SSADM
(Structured Systems Analysis and Design Method)

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Assignment 2

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Classification (Avison/Fitzgerlad)
History

Traditional Approach (around 1970s)

Yourdon (1979)

CCTA + LBMS (1981) → SSADM

IEEE (1988)
Diagrammatic Techniques

Logical Data Structures

A

B

C

D

E

Data Flow Diagrams

Adapted from: Ashworth/Goodland, 1990 p. 31

Source: http://www2.docm.mmu.ac.uk/STAFF/M.Stanton/sad/Tutorials/CDDFD1.png
Diagrammatic Techniques

Entity Life Histories

- Bank Account
  - Open
  - Account Lifetime
  - Close
  - Account Transaction
    - Account Transaction
      - Deposit
      - Withdrawal

Others (but not so frequent)

- Logical Design Dialogue
- Context Diagrams
- Structure Chart

source: http://www.jacksonworkbench.co.uk/stevefergspages/papers/entity_event_modelling/index.html
Non diagrammatic techniques

• Documentation
• relational data analysis
• first cut rules and physical design control
• quality assurance
• project estimating
• Others: interviewing, questionnaires, cost-benefit analysis, ...
Structure (SSADM 4+)

Phases
• Feasibility study
• Requirements analysis
• Requirements specification
• Logical system specification
• Physical design

Stages
• Stage 0 Feasibility
• Stage 1 Investigation of current system
• Stage 2 Business system options
• Stage 3 Definition of requirements
• Stage 4 Technical system options
• Stage 5 Logical design
• Stage 6 Physical design
Benefits

• User feedback
• Facilitates modulation / communication
• Remove redundancies / inconsistencies / ambiguity
• Project planning improved
• Different views on system (levels)
• Can be adapted
Risks

• SSADM has troubles to cope with requisite variety and complexity (analysis paralysis)
• Linear approach \(\rightarrow\) hard to implement adaptive content
• Hard to define boundaries of a system
• Time / cost consuming
• No user involvement in design process
• Doesn’t cover the whole SDLC
Application of SSADM in the SDLC

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Evaluation

- Relevancy problem
- Conflicting values
- Prejudices
- Skills

- Distinguishes objectives
- Fails to state boundaries
- Omits human values
- Ambiguity in specs.
- Who is the client(s)?

- Promotes participation
- Modeling ambiguity
- What/How Questions

Problem-solving process

Intended problem solver

“Problem situation”
Summary

• Classification: where SSADM fits in compared to other methodologies
• Historical background and evolution
• Main and supplementary techniques
• Structure of the methodology
• Advantages/Disadvantages
• Evaluation of the methodology
DISCUSSION
References

References

- http://www.jacksonworkbench.co.uk/stevefergspages/papers/entity_event_modelling/index.html
- http://www2.docm.mmu.ac.uk/STAFF/M.Stanton/sad/Tutorials/CDDFD1.png