Mastering Systems Integration; Integration Environments

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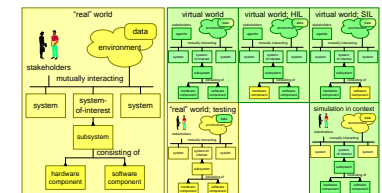
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Abstract

Integration requires an environment that serves as vehicle for the integration. Typically, a wide variation of enviroments supports the integration.
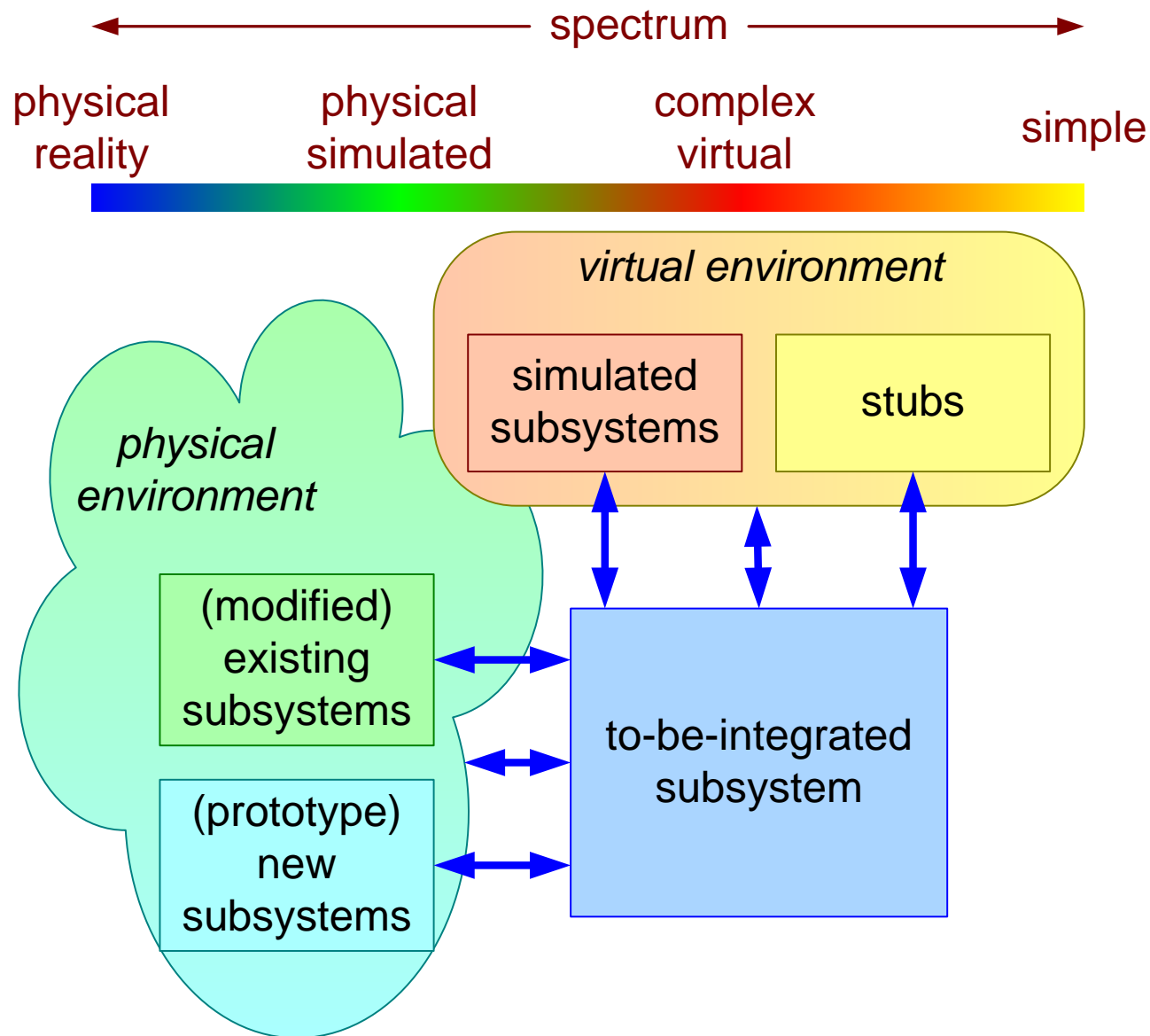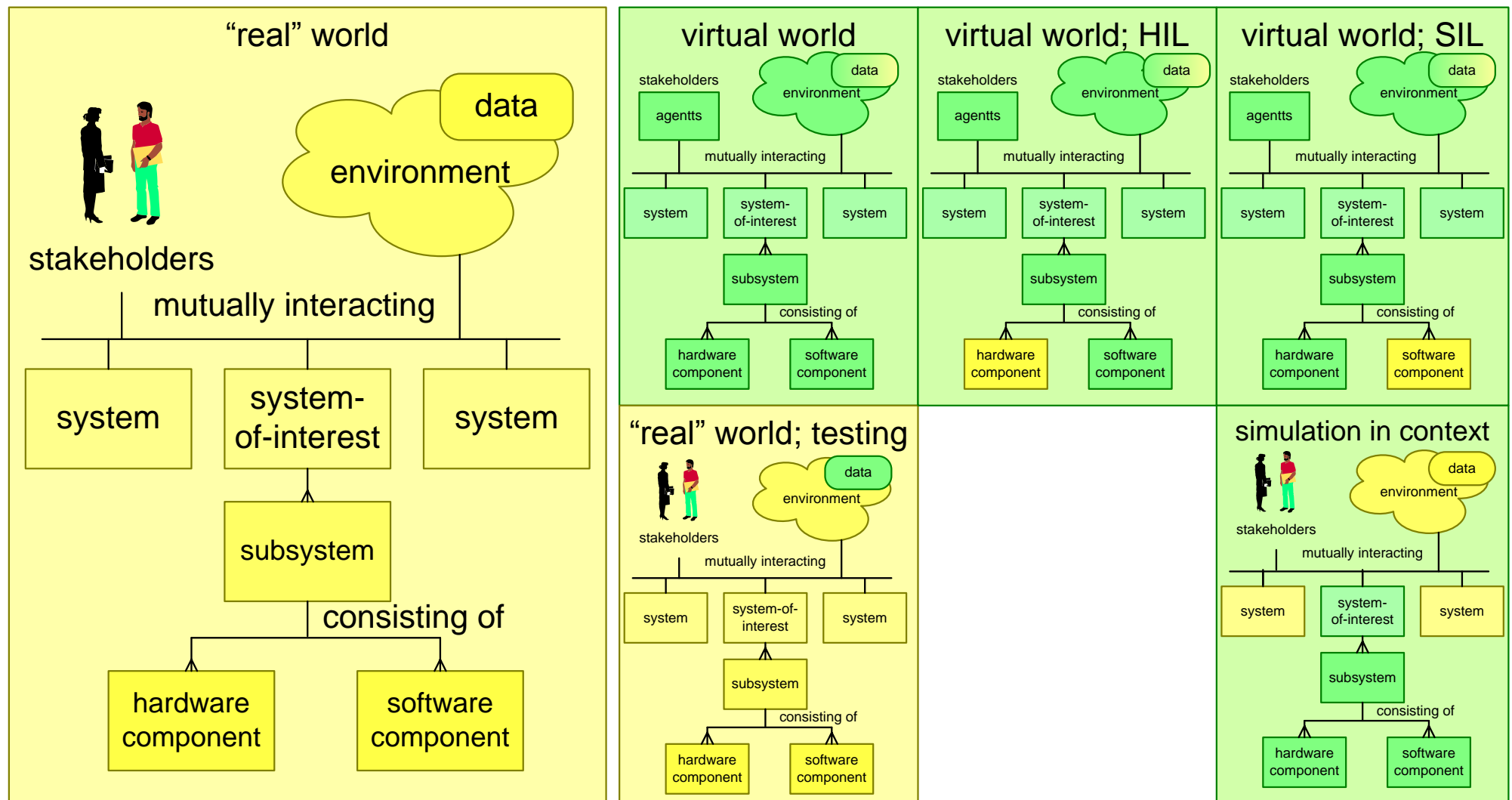
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Spectrum of Environments to Support Integration

Spectrum from Real to Virtual Systems

"real" world

stakeholders

mutually interacting

data
environment

- system
- system-of-interest
- system
- subsystem
- consisting of
  - hardware component
  - software component

virtual world

stakeholders — agentts

mutually interacting

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environment

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virtual world; HIL

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virtual world; SIL

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"real" world; testing

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simulation in context

stakeholders

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Scope of Test Configuration Management

components $10^4..10^6$

functions   emerging from components

specifications and designs

infoware ⎤
         ⎬ generating, building, manufacturing, configuring, transporting,
tools   ⎦   installing, commissioning, diagnosing, analyzing, teaching, ...

test data and objects

environment   physical conditions, physical and information infrastructure

people and their behavior

Modeling Space