Тема 3: Использование Rose в команде

Where Are We?

- Team-based modeling
- Controlled Units
- Virtual Path Maps
- Reuse
- Version Control Add-Ins
- Model Integrator

Team-Based Modeling

- Rational Rose supports
  - Controlled evolution of the model.
  - Partitioning of models into architecturally significant units.
  - Reuse of architecturally significant model elements.

Controlled Evolution

- Rose supports architecture-based modeling through the use of UML packages and subsystems.
- Rose helps users work on low-level design details without affecting the work of others.
  - Specification of architecture-level functionality (interfaces) can be separated from specification of implementation.
- Rose helps users avoid creating inappropriate dependencies between architectural units.
  - Show Access Violations report supports this.

Partitioning

- In Rose, UML packages/subsystems can be maintained as separate files called controlled units.

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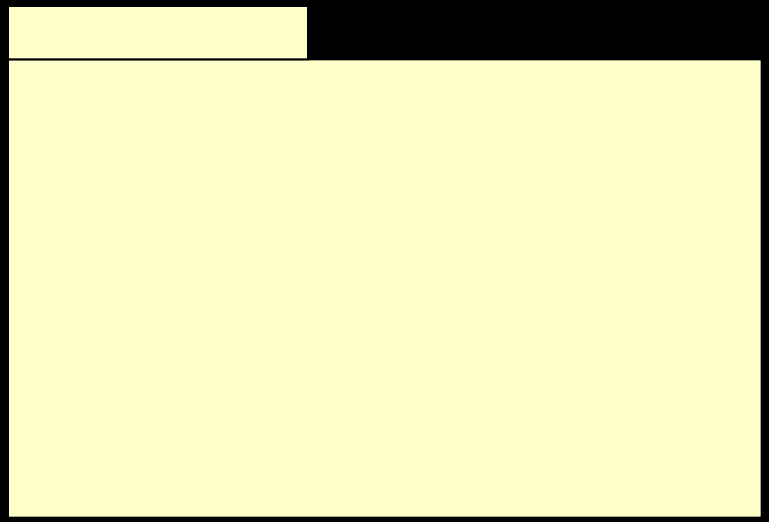
Controlled Units

- A package is the smallest element that can be a controlled unit.
- In the UML, a package is represented by a file folder.



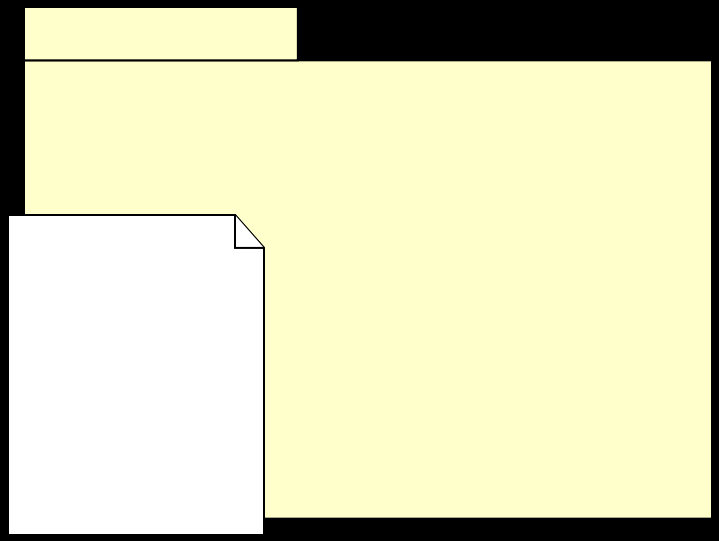
Package

Controlled Units

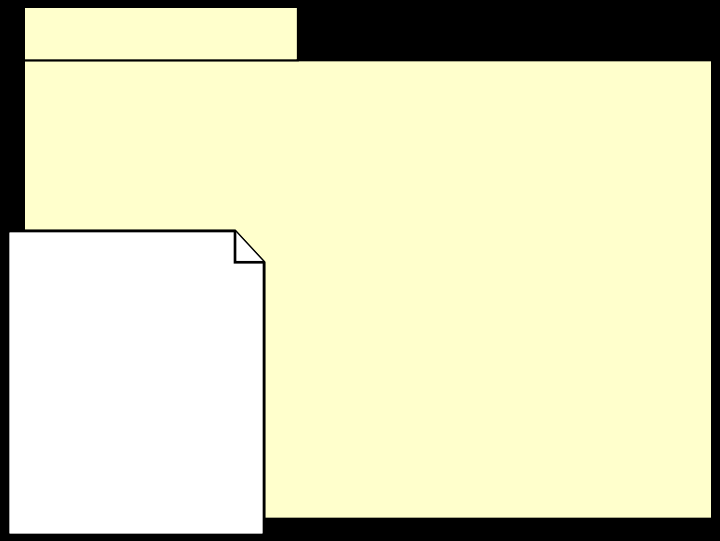
- A controlled unit is a model element that can be placed under version control.
- The following model elements can be controlled units
  - Model file itself (.mdl file)
  - Logical View and Use-Case View packages (.cat file)
  - Component View packages (.sub file)
  - Deployment View diagram (.prc file)
  - Model properties (.prp file)

Controlled Units

- A controlled unit can be loaded or unloaded. In Rose, a controlled unit is represented in the browser as follows



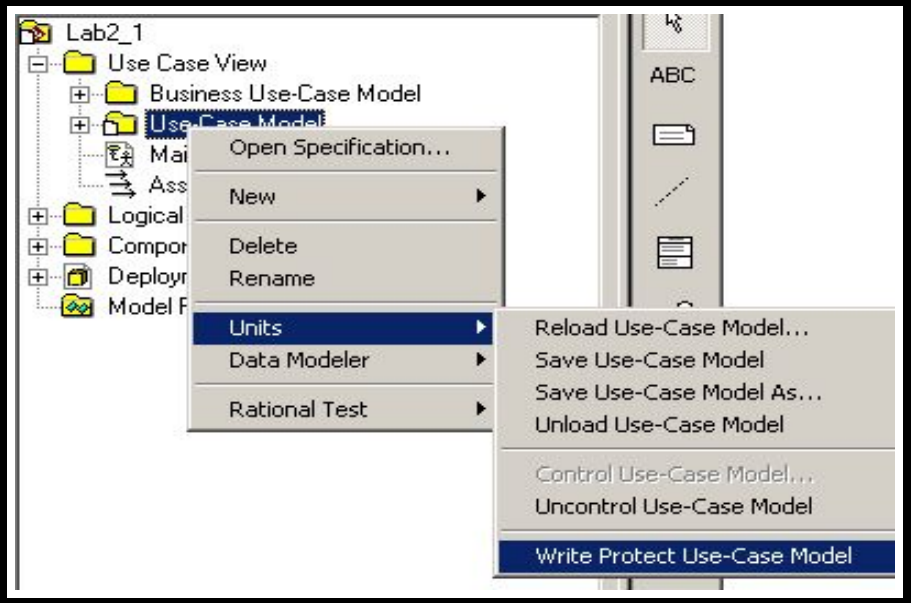
Loaded Controlled Unit



Unloaded Controlled Unit

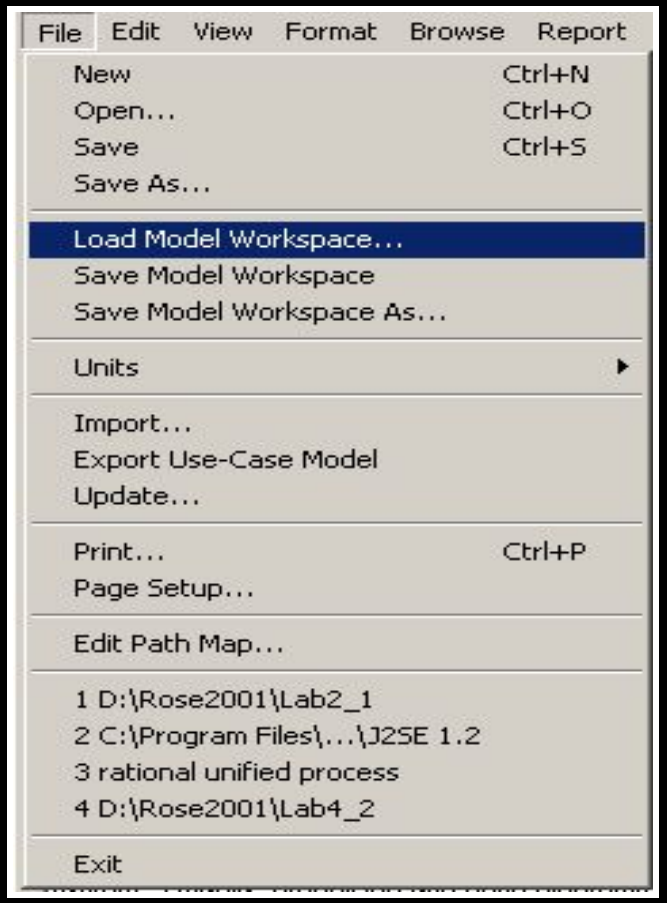
Controlled Units

- A controlled unit may be write-protected or write-enabled depending on the file's status in the file system.
- A controlled unit can also be write-protected or write-enabled manually.



Controlled Units

- A model workspace is a snapshot of all currently loaded controlled units and open diagrams.



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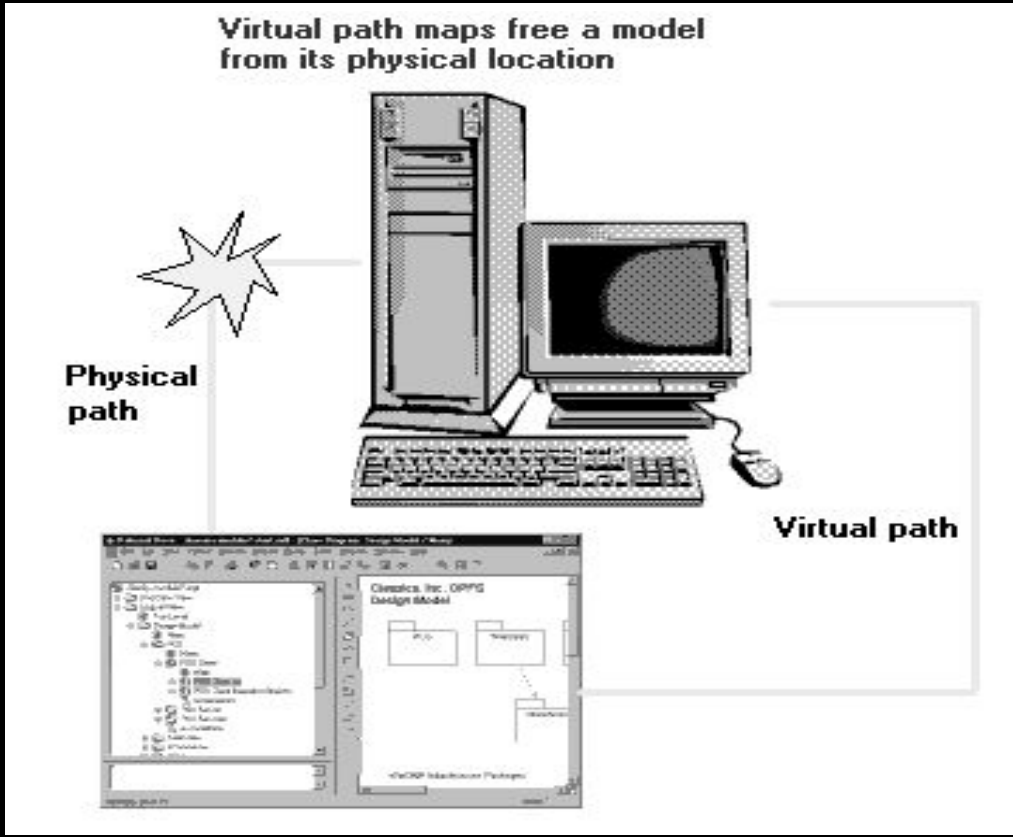
Virtual Path Maps

- A virtual path map allows models to be moved between different folder structures and to be updated from different workspaces.



How do virtual paths work?

- For example, if a user has defined a virtual path,

  $MYPATH=Z:\ordersystem

  and saves a package as

  Z:\ordersystem\user_services.cat

  the model file will refer to the package as

  $MYPATH\user_services.cat

- When another user, who has defined **$MYPATH** as

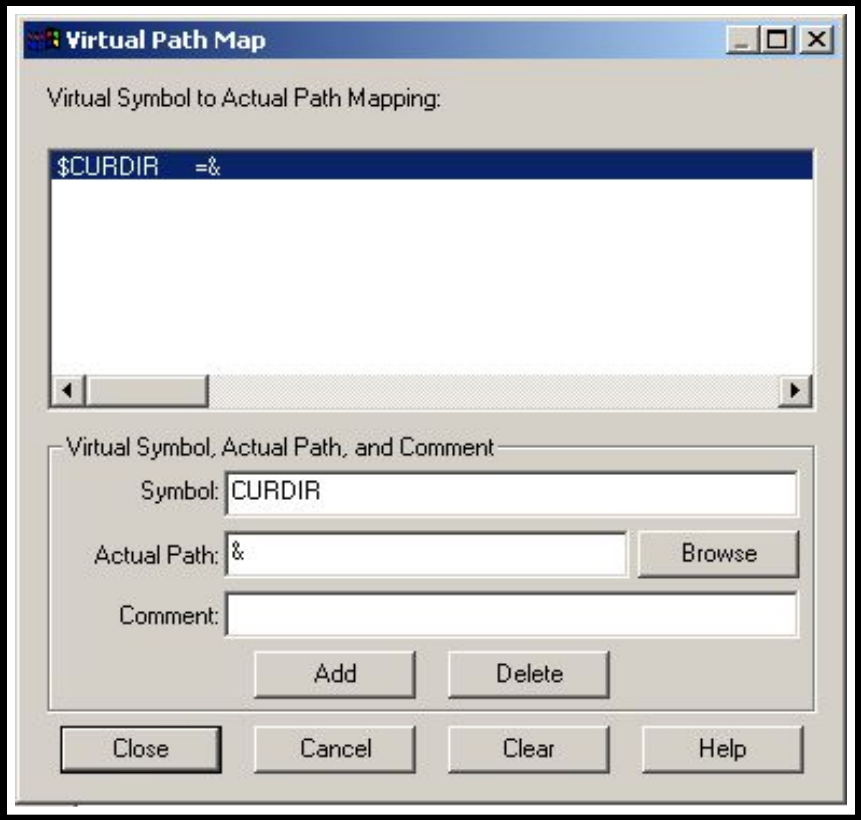
  $MYPATH=X:\ordersystem

  Rational Rose loads the following file:

  X:\ordersystem\user_services.cat

Virtual Path Maps

- In Rose, the path map reference “&” equals the path to the directory where the current .mdl file or controlled unit is located.



Review

1. What is a package?
2. What is a controlled unit?
3. Name two model elements that can be controlled units.
4. Identify a loaded and unloaded controlled unit.
5. What is a virtual path map?

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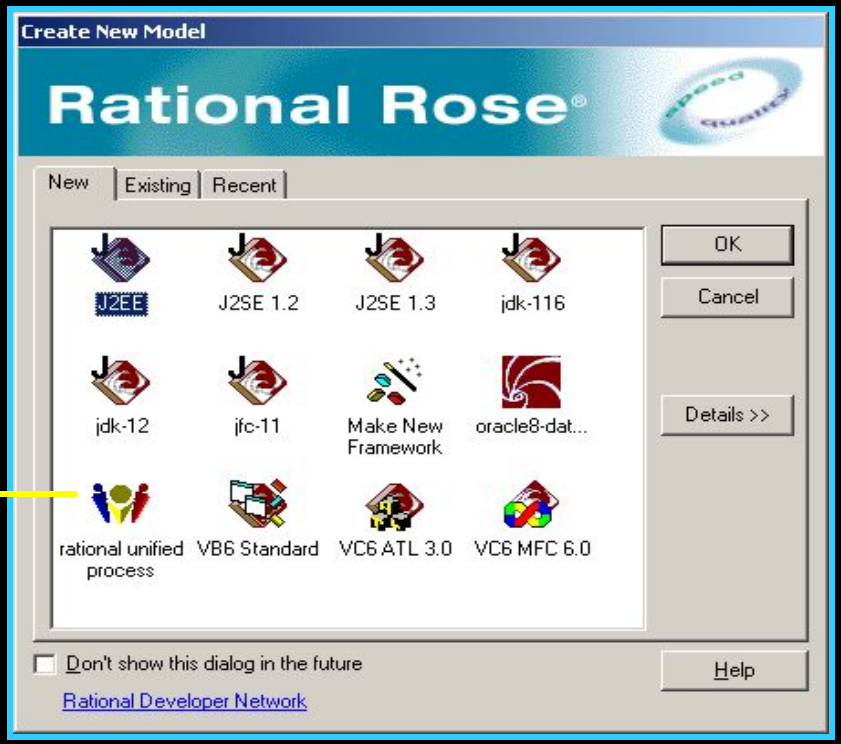
Reuse

- Reuse refers to archiving and maintaining artifacts for future projects.
- Organizations gain significant benefits from reusing large-scale design elements like
  - Frameworks
  - Architecturally-significant packages
  - Subsystems
  - Mechanisms

Frameworks

- A framework in Rational Rose is a set of predefined model elements that are used to model a certain kind of system and to provide a set of reusable components.

Framework Wizard



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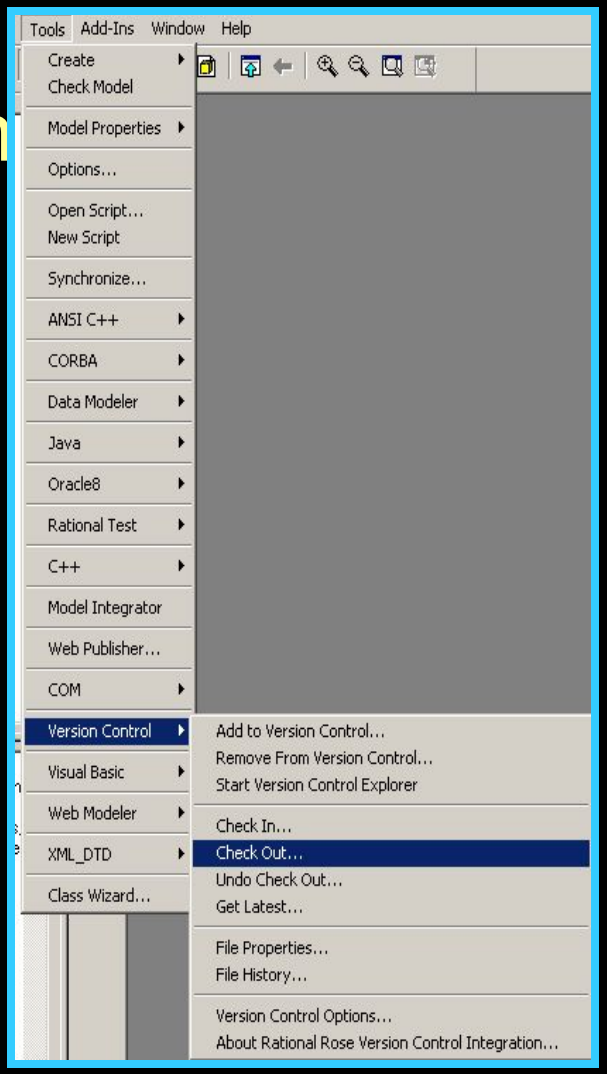
Version Control Add-Ins

- Rose provides two add-ins for version control
  - Version Control Add-In
  - ClearCase Add-In

Version Control Add-In

- The Version Control Add-In provides integration between Rational Rose and any SCC-compliant version control system.



ClearCase Add-In

- The ClearCase Add-In provides a tight integration between Rational Rose and Rational ClearCase.

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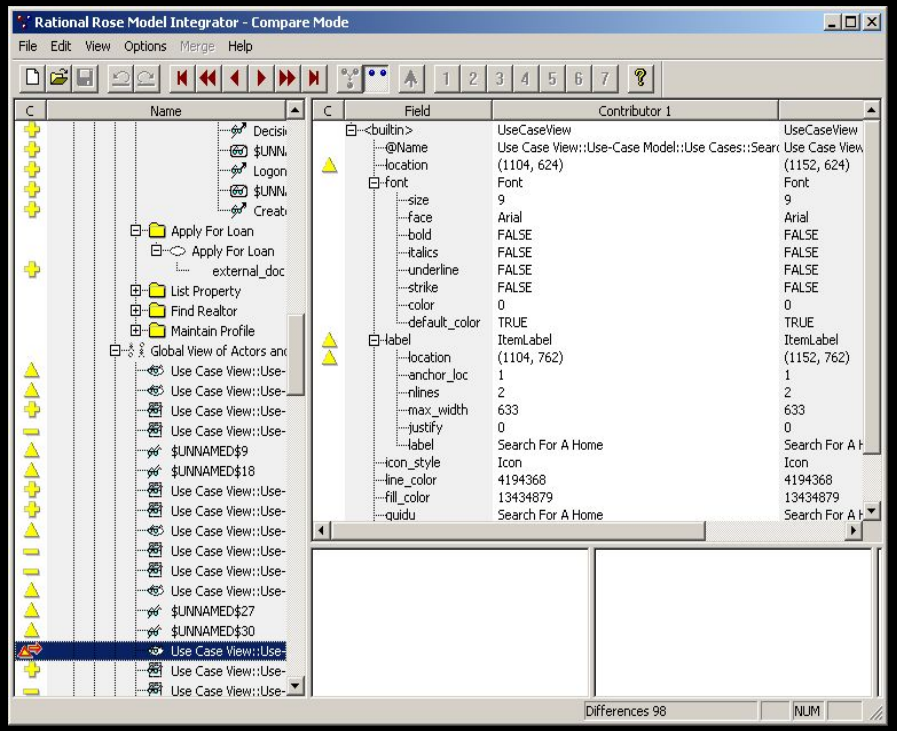
Model Integrator

- The Model Integrator is a stand-alone tool that can be used to
  - Compare the differences between Rose models.
  - Merge different Rose models into a resultant model.



Review

1. What capabilities in Rose support reuse?
2. Name the two version control add-ins supported by Rose.
3. What is the Model Integrator?