

MEng Innovation by Design

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Function Modelling: A Novel Function Modelling Framework for Complex Software Design

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Background

What?

Function models describe and visualize the functionality of the system to be developed.

Relevance?

Software development community has been using numerous function modeling approaches over past few decades to conceptualize software systems.

Situation?

It has been proven that majority of people prefer to design software without using a proper function modelling approach because of numerous shortcomings in each approach, even though it is essential to use function models in designing complex software systems. Most widespread difficulties stated related to current approaches are high complexity, inconsistency, incompleteness and time-consuming behavior.

Problem?

Lack of usage of function models in early design stages leads to poor quality software products while failing to meet expected business goals.

Project Aim, Goal and Focus

Aim (Why?)

Enhance the quality of software products by encouraging people who work in software development discipline to use function models more adequately in early designing stages.

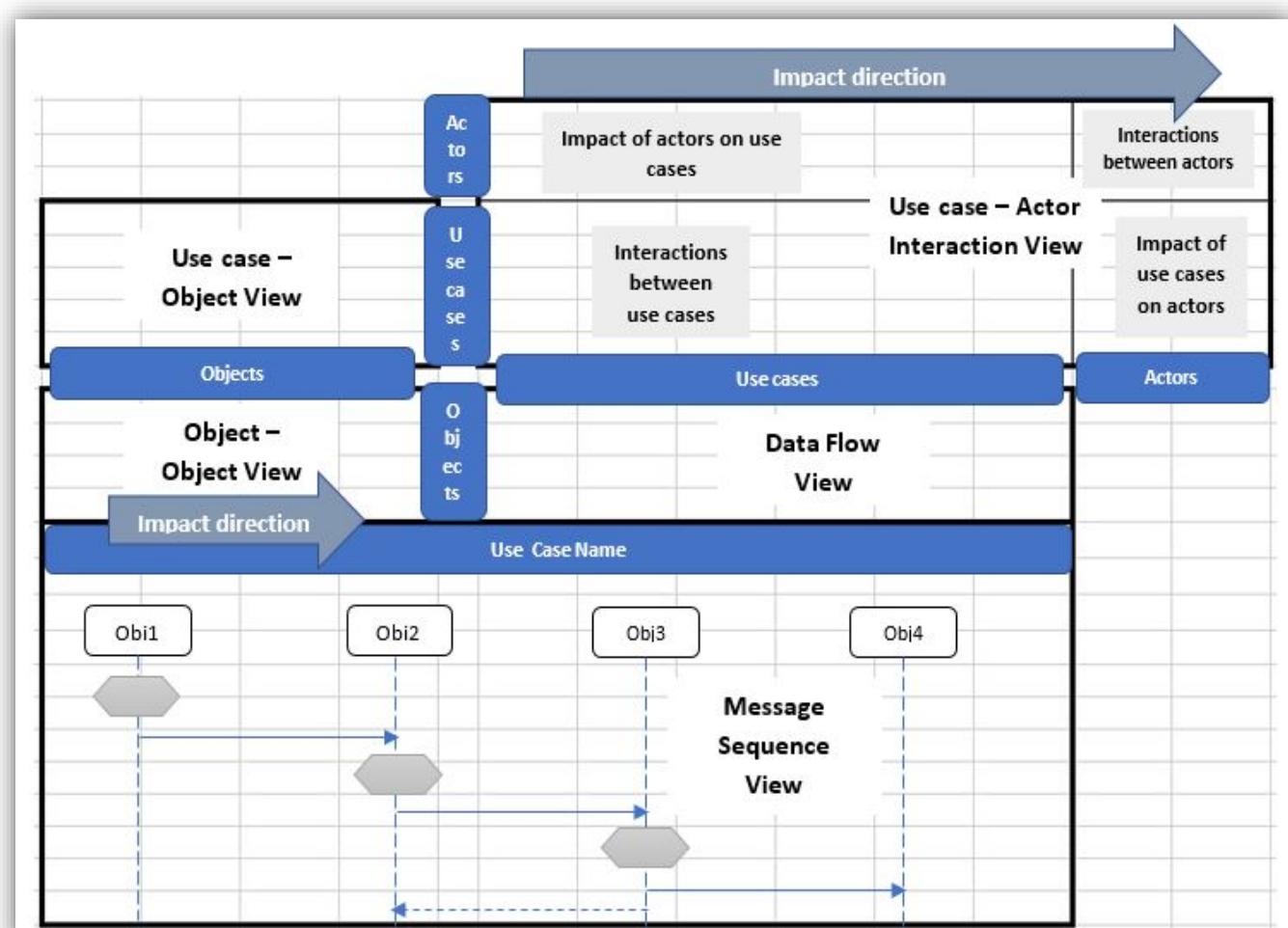
Goal (What?)

Develop a simplified function modelling framework for software community to conceptually design complex software systems.

Focus

Identify most significant features of current function models and apply them in designing a simplified function modeling framework, through analyzing benefits and shortcomings of each model.

Object-Oriented Function Modelling (OOFM) Framework



Key Benefits

- Summarize all modelling aspects in one place using a matrix-based representation.
- Clarity of visualizing the content and solutions, hence enhance the understandability of the overall system.
- Enhance the collaboration between the teams and clients.

Design Approach

