Twenty Years of Better IT Estimating Software
©2002, by Stacy Goff

Over the last twenty years we have seen the power of Information Technology Estimating Software Packages evolve. Our favorites are always changing as new tools emerge, old ones change hands, or breakthrough products emerge. We have used many these estimating software packages going back to the early 80's, and still today each one has its strengths and weaknesses. The truth is, not one of them is perfect. On the other hand, every one of them will help you improve estimates, giving you more information than you currently have available.

We describe the packages below, ranked in rough sequence of introduction.

CA-Estimacs

Howard Rubin's original innovative estimating package has over a dozen different estimating models. Now owned by Computer Associates, CA-Estimacs supports estimates of Project Effort, Staffing & Cost, Hardware Requirements, Risk Analysis, Portfolio, Maintenance, Financial Analysis & ROI, Function Point Estimator, Small Project Estimator (their small project is really quite large), and a Strategic Planning module. In our experience this product's algorithms for early project estimating seem to be better (more accurate) than the models used by most other packages, but it is pretty user-ugly and very sensitive to tuning of the data base to your enterprise history. Latest price: $25K.

Before You Leap

This innovative software package was the first (that we know of) to combine the COCOMO (COnstructive COst MOdel) Cost Driver work of Barry Boehm with use of Function Points for scope measurement, as opposed to lines of code. Of course, Rubin did have SuperPoints in the last 5 questions in CA-Estimacs. But what ever happened to Gordon Group, anyway? For $495 BYL would still be a bargain 15 years later!

SPQR/20

Developed by T. Capers Jones, the name comes from his company's initials, and the 20 reflects the 20 questions you answer to get an estimate. If you have good requirements, the information is extremely valuable. The package provided excellent effort and cost estimating, then reflected his emphasis on software quality and productivity metrics, by providing information about number and origin of defects, when you will find them, time to first failure, time to stability and projected maintenance costs. Price in 1987: $5000.

PMS/Bridge

A product of Applied Business Technology (acquired by Niku), this package works well with the popular project management software package, Project Workbench. We (Stacy Goff) collaborated with Ed Dante, the tool's innovator, during the tool's early days in the mid-late 1980s, comparing features and sharing insights. We were developing our Plan By Example tools while he worked on Bridge. Its features include effort and cost estimating, risk assessment, financial analysis, "what if" modeling and ability to export the results into Project Workbench, using the Repository. It also collects actuals from Project Workbench and stores them in the model, to fine tune the history data base.

CheckPoint

Developed by T. Capers Jones, this package was an update and extension of SPQR/20 (see above) with an easier-to use interface and a lot more research behind the databases. This product's strengths are in the areas of defect management and Quality Assurance metrics. These products have been superseded by newer ones. Recent price: $25K.

Estimate Professional

Developed by Steve McConnell (consultant and author, Rapid Development and others), and marketed by Software Productivity Center, Inc. This killer product has been one of our favorites for the last three years, and we recommend it often. Sporting many of the best features of the other software packages, Estimate Pro goes further than most. For example, you can select your project type, technology, language, and model alternative schedules. Wanna go real fast? A scatter-diagram shows the risk of aggressive schedules. A bargain at $1K! Want a better bargain? At McConnell's website (construx.com), he offers a demo version. It doesn't sport as many features and the databases are not as up-to-date, but for free, it is enough to convince you to spring for the real thing.

Our Point of View

The information in the chart below is subjective, based on our evaluation of the features of different software products. We have included our Quest For Better Estimates (Quest) in the evaluation as a reference point, along with the commercial packages discussed earlier. Quest is a simple spreadsheet-based estimating model that incorporates Function Point and Application Point estimating (more relevant earlier in the project) together with COCOMO II factors to arrive at an effort estimate. We include Quest For Better Estimates™ only for comparison purposes.

Evaluation of Software Packages

	CA-Estimacs	BYL	SPQR/20	PMS/Bridge	CheckPoint	Estimate Pro	Quest FBE
Extent of Functions	Excellent	Good	Very Good	Very Good	Excellent	Very Good	Fair
Early Estimating Validity	Good	Fair	Fair	Fair	Good	Good	Fair
Special Features	Very Good	Good	Good	Excellent	Excellent	Excellent	Fair
Ease of Use	Fair	Fair	Good	Very Good	Excellent	Very Good	Good
Interactive Help	Good	Fair	Poor	Excellent	Very Good	Excellent	Fair
Usefulness of Reports	Fair	Good	Good	Very Good	Very Good	Very Good	Fair
Value (functions/price)	Poor	Excellent	Good	Fair	Fair	Excellent	Excellent

Here's an explanation of the columns on the chart:

Feature	Explanation
Extent of Functions	The number of useful functions for the estimator.
Early Estimating Validity	Accuracy and usefulness of the estimate before you define requirements.
Special Features	Presence of special, useful features; i.e., Project Export.
Ease of Use	The ease of developing an estimate, and modifying that estimate. Also reflects the ability to develop and evaluate comparative estimates.
Interactive Help	The quality and ease of use of on-line help functions.
Usefulness of Reports	The production, formatting and content of reports.
Value (functions/price)	A subjective rating of the value of the product, given price, functions, and ease of use of those functions.

Summary

Your choice of an Estimating Software Package depends on the requirements of your projects. We'll repeat the statement made earlier: Any commercial package will give you more information than you currently have.

About the Author

STACY A. GOFF, *the PM Performance™ Coach*, has coached and inspired tens of thousands of project and program managers, and hundreds of organizations, on five continents, for over forty years. A Project Management practitioner since 1970 and consultant since 1982, he has also been a strong contributor to professional organizations such as IPMA® and PMI® since 1983.

He is a co-founder and past-president of IPMA-USA, and 2011-2014 Vice President of Marketing & Events for IPMA, the International Project Management Association. In September, 2015, he was named an IPMA Honorary Fellow.

Goff's interest in project competence and performance began with establishing a PM Competency Center for a nuclear power plant in the early 1980s. It continued with international engagements during the 1980s and 90s as he helped organizations assess and improve their project and program performance. Today, he coaches, speaks and performs keynote speeches at major project-related events. And, he continues to pursue his interest in individual, project team, organization, and national and international PM performance.

Mr. Goff brings a results-oriented approach to Project Management coaching, consulting, and training. His insight for the needed PM Competences, and his delivery of effective training translate to improved project performance. In his working life, he combines his Project experience with sensitivity for the interpersonal skills areas—the human aspects of projects.

In his papers, presentations, workshops or in consulting, he combines his project experience with strategic linkage for all projects and programs. And his sensitivity for the human aspects of projects (leadership and interpersonal skills), together with his insights for strategic alignment, have provided competitive advantage for his clients for over 40 years. His business result: measurably increased **PM Performance.**

Contact Stacy at +1.719.488.3850, email: Stacy.Goff@gmail.com. His website is https://StacyGoff.com