HotAgent
Component Assembly Editor

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Introduction

- Various kinds of visual development environments are available
- De Mey and Gibbs: components are needed to construct applications visually
- HotAgent development environment for development, testing and composition of components
- HotAgent provides special components to construct agents for electronic commerce
Component Model

- small component model
- eases connection of components and simplifies visual composition
- one common interface (sole public part)
- documentation of components
  - category name
  - unique description name
  - description text
Component Assembling

- components provide entrances and exits
  - entrances (require ports) receive data and produce results
  - exits (provide ports) are activated on changes and provide data
  - Smalltalk is an untyped programming language
  - entrances and exits have names and descriptions
- any exits can be connected with any entrances
- two questions:
  - what kind of visual interaction model is chosen
  - what does the textual representation look like
HotAgent Assembly Editor (1)

- application composition
- compose agents using predefined components
- graph metaphor used (most state-of-the-art visual programming environments are based on this metaphor)
- two types of a component
  - visible components are elements of graphical user interface
  - invisible components are without any visual representation
HotAgent Assembly Editor (2)

- main part only for invisible components
- frame for visible and invisible components
- choose position for new comp.
- choose a component
  - category
  - component
  - description
- unique instance name
HotAgent Assembly Editor (3)

* Connect component
  * select source
  * drag middle handle to target
  * choose exit and entrance (description)
  * choose label and color
HotAgent Assembly Editor (4)

- Medical Advisory Service
- colors
- text
- position
- zoom
- display
Textual Composition Language

- to store a visual specification a textual language is needed (Smalltalk, array)

- component specification
  #(‘Window’ #(#name: ’Medical Advisory Service’ #origin: #(21 18)
   #dimension: #(425 451))
  ’eMail’ #(#name: ’eMail’ #origin: #(530 254))
  [...] )

- connection specification
  #(#(‘eMail’ ’notify’ ’control’ ’activate’ #red ’mail received’)
   #(’control’ ’queryMailText’ ’eMail’ ’queryText’ #red
    ’query mail test’)
  [...] )
Other HotAgent Parts

Pattern Component Editor

Component Testing

Component Editor
Further Work

- How to test components and sets of components in a visual way
- HotAgent Assembly Editor usable in real-world project?
- How to check the type of entrances and exits in an untyped component model