Painting objects with Mondrian

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Mondrian is about visualization
Mondrian is also about interaction
please ask questions
Why visualization?
“One picture is worth a thousand words”
some took it literally :)
70% of our sensors are dedicated to vision

Do you see?

Picture it!

Let’s see

I see
How many groups do you see?
How many groups do you see?
How many groups do you see?
How many groups do you see?
70% of our sensors are dedicated to vision

Do you see?

Picture it!

Let’s see

I see
“One picture is worth a thousand words”
Example: What is ?
What we have: Graphviz is a visualization engine

digraph classGraph {
    A [ shape=polygon, width = 6 ... ]
    B [ shape=polygon, width = 5 ... ]
    ...
    A -> B
    C -> D
    ...
}

[Diagram of a graph with nodes A, B, C, and D connected by edges]
What we would like

Scripting
Instance based
Any data model
Close to data
Interaction
What we would like

Scripting
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Mondrian
Mondrian metaphor: painting a view
Mondrian metaphor: painting a view
Mondrian metaphor: painting a view

Composition with Red, Yellow and Blue
Piet Mondrian (1921)
The simplest Mondrian script is an empty view

view := ViewRenderer new.
view open.
The view consists of nodes and edges arranged according to a layout

view := ViewRenderer new.
view nodes: classes.
view edges: classes from: [:each | each superclass] to: [:each | each].
view treeLayout.
view open.
Visual representation is given by the shape

view := ViewRenderer new.
view borderedRectangleShape height: [:each | each numberOfMethods].
view nodes: classes.
view edges: classes from: [:each | each superclass] to: [:each | each].
view treeLayout.
view open.
Blocks can be replaced by symbols

view := ViewRenderer new.
view borderedRectangleShape height: #numberOfMethods.
view nodes: classes.
view edgesFrom: #superclass.
view treeLayout.
view open.
Nesting is done through blocks

```plaintext
view := ViewRenderer new.
view borderedRectangleShape.
view nodes: classes forEach: [:each |
    view nodes: each methods.
    view gridLayout].
view edgesFrom: #superclass.
view treeLayout.
view open.
```
What about interaction?
Interaction is scriptable, too

view := ViewRenderer new.
view2 := ViewRenderer new.

view interaction onSelect: [:each | each viewOn: view2].
view interaction popupView: [:each :aView | each viewOn: aView].

view nodes: ...
...

view open.
view2 open.
Mondrian

Close to data
Any data model
Scripting
Interaction
Least object creation
Instance based

Soon in the Cincom Store ...