Creating Micro Frames with BusinessEvents

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Agenda

1. Frames, What and Why
2. BusinessEvents Capabilities & Support for Frames
3. BusinessEvents Frame Examples
4. Q&A
Frames

What & why
Componentware

Benefits

- Highly reusable and reliable
- Distributed
- Cost Effective
- Simple
- Separation of concerns / Encapsulation
- Short Development Cycle
Framework Enemies

GENERALIZATION

THE “OTHER” CODE

IMPLEMENTATION

COMPLEXITY
Frame-tamed Enemies

- **DOMAIN TARGETED**
- **FOCUSED CAPABILITY**
- **KISS IMPLEMENTATION**
Micro Framework – aka FRAME

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TRIVIAL OTHER CODE EXAMPLE

List → DO SUM (processing) → Result
TRIVIAL OTHER CODE EXAMPLE
Business Events Capabilities

How they support Frames
BusinessEvents Declarative Capability – Concepts

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BusinessEvents Declarative Capability – Event
Overview
BusinessEvents Declarative Capability – Channel
Overview
BusinessEvents Pseudo Functional and Recursive Capabilities

```java
Scope {
    Concepts.InboundList list;
    Concepts.Sum sum;
}
Condition {
    list.correlationId == sum.correlationId;
    sum.listSize < list.values@length;
}
Action {
    sum.result = sum.result + list.values[sum.listSize];
    sum.listSize = sum.listSize + 1;
}
```
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BusinessEvents Frame-Supporting Capabilities

- BASE FRAMES: State-Machines, Decision Tables
- IMPLICIT HYDRATION-DEHYDRATION
- AGENT DISTRIBUTION/SYNCHRONIZATION SUPPORT
- DECLARATIVE MULTI-CHANNEL MULTI-DATASTORE SUPPORT
BusinessEvents Frame Example

T-Mobile REEF-METRICS
Alerting Frame Conceptual View

Decision Table

Filter 1  | Filter N  | Alert Config 1  | Alert Config N
--- | --- | --- | ---
... | ... | ... | ...

Frame Alerting Configuration
Rule Function
Frame Concept
Alert Tracker

Aggregation
Domain Specific Concept
Domain Specific Filtering

EMAIL
JAVA Custom Function
Alert Datastore

Alert
Frame Concept

Frame Rules

RULES
Alert Dependency Rules
Number of Occurrences Rules
Threshold Rules

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Rule Tree Frame

(limitChecking + limitCC + limitOverdraft > txAmount) AND (segCode == '0015' or segCode == '0025')
2nd Phase:
Association Values/Properties
INBOUND EVENT

Root true

OUTBOUND EVENTS

Any(all) true

Any(1) true

3rd Phase: Node Tests

Rule Tree Frame

Property txAmount 250,00

Property segCode 0025

Property Constant '0015'

Property segCode 0025

Property Constant '0025'

Property limitChecking 1000,00

Property limitCC 1000,00

Property limitOverdraft 2000,00

Transaction

Client

Credit Info
Segmentation Info
Card Info
SMS Info

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**4th Phase: [ROOT==true]**

**Outbound Events Asserted**

- **Rule Tree Frame**

- **Inbound Event**
  - Root: true

- **Outbound Events**
  - Any(all): true

- **Sum**: 4000,00

- **Property txAmount**: 250,00

- **Property limitChecking**: 1000,00

- **Property limitCC**: 1000,00

- **Property limitOverdraft**: 2000,00

- **Property segCode**: 0025

- **Property Constant '0015'**:
  - Any(1): false
  - Property txAmount: 250,00
  - Property limitChecking: 1000,00
  - Property limitCC: 1000,00
  - Property limitOverdraft: 2000,00

- **Property Constant '0025'**:
  - Any(1): true
  - Property segCode: 0025

- **Outbound Events Asserted**

---

**Transaction**

**Client**

**Credit Info**

**Segmentation Info**

**Card Info**

**SMS Info**
Rule Tree Frame

5th Phase:
Tree Reset
Rule Tree ReFraming Into Kanban Tree

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Takeaways


2. Utilize BusinessEvents capabilities to implement FRAMES that minimize “Other code” and diminish complexity.

3. Export BusinessEvents FRAMES as projlibs and mix and match to create tailored applications.

4. FRAME candidates include alerting, orchestration, choreography, rule-based routing, Kanban-type tracking, among others.
Q & A

THANK YOU!
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