

The basic premise behind the **Reuse Model** is that systems should be built using existing components, as opposed to custom-building new components. The **Reuse Model** is clearly suited to Object-Oriented computing environments, which have become one of the premiere technologies in today's system development industry.

Within the **Reuse Model**, libraries of software modules are maintained that can be copied for use in any system. These components are of two types: procedural modules and database modules. When building a new system, the developer will "borrow" a copy of a module from the system library and then plug it into a function or procedure. If the needed module is not available, the developer will build it, and store a copy in the system library for future usage. If the modules are well engineered, the developer with minimal changes can implement them.

The **Reuse Model** consists of the following steps:

- **Definition of Requirements.** Initial system requirements are collected. These requirements are usually a subset of complete system requirements.
- **Definition of Objects.** The objects, which can support the necessary system components, are identified.
- **Collection of Objects.** The system libraries are scanned to determine whether or not the needed objects are available. Copies of the needed objects are downloaded from the system.
- **Creation of Customized Objects.** Objects that have been identified as needed, but that are not available in the library are created.
- **Prototype Assembly.** A prototype version of the system is created and/or modified using the necessary objects.
- **Prototype Evaluation.** The prototype is evaluated to determine if it adequately addresses customer needs and requirements.
- **Requirements Refinement.** Requirements are further refined as a more detailed version of the prototype is created.
- **Objects Refinement.** Objects are refined to reflect the changes in the requirements.

Problems/Challenges Associated with the Reuse Model

A general criticism of the **Reuse Model** is that it is limited for use in object-oriented development environments. Although this environment is rapidly growing in popularity, it is currently used in only a minority of system development applications.
