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
- design
  - space

**Threads of Reasoning in the Medical Imaging Case**

version: 2.4
June 21, 2020
MITORthread
Thread of reasoning; introvert phase

Introvert view: cost and impact of new technologies

Philips operational view
(manufacturing, service, sales)
Thread of reasoning; phase 2

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!
from extrovert diagnostic quality, via image quality, algorithms and load, to extrovert throughput
Thread of reasoning; phase 5

Cost revisited in context of clinical needs and realization constraints; note: original threads are significantly simplified.