Software Design

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SWEBOK® V3.0

Guide to the Software Engineering Body of Knowledge

Editors

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◆IEEE

IEEE ◆ computer society

Sw Design

* the process of defining
  * the architecture
  * components
  * interfaces
  * other characteristics
* of a system or component

* the result of this process

SD Fundamentals

* general SD concepts

* context of SD

* SD process

* SD principles

Key Issues in SD

* concurrency
* event handling
* data persistence
* distribution of components
* error handling
* fault tolerance
* interaction
* presentation
* security

Structure & Architecture

∗ architectural viewpoints

∗ architectural styles

∗ design patterns

∗ architecture design decisions

∗ families of programs & frameworks

UI Design

* general UID principles
* UID issues
* user interaction modalities
* info presentation
* UID process
* localisation / internationalisation
* metaphors & conceptual models

Quality Analysis

* quality attributes

* quality analysis techniques

* quality evaluation techniques

* measures

SD Notations

* structural descriptions
  * static view

* behavioural descriptions
  * dynamic view

* tools

SD Strategies

* general strategies
* functional / structured
* OOD
* data structure centred
* component-based
* ...