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Business and IT Domains

Business
Domain
Orientation

Business Experts

Programmers

PowerPoint

Visio

Word   Excel

Intentional Domain Workbench

Java/C#/ Ruby/…

C/C++

Non-executable   *Executable*

Computing Power

Old Software Process

Domain Knowledge

Creates

Domain Expert

Explains

Programmer

Creates

```
public CodeTable()
{
    rgcod = new ArrayList();
}

public ArrayList rgcod;

public void Pass4(XCOD xcod, int i,
NTE nte)
{
    Console.WriteLine("P4: " +
xcod.ToString());
    this.rgcod.Add(new MICOP(xcod,
i, nte));
}

public MICOP MicopLast()
{
    return
(MICOP)this.rgcod[this.rgcod.Count
- 1];
}

public void DeleteLastMicop()
{

this.rgcod.RemoveAt(this.rgcod.Coun
t - 1);
}

public void Px()
{
    Console.WriteLine("Produced
code");
    int i = 0;
    foreach (MICOP micop in
this.rgcod)
    {

Console.WriteLine("{0,4}\t{1,-
14}\t{2}\t{3}",
                i++,

                micop.xcod.ToSt
ring(),
                micop.i,
                micop.nte ==
null ? " " : micop.nte.ToString());
    }

}
```

Intentional Software Process

Domain Code

Business Workbench

input

output

Creates

Creates

Domain Expert

Programmer

```
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}
```
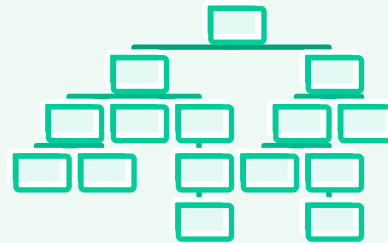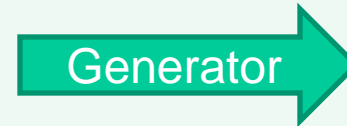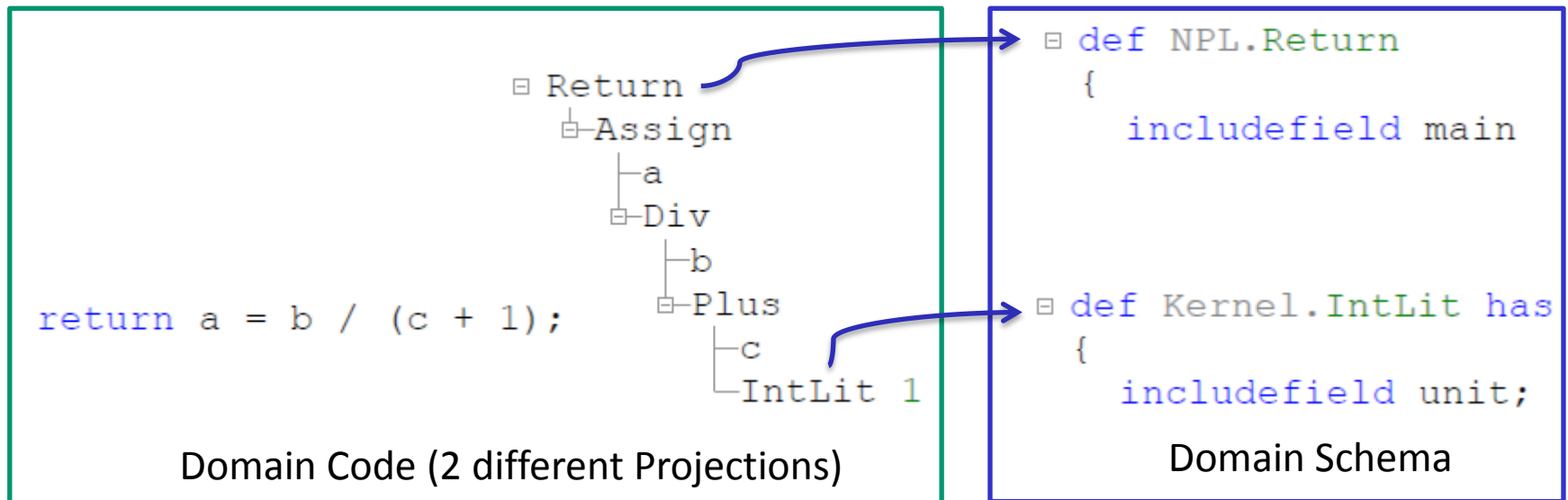
Inside the Domain Workbench

Projection

Generator

Projectional editor

Intentional Tree

Intentional Tree

- Uniform representation of Domain Schema, Domain Code and Programs
- Resolution by identities, not names
- No fixed meta-levels
- Versioned storage

Domain Code (2 different Projections)

Domain Schema

Projectional editing

- Separates underlying representation from syntax
- Works in two directions: display and editing
  - Special selections that take tree structure into account
- Large number of notations for:
  - matching existing notations
  - multi-domain
  - ambiguity resolving
  - domain evolution
- Also to edit Programs, Schema, Generators

Why is Intentional Different

1. Separate business domain from programming domains
   - Domain representation does not need to be computable
   - Any graphical, textual or symbolic notation, e.g tables
   - Domain schema and notation can evolve independently
2. Mix multiple domains
3. Edit domain directly in the Intentional tree
   - no need for parsing nor name binding
4. Describe how program is generated from domain schema
   - Allow for re-generation
5. Groupware for domain experts and programmers

DSL for DSLs

- Domain Definitions
  - **domaindef, def, fielddef, typedef**…
- Transformations
  - **transformation, transformdef,**…
- Projections
  - **projection, projectdef,**…
- Semantics
  - **validator, typecalcdef, [include C#],**…
- UX
  - **menu, stylesheet, commands, kaleidoscope,** …
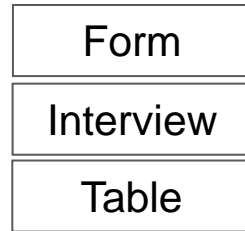- Mix and Match with other domains, e.g. Testing

Demo Time!

Demo Domains

Inspectional Services Department

- **ISD Home**
- **Building**
  - Online Applications
  - Plans & Zoning
  - Obtaining a Building Permit
  - Building Permit Search
  - As Of Right Permits
- **Housing**
- **Health**
- **Environmental Services**
- **Weights & Measures**
- **Vacant Foreclosing and Foreclosed Application**

Contact Us

Boston Inspectional Services

City Hall Hours & Directions

Mayor's Online Constituent Service

City Departments

Select a Department ▼

Short Form Permit Application

Permit Location

6 - 0 LANGLEY RD
Ward: 22

Applicant Information

*Name: [   ]

*Address: [   ] [   ] [▼]

City: [   ]

State: [   ]

Zip: [   ]

*Phone: [   ]

Owner Information

click here to copy the applicant information

*Name: [   ]

*Address: [   ] [   ] [▼]

City: [   ]

State: [   ]

Zip: [   ]

*Phone: [   ]

Applicant Type

○ Home Owner (1-2 Family)   ○ Owner (Business)
○ General Contractor   ○ Home Improvement Contractor Only

Building Type

○ 1-2 Family   ○ 1-4 Family   ○ Commercial   ○ Mixed Use
○ Multi Family   ○ Other

Prequalification Questions

1. Will there be any structural work?   Yes ○   No ○
2. Are you applying for a change in occupancy?   Yes ○   No ○
3. Will there be any egress work?   Yes ○   No ○
4. Will there be any fire protection work?   Yes ○   No ○
5. Are you extending any new living space/FAR?   Yes ○   No ○
6. Are you building a new deck, pool, sign or canopy?   Yes ○   No ○
7. Has the building been vacant for over three months?   Yes ○   No ○
8. Is the work being done in a commercial food restaurant or
   retail food store, health club or public pool?   Yes ○   No ○
9. Is application for a building Demolition/take-down?   Yes ○   No ○
10. Will there be any basement/ground work or excavation?   Yes ○   No ○
11. Are you registered as a Home Improvement Contractor
    (HIC)?   Yes ○   No ○

[next] [back]

Long Form Permit Application

Permit Location

100 - 0 HUNTINGTON AVE
Ward: 03

* Are you extending on any side or vertically?   Yes ○   No ◉

* General Description of Work/Occupancy

General description of the proposed work and its location. All structural, mechanical, electrical, etc., shall be included.

Estimated Cost

*Cost: [   ]

Mass Debris Disposal Law

*Disposal Location/Company: [   ]

Ground Water Survey

*Repairs to exterior wall: Yes ○   No ◉
*Repairs to foundation: Yes ○   No ○
*Repairs to basement area: Yes ○   No ○

submit   back

Inspectional Services Department

Long Form Permit Application

Permit Location

100 - 0 HUNTINGTON AVE
Ward: 03

* Are you extending on any side or vertically?   Yes ◉   No ○

Describe Proposed Extension

	ft:	in:
*Number of feet long		
*Number of feet wide		
*Feet high above sidewalk		

*Style of roof

*Roofing material

*Extension material

*Foundation

*Type of construction

*How will the extension be occupied?

* General Description of Work/Occupancy

General description of the proposed work and its location. All structural, mechanical, electrical, etc., shall be included.

Estimated Cost

*Cost:

Demo