UML™ Quick Reference Guide AT A GLANCE

The Truth is in the Models®

CLASS DIAGRAM:

Class
A descriptor for a set of objects with similar structures, behaviors,and relationships.
Classes contain Attributes and operations

Enumeration
A user-defined data type whose instances are a set of user-specified named enumeration literals.

Port
A port is a property of a classifier that specifies a distinct interaction point between that classifier and its environment or between the (behavior of the) classifier and its internal parts.

Interface
The description of a visible behavior of a class, a component or a package.

Collaboration
A collaboration is represented as a kind of classifier and it defines a set of cooperating entities to be played by instances (its roles) as well as a set of connectors that define communication paths between the participating instances.

Substitution
A substitution is a relationship between two classifiers.

Usage
A usage is a relationship in which one element requires another element (or set of elements) for its full implementation or operation.

Template Binding
A binding is a relationship between a template and a model element generated from the template.

Generalization — A relationship between a more general and a more specific element.

Association — A connection among classes, which also means a connection among objects of those classes.

Directed Association

Aggregation — An aggregation is an association that represents a whole-part relationship.

Composition — A composition is a form of aggregation with a stronger ownership and coincident lifetime of part with the whole.

Multiplicity — Defines the limits on the number of objects of each type that may participate in the association.

Realization — A realization signifies that the client set of elements are an implementation of the supplier set, which serves as the specification.

The Class implements the interface (circle) TemperedGlass

COMPONENT DIAGRAM:

DEPLOYMENT DIAGRAM:

PACKAGE DIAGRAM:

A package is a namespace that may contain any model elements, including other packages. Packages may participate in the same set of relationships as a class. Package dependencies are derived from relationships between model elements contained in each pair of packages.

Package — A namespace that may contain model elements.

Data — A model is an abstraction of a physical system from a particular point of view. A model contains a hierarchy of packages/subsystems and other model elements that describe the system.

«profile» Validation Profile — A profile extends one or more elements in a metamodel.

Package A «merge» Package B — A package merge relationship indicates the contents of the supplier package are incorporated into the contents of the client package.

Application «import» datatypes — A package import indicates that the client package has access to the contents of the supplier package without the use of qualified names.

COMPOSITE STRUCTURAL DIAGRAM:

Part — A part is a classifier property owned by a composition.

Port — A port may appear either on a contained part representing a port on that part, or on the boundary of the class diagram, representing a port on the represented classifier itself.

: Collaboration Use — A collaboration use represents one particular use of a collaboration to explain the relationships between the properties of a classifier. The collaboration use shows how the pattern described by a collaboration is applied in a given context, by binding specific entities from that context to the roles of the collaboration.

Role Binding
Is a relationship from parts to the Collaboration Use (in diagram).

Connector
Each connector may be attached to two or more connecting elements, each representing a set of instances. Each connector end is distinct in the sense that it plays a distinct role in the communication realized over the connector.

OBJECT DIAGRAM:

An instance specification describes an entity based on the corresponding class specification.

A connection between two objects.

PROFILE DIAGRAM:

«stereotype» [Element] — A stereotype is an extension mechanism that adds information to an existing metamodel element.

«Metaclass» *Element* — A class whose instances are classes. Metaclasses are typically used to construct metamodels.

«profile» «apply» Package — A profile application is used to show which profiles have been applied to a package

«profile» Profile — A Profile is a kind of Package that extends a reference meta model.

Package — A namespace that may contain model elements.

«Customization»

Model — A model is an abstraction of a physical system from a particular point of view. A model contains a hierarchy of packages/subsystems and other model elements that describe the system.

The Truth is in the Models®
www.nomagic.com

Corporate Headquarters
One Allen Center
700 Central Expressway South, Suite 110
Allen, Texas 75013
Phone: 214.291.9100
Fax: 214.291.9099
E-mail: sales@nomagic.com

UNIFIED MODELING LANGUAGE™

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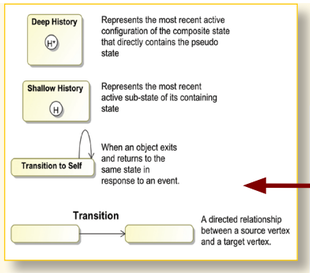
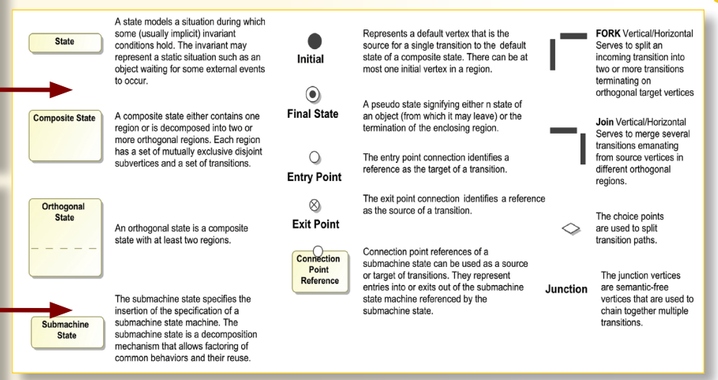
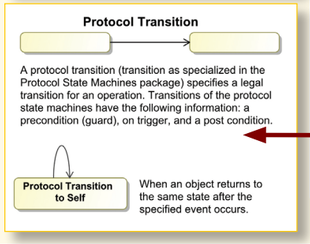
STATE MACHINE DIAGRAM:

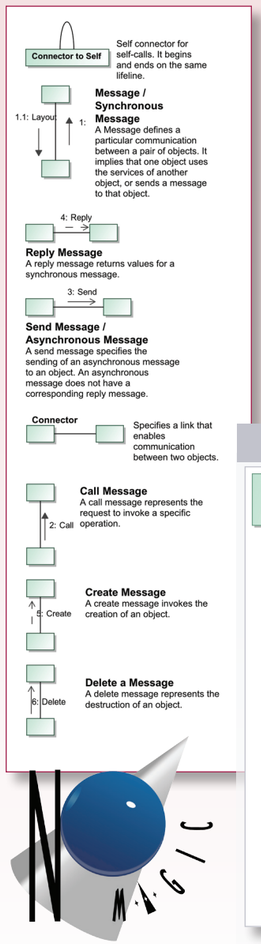




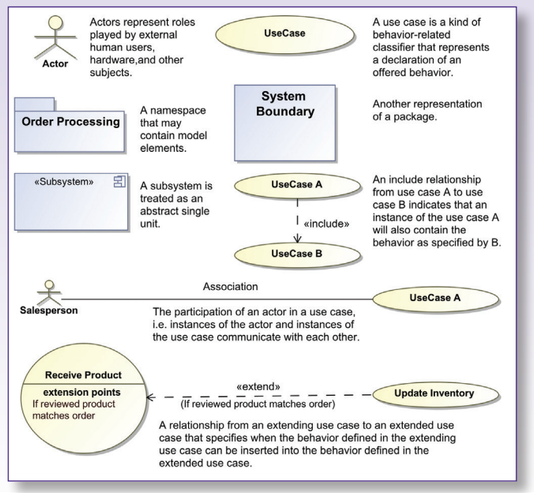
PROTOCOL STATE MACHINE DIAGRAM:



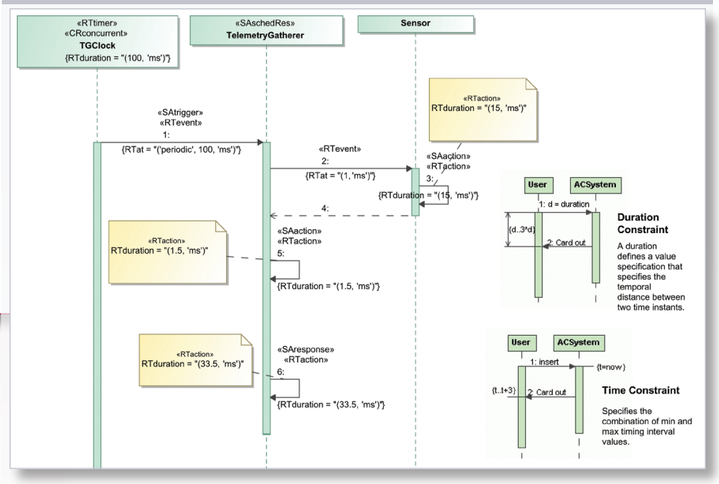
COMMUNICATION DIAGRAM:



USECASE DIAGRAM:



TIMING DIAGRAM:



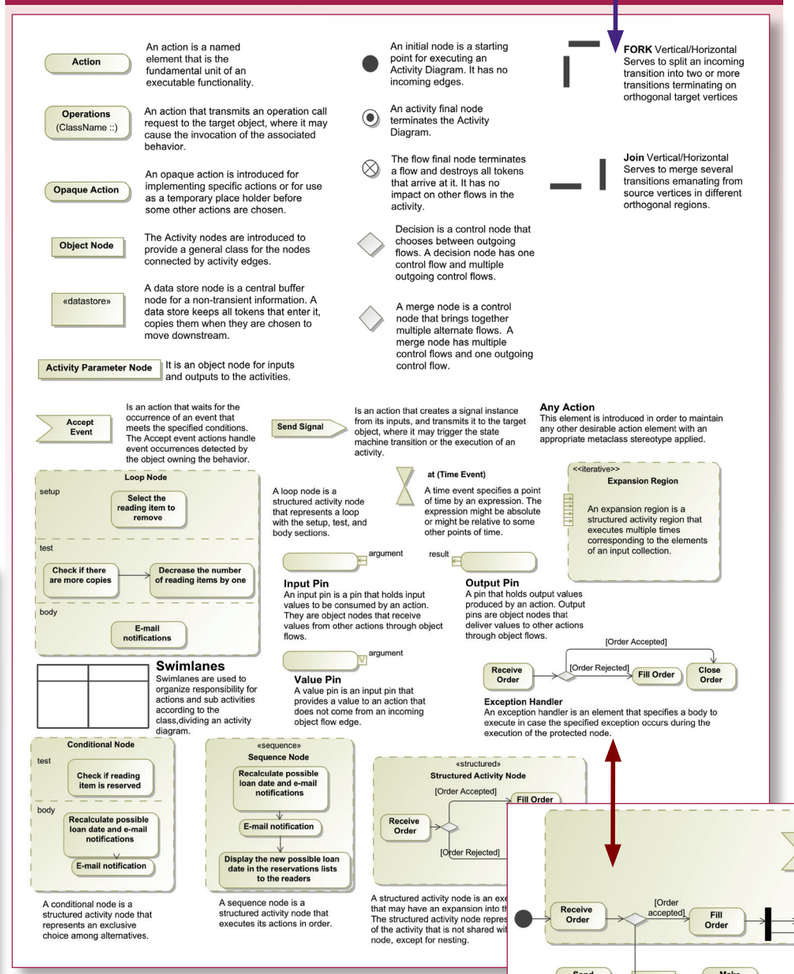
INTERACTION OVERVIEW DIAGRAM:

The interaction diagram is new with UML 2.0. It is a variant of the Activity diagram that enables users to represent an overview of control flow between interactions described by Sequence diagrams. The Interaction Overview uses Activity diagram elements to provide a high-level of logical progression through a set of interactions.

ref
Ineraction Use

The Interaction Use element is used to represent a Sequence diagram.

ACTIVITY DIAGRAM:



SEQUENCE DIAGRAM: