Qualities as Integrating Needles

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Abstract

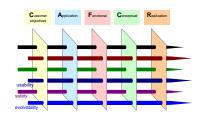
Many stakeholder concerns can be specified in terms of qualities. These qualities can be viewed from all 5 "CAFCR" viewpoints. In this way qualities can be used to relate the views to each other.

The meaning of qualities for the different views is described. A checklist of qualities is provided as a means for architecting. All qualities in the checklist are described briefly.

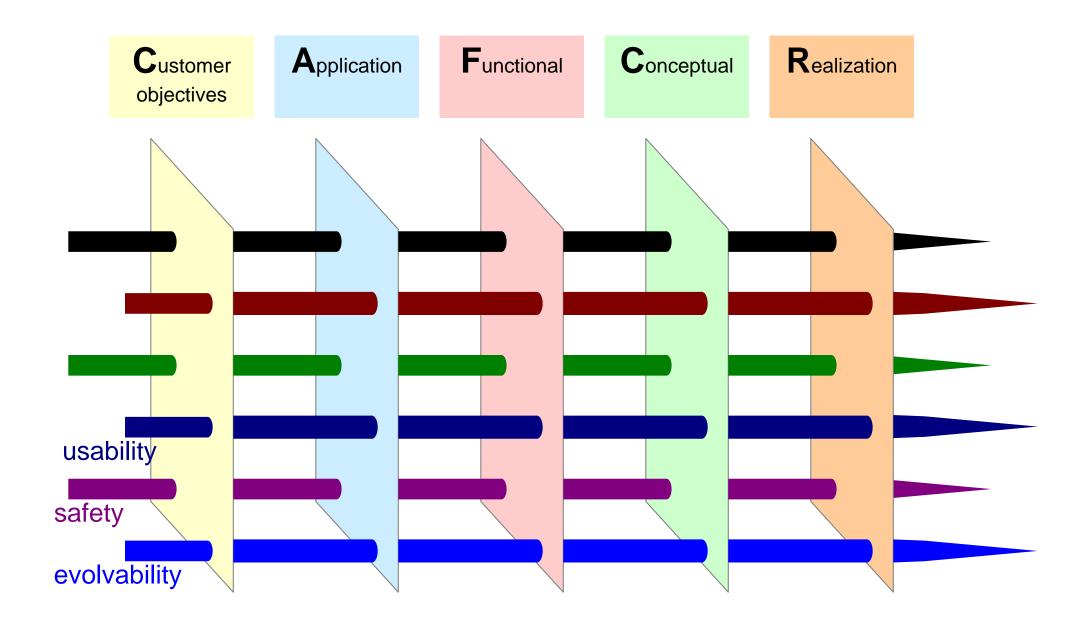
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Quality needles as generic integrating concepts





Security as example through all views

Customer objectives

Application

Functional

Conceptual

Realization



trusted

selection
classification
people
information
authentication

badges passwords locks / walls guards

administrators

functions for administration authentication intrusion detection logging quantification

cryptography firewall security zones authentication registry logging specific algorithms interfaces libraries servers storage protocols

desired characteristics, specifications & mechanisms



social contacts open passwords blackmail burglary fraud

unworkable procedures

missing functionality wrong quantification holes between concepts

bugs
buffer overflow
non encrypted
storage
poor exception
handling

threats



Quality Checklist

serviceable usable ecological interoperable usability ecological footprint serviceability connectivity attractiveness contamination 3rd party extendible configurability responsiveness installability noise image quality disposability liable wearability future proof storability liability transportability testability evolvability down to earth dependable traceability portability standards compliance safety attributes upgradeability security extendibility cost price efficient reliability maintainability power consumption robustness resource utilization consumption rate integrity cost of ownership (water, air, availability logistics friendly chemicals, effective consistent et cetera) manufacturability throughput or size, weight reproducibility logistics flexibility



accuracy

productivity

predictability

lead time