Domain-Driven Design of Large Software Systems

Final Paper Delivered By TH Köln Master Digital Sciences Course, WS 23/24

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Abstract: This is a brief overview of the paper, which should be 70 to 150 words long and include the most relevant points. This has to be a single paragraph. (The rest of this abstract is Lorem Ipsum to give the right indication of its proper length.) Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

Keywords: Keyword1; Keyword2; Keyword3; Keyword4

[1] Participant of DDD Master Course

Contents

1 Introduction **4**

2 Trial Workshops **4**

2.1 EventStorming Trial Workshop 4

2.2 Bounded Context Trial Workshop 5

2.3 C4 Model Trial Workshop 5

3 Bounded Contexts in Case Study **6**

3.1 Bounded Context AAA 6

3.1.1 EventStorming and Bounded Context Clustering 6

3.1.2 Core Domain Charts 6

3.1.3 Domain Message Flow Modelling 6

3.1.4 Bounded Context Canvas 7

3.2 Bounded Context BBB 7

3.2.1 EventStorming and Bounded Context Clustering 7

3.2.2 Core Domain Charts 7

3.2.3 Domain Message Flow Modelling 7

3.2.4 Bounded Context Canvas 8

3.3 Bounded Context CCC 8

3.4 Bounded Context DDD 8

4 Context Map with Aggregates **8**

4.1 Context Map for the Whole Landscape 8

4.2 Context Map Details for Bounded Context AAA 9

4.3 Context Map Details for Bounded Context BBB 9

4.4 Context Map Details for Bounded Context CCC 9

4.5 Context Map Details for Bounded Context DDD 9

5 C4 Model with Aggregate Canvases 10

5.1 C4 Model Level 1 10

5.2 C4 Model Details for Bounded Context AAA 10

5.2.1 C4 Model Level 1 10

5.2.2 Aggregate Canvas(es) 10

5.2.3 C4 Model Level 2 10

5.3 C4 Model Details for Bounded Context BBB 11

5.3.1 C4 Model Level 1 11

5.3.2 Aggregate Canvas(es) 11

5.3.3 C4 Model Level 2 11

5.4 C4 Model Details for Bounded Context CCC 11

5.5 C4 Model Details for Bounded Context DDD 11

6 Method Reflection 12

6.1 EventStorming Method Reflection 12

6.2 Bounded Context Methods Reflection 12

6.3 C4 Model Method Reflection 12

7 Critical Summary 12

7.1 Critical Summary for Bounded Context AAA 12

7.2 Critical Summary for Bounded Context BBB 13

7.3 Critical Summary for Bounded Context CCC 13

7.4 Critical Summary for Bounded Context DDD 13

1 Introduction

Background of this course and the case study.
Written by: all

2 Trial Workshops

The general rule is: In the trial phase, the method teams (EventStorming, Bounded Context, C4 Model) are responsible for *everything*, documentation-wise. (This will change later, in the case study phase.)

2.1 EventStorming Trial Workshop

- References, resources
- Workshop planning and concept
- Workshop results
  - Photographic documentation of the workshop
  - List of domain events
  - Special items, like e.g. pivotal elements
- Results and learnings from retrospective (what to keep/drop/try for the “real” case study workshop)

Written by: Event Storming team

2.2 Bounded Context Trial Workshop

- References, resources
- Workshop planning and concept
- Workshop results
  - Bounded Context Clustering
  - Core Domain Charts
  - Domain Message Flow Modelling
  - Bounded Context Canvas
  - Context Map with Aggregates
- Results and learnings from retrospective (what to keep/drop/try for the “real” case study workshop)

Written by: Bounded Context team

2.3 C4 Model Trial Workshop

- References, resources
- Workshop results
  - C4 Model Level 1
  - Aggregate Canvas for the main aggregates
  - C4 Model Level 2 for all bounded contexts
- Results and learnings from retrospective (what to keep/drop/try for the “real” case study workshop)

Written by: C4 Model team

3 Bounded Contexts in Case Study

In the case study phase, the method teams (EventStorming, Bounded Context, Component Model) are *only* responsible for the workshop organization. All documentation is done by the participants themselves.

All DDD participants need to regroup and "specialize" in one or several of the bounded contexts of the case study. Each case study subteam then describes its own part of the overall results. The case study documentation is clustered according to bounded contexts.

3.1 Bounded Context AAA

Written by: Case study subteam for this bounded context

3.1.1 EventStorming and Bounded Context Clustering

- Photographic documentation of EventStorming results (only the part relevant for this bounded context) with explanation
- List of domain events for this bounded context
- Special items, like e.g. pivotal elements
- Bounded Context Borders (with reasoning)
- Open issues clarified with case study partner team (if any)

3.1.2 Core Domain Charts

- Diagram(s) with explanation, reasoning for the classification
- Open issues clarified with case study partner team (if any)

3.1.3 Domain Message Flow Modelling

- Diagram(s) with explanation
- Open issues clarified with case study partner team (if any)

3.1.4 Bounded Context Canvas

- Bounded Context Canvas for this bounded context
- Explanation for the fields in the canvas
- Open issues clarified with case study partner team (if any)

3.2 Bounded Context BBB

Written by: Case study subteam for this bounded context

3.2.1 EventStorming and Bounded Context Clustering

- Photographic documentation of EventStorming results (only the part relevant for this bounded context) with explanation
- List of domain events for this bounded context
- Special items, like e.g. pivotal elements
- Bounded Context Borders (with reasoning)
- Open issues clarified with case study partner team (if any)

3.2.2 Core Domain Charts

- Diagram(s) with explanation, reasoning for the classification
- Open issues clarified with case study partner team (if any)

3.2.3 Domain Message Flow Modelling

- Diagram(s) with explanation
- Open issues clarified with case study partner team (if any)

3.2.4 Bounded Context Canvas

- Bounded Context Canvas for this bounded context
- Explanation for the fields in the canvas
- Open issues clarified with case study partner team (if any)

3.3 Bounded Context CCC

...

3.4 Bounded Context DDD

...

4 Context Map with Aggregates

4.1 Context Map for the Whole Landscape

Context Map for the whole landscape created jointly by the whole course (workshop organized by the Bounded Context team); then the details documented by case study subteams.

- Full diagram as an overview (no explanations needed, this will follow in the detailed sections)
- Open issues clarified with the case study partner team (if any)

Written by: all

4.2 Context Map Details for Bounded Context AAA

- List of Aggregates (no further details needed - this will come later in the Aggregate Canvas subsections)
- Explanation for interfaces and relationships to other bounded contexts
- Esp. reasoning for relationship types
- Open issues clarified with the case study partner team (if any)

Written by: Case study subteam for this bounded context

4.3 Context Map Details for Bounded Context BBB

- List of Aggregates (no further details needed - this will come later in the Aggregate Canvas subsections)
- Explanation for interfaces and relationships to other bounded contexts
- Esp. reasoning for relationship types
- Open issues clarified with the case study partner team (if any)

Written by: Case study subteam for this bounded context

4.4 Context Map Details for Bounded Context CCC

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4.5 Context Map Details for Bounded Context DDD

...

5 C4 Model with Aggregate Canvases

5.1 C4 Model Level 1

C4 Model (Level 1) for the whole landscape created jointly by the whole course (workshop organized by the Component Model team); then the details documented by case study subteams.

- Full diagram as an overview (no explanations needed, this will follow in the detailed sections)
- Open issues clarified with the case study partner team (if any)

Written by: all

5.2 C4 Model Details for Bounded Context AAA

Written by: Case study subteam for this bounded context

5.2.1 C4 Model Level 1

- Show again the part of the C4 Model Level 1 that refers to your bounded context
- Reasoning for the elements and their relationships
- Open issues clarified with the case study partner team (if any)

5.2.2 Aggregate Canvas(es)

- Show canvas with explanation for each relevant field
- Open issues clarified with the case study partner team (if any)

5.2.3 C4 Model Level 2

- Show diagram with reasoning / explanation of elements
- Open issues clarified with the case study partner team (if any)

5.3 C4 Model Details for Bounded Context BBB

Written by: Case study subteam for this bounded context

5.3.1 C4 Model Level 1

- Show again the part of the C4 Model Level 1 that refers to your bounded context
- Reasoning for the elements and their relationships
- Open issues clarified with the case study partner team (if any)

5.3.2 Aggregate Canvas(es)

- Show canvas with explanation for each relevant field
- Open issues clarified with the case study partner team (if any)

5.3.3 C4 Model Level 2

- Show diagram with reasoning / explanation of elements
- Open issues clarified with the case study partner team (if any)

5.4 C4 Model Details for Bounded Context CCC

...

5.5 C4 Model Details for Bounded Context DDD

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6 Method Reflection

6.1 EventStorming Method Reflection

- Strengths and weaknesses of this method (literature)
- Strengths and weaknesses of this method (own experience)

Written by: Event Storming team

6.2 Bounded Context Methods Reflection

- Strengths and weaknesses of these methods (literature)
- Strengths and weaknesses of these methods (own experience)

Written by: Bounded Context team

6.3 C4 Model Method Reflection

- Strengths and weaknesses of these methods (literature)
- Strengths and weaknesses of these methods (own experience)

Written by: C4 Model team

7 Critical Summary

7.1 Critical Summary for Bounded Context AAA

- What worked well in modelling bounded context AAA?
- What would we do differently next time?
- Outlook - next steps to be taken (if we had more time)

Written by: Case study subteam for this bounded context

7.2 Critical Summary for Bounded Context BBB

- What worked well in modelling bounded context BBB?
- What would we do differently next time?
- Outlook - next steps to be taken (if we had more time)

Written by: Case study subteam for this bounded context

7.3 Critical Summary for Bounded Context CCC

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7.4 Critical Summary for Bounded Context DDD

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Bibliography