

## CHAPTER : 17

### ⇒ Reuse Dimensions :

- Scope: horizontal vs vertical.
- Approach: systematic or opportunistic
- Technique: compositional or generative.
- Use: Black-box or white box

### ⇒ Success criteria for component libraries

- well developed standard terminology.
- Small interfaces
- standardized data formats

- ⇒ Requirements for component library
- Searching for components
  - Understanding components found
  - Adapt components if necessary
  - Compose systems from components

- ⇒ Component evaluation, useful information.
- Quality information
  - Administrative information
  - Documentation
  - Interface information
  - Test information

⇒ Reuse process models

- Software development with reuse
  - Passive
    - Component library evolves haphazardly
- Software development for reuse
  - Active
    - Reusable assets are developed, rather than found by accident.

⇒ Software development for reuse:

- Often two separate development processes
  - a. Development of components
  - b. Development of applications, using the available components

⇒ Characteristics of successful reuse programs:

- Extensive management support
- Organizational support structure
- Incremental implementation
- Significant success
- High incentives
- Domain analysis done
- Attention to architectural issues

⇒ Non-technical aspects of software reuse:

- Economics: it is a long term investment -
- Management: ~~It~~ <sup>It</sup> does not happen ~~is a long term~~  
spontaneously
- Psychology: people do not want to reuse someone else's code