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Do You Weebis? Clarifying WBS, OBS & RBS

Every discipline has its alphabet soup . . . abbreviations or acronyms for seemingly nonmistakable terms and functions. In project management, we have the WBS, OBS, and RBS, which, of course, everyone clearly understands. Right? It should only be that simple.

The truth is that these terms have been applied somewhat loosely within the project management community and by the popular project management software packages. Sometimes, new terms are introduced to replace the basic three, and even worse, these basic terms are being applied to functions that differ from the traditional concepts. In some cases, this deviation may primarily be a careless application of the wrong term or willingness to stray from the traditional concept. In other, more deleterious cases, the misuse of the terms will make it appear that the product has capabilities that are not present. For instance, the availability of a data field that contains an activity tag number called "WBS," does not necessarily mean that the product has a true WBS capability. Any full WBS-type function (including OBS or RBS) must be able to facilitate data summarization and reporting by these codes, to any level. Using WBS codes solely for sorting and selecting (filters) does not constitute a WBS function.

OUTLINES AND OTHER FRAMEWORKS

Fearing that many of us need something more simple and visual (than WBS, etc.), several project management software developers, especially at the low-end, focus on an Outline mode. This provides a practical and very readable method of defining and displaying a hierarchical relationship of individual tasks within a larger project (and everyone knows what an outline is). It works, but with limitations. The biggest constraint is that the outline provides only one project hierarchy, when there may be several. For instance, the project manager may wish to view the project using a work breakdown based on the phases of the project, or geographical divisions, or perhaps deliverables. A functional manager is often more interested in an outline that reflects the organizational structure, such as division, department, section, discipline, etc. The corporate comptroller may wish to segment and interrogate the data based on a code of accounts. So, you can see that a single outline may not do the job for everyone.

Not to worry! Many of the project management packages provide multiple code fields for this multiple outline function. There has been some confusion being generated by this expansion of outline fields. In an attempt to expand upon the hierarchical capabilities of the software, and to create some standard terminology, the market has produced a set of new terms and formats. However, these are anything but standard.

In order to facilitate frameworks for project plans (a very useful function), we have invented the WBS (Work Breakdown Structure), the OBS (Organization Breakdown Structure), and the RBS (Resource Breakdown Structure). One of my clients referred to

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them as the Weebis, Obis, and Reebis (which, once you stop laughing, is easier to say). But! These terms, as they are being used, do not always mean the same thing.

WHAT TO LOOK FOR

Ordinarily, we would expect the outliner function to provide a summarization capability. That is, we expect the project data to be able to be rolled-up to the various outline levels. This is almost universally true, for all outliners. We would expect similar capabilities from a WBS. But, look out! Occasionally, you will come across a WBS function wherein the WBS numbers are used solely as IDs, rather than summarization points. In this case, the term WBS is really misapplied, as the field is nothing more than an auxiliary code field. You will run into this situation primarily in a few low-end products, where the outline based products are trying to appear to have WBS functionality.

A larger problem is the varied use of the term OBS (see below). It can mean two very different things. In fact, I once found the terms to be used quite differently in two products being distributed by the same project management software vendor.

To set the stage for a clarification of these terms, and their use, it is important to establish a clear understanding of a basic premise of project data. There are two basic areas that are defined and managed. One is the work itself, consisting of the project(s) and the tasks that are to be accomplished within the project. The other is the resources that are going to accomplish the work. It is very important to recognize this distinction. All project management software is based on this protocol. There is task information, and there is resource information. We need to make the distinction between frameworks for the work (tasks) and frameworks for the resource data.

Definitions

- The **Outline**, for those programs using this mode as the primary (or only) framework, is always a work (task) framework.
- The **WBS** is fairly clear-cut. It is essentially the same thing as the Outline. It is the primary hierarchy for the tasks within a project. It applies to the work, as opposed to the resources. When there are multiple WBS's, they are merely additional codes applied to the list of tasks to facilitate multiple sorts, filters, and summarization hierarchies.
- The **RBS** applies to the resources. It provides a basis for defining a parent group for each resource (perhaps all resources within a specific discipline). For instance, we might have Tom, Joan, and Iris, who are mechanical designers. The parent category would be Mechanical Engineering & Design, which, in turn, is a part of the Eng'ng & Design Function.
- The problem child in this alphabet soup is the **OBS**. Sometimes it is set up to be the exact same function as the RBS. In other words, it is an RBS that is called OBS. Other times it is set up to be a second variation of the WBS (as we noted, it is quite normal for there to be several WBS-type hierarchies). There is certainly a

significant difference in these two concepts, as the RBS should be used only for the resource data, whereas the OBS is intended solely for task data.

Lastly, about these definitions, I will again state that a true WBS, OBS, or RBS must be able to facilitate data summarization and reporting by these codes, to any level. Using WBS codes for sorting and selecting does not constitute a WBS function. Having a data field to designate a group for resources (even if called RBS or Resource Outline) is not an RBS if it does not allow you to look at resource assignment data, at any level of the coding structure.

CLARIFYING THE CONCEPTS: WBS, OBS and RBS

The following summary is offered as an attempt to clarify the concepts of WBS, OBS, and RBS:

Common Characteristics

WBS, OBS, and RBS:

- Provide a logical breakdown of a project into successive levels showing increasing detail.
- Are composed of elements related in such a manner that each element is associated with one and only one higher-level element.
- The elements can be progressively summarized upward to present the time spans, or resource and cost total for the next higher-level element, and ultimately for the project.

Differentiating Characteristics

At the lowest levels of detail, in the project database, the codes are associated

- With activity records, for the **WBS**
- With activity records, for the **OBS**
- With resource assignment records, for the **RBS**

The Logic of the Breakdown Structure

- **WBS** is generally based on deliverables, sometimes within phases of a project.
- **OBS** is generally based on organizational entities.
- **RBS** is generally based on:
 - Common resource usage wherever used in the project, i.e., all electricians;
 - Common types of work wherever appearing in the project, i.e., all concrete placement;
 - Or is used to differentiate between work to be expensed versus capitalized.

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- In many programs, the term **Cost Account** is substituted for RBS. If the Cost Account function provides a means of defining a code structure, at the assignment level, it is the functional equivalent of an RBS (rather than a WBS or OBS).

Usage Characteristics

WBS — to accumulate all timing, resource data, and costs associated with a project as incurred in performing each activity in the project. It is important for scope management as well as analyzing earned value.

OBS — to accumulate all timing, resource data, and costs in a project for which an organizational entity is responsible and relate them to the administrative budgeting process of the organization.

RBS — to aggregate all timing, resource data and costs in a manner required for control by trade, skill or profession or by expense versus capitalization accounts.

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