**ACEIT FEATURES COMPARED TO APPLICABLE
"CHARACTERISTICS OF AN ADEQUATE ESTIMATING SYSTEM"**

(Paragraph 15.811-76, DOD FAR Supplement, March 1988)*

(b) <u>Evaluation</u>. In evaluating the adequacy of a contractor's estimating system, the Administrative Contracting Officer (ACO) should consider whether the contractor's estimating system--

(3) Assures that relevant personnel have sufficient training, experience, and guidance to perform estimating tasks in accordance with the contractor's established procedures.

ACE contains built-in subject help, consisting of many ACE and generic cost estimating topics, which can help the cost estimator through the estimating process. These subject help screens can be easily increased to cover additional topics. There is no limit on the number of help topics.

(4) Identifies the sources of data and the estimating methods and rationale used in developing cost estimates.

ACE contains built-in estimating methodology libraries composed of cost estimating relationships (CERs), models, and sources. Each methodology is fully documented with its supporting rationale for use. Again, your ACEIT Manager can easily edit/create this back-up documentation and/or add additional methods to your own user or site library. When you select a methodology from an ACE built-in library to use in your estimate, all of the documentation text is carried with it (and can be viewed with a single command). This estimating methodology rationale is also included in your printed estimate document, if desired.

Similarly, when you access data in the ACEIT databases (ACDB) and use the data for analog cost estimates or use the data to build CERs, the data sources are automatically carried back in a self-documenting process.

Finally, a pop-up window lets you enter your estimating rationale at each step. We call this "on-the-fly" documentation. When you've finished the estimating process, one command creates totally-integrated/completed cost estimate documentation output.

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NOTE: There are 15 characteristics listed, but only 9 of them can be implemented via an automated cost estimating system; the other 6 characteristics are concerned with management organization, review, control, etc.

The **bold** print shows the applicable characteristics extracted from the DOD FAR Supplement. Below each characteristic is a short description of how ACEIT and its Automated Cost Estimator (ACE) could answer your needs.

(6) Provides for consistent application of estimating techniques.

Your ACEIT Manager controls which methodologies can be placed in the ACE built-in methodology "system" libraries. He also describes their recommended uses and/or limitations in the ACE on-line back-up documentation feature. Naturally, you don't have to use the methods in the built-in ACE system library. You can create your own "user" library, but you have the same back-up documentation features. Similarly, if you create a new CER using CO$TAT, all of your data, analysis, and results are fully documented. Your ACEIT Manager can build in as much consistency and allow as much flexibility as you desire--the tools are there.

(7) Provides for detection and timely correction of errors.

ACE automatically tracks the quantities, units, and fiscal year of data and methodologies. It automatically converts these to the desired quantities, base year, and units of cost. Other features allow you to link CERs to only certain WBS (e.g., equipment) items and program phases. Similarly, ACE checks your estimating equations and variables and your time-phasing and learning curve methods for correctness.

Based on ten years of field use since 1988, we have incorporated hundreds of error traps and warning messages to help omit or fix errors. Users who converted spreadsheet-based estimates into ACE have marveled the number and type of errors uncovered by ACE.

The above features, coupled with extensive on-line help, aid in preventing/finding errors. The carry-along documentation allows easy review of methodologies, and the spreadsheet style of ACE makes editing and correcting simple and efficient.

(8) Protects against cost duplication and omissions.

The built-in WBSs and their definitions help protect against omissions (but, if some WBS items don't apply, you can edit them out). The ACE built-in libraries and ACEIT databases contain information on which cost elements have been included/excluded (e.g., integration, burdens).

(9) Provides for the use of historical experience where appropriate.

You can build your own site or commodity databases in ACEIT's ACDB. No knowledge of DBMSs, SQL, or programming is required. ACDB is a database building tool. You can search the ACEIT databases at any time for analogous programs/equipment. You can easily retrieve data to calculate factors, rates, durations, time-phasing parameters, etc. Similarly, you can move retrieved historical cost and technical data into the CO$TAT data editor (spreadsheet) for further analysis and manipulation or into the CO$TAT analyzer to derive CERs. Every step is self-documenting.

(10) Requires use of appropriate analytical methods.

Appropriate analytical methods are already built into the ACEIT system, and it's a totally integrated package with a single user interface to learn. The full power of ACEIT is obtained through the use of these methods/tools. Plus, guidance and help are available at each step.

(11) Integrates information available from other management systems as appropriate.

This is clearly demonstrated as the ACE user accesses the various ACEIT databases, libraries, and CO$TAT data editor. Also, other management information systems (MISs) can be integrated into ACEIT. ACE can easily access other MIS data, particularly if it can be output into a columnar format.

(14) Provides procedures to update cost estimates in a timely manner throughout the negotiation process.

ACE lets you run many estimates simultaneously, using different input values for the variables. This gives you the capability to have a side-by-side track record of each change, quickly perform sensitivity analyses, or do a simple risk analysis (e.g., highest, most-likely, and lowest cost estimates). Plus, the RI$K Executive application lets you perform a full Monte Carlo risk analysis of your cost uncertainty. Each what-if estimate can also be separately time-phased to see the impact of fiscal year funding constraints.

The ACE Executive application lets you perform a simple Cost As an Independent Variable (CAIV) analysis. With this tool, you can free up a variable to let it float (take on a value within a user-specified range) to see what impact it has on some constrained item (e.g., a cost budget, weight budget, etc.). Thus, you can use the ACE Executive CAIV feature to run ACE backwards to see what input values will achieve the desired result (e.g., design to cost/budget).