Abstract

A thread of reasoning is build up in steps and the underlying reasoning is explained.
Thread of reasoning based on efficiency-quality tension

Customer objectives
- time efficient
- diagnostic quality
- safety (liability)

Specification issues
- system response
- system throughput

Concepts
- resource management
  - processor, memory
- internal logistics
  - concurrency, processes
- image processing
  - algorithms

Customer objectives, Application, Functional, Conceptual, Realization

Concepts
- reinforcing
- conflicting

Concepts

Customer objectives
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Concepts

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Concepts
Thread of reasoning; introvert phase

Introvert view: cost and impact of new technologies

Philips operational view (manufacturing, service, sales)
Philips operational view
(manufacturing, service, sales)

How to measure memory, how much is needed?
from introvert to extrovert
Radiologists diagnose from film, throughput is important. Extrovert view shows conceptual and realization gaps!
Threads of Reasoning in the Medical Imaging Case

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Philips operational view
(manufacturing, service, sales)

from extrovert diagnostic quality, via image quality,
algorithms and load, to extrovert throughput
cost revisited in context of clinical needs and realization constraints; note: original threads are significantly simplified