

Modeling and Analysis: Applications and Variations

by *Gerrit Muller* [TNO-ESI, University of South-Eastern Norway]

e-mail: gaudisite@gmail.com

www.gaudisite.nl

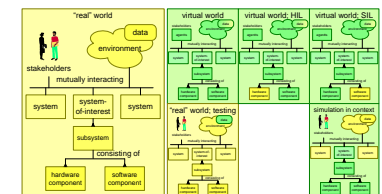
Abstract

Models are used for a wide variation of purposes. Stakeholders can get confused between "reality" and the virtual counterparts. In practice, many hybrids between "real" and virtual systems exist. For example, planning and training systems using real algorithms and data, and physical systems using a world model for situation awareness.

Distribution

This article or presentation is written as part of the Gaudí project. The Gaudí project philosophy is to improve by obtaining frequent feedback. Frequent feedback is pursued by an open creation process. This document is published as intermediate or nearly mature version to get feedback. Further distribution is allowed as long as the document remains complete and unchanged.

August 16, 2025
status: preliminary
draft
version: 0.1



Model Applications and Variations



capability analysis

Systems of Systems
apply all asynchronously



understanding
exploration
optimization

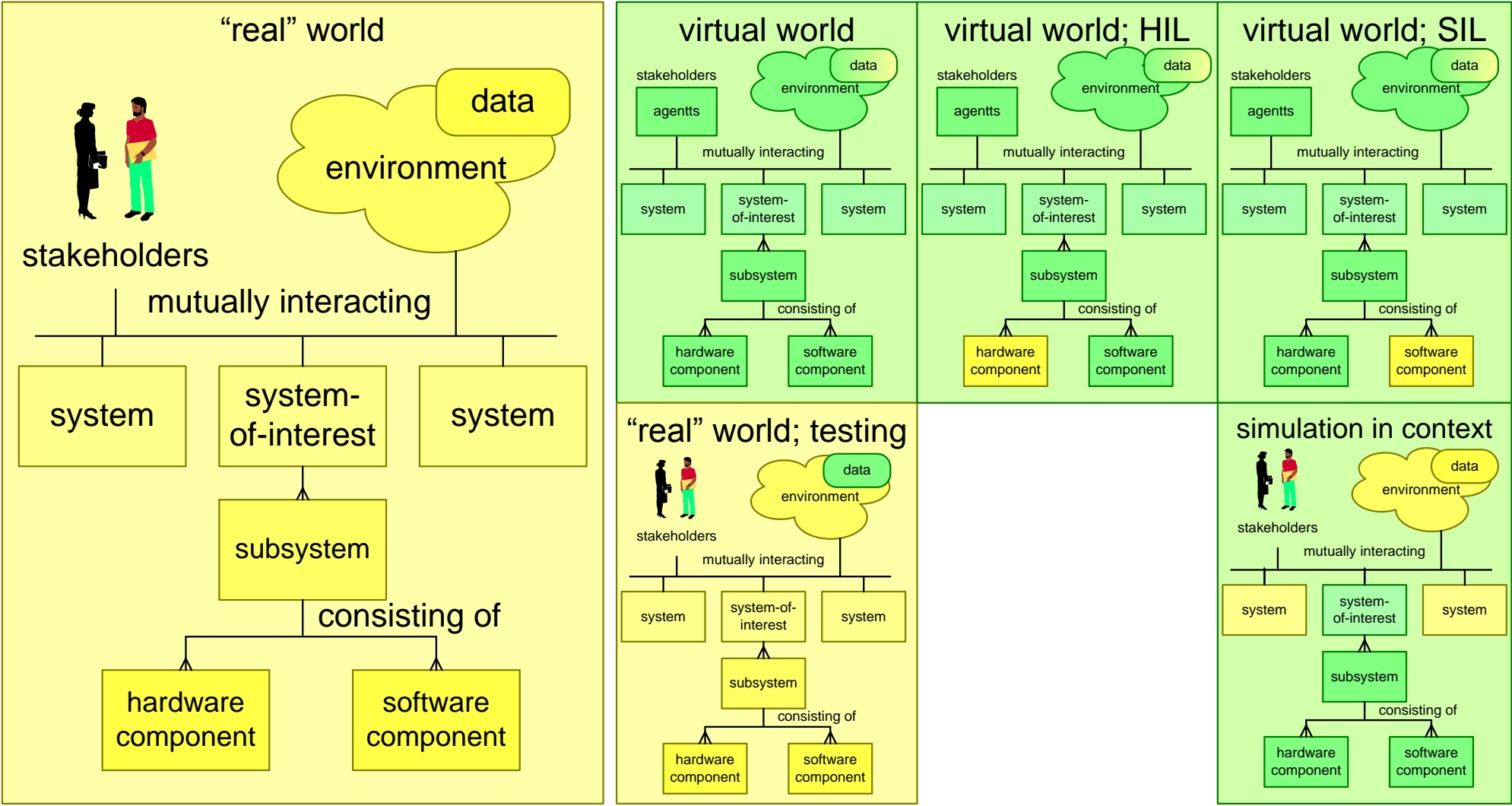
test data
comparison
trouble shooting

mission planning
training
health monitoring

evolvability
all phases repeat with same needs

in system
situation awareness
planning
training
health monitoring

Spectrum from Real to Virtual Systems



Architecting for Variations

