) = \begin{cases} a(i) & i < n \\ b(i - n) & \text{otherwise} \end{cases}$$

$addAnn :: Seq_n Annotation \rightarrow Annotation \rightarrow Seq_{n+1} Annotation$

$$addAnn ss a = \begin{cases} ss(i) & i < n \\ a & \text{otherwise} \end{cases}$$

Revised workspace

A workspace is a 2.5-D coordinate system which contains 0 or more compositions. The coordinate system, CS , is described by the following:

- ▶ a point that is the origin, O
- ▶ positive x axis goes to the right, represented by the unit vector \vec{i}
- ▶ positive y axis goes up, represented by the unit vector \vec{j}
- ▶ z axis is the cross product of x and y , $\vec{i} \times \vec{j}$

$CS :: (Real^2, Vector, Vector, Vector)$

$CS = (O, \vec{i}, \vec{j}, \vec{i} \times \vec{j})$

\mathcal{W} = the set of all compositions from the workspace