

ACEIT E-News: Risk Analysis

Overview

Issue 12 - January 2006

The January ACEIT E-News takes a closer look at Risk Analysis, so make sure you read the Tip of the Month: <u>Using the CV to Specify Risk distributions in ACE</u>. Get some good advice on <u>Managing RI\$K</u> <u>Groups (correlation) in your session</u> in this month's ACEIT Highlight. Download the <u>updated ACE</u> <u>Example files</u> now available on <u>www.aceit.com</u>. Also, if you missed the first in our new Seminar Series, <u>Building and Using Inflation Indices in ACEIT and Excel</u>, you can still register for the East Coast seminar. Sign up today for our <u>CO\$TAT/ RI\$K</u> class in March, take a look our <u>Training Schedule</u> and monitor the latest <u>Support Alerts</u>.

Tip of the Month

Using the CoV to Specify Risk distributions in ACE

Did you know that you can specify risk by entering a special form of the Coefficient of Variation (CV) in ACE's "Spread" column? The true CV is a normalized version of the Standard Deviation. It is calculated it by dividing the Standard Deviation by the Mean (i.e., StdDev/Mean). The ACE user, however, can enter the StdDev/Point Estimate into the spread column. By using this unitless ratio of the PE, instead of the Standard Deviation directly, the risk distribution will scale with the point estimate. For example, if the point estimate is re-evaluated for a different alternative, the standard deviation will scale with the estimate.

ACEIT Highlight: RI\$K Grouping and Correlation Dialog

In risk analysis, you must adequately account for the relationship between cost elements and the input variables. This is generally referred to as "correlation" or "dependency".

There are two types of correlation that can be modeled by ACE:

1 – *Functional Correlation* - Correlation of the risk distributions in a cost model can be captured through functional relationships within the cost model. For instance, if both the costs of Data and SEPM are modeled by using certain factors times the cost of the Prime Mission Equipment (PMP) cost, then Data and SEPM will be positively correlated in the risk simulation. In this situation, as PMP changes, the costs of Data and SEPM will change in the same direction; therefore, they are positively correlated. 2 – *Defined Correlation* – You can define additional correlation between various elements within ACE by using the RI\$K Grouping and Correlation dialog. But, we highly recommend you measure the correlation already present in the ACE model. <u>Only ACE</u> provides a report for just this purpose.

The RI\$K Grouping and Correlation tool helps you manage RI\$K Groups in your session. Use it to create a new Group, rename a Group, delete a Group, add and remove rows from the Group, and assign Group strengths to the rows. The tool provides a convenient way to visualize the resulting theoretical pairwise correlation matrix based on the Group strengths assigned.

Downloads

Updated ACE Example Files

Tecolote has begun updating the example files that are available within ACE for our upcoming version 7.0. The first 5 core example files are available for download from <u>www.aceit.com</u> in the Downloads section under "<u>Example Files</u>". These files demonstrate the core features of ACE and illustrate basic estimating principles that can be used to create an estimate. Each file builds on the previous file. The following example files have been created:

1 – **Basic ACE** – Shows basic ACE syntax and how to create a simple session.

2 - **Basic Learning** - Adds simple learning concepts onto basic example file.

3 – *Enhancing the Production Estimate* – Demonstrates various methodologies that may be used to estimate production costs in an estimate.

4 – *Implementing RD Estimating Methods* – Demonstrates various methodologies that may be used to estimate Research & Development costs in an estimate.

5 – **Using Dates in ACE** – Enhances the RD session to incorporate date math and functions; uses dates to set end dates on methodologies and link phases together.

New Seminar Available – East Coast



an ACEIT Seminar (half-day) Price: \$69

If you missed the first in our new seminar series, don't worry, there's still time to register for the East Coast seminar on February 14th. For complete details and to register visit the <u>ACEIT training schedule</u>.

Description:

This seminar is designed to review the foundational concepts of inflation indices and to provide students with hands-on training on how to build inflation indices based on annual inflation assumptions and outlay rates for use in ACEIT and Excel. Attendees will learn how to access system and custom inflation indices within ACE and Excel and how to create custom inflation indices. Attendees will also become familiar with the data format of ACEIT inflation indices, and learn the difference between Base Year (BY) and Then Year (TY) time-phased ACE results.

Training – Limited Offering

🥩 <u>CO\$TAT / RI\$K Training</u>

This 4-Day training bundle combines two 2-day classes into one money-saving class. This class will be taught March 7-10, 2006 in Herndon, VA. To reserve your spot in this Limited Offering class, visit the registration page.

The prerequisite for this course is the Basic ACEIT training course. We strongly recommend that students have developed at least one estimate in ACE.

CO\$TAT OBJECTIVE: This is a 2nd level course to help you analyze datasets to develop cost estimating relationships, learning curve parameters and expenditure profiles. At the completion of the course you will be able to format datasets, perform analyses, and export results to other ACEIT tools. In addition you will learn about reports and features that can help you perform analysis efficiently.

RI\$K OBJECTIVE: This is a 2nd level course that focuses solely on implementing risk in ACE. It is designed for basic users who need to perform a risk analysis on their estimates. The course explores the nature of risk in an estimate and how to model. At the completion of the course you will be able to apply a risk distribution to equation and input rows in ACE, view simple risk reports, allocate risk results in the estimate, and develop graphical displays of risk simulation results.

Training Schedule

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Upcoming ACEIT Training

February 2006 – May 2006 classes listed below. For a complete listing of all upcoming training, check the <u>ACEIT training schedule</u> to view the 12 month class schedule.

| | Feb | Mar | Apr | Мау |
|--|--|--------------------------------------|------------------------------------|---------------------------|
| Advanced ACEIT (In Depth ACEIT/POST) | | | <u>3-6 Las</u> <u>Vegas, NV</u> | |
| Automated Reports and Presentations Using Excel (POST) | | <u>2-3 WDC</u> | <u>6-7 Las</u> <u>Vegas, NV</u> | |
| Basic ACEIT | <u>14-17 WDC</u> | <u>20-23 Las</u> <u>Vegas, NV</u> | 25-28 WDC | <u>2-5</u> Herndon, VA |
| Training Bundle - 4 Day (CO\$TAT/RI\$K) | | <u>7-10</u> <u>Herndon, VA</u> | | |
| <u>Training Seminar -</u> <u>Building and Using</u> <u>Inflation Indices in</u> <u>ACEIT (0.5 days)</u> | <u>14th</u> Arlington, VA | | | |

On-Site and **Mechanics Training** are available; contact our <u>Training Coordinator</u> for more information. Support Alerts on ACEIT.com

There have been **0** Support Alerts posted since the last e-news.

Please see the <u>Support Alert page</u> of the ACEIT website for more information on recent alerts and to view other Warnings and Informational postings. You will need to login and have current DMS.

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