

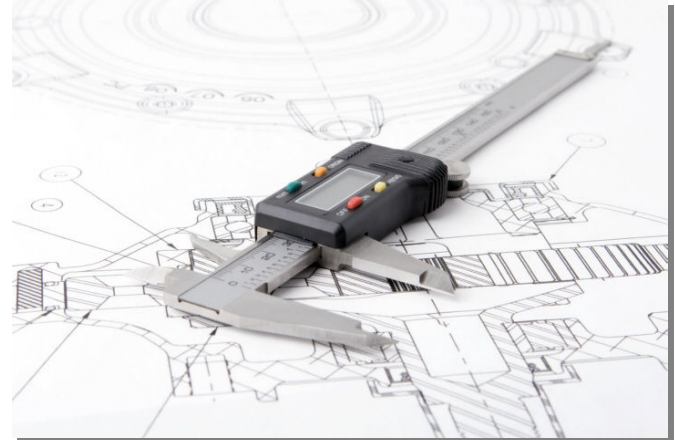


MicroEstimating

Trends in Computer Aided Estimating

When is a computer generated estimate really an estimate?

Before we look ahead at the trends in computer aided estimating, let us examine the often-misunderstood term “estimating”. What is computer-aided estimating?



A better question might be: When is a computer-generated estimate really an estimate?

Is it important to understand the strategies used to ‘build’ a computer-aided estimate? Yes. The industry neither has a standard definition for an estimate, nor standards by which to measure what an “estimating” program provides.

With computer-aided estimating systems today, the user has a wide choice – capability wise. Know that when people talk about estimating software, typically they refer to one of two groups of software:

- Software that simply assists the shop owner to determine a price. The estimator manually calculates or guesses the time it will take. This is a computer prepared quote.
- Other software provides, in addition to quoting, estimates of actual times the job will require in the shop. When the computer estimates the times, this a computer generated estimate.

Time is the differentiator that makes it simple to differentiate between quoting and estimating software.

Within the estimating classification, some software systems are standards-based, some are engineering-based, and some exhibit genuine intelligence by emulating actual machine motions and others are evolving from one form toward another.

The important fact to remember, when buying estimating software, is that each time you send a quote to a customer, you are betting your business on the accuracy of the times in the estimate.

Now, why did we say “estimating” is often misunderstood? Determining pricing for customer quotes or new products once was a matter of time-consuming, detailed number crunching, or of “painting with a broad stroke,” when shop estimators relied upon their industry experience and intuition. Today, however, just as speed and accuracy are demanded on the shop floor, predicting profit before a job gets to the shop is a critical phase of manufacturing. It begins by computing an accurate price for each job.

The term “estimating” still sounds like a guess, no matter how sophisticated the software is. In fact, some computer aided estimating software is true engineering based process planning and profit predicting systems.

Feature Recognition Estimating

The exciting change in estimating, or profit predictor, software is here today. When a shop receives a request for quote (RFQ) electronically with an accompanying solid drawing. The estimating program feature recognizes the part automatically and develops a suggested production method for the part.

The estimator will review the information, accept or modify the process as needed, and send the customer a price for their part. All of this often takes place in a matter of minutes. The customer will be able to accept the cost, having reviewed the emailed information he received, and can reply with a confirming email. The shop, upon receiving the confirming email, can forward the information from the estimating system to the shop management system and to the part programming system for processing on the shop floor. Realize as well, this opens up the estimating process to a whole new department that has always asked, "If I make this change, how does it affect the cost of manufacturer?" Now design engineers using estimating/design tools available today, can make changes to the design and process in the estimating/part recognition system, where they can see the instant impact of their design changes on part cost. And if a prototype needs to be made, a single click on this system can generate the g-code necessary to manufacture/machine the part.

The growing trend to integrate best in class systems will continue. As a result, with that go-ahead, the order entry person clicks another button and the estimate is transferred to the shop control package (no redundant typing of the information); the order and routings, required materials, and required tool lists are generated. The CAD/CAM programmer will feature recognize the part and send the code to the machine tool for manufacture via DNC software; the part is made and shipped; and both QC and shipping modules electronically initiate printing of shipping and QC documents, as well as the invoicing process.

Those who have treated quotes lightly "because it is just an estimate" might lose the job before they begin their quoting.