



The Legis Report

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Cost Estimates Used for Damages Calculations

Cost estimating, like many other professional endeavors, has often been described as both an art and a science. Miriam-Webster's Online Dictionary defines [in part] the verb, estimate: "... to judge tentatively or approximately the value, worth, or significance of ... to produce a statement of the approximate cost of...". Cost estimates are undertaken in advance of many different business activities for various purposes. Some estimates are used to make internal business decisions - should a company upgrade its production facilities for a new product? Others are used to price proposals for work for the company's customers - prices that the company must honor if the customer accepts the proposal. Still other estimates are used to support damage calculations when business disputes end up in court. Despite the wide range of end uses for cost estimates, all have certain common components. The two major parts of a cost estimate are its scope and its price.

Scope-of-Work

The scope (often referred to as the "scope-of-work") defines the limits of what is being priced. Almost all scopes-of-work require a quantitative element or elements. One can estimate the cost of a 35 story building. One can much more accurately estimate the cost of a 35 story, 1,050,000 gross square foot, structural steel framed, limestone-sided office building in New York City. The accuracy will be vastly increased if the plans and specifications for the building are available to the cost estimator.

Scope-of-work definitions can vary as widely as the number of business activities that exist. One can estimate the yearly cost for the operation of a nuclear waste processing plant. A better, more accurate estimate would result from a scope-of-work definition that describes the nuclear waste throughput as 1,000 tons per year of Radium and Thorium in a slurry state. A far more accurate estimate would be obtained if the process diagrams for the processing plant, the manning tables and the equipment lists, as well as, the regulatory

requirements and plant location were also made available to the estimator. The potential accuracy of a cost estimate for an activity or project is proportional to the availability of information concerning it.

Once the information defining the scope-of-work is assembled and organized, the cost estimator reconciles any conflicting information. The next step is to identify the information gaps and establish reasonable assumptions for the missing material. The reconciliation and assumption activities complete, the estimator documents all the information used for the estimate in the Basis of Estimate section, particularly identifying that information which is based on assumptions.

Work Breakdown Structure

Presenting a cost estimate in a rational, understandable format is important. A work breakdown structure ["WBS"] is normally an acceptable way to accomplish this. The WBS is hierarchal, that is, lesser elements are gathered under related more inclusive elements continuing this process until all elements are gathered under a single element - the project or activity. In our New York building example, we would likely find the top level WBS element described as Building. At the second level, we would likely find WBS activities such as Foundation, Structural Frame, Exterior Closure, Interior Construction, etc. Under the Structural Frame WBS element, one might find activities such as steel columns, trusses, beams, etc. Under the Exterior Closure WBS Element, we might find the limestone cladding, windows and exterior doors.

Similarly, in our estimate of the yearly cost of operating a nuclear waste processing plant, we might find the top level WBS described as Plant Operations. At the second level, we might find WBS activities such as Pretreatment, Treatment, Storage, Shipping, Nuclear Safety, Security, etc. Under the Treatment WBS element, one might find activities such as operator labor, maintenance of mobile equipment, chemicals, supplies, etc. Under the Security WBS element, one would find background checks, guard labor, maintenance of patrol

vehicles, upkeep of security fences, etc. The basis for an estimate WBS may be functional, geographic, or even by trade. Or, it may be a combination of these. There is no single 'correct' WBS. The selection of the type of WBS to use for a cost estimate is a function of the use for which the cost estimate is generated.

Pricing

Pricing is perhaps the easiest step. Once the WBS is developed and all the lowest level WBS elements are quantified, the estimate can be priced. The pricing itself can come from company records, published pricing manuals, vendor price sheets, quotations, productivity analysis or from other sources. Of course, consideration must be given for inflation when using historical data. This is accomplished by factoring the historic price from the year the activity took place to the year of the estimate using government or industry published tables for price escalation.

If one were estimating the damages for a failed computer hardware installation that is the subject of a lawsuit, it is important to capture and price all the activities that increased the cost experienced by the plaintiff. Estimates of excess installation work-hours would be priced based on each involved individual's salary plus the firm's labor burden. Replacements for damaged or incorrectly specified equipment would be priced based on invoiced amounts, or quotes, plus shipping, storage and other related charges. Of course, salvage value received or credits for returned equipment would be deducted from the damage calculation.

As was the case for the source of information and assumptions supporting the scope-of-work, it is also necessary to document the sources of pricing and any pricing assumptions.

Standard of Care

The standard of care for the professional undertaking a damage calculation is usually 'within a reasonable degree of accuracy'. Properly developed and documented estimates of damages will likely meet this standard.



More on Digital Discovery

[The Winter 2004 issue of The Legis Report included an article on digital discovery. The following updates our readers on the issue.]

The Committee on Rules and Procedure of the Judicial Conference of the United States issued the Report of the Civil Rules Advisory Committee dated May 17, 2004, revised August 3, 2004. In that report, the Civil Rules Committee recommended that the Standing Committee publish for comment a package of proposed rule amendments relating to the discovery of electronically stored information.

The Proposed Amendments Involving Electronic Discovery section addresses five related areas:

- * Early attention to issues relating to discovery, including the form of production, preservation of electronically stored information, and problems of reviewing electronically stored information;
- * Discovery of electronically stored information that is not reasonably accessible;
- * The assertion of privilege after production;
- * That application of FRCP Rules 33 and 34 to electronically stored information; and
- * A limit on sanction under FRPC Rule 37 for the loss of electronically stored information as a result of the routine operation of computer systems.

Comments were accepted until February 15, 2005 by mail, e-mail, the electronic form provided, and at three public hearings that were held in January and February 2005 in San Francisco, Dallas, and Washington DC.



Damage Calculations

Legis Consultancy recently completed work on a dispute involving an improperly constructed swimming pool and spa. Staff members, Michael C. Ray, PE, CCE, PSP, PMP and Patrick S. Ray, CCC, PMP, prepared a report for the client's attorneys covering the damage calculations.

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