Wang

A few components can be managed by hand. But it

will become difficult to manage thousands of

components manually. CBSD process includes

requirement analysis, retrieving components, getting

components, and integration of applications software.

Retrieving and getting components is a process of

communicating with domain component library (asset

library).

Reusable asset specification (RAS) [7] is an Object

Management Group standard to describe and package

asset. RAS is described in two major categories, Core

RAS and Profiles. Core RAS represents the

fundamental elements of asset specification. Profiles

describe extensions to those fundamental elements.

The Core RAS is not instantiated therefore an asset

must be of a particular profile. A profile may extend

Core RAS or may extend another profile. This Default

profile is a realization of the Core RAS. The Default

Component Profile and Default Web Service Profile

derive from the RAS Default Profile.

Shreiff

Some of the barriers are directly related to the

complexity of the reuse technology. These revolve

around three factors: the process involved in building

reusable assets, the reusable assets themselves, and the

support available for utilizing and maintaining the

assets.

The major technical barrier pertains to difficulty of

locating reusable assets. Software repositories, while

not considered a success factor [17] are believed to be

responsible for dissatisfaction with reuse. The structure

of the repository may make it hard to locate an

asset.

Barriers manifested themselves during the three

stages of the reuse life cycle. The main ones during

the early stages of asset creation were lack of reuse

policies to govern the creation of reusable assets, lack

of funding, immature technology, and lack of reuseoriented

education and training. In the asset utilization

phase, reuse stakeholders complained about difficulty

in accessing an asset, limited marketing of assets

available in the repositories, and lack of support for

the integration of assets during application development.

Though stakeholders at all five sites acknowledged

an ongoing effort to manage assets, they

reported the same barriers that emerged during the

creation of assets for the limited role of asset management

Proposition 9 (Asset utilization—accessibility). The

lack of a well-organized and indexed software repository

with appropriate search engines is a barrier to

reuse adoption.

The problem at several sites was that developers

were unaware of assets at an organizational level and

relied heavily on word of mouth to find them. They

asserted that the lack of software repositories and the

lack of ways to promoting reusable assets constituted

significant barriers. At CBS-TCC and POM-OGC the

main problem was the lack of a central repository with

a good search mechanism and catalogue system.

Developers developed an attitude that: ‘‘it was more

trouble to find and use than to build on your own.’’

At SCC, asset utilizers complained they were not

aware of reusable components availability despite a

central on-line index. They commented that: ‘‘it is the

asset creators’ responsibility to inform us of what is

there,’’ and provide tools to make it easily accessible.

They suggested a knowledge-based repository.

At STAR II, the accessibility of the assets was not

felt to be a problem. Developers said they believed that

assets could be easily found within the repository

because the library was categorized under domains;

also web pages that search components in the library

have been published. The group also provided a use

scenario to help asset utilizers understand what each

component did and how it did it.