

Requirement Tracking: A Streamlined Approach

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The Requirement Approach

The Streamlined Approach is a midrange approach to requirement tracking that rejects both a high degree of formality (such as requirements matrices) and informal techniques (such as "user stories"). The basic requirement unit is the requirement statement, not the document, or the use case. Typically, requirements statements are from one to four sentences long.

Requirement Domains

Most requirement methods distinguish between Business Requirements and Software Requirements and this one is no exception. Business Requirements express the reason for writing the software.

Requirements Hierarchies

In order to assure the method will scale both up and down, two hierarchies are defined, one for Business Requirements and one for Software Requirements. These are tree structures with the entire system represented at the root node and the desired level of decomposition below. The Business Requirements Hierarchy and Software Requirements Hierarchy provide the appropriate levels of abstraction for the corresponding requirement domain.

Below each node of the Business Hierarchy are two more levels: Business Functions and the Business Requirements themselves.

The Software Requirements Hierarchy has the same general structure as the Business Requirements Hierarchy with the Business Function replaced by the Software Deliverable.

Requirement Linkages and Tracing

The rule for requirement tracing is simple: Each Concrete Software requirement (defined below) must be linked to a single Business requirement (called Concrete) which it satisfies.

Requirement Types

The four basic requirements types are Concrete, Indeterminate, Abstract, and Typed.

Software Requirement Types

The key concept of the Streamlined Approach is that of the Concrete Software Requirement. The two primary characteristics are:

- The requirement is linked to a single Software Deliverable which it specifies.
- There exists a well defined completion criterion for determining when the Deliverable satisfies the requirement.

Secondary characteristics are links to:

- A (Concrete) Business Requirement
- A task in the schedule
- A Completion Status
- A Software Build

If a Software requirement satisfies the first primary characteristic but not the second, it is called Indeterminate.

If a Software requirement is not linked to a Software Deliverable but applies to every Software Deliverable below a node in the Software Hierarchy, it is called Abstract.

Finally, if a requirement is relevant to some aspect of the Software (called its Type) but does not meet any of the above criteria, it is called Typed.

Business Requirement Types

A Business Requirement is called Concrete if it is linked to a Concrete Software Requirement which satisfies it.

A Business Requirement is called Abstract if it applies to all Business Functions below a node in the Business Hierarchy.

Finally, a Typed Business Requirement parallels the definition of a Typed Software Requirement.