Delegation of actions and accumulator

Form validation as an example
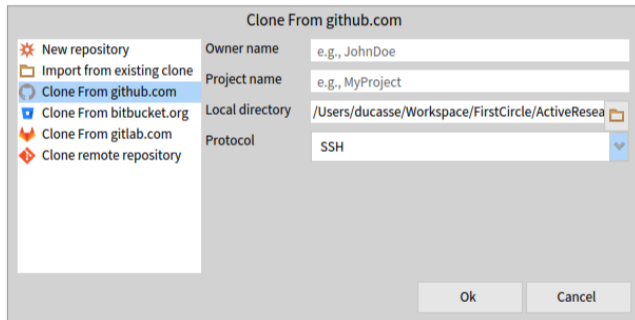
S. Ducasse

http://www.pharo.org
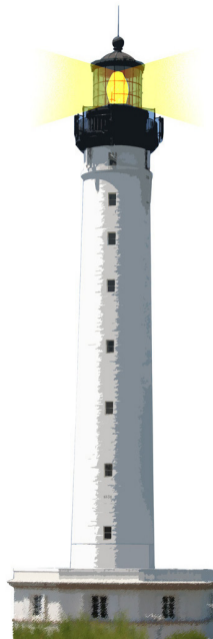
Scenario

- How can we navigate a tree of instances (widgets)?
- Where children can decide to be skipped?

The case: Validation
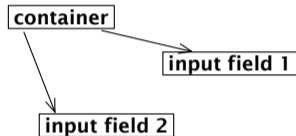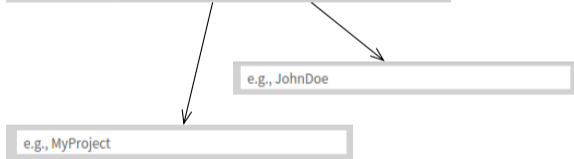
- We want to validate UI forms
- Nested components may want to validate **or not** their contents
  - at input field or just at the OK level

A tree of instances

Owner name	e.g., JohnDoe
Project name	e.g., MyProject
Local directory	/Users/ducasse/Workspace/FirstCircle/ActiveResea
Protocol	SSH

container

input field 1

input field 2

e.g., JohnDoe

e.g., MyProject

A first design

- Any presenter can validate its contents
- Per default does not nothing

```
SpPresenter >> validate
  ^ self
```

```
SpOptionPresenter >> validate

  | report |
  report := SpValidationReport new.
  self children do: [ :presenter | presenter validate ]
```

Flow's first design
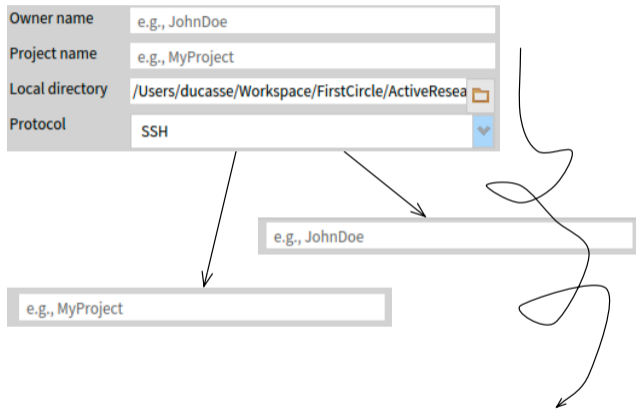
Analysis

- We need to have a report to know if the validation failed or not
- Should validate return a report?
- If validate returns a report then we have to return an ok report for anybody
- Force a report for any instances?

Flow's first design

Second design: provide an accumulator
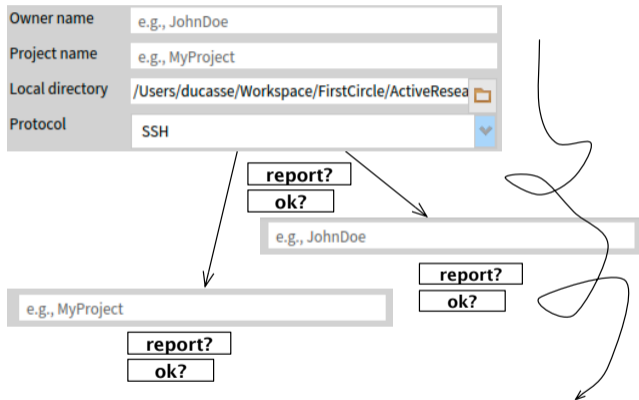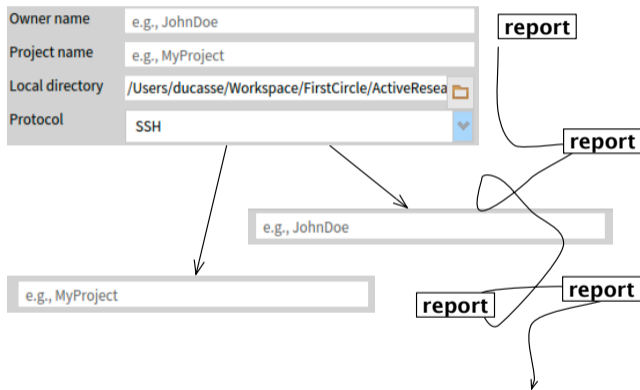
Pass around a basket and let any sub instance decides if it wants to participate

Second design: code

```
SpPresenter >> validateInto: aReport
  ^ self
```

```
SpOptionPresenter >> validate

  | report |
  report := SpValidationReport new.
  self children do: [ :presenter | presenter validateInto: report ].
  ^ report
```

Local and global together

```
SpTextInputFieldWithValidation >> validateInto: aValidationReport
  self validate.
  aValidationReport addAll: validationErrors
```

Each validating subcomponent

- gets the responsibility to fill up the report
- can bring its information to the report

Conclusion

- Let the object decides if it wants to join a process but passing a container

A course by

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