Introduction to CM

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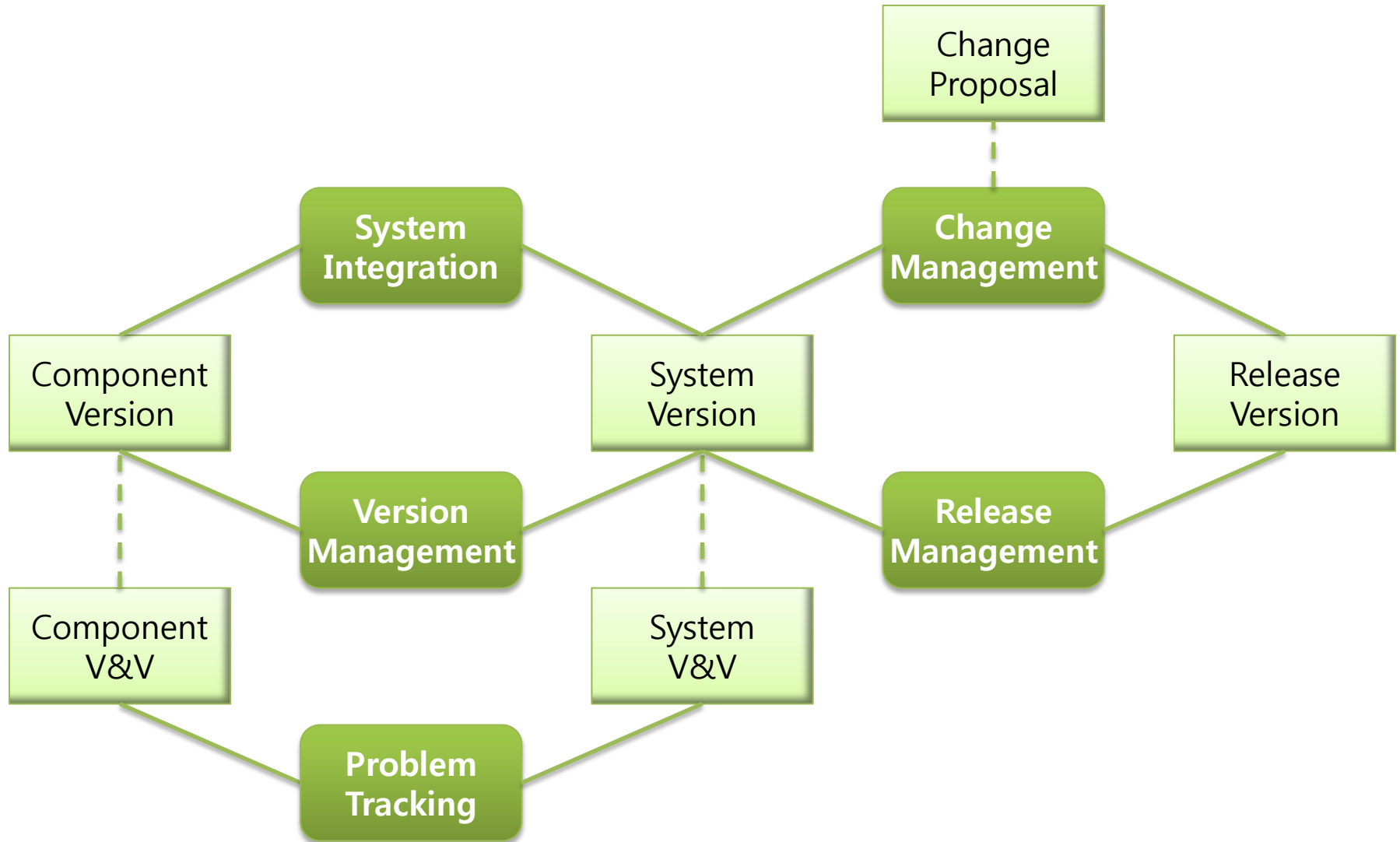- Use of CM

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Introduction to CM

- Configuration Management (CM)
  - The Process of managing changes to an evolving software system
    - Software always change during development and use
    - Changes of requirements, bug fixing, and/or new version of SW...

  - The aim of CM is to support the system development and integration process

  - It is consist of 5 activities:
    - Change Management
    - Version Management
    - System Integration/Building
    - Release Management
    - Problem Tracking

CM Activities

- Change Management
  - It is concerned with analyzing benefits of proposed changes, approving those changes, and tracking which components in the system have been changed

- Version Management
  - It is the process of keeping track of different versions of software components or configuration items and the systems in which these components are used

- System Integration/Building
  - It is the process of creating a complete, executable system by compiling and linking the system components, libraries, configuration files, etc.

- Release Management
  - It is concerned with managing a release of the system which includes executable code and all associated stuff with the system

- Problem Tracking
  - It is provided to allow user to report problems, and to allow all developers to see who is working on these problems and when they are fixed

Use of CM

- CM is essential for team projects
    - where several developers are working at same time
    - where developers are distributed with members in different place

- CM is also useful for individual projects

CM Tools

- CM Tools
  - ClearCase (Bellagio and Milligan, 2005)
    - Integrated CM Tool

  - SVN: Subversion (C. Michael Pilato et al., 2008)
    - Version Management
    - System Integration/Building

  - CVS: Concurrent Versions System (Dick Grune, 1986)
    - Version Management
    - System Integration/Building

  - Mantis Bug Tracker (Kenzaburo Ito et al., 2000)
    - Problem Tracking

Team Project with CM

- Team Presentation #4
  - SVN & Mantis Bug Tracker 사용법

- Team Project
  - 4학년 "소프트웨어 검증" 수업과 연동
  - 4학년 수업에서 Testing 및 정적 분석을 위한 CTIP 환경을 제공

  - SVN을 사용하여 코드를 공유하고 버전 관리 수행
  - Mantis를 사용하여 문제 (Testing 결과 및 수정) 에 대한 이슈 관리 수행

End