**Chapter Notes**

**Project Scope Management**

**Tools & Techniques for Scope Definition**

**Work breakdown structure templates**

* A WBS is a deliverable-oriented grouping of project components that organizes and defines the total scope of the project.
* It is often used to develop or confirm a common understanding of project scope.
* Each item in the WBS is assigned a unique identifier which provides a structure for a hierarchical summation of costs and resources.
* Work packages refers to the items at the lowest level of the WBS.
* Work component descriptions are often collected in a WBS dictionary.
* The WBS should not be confused with other kinds of “breakdown” structures used to present project information.
* Other structures commonly used in some application areas include:
	+ Contractual WBS, which is used to define the level of reporting that the seller will provide the buyer.
	+ Organizational breakdown structure (OBS), which is used to show which work components have been assigned to which organizational units.
* Resource breakdown structure (RBS), which is a variation of the OBS and is typically used when work components are assigned to individuals.
* Bill of materials (BOM), which presents a hierarchical view of the physical assemblies, subassemblies, and components needed to fabricate a manufactured product.
* Project breakdown structure (PBS), which is fundamentally the same as a properly done WBS.

**Sample Work Breakdown Structure**



**Fig. 5.1.** A Guide to the Project Management Body of Knowledge (PMBOK Guide) 2000 Edition

**Tools & Techniques for Scope Definition**

**Decomposition**

* Involves subdividing the major project deliverables into smaller components.
* Decomposition involves the following major steps:
	+ Identify the major deliverables of the project; The major deliverables should always be defined in terms of how the project will actually be organized.
	+ Decide if adequate cost and duration estimates can be developed at this level of detail for each deliverable.
	+ Identify constituent components of the deliverable; constituent components should be described in terms of tangible and verifiable results to facilitate performance measurement.
	+ Verify the correctness of the decomposition:
		- Is each item clearly and completely defined?
		- Can each item be appropriately scheduled?

**Outputs from Scope Definition**

**Work breakdown structure**

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**Scope statement updates**

* Any modification of the content of the scope statement should be included in the updates.
* Appropriate stakeholders must be notified about the updates.

**Scope Verification**

* The process of obtaining formal acceptance of the project scope by the stakeholders.
* It requires reviewing deliverables and work results to ensure that all were completed correctly and satisfactorily.
* Scope verification differs from quality control (described in 8.3) in that it is primarily concerned with *acceptance* of the work results while quality control is primarily concerned with the *correctness* of the work results.

**Some Tools & Techniques for Scope Verification**

**Inspection**

* Inspection includes activities undertaken to determine whether results conform to requirements.
* These activities include:
	+ Measuring
	+ Examining
	+ Testing
	+ Also called reviews, audits, and walkthroughs.

**Scope Change Control**

* Must be thoroughly integrated with the other control processes.
* Controlling changes to project scope.
* It is also concerned with:
	+ Influencing the factors that create scope changes to ensure that changes are agreed upon.
	+ Determining that a scope change has occurred.
	+ Managing the actual changes when and if they occur.

**Tools & Techniques for Scope Change Control**

**Scope change control system**

* Defines the procedures by which the project scope may be changed.
* It should be integrated with the integrated change control described in 4.3 and with any systems in place to control product scope.

**Performance measurement**

* Help to assess the magnitude of any variations that do occur.
* Determining what is causing the variance relative to the baseline and deciding if the variance requires corrective action.
* Performance measurement techniques will be described in 10.3.2 in details.

**Additional planning**

* Since sometimes projects run not exactly according to plan, prospective scope changes may require modifications to the WBS.