

Introduction to Information Policy

Information Policy

01



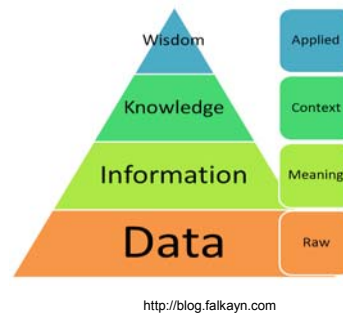
- 164323-01
- Information Policy
- Spring 2014
- Sync Sangwon Lee, Ph. D
- D. of Information & Electronic Commerce
- WONKWANG University

00. Contents

- 01. Information
- 02. Systems
- 03. Management Information Systems
- 04. Software Crisis
- 05. Information System Analysis and Design

01. Information

- Wisdom Experienced application of knowledge
- Knowledge Accumulated and shared information with rules
- Information Subjectively meaningful and valuable data
- Data Objective facts and values



01. Information

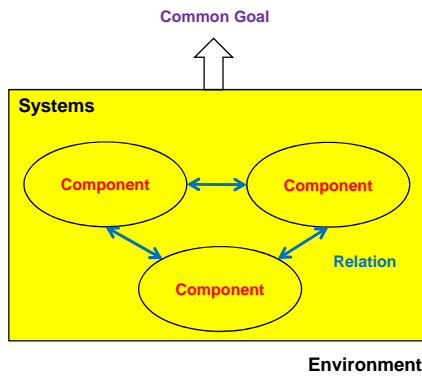
- Values of Information
 - Quantitative Values
 - Normative Values
 - Realistic Values
 - Subjective Values
 - Qualitative Values
 - Relevancy
 - Accuracy
 - Timeliness
 - Completeness



<http://www.charneycoachingconsulting.com>

02. Systems

- System
 - A set of components interacting for common goals
- 3 Factors of Systems
 - Component
 - Relation
 - Common Goal



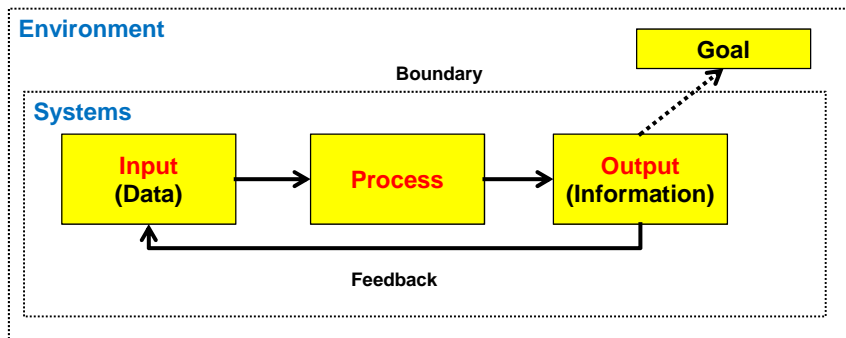
02. Systems

- Features of Systems
 - Objectivity
 - Automaticity
 - Controllability
 - Integration
 - Inputs from environment are transformed into outputs to environment.
 - It is controlled so as to suppress the increase of entropy(= uncertainty).
 - It is recognized as a whole thing.
 - It is goal-oriented.
 - Its performance is measured.
 - It is classified hierarchically.
 - It displays synergy effect.



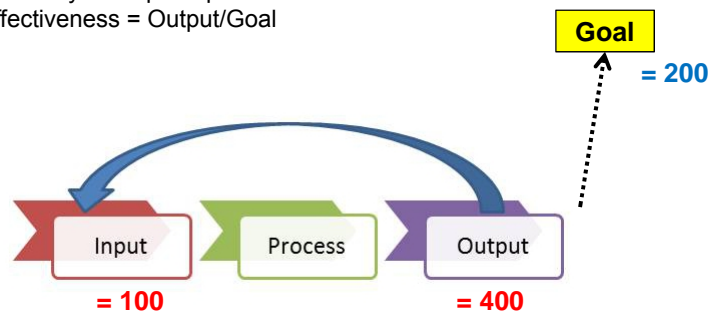
02. Systems

- Major Procedure of Systems
 - Input → Process → Output



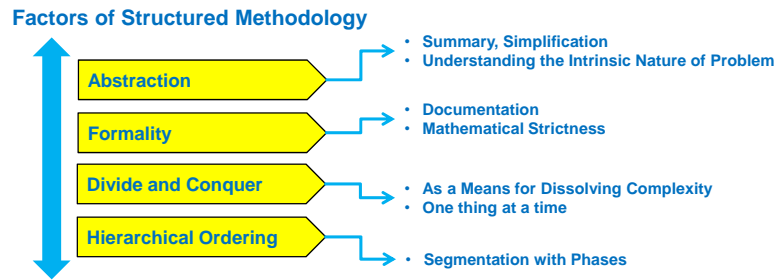
02. Systems

- How to Measure Performance of Systems
 - Efficiency = Output/Input
 - Effectiveness = Output/Goal



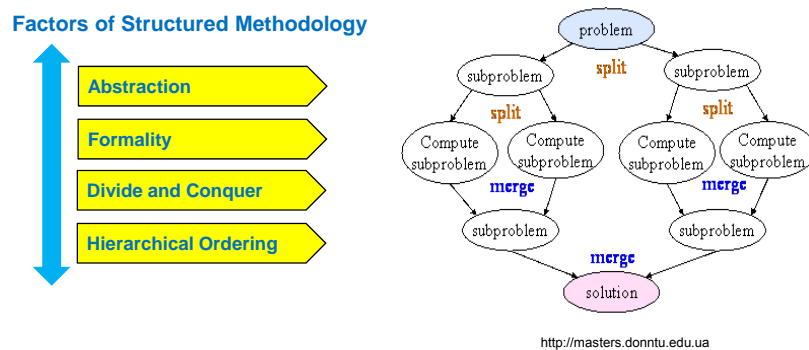
02. Systems

- 4 Factors of Structured Modeling for Systems



02. Systems

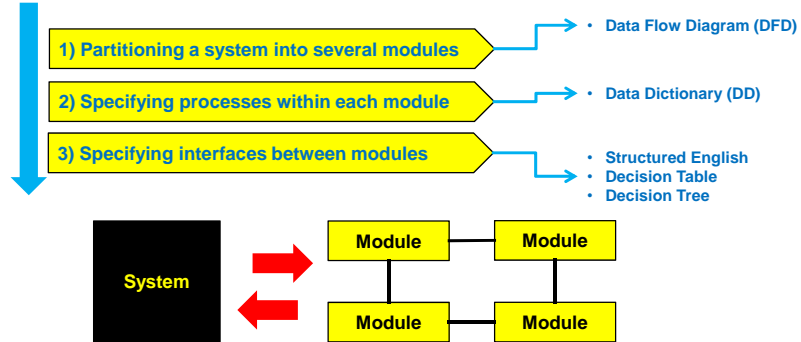
- 4 Factors of Structured Modeling for Systems



02. Systems

- 3 Phases of Structured Modeling for Systems

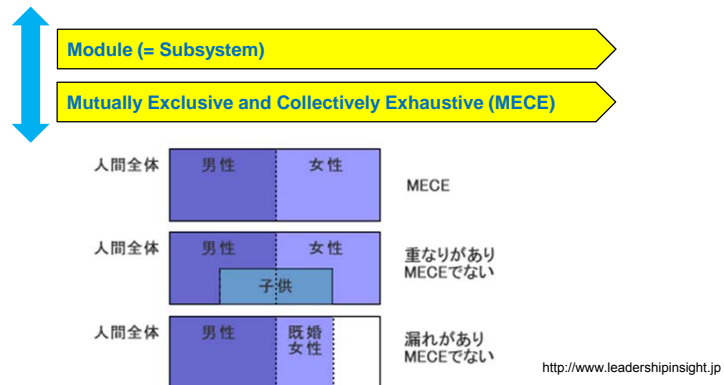
3 Phases of Structured Modeling



02. Systems

- Divide and Conquer

Divide and Conquer



02. Systems

- How to Measure Reliability of Systems
 - Mean Time Between Failure (MTBF)
 - Mean Time to Repair (MTTR)
 - Reliability (R)

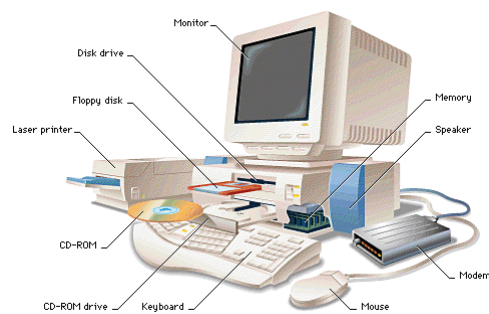
| | | | | | | |
|-----------------|---------------|-----------------|--------------|-----------------|---------------|-----------------|
| Operation 50 | Failure 10 | Operation 40 | Failure 5 | Operation 30 | Failure 15 | Operation 40 |
|-----------------|---------------|-----------------|--------------|-----------------|---------------|-----------------|

- $MTBF = \text{Total Operations} / \text{No. of Operations} = (50 + 40 + 30 + 40) / 4 = 40$
- $MTTR = \text{Total Failures} / \text{No. of Failures} = (10 + 5 + 15) / 3 = 10$
- $R = \text{Total Operations} / \text{Total Time} = (50 + 40 + 30 + 40) / (50 + 10 + 40 + 5 + 30 + 15 + 40) = 0.84$

• $R = 0.84 \approx 0.8 = MTBF / (MTBF + MTTR)$

02. Systems

- Conditions of Good Systems
 - Full functionality to attain the goal
 - High performance
 - High reliability
 - Flexibility



<http://prepare.icctrends.com>