

100% JDclare Language Workbench



MODELING VALUE GROUP

SOFTWARE FACTORIES

Wim Bast



Tom Brus



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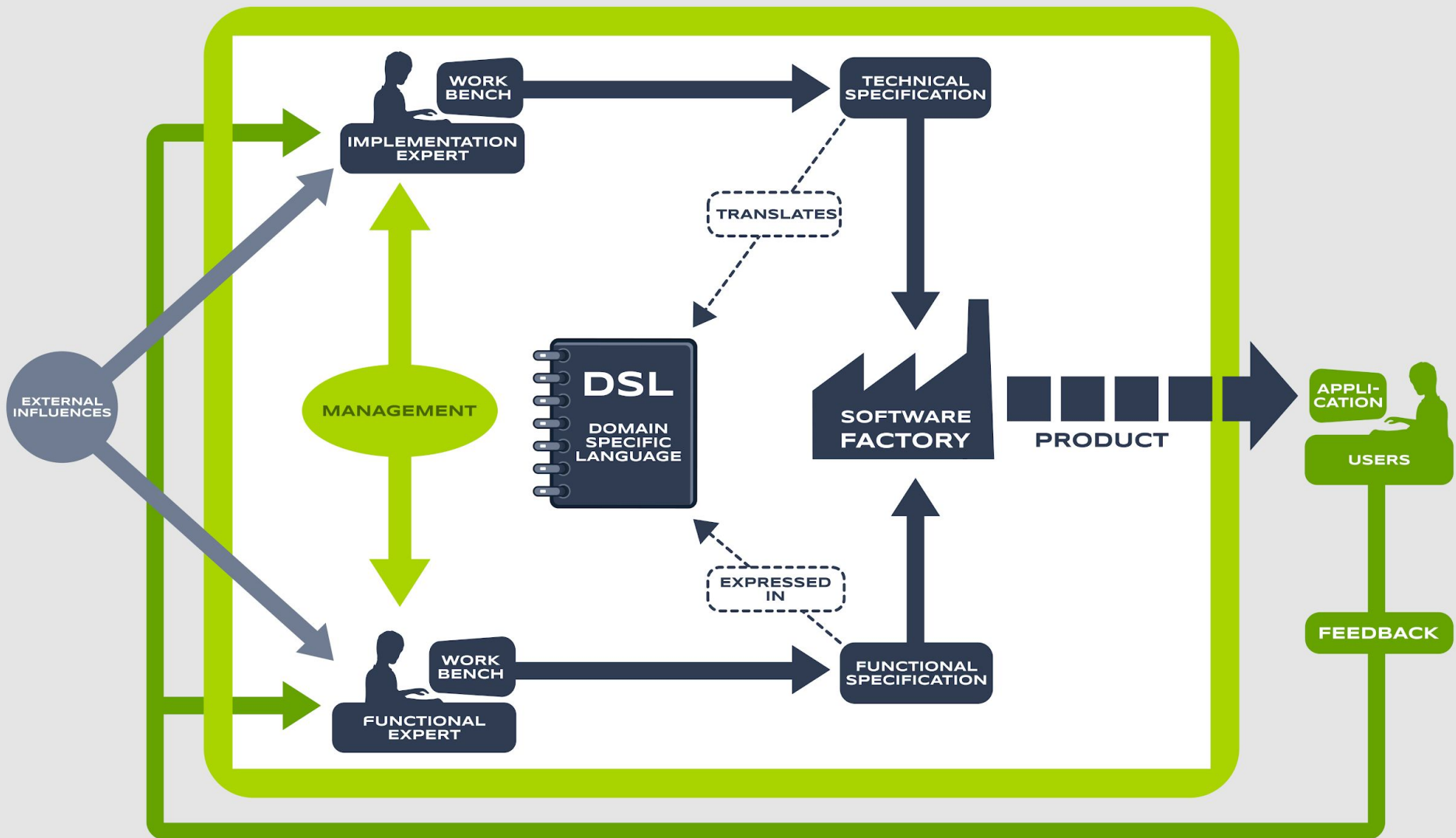
Carel Bast



Arjan Kok



Software Factories



DSL Workbenches - PMW

The screenshot displays the Product Management Workbench (PMW) interface, a tool for developing Domain Specific Languages (DSLs). The interface is divided into several panes:

- Workgroup Explorer:** Shows a hierarchical tree of workgroups and artifacts. The selected artifact is "R000.001.047 : 9/1/17 - 12/31/99 | Distributed" under "Businessowners Package Policy, TEXAS".
- Diagram:** A central workspace showing a DSL model. It includes a "Structural Component" (BOP Building Earthquake Details V1) with a "PropertySpec" (Earthquake Rate Grade) and an "Allowed Value" (BOP Earthquake Building Construction Types). The diagram also shows a "PropertySpec" (Earthquake Construction Type) and an "Allowed Value" (BOP Earthquake Building Construction Types).
- Properties:** A table showing the properties of the selected artifact. The table has columns for "Property", "Value", and "Concept Type".
- Types Explorer:** A list of types and concepts, including "Physical Object Details (Business Type) (p)", "Structure Details (Business Type) (p)", "Vehicle Details (Business Type) (p)", "Watercraft Details (Business Type)", "Watercraft Optional Equipment Details (Business Type)", "Place (Business Type) (p)", "Collection<EObject> (Collection)", "Concept (ConceptType)", "Allowed Value (ConceptType)", "Calculation (ConceptType)", "ConstantRole (ConceptType)", "Commercial (no Features)", "agreement : CalculatedType - Concept", "all : CalculatedType - Concept", "kind : String - Concept", "parent : CalculatedType - Concept", "product : CalculatedType - Concept", "request : Request - Concept", "topLevelAgreement : CalculatedType - Concept", "f1:=(Object) (p) - Object", and "f1:=(Object) (n) - Object".
- Problems:** A list of problems or warnings. The first problem is "ProductConcept WC Broad Form Liability Co..." with the message "ProductConcept WC Broad Form Liability Coverage:WC Broad Form Liability Coverage is not used in any current TLVR (in Workg".
- Palette:** A list of concepts and properties, including "Select", "Marquee", "Properties", "PropertySpec", "ConstantPropertySpec", "ConceptPalette", "ProductConcept", "RequestSpecConcept", "CalculationConcept", "RuleSpecConcept", "RoleSpecConcept", "ConstantRoleSpecConcept", "AllowedValueConcept", "Notes", "Note", "Other", and "AllowedValue".
- Filters:** A list of filters, including "Filters enabled! Hidden: LS", "R000.001.047: Businessowners Package Policy, INDIANA [9/1/17->12/31/99]", "Businessowners Package Policy1 (Commercial / Businessowners Pac", "BOP Building1 [1..*] (Building / BOP Building)", "BOP Building Burglar Alarm Details1 [1..1] (Structural Compon", "Local Burglar Alarm Indicator (Local Burglar Alarm Indicat", "BOP Building Construction Details1 [1..1] (Structural Compon", "BCEG Description (BCEG Description / String)", "BOP BCEG Construction Descriptions1 (Allowed Value", "Community", "Individual", "BCEG Grade (BCEG Grade / String)", "Construction Symbol (Construction Symbol / String)", "Construction Type (Construction Type / String)", "BOP Building Construction Types Lookup1 (Lookup / E", "Grade (Grade / String)", "Masonry Type (Masonry Type / String)", "Number Of Stories (Number Of Stories / Decimal)", "Rise (Rise / String)", "Square Footage Area (Square Footage Area / Decimal)", "Steel Type (Steel Type / String)", "Year Built (Year Built / Integer)", "BOP Building Earthquake Details1 [1..1] (Structural Compon", "Earthquake Rate Grade (Earthquake Rate Grade / String)", "Earthquake Construction Type (Earthquake Construction T", "BOP Earthquake Building Construction Types1 (Allow", "Frame - Includes metal, non-combustible buildings", "Joisted Masonry - Solid unreinforced brick", "Joisted Masonry - Hollow tile/block", "Non-Combustible", "Masonry Non-Combustible", "Modified Fire Resistive Or Modified Fire Resistive", "BOP Building Fire Protection Details1 [1..1] (Structural Compon", "Protection Class (Protection Class / String)", "BOP Property Protection Class Lookup1 (Lookup / BOP", "Sprinklered Indicator (Sprinklered Indicator / Boolean)", "BOP Building Occupancy Details1 [1..1] (Structural Compon", "Lessors Risk Indicator (Lessors Risk Indicator / Boolean)", "Multiple Occupancy Indicator (Multiple Occupancy Indica", "Number Of Units (Number Of Units / String)", "BOP Property Number Of Units Values1 (Allowed Value", "1-4 Units", "5-10 Units", "11-30 Units", "31+ Units", "BOP Building Roof Details1 [1..1] (Structural Component / BC", "Roof Type (Roof Type / String)", "BOP Location Reference1 [1..1] (Place / BOP Location Refer", "Location Number Reference: Number [1..1]", "Location Number Reference (Location Number Reference", "BOP Building Screen Layout1 (Screen Hint / BOP Building Sc

DSL Workbenches - Iglu

The screenshot displays the Iglu - Taxonomy Editor interface, which is a complex multi-panel application for managing taxonomies. The interface is divided into several main sections:

- Top Panel:** Contains a tree view of the taxonomy structure. The root node is "NT13KVK (editable)", which has a child node "NT13KVK-RJ605 (editable)". Under "NT13KVK-RJ605", there is a node "nt13", which in turn has a node "kvk". Under "kvk", there is a node "20181212.a", which has a node "dictionary". The "dictionary" node has several child nodes, including "kvk-linkroles-insurance", "kvk-linkroles-insurance-generic-lab-de.xml", "kvk-linkroles-insurance-generic-lab-en.xml", "kvk-linkroles-insurance-generic-lab-fr.xml", "kvk-linkroles-insurance-generic-lab-nl.xml", and "kvk-linkroles-insurance.xsd".
- Middle Panel:** Displays a table with columns for "labeled element", "type", and multiple language labels (label-de, label-en, label-fr, label-nl). The table contains 10 rows of data, each representing a different element in the taxonomy. The elements are: "AccommodationCostsDisclosureTitle", "AccountingPrinciplesAssetsLiabilitiesTitle", "AccountingPrinciplesCashflowStatementTitle", "AccountingPrinciplesResultTitle", "AccountingPrinciplesSegmentReportingTitle", "AccountingPrinciplesStatementComprehensiv...", "AccountingPrinciplesTitle", "AccrualsAndDeferredIncomeDisclosureTitle", "AccrualsAndDeferredIncomeTitle", and "AccruedIncomeBreakdownTitle".
- Right Panel:** Contains a "Color Legend" and a "Document Viewer". The "Color Legend" shows a list of colors and their corresponding roles (e.g., "EClass: DefinitionLinkbase", "EClass: FormulaLinkbase", etc.). The "Document Viewer" displays a document titled "Artikel 2" with a numbered list of items. The list items are: "1. Op de balans worden onder het eigen vermogen afzonderlijk opgenomen fiscale herinvesteringsreserves als bedoeld in artikel 3.54 van de Wet op de inkomstenbelasting 2001." and "2. Op de winst- en verliesrekening worden opgenomen: a. kosten die fiscaal niet of slechts voor een een deel in aftrek komen; b. afzonderlijk, de vennootschapsbelasting en andere belastingen naar de winst die fiscaal niet in aftrek komen, gebaseerd op een berekening van het vermoedelijk over het".
- Bottom Panel:** Features a "Project Graph" showing a network of nodes and a "Progress" bar. The "Project Graph" shows a network of nodes representing different elements in the taxonomy, with arrows indicating relationships between them. The "Progress" bar shows the progress of the rule engine, with a green bar indicating 99% completion.
- Status Bar:** At the bottom of the interface, the status bar displays "7037M of 11964M" and "Rule Engine: (99%)".

FileEditViewProjectionNavigateCodeAnalyzeBuildRunToolsMigrationVCSWindowHelp

Logical View

IH-Rekenserver (C:\projects\rih)

build

IH (generation required)

ih

specificaties

besturing (generation required)

IBPV

LH

ZVW

gegevens (generation required)

IH objecten

regels (generation required)

Constanten

Constanten 2015

Constanten 2016

Constanten 2017

Constanten 2018

IBPV-A-Herrekende premie-percentages

IBPV-A-Herrekende premie-percentages - 1

IBPV-A-Herrekende premie-percentages - 2

IBPV-A-Herrekende premie-percentages - 3

IBPV-A-Herrekende premie-percentages - 4

IBPV-A-Herrekende premie-percentages - 5

IBPV-A-Premieperiodes en premiedagen

IBPV-B-Belastbaar inkomen

IBPV-C-Inkomstenbelasting Box-1

IBPV-C-Inkomstenbelasting Box-2

IBPV-C-Inkomstenbelasting Box-3

IBPV-C-Nabewerken schijventarief IB

IBPV-C-Saldo inkomstenbelasting

IBPV-C-Toepassen progressief tarief Box-1

IBPV-C-Voorbereiden schijventarief

IBPV-D-Herleid premie inkomen

IBPV-D-Nabewerken bepaling premie-inkomen IB

IBPV-D-Nabewerken premiebepaling

IBPV-D-Premie inkomen

IBPV-D-Premies volksverzekering

IBPV-E-Voorheffing

IBPV-F-Algemene heffingskorting

IBPV-F-Alleenstaande ouderenkorting

IBPV-F-Arbeidskorting

aantal PV-dagen AOW ivm AOW-leeftijd 01 TC

begindatum premieplicht AOW/Anw 02 TC

reken belastbaar inkomen Box-1 01 TC Maxima

toegepast bijdrage-inkomen ZVW 01 TC Groter

Testset Groter of gelijk aan voor de regel toegepast bijdrage-inkomen ZVW 01

Peildatum: 2015

Gebruikte constanten: Constanten 2015

Test toegepast bijdrage-inkomen ZVW 01 Groter of gelijk aan TC 001

een IB belastingplichtige met alleen

gecorrigeerd bijdrage-inkomen aanwezig = 'ja' (waar)

gecorrigeerd bijdrage-inkomen ZVW th1 = <leeg>

heffingsruimte bijdrage-inkomen ZVW th1 = <leeg>

herleid bijdrage-inkomen aftrek aanwezig = <leeg>

herleid bijdrage-inkomen ZVW aftrekmethode th1 = <leeg>

bijdrage inkomen ZVW aanslag = <leeg>

moet de volgende resultaten hebben:

toegepast bijdrage-inkomen ZVW th1 = leeq.

Test toegepast bijdrage-inkomen ZVW 01 Groter of gelijk aan TC 002

een IB belastingplichtige met alleen

gecorrigeerd bijdrage-inkomen aanwezig = 'ja' (waar)

gecorrigeerd bijdrage-inkomen ZVW th1 = 100

heffingsruimte bijdrage-inkomen ZVW th1 = <leeg>

herleid bijdrage-inkomen aftrek aanwezig = <leeg>

herleid bijdrage-inkomen ZVW aftrekmethode th1 = <leeg>

bijdrage inkomen ZVW aanslag = <leeg>

moet de volgende resultaten hebben:

toegepast bijdrage-inkomen ZVW th1 = leeq.

Test toegepast bijdrage-inkomen ZVW 01 Groter of gelijk aan TC 003

een IB belastingplichtige met alleen

gecorrigeerd bijdrage-inkomen aanwezig = 'ja' (waar)

gecorrigeerd bijdrage-inkomen ZVW th1 = <leeg>

heffingsruimte bijdrage-inkomen ZVW th1 = 100

herleid bijdrage-inkomen aftrek aanwezig = <leeg>

herleid bijdrage-inkomen ZVW aftrekmethode th1 = <leeg>

bijdrage inkomen ZVW aanslag = <leeg>

moet de volgende resultaten hebben:

toegepast bijdrage-inkomen ZVW th1 = leeq.

Console

3: Usages

0: Messages

Documentation

9: Version Control

Terminal

Inspector

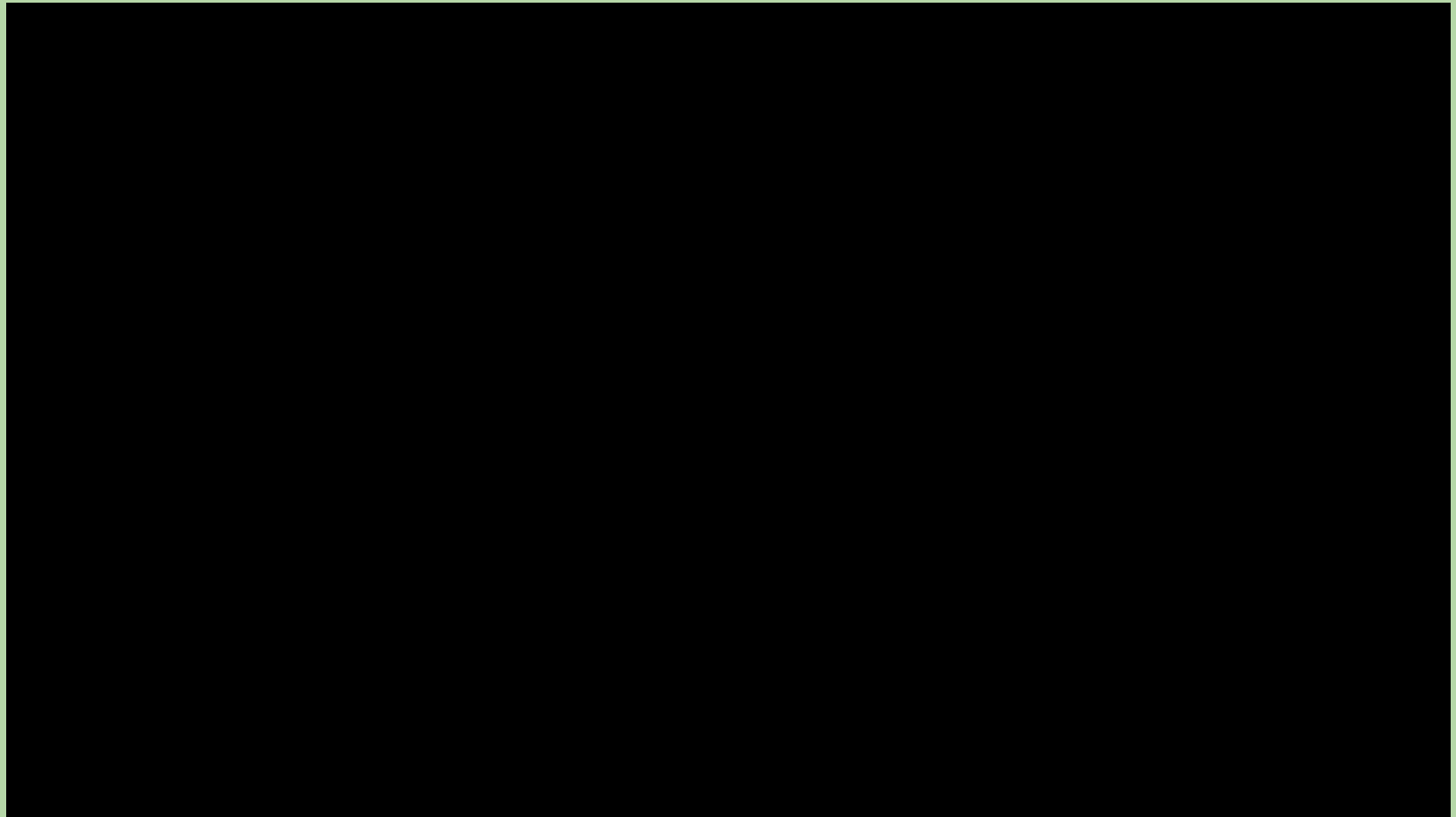
Event Log

Git: master

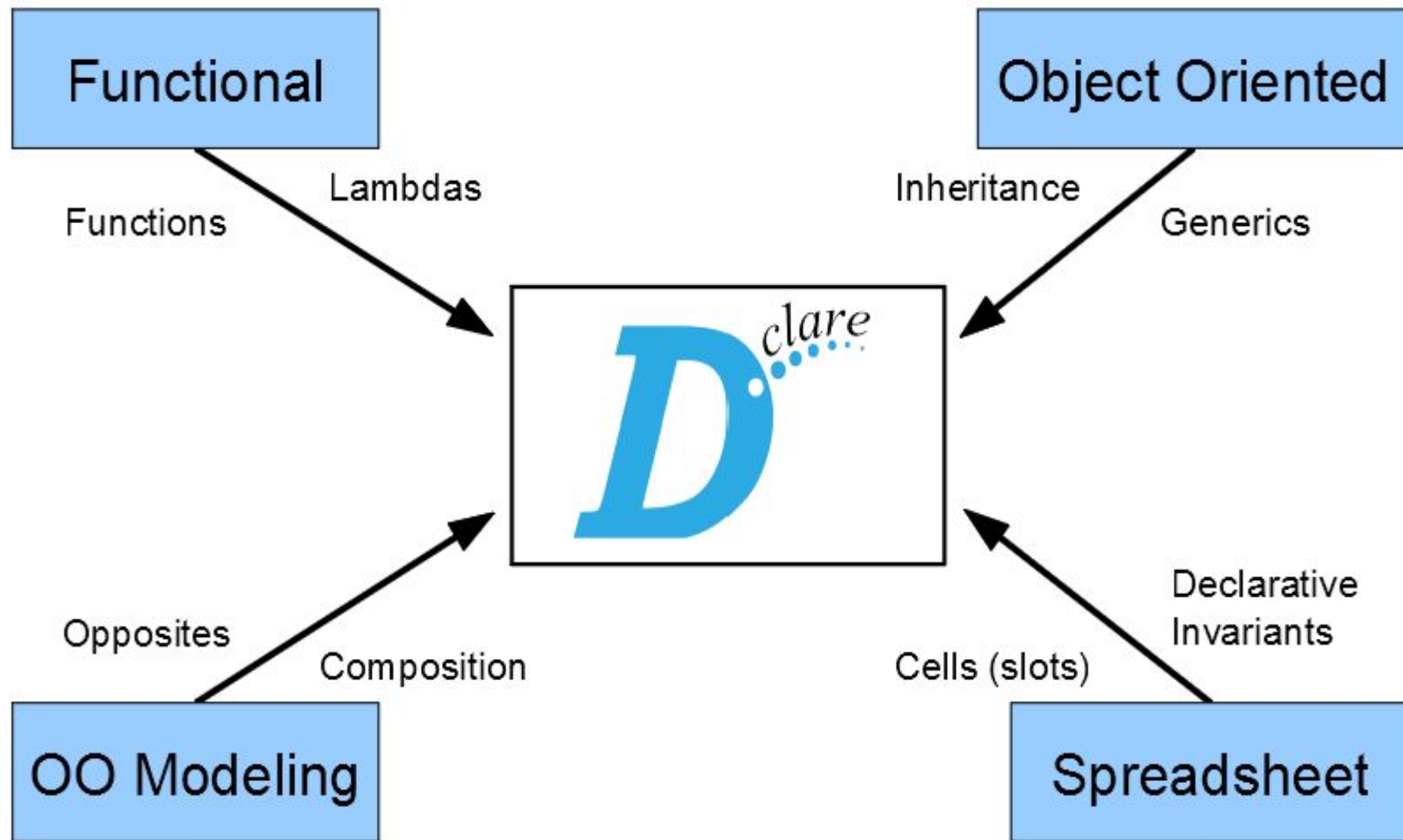
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Immediate Feedback



Dclare



Dclare

Classes

Properties

Constraints

Fix-point
Semantics

Meta-recursively
Closed

~~Threads, Control, Observer Pattern,
Distribution, Persistency, Monoliths~~

JDclare

```
public interface AFieldCall extends AExpression {
    @Containment
    @Mandatory(false)
    AExpression base();

    AField field();

    @Override
    default AType type() {
        return field().type();
    }

    @Constraints
    default void constraints() {
        SCOPE(AFieldCall::field, AFieldCall::scopeField);
    }

    @Visible(false)
    default Set<AField> scopeField() {
        AExpression base = base();
        if (base != null) {
            return base.type().fields();
        } else {
            return ancestor(AClass.class).fields();
        }
    }
}
```

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DEMO