A DATA-DRIVEN APPROACH TO UX-FOCUSED MODEL-BASED ROADMAPPING FOR NEW PRODUCT PLANNING

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Context:
Complexity of systems and complexity of products

Complex systems
Amazon
Software ecosystem
Satellite constellation
Space system
Energy grid
Amusement park
Modern vehicle
Satellite constellation

Simple systems
Consumer product
Website
Mobile game

User experience is a composite time-dependent concept with many unknowns, which complicates management and planning

Global research question: How to facilitate the new product development and strategic planning activities to create products and services that offer the best user experience on the market?


Roadmapping for preparation, not prediction[2]

UX-, product-, and technology-related concepts must be stored in a computer as a graph with predefined formal syntax

RQ1: Can we propose a metamodel for the model-based technology roadmapping that will define this field independently from application domain?

RQ2: How to support user-centered model-based roadmapping?

Contribution 1: Metamodel for model-based roadmapping

Contribution 2: Feature-oriented domain analysis as a universal model for UX/product/technology modeling

Implementation: Web-based software tool for user-centered model-based roadmapping

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