ACEIT 7.2 New Features Revealed

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ACEIT 7.2 Highlights

🖈 Live Demo

ACE

- Window and Workscreen tabs ★
- Updated Traceback Navigator interface
- New Cat() function summarizes by category within the session
- Additional Session Analyzer tests
- System by Site Wizard enhancements
- Persistent results, bookmarks, and DEC results added to the Inputs/Results Viewer \bigstar
- Introducing four new ways to phase RI\$K allocation results
- New RI\$K distributions Student's t and Log-t
- Enhanced RI\$K Grouping and Correlation wizard

POST

- New Time Phased Row Delta report yearly delta between target and selected row
- New RI\$K Convergence Chart guidance on required number of risk iterations
- New RI\$K Fan Charts illustrate uncertainty by year (annual and cumulative)
- New Joint Probability Chart plots the joint probability between two rows \bigstar

CO\$TAT

- Added support for Student's t and Log-t distributions
- Easy access to example files







Tabbed Session Windows

Improved Navigation

- Window Tabs: session, Inputs/Results Viewer (IRV), & reports
- Workscreen Tabs: at the bottom of the screen; tab order saved with the session

	ACE	7.2 - [06c - Advanced Risk.aceit (Read-On	ly) - Metho	odology (B)	(2006\$K)]						
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Window Tabs for open sessions											
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01 - Basic ACE.aceit 🛄 03 - Enhancing t Estimate.aceit 🛄 06c - Advanced Risk.aceit											
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Right-click window	54	*Estimate		*Estimate			_				
tab antiona	55	Total		Total\$	\$ 703,668.413 (37%) *						
	56	RDT&E		RDT&E\$	\$ 86,222.741 (24%) *						
	57	Concept Refinement			\$ 1,064.723 *						
	58	Contractor A	3600		\$ 534.565 *	TY					
	59	Contractor B	2040		\$ 530.158 *	TY					
	60	Technology Development			\$ 4,000.000 *						
	61	Contractor A	3600		\$ 2,000.000 *	тс					
	62	Contractor B	2040		\$ 2,000.000 *	TS					
	63	System Development and Demonstration			\$ 81,158.018 (24%) *						
Workscreen Tabs	64	Development Engineering			\$ 38,346.045 (36%) *						
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	66	Basic Structure	3600		\$ 1,732.678 (52%) *		Str 🗸				
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WBS/CES Methodology											
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ACE 7.2 Enhancements

ACE dynamically shows the sum of selected numbers on workscreens, Inputs/Results Viewer and

Report Viewer.

Elle Edit Yiew Calc Window Help Participation 04 - Implemey (BY2010\$K) 02 - Basic LeS (BY2010\$K) 02 - Basic Lnt Estimate) 104 - Implemey (BY2010\$K) 02 - Basic LeS (BY2010\$K) 02 - Basic Lnt Estimate) 15 *Estimate Approp Total FY 2006 FY 2007 15 *Estimate \$91,303.128 \$15,652.732 \$14,097.093 16 Total \$91,303.128 \$15,652.732 \$14,097.093 17 Manufacturing \$66,232.761 \$11,332.056 \$10,198.850 18 Air Vehicle 3010 \$57,593.705 \$9,853.962 \$8,868.565 19 Integration 3010 \$24,506.122 \$4,192.861 \$3,773.575 20 SEPM 3010 \$24,506.122 \$4,192.861 \$3,773.575 21 Other 3080 \$564.245 \$127.816 \$124.668 22 Image: Set the s	💟 ACE	7.2 - [02 - Basic Learning.aceit - BY P	hased Cos	ts (FY2010 \$K	, Time Phased	i, 💶 🗖 🔀							
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18 Air Vehicle 3010 \$ 57,593.705 \$ 9,853.962 \$ 8,868.565 19 Integration 3010 \$ 8,639.056 \$ 1,478.094 \$ 1,330.285 20 SEPM 3010 \$ 24,506.122 \$ 4,192.861 \$ 3,773.575 21 Other 3080 \$ 564.245 \$ 127.816 \$ 124.668	17	Manufacturing		\$ 66,232.761	\$ 11,332.056	\$ 10,198.850							
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22	21	Other	3080	\$ 564.245	\$ 127.816	\$ 124.668							
	22					~							
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SUM=66,232.761					SUM=	66,232.761							

Drop-down choice list available when the cursor enters a cell containing a choice list. A downarrow will immediately appear so the user can click the arrow and select an item from the list.

		WBS/CES Description	Point Estimate	Phasing Method	Equation / Throughput	۶
	26	*Estimate				
	27	Total	\$ 542,830.714 *			
	28	RDT&E	\$ 92,932.507 *			
-	29	Concept Refinement	\$ 1,147.824 *			
	30	Contractor A	\$ 576.302 *	TY	[Cost Throughpu	ut]
	31	Contractor B	\$ 571.522 *	BY 🔻	[Cost Throughpu	ut]
	32	Technology Development	\$ 4,153.531 *	% · Perce BE · Beta TC · Trape	at of Total Obligated Curve szoid Based on Cost	
	33	Contractor A	\$ 2,084.592 *	BY · Base TY · Then	Year Throughput Year Throughput Year Throughput	ut]
	34	Contractor B	\$ 2,068.938 *	SY - Same R - Learn	e Year Throughput roughpu	ut]
	35	System Development and Demonstration	\$ 87,631.153 *	F · FYFa ∆ · ∆vera	actors	
	36	Development Engineering	\$ 41,444.370 *	C · Cons	tant	
<	.37	Air Vehicle	\$ 10.958.768 *	I - Input IS - Input	Variables Variables that Sum	>

NOTE: Choice list feature can be enabled/disabled under Tools>User Options in the Sheet Behavior group



ACE 7.2 Enhancements

Combined the Find/Replace feature into one tabbed dialog and modified it to remain open while editing the workscreen

Find and Rep	lace		
Find Replac	ce		
Find what:			~
Replace with:			~
Direction: D	own 💌	Match case	Current column only
Search: By	Rows 💙	Match whole word only	
	Replace All	Replace Find Next	Close Help

Keep your **ACE and POST files in sync**. ACE File> Save As, will prompt to make a copy of the POST cache file also, if one exists





ACE 7.2 Enhancements

Added Export/Import Custom Workscreen options to the View menu, to allow workscreen column arrangement to be saved for use in another session

🚰 Export Custom Workscreens 🛛 🔀
Select the workscreens you would like to export:
Title
Custom 1 Custom 2 Custom 3 ✓ Custom Methodology Adjustments Keywords Learning Methodology
File name for custom workscreens:
Please Note: - If a workscreen contains case, DEC or category columns, these columns will be added to any session which imports the workscreen. Select All OK

 Added a Customize option under View>Toolbars so that the user can customize the ACE toolbars





directly from within ACE

ACE 7.2 Enhancements

Added File > Send To Email feature in ACE to allow sessions to be sent to e-mail



- Added a new Results Format Painter to paste the results format from one row onto other rows
- Added a new Edit>Add Category option for creating an unlimited number of category columns. With the new Cat() function you will be able to use category columns for reports and for summarizing within the session.
 - Expanded the size limit of the **System by Site Wizard** from 50 by 50 to 500 by 500, enhanced the wizard to include the SiteSSCost function, added an option for the user to add sites as cases for SiteSSCost calls, and now up to ten sets of previously entered data are stored for future retrieval.



New Session Analyzer Tests

	2	ACE Session Analyzer					
1	s	ession: C:\Documents and Settings\sbe	ane\My Docu	uments\ACEI			
	Flags Sunk costs	Tests	Status	Run			
1	past the current	Base Year		Report			
	year	Add Leading Fiscal Years		Close			
		Add Trailing Fiscal Years		Close			
		Undefined Variables		Help			
		Sunk Cost					
		Baseline Override	(Army) CES RI\$K: flags top				
		Army CES Appropriation		level rows v	where point		
		Army CES External Code Army CES BISK		estimate co	onfidence level is		
		RI\$K CV Test		<10% or >5	50%		
		RI\$K Correlation		_			
	RISK Coefficient of Variation			Session lev	el RI\$K		
	test flags WBS level 1 and 2			Correlation	checks that		
	rowe with $CV < 1$ or $CV > 5$: Running Session Analyzer makes no	changes to t	correlation: checks that correlation is defined within			
		sion file.					
		+-+-1 1 -+-3		ine estimati	C		
		11144	14				



New Traceback Navigator Interface

Updated the Traceback Navigator interface to an expandable treeview. More information is displayed at once.

93: Navigation/Guidance	~						
ase: Point Estimate	~						
Clear History He	lp						
aceback:							
Description	ID	Equation	Total	Unwrapped Total	Appr	Ph	Used in Column
📲 93: Navigation/Guidance							
🖃 🔤 Equation							
—		425.555+25.555*PCDWT	\$ 1,404.380	1064			
─	aStartDate	(inherited) DevStartDate	01JUL2004	(na)			
–≝ Finish Date	aFinishDate	(inherited) DevEndDate	01NOV2007	(na)			
────────────────────────────────────	SvcID	1	1	(na)			
🖃 🔁 Predecessors							
-≝ 182: Navigation / Guidance Weight (lbs)	PCDWT		25	(none)		С	Equation / Through
─	DevStartDate		01JUL2004	(none)		С	Start Date
206: Development End Date	DevEndDate		01NOV2007	(none)		С	Finish Date
Successors							
-	AFRD\$	SumIf(SvcID, SvcID, @RDTE\$)	\$ 90,044.054			F	Equation / Through
91: Air Vehicle	AV\$	Sum of children	\$ 10,992.817		3600	BE	(Parent)



Inputs/Results Viewer Improvements

Inputs/Results Viewer (IRV) enhancements: calculation results are stored so you don't have to calculate as often, bookmarks, zoom, and row and column header highlighted for current cell

	BY Results	-	Cases by Total 🚽 🗐 👘 🗊 🎙	5 🎘 • 🗣 🔹 🎭	📲 🎽 🖻 🕘 📮			ZOOM
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F	FOTAL FY 2003		WBS/CES Description	Point Estimate	Lower Propulsion Cost Scenario [out of date]	New 3010 Budget and AF Buy Quantities [out of	Ground Station Mods [out of date]	
F	Y 2004	79 80	×Estimating W/BS					
F	-Y 2005	7 81	Total	\$ 764,517.224	\$ 738,078.250	\$ 762,280.930	\$ 754,706.361	
∼-∖_ F	-Y 2006	82	RDT&E	\$ 93,154.198	\$ 93,039.093	\$ 93,154.198	\$ 83,343.335	
		83	Concept Refinement	\$ 1,147.824	\$ 1,147.824	\$ 1,147.824	\$ 1,147.824	
km	arks I	84	Contractor A	\$ 576.302	\$ 576.302	\$ 576.302	\$ 576.302	
		85	Contractor B	\$ 571.522	\$ 571.522	\$ 571.522	\$ 571.522	
F	-Y 2010	86	Technology Development	\$ 4,312.388	\$ 4,312.388	\$ 4,312.388	\$ 4,312.388	
F	Y 2011	87	Contractor A	\$ 2,156.194	\$ 2,156.194	\$ 2,156.194	\$ 2,156.194	
~i	Y 2012	88	Contractor B	\$ 2,156.194	\$ 2,156.194	\$ 2,156.194	\$ 2,156.194	Option for storing
	V 2012	89	System Development and Demonstration	\$ 87,693.986	\$ 87,578.882	\$ 87,693.986	\$ 77,883.124	roculte (unchock for
	7 2013	90	Development Engineering	\$ 41,483.525	\$ 41,483.525	\$ 41,483.525	\$ 34,431.968	Tesuits. (uncheck for
	-1 2014	91	Air Vehicle	\$ 10,992.817	\$ 10,992.817	\$ 10,992.817	\$ 10,992.817	large sessions to kee
			c Structure	\$ 5,102.286	\$ 5,102.286	\$ 5,102.286	\$ 5,102.286	
	it of dat	o ro	Sults	\$ 1,404.380	\$ 1,404.380	\$ 1,404.380	\$ 1,404.380	(Tile size down)
<u> </u>	it of uai			÷ 2,000.040	\$ 2,399.545	\$ 2,399.545	\$ 2,399.545	
sho	wn in c	Irav		\$ 2,086.606	\$ 2,086.606	\$ 2,086.606	\$ 2,086.606	
0110	, and the g	iuy	Station	\$ 25,079.814	\$ 25,079.814	\$ 25,079.814	\$ 18,948.025	
	opti	on)	re UTS Parts	\$1,028.376	\$ 1,028.376	\$ 1,028.3	CE Session Droper	tios
	opti		n New Parts	\$ 6,427.353	\$ 6,427.353	\$ 5,427.3	ice bession Proper	1165
F	Y 2022	100	JontWare	\$ 17,624.085	\$ 17,624.085	\$ 17,624.0		
Ē	Y 2023	100	Int & Assy Prototuno Manufacturing	\$ 5,410.895	\$ 5,410.895	\$ 5,410.8	General Calculation	ors Inflation RI\$K Format Summary
	-Y 2024	101	A SOLUTION	\$ 3,631.534 \$ 3,000.107	\$ 3,376,430 \$ 3,104,000	\$ 3,631.0 A 3,000 1		
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Re	ady						Calculated Results -	



IRV Improvements (cont.)

IRV synchronized with the workscreen for hidden rows

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BY Results	Inputs	🏪 🗊 🦄 🖬 🕄 🖬 🕫	🛊 🖳 🚚 🎾 🛛	
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** EXAMPLE FILI	<u>T</u> Y Results		Bight click pop up a	lieles edded to Cost
N Point Estimate	<u>S</u> Y Results		Right-Click pop-up d	nalog added to Cost
Lower Propuls	BY <u>R</u> isk Statistics	/LES Description		n (also in POST)
	<u>A</u> uto Size Columns	ACE 7.1 - [06 - Implementi	ng O&M Estimating Methods.aceit - Inputs/Results Viewer (BY)	2006SK)]
	Sho <u>w</u> Rows Visible in POST	JC [:]	lic C <u>a</u> ses <u>R</u> eports <u>T</u> ools <u>W</u> indow <u>H</u> elp	_ & ×
V	Show Rows Visible in <u>W</u> orkscreens	Inputs Phased by		
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	Zoom	Point Estimate [out of date] Lower Propulsion Cost Scenario	WBS/CES Description	Total FY 2003 FY 2004
	22 Average Onic Fit 23 Average AF Air V 24 Average Army Air 25 26 26 *Estimate 27 Total		121 INPUT VARIABLES 123 "RDT&E Inputs 124 Air Vehicle T1 125 Basic Structure T1 126 Navigation/Guidance 127 Propulsion 128 Navigation/Guidance 129 Air Vehicle S/W Labor Hours 130 Transportable Ground Stations (Army) 131 Ground Station Hardware (Army) 132 Transportable Vehicle (Army) 133 Wehicle Ruggedization (Army) 134 Integration & Test (Army) 135 Ground Station S/W Labor Hours 136 Software Labor Rate 137 Ground Station Unit Cost 138 Complexity Factor 139 Number of Ground Stations	\$ 1,975.124 * \$ 1,352.194 * retation cost type information for the case n the selected rows. atting: BY2006\$K erride(s) Setting: Type: BY erride(s) Setting: Setting: Type: BY erride(s) Setting: Setting
		Ready	141 Number of Contractor Staff OK	Cancel Help

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Other IRV Improvements

WBS/CES Description

Initial Operational Test & Eval (AE)

Initial Operational Test & Eval (Army)

Initial Spares & Repair Parts (Army)

Initial Spares & Repair Parts (AF)

Manufacturing (Air Force) Air Vehicle (AF) Basic Structure (AF) Navigation/Guidance (AF) Propulsion (AF) Integration & Test (AF) Ground Station LRIP Support (AF)

Transportation (AF)

Manufacturing (Army) kir Vehicle (Army) Basic Structure (Army) Navigation/Guidance (Army) Propulsion (Army) Air Vehicle Integration (Army) Transportable Ground Stations (Army) Ground Station Hardware (Army) Transportable Vehicle (Army) Vehicle Ruggedization (Army) Integration & Test (Army) Transportation (Army)

Quality Control

Program Office Costs

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Start Date

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010CT2009 01APR2011

010CT2006 30SEP2014

010CT2006 30SEP2014

ACE 7.2 - [07 - Detailed LCC Estimate.aceit - Inputs/Results Viewer (BY2010\$K)]

: <u>File Edit View Mode Calc Cases R</u>eports Tools <u>Window H</u>elp

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New option to lock case overrides (Cases>Lock Cases). Use Manage Cases or File/Protect to assign a password.

BY DEC Results

Point Estimate

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- Multiple IRV windows allowed
- **DEC Results** can be viewed in the IRV using View>BY DEC Results. Use View>Select DECs to customize the view.

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				10 Bedaet	116	Procurement
ACE 7	7.2 - 107 - Detailed I CC Estimate.aceit (Read-Only) - Methodology (BY)	2010SK)1		117	Manufactu
						Air Veh
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156	▼ J _x L ₀ 22			_	125	Initial O
9 07	- Detailedgy (BY2010\$K) 1 07 - Detailedgy	etailed Lewer (BY2010\$K)		▼ ×	126	Initial S
					127	
	WBS/CES Description	Start Date	Finish Date		128	Manufact
					129	Air Veh
116	Procurement				130	Basi
117	Manufacturing (Air Force)				131	Nav
118	Air Vehicle (AF)				132	Prop
119	Basic Structure (AF)				133	Air ven
120	Navigation/Guidance (AF)				135	Grou
121	Propulsion (AE)				136	Tran
121	Integration (Test (AE)				137	Vehi
122				-	138	Integ
123	Ground Station LRIP Support (AF)	FYCFirstYr(@Trans\$)	FYCLastYr(@LRIPAFQty	2	139	Transp
124	Transportation (AF)				140	Initial O
125	Initial Operational Test & Eval (AF)	DateAdd(DateOf(AFFYr), 0, 12,0)	DateAdd(aStartDate, 0, 18, 0	0	141	Initial S
126	Initial Spares & Repair Parts (AF)			~	142	Quality Co
<		·	[2	143	SEPM
Metho	dology WBS/CES				144	Program (
Lineario				>	<	

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Finish Date

2010

2014

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Category Function – Cat()

SumIf() and If() functions can now test string values contained in a Category column by using the new Cat() function. Category columns can now be used for summary rows within the estimate and cost category reports (in ACE and POST).

Syntax: Cat([@Var,] "Cat Short Title" [, Inherits])

	WBS/CES Description	Unique ID	Point Estimate	Phasing Method	Model	Service	SvcID (!) Service	Equation / Throughput
!	Air Force (old way using DEC)		\$ 83,243.858 *	F		AirForce	1	Sumlf(SvcID, SvcID, @RDTE\$)
!	Army (old way using DEC)		\$ 2,780.883 *	F		Army	2	Sumlf(SvcID, SvcID, @RDTE\$)
	Air Force	AFRD\$	\$ 83,243.858 *	F		AirForce		SumIf(Cat("Service"), "AirForce", @RDTE\$)
	Army	ArmyRD\$	\$ 2,780.883 *	F		Army		SumIf(Cat("Service"), "Army", @RDTE\$)
	Air Force and Model A		\$ 41,415.497 *	F				Sumlf(AND(Cat("Service")="AirForce", Cat("Model")="ModelA"), 1, @RDTE\$)
	Marines		\$ 23.000 *	F	Model B			lf(Cat("Model")="Model B", 1, 2)

Other Examples:

- SumIf(Cat("Appn"), "RDTEA", @Total\$) Returns sum of all rows under "Total\$" with RDTEA.
- SumIf(OR(Cat("Service")="AirForce", Cat("Service")="Army"), 1, @Total\$) Returns the sum of all rows that have a category code of "AirForce" or "Army" in the Service category column.

NOTE: Cat() uses the short, not long column titles. The short title may not contain **double quotes**. The long title can contain any character.



Vertical Lookup Function – VLookup()

Added a VLookup() function which searches for a value stored in the first FY column of the DataTable, and returns a value from the specified column (col_index) in the located row.

Syntax: VLookup(lookup_value, @DataTable, col_index, num_rows)

-		WBS/CES Description	Unique ID	Point Estimate	Equation / Throughput	FY 2003	FY 2004	FY 2005
	16	Number of Fuel Tanks needed for HW with Qty = 2		1.000 *	VLookup(2, @HWReq, 2, num_rows)			
	17	Number of Fuel Tanks needed for HW with Qty = 8		2.000 *	VLookup(8, @HWReq, 2, num_rows)			
	18	Number of Fuel Tanks needed for HW with Qty = 10		2.000 *	VLookup(10, @HWReq, 2, num_rows)			
~	19	ManPower needed for HW with Qty 17		8.000 *	VLookup(17, @HWReq, 3, num_rows)			
	20	ManPower needed for HW with Qty 50		8.000 *	VLookup(50, @HWReq, 3, num_rows)			
	21							
	22	*INPUT VARIABLES	*IN_VAR					
_	23	*** Fuel Tanks and Manpower needed by Qty				Qty	Fuel Tanks	Manpower
	24	HW Fuel and Manpower Matrix	HWReq	0.000 *				
	25	HW Qty 1-5			[Input Throughput]	5	1	2
	26	HW Qty 6-10			[Input Throughput]	10	2	4
	27	HW Qty 11-15			[Input Throughput]	15	4	6
-	28	HW Qty 16-20			[Input Throughput]	20	6	8
	29							
-	30	Number of rows for HWReq matrix	num_rows	4.000 *	4			

Note: When the lookup_value is not an exact match, VLookup in ACE returns the next largest value in the col_index, Excel returns the next smallest.



Functions and Phasing Methods

- New argument for the DateAdd(Date, Year [, Month] [,Day] [,Truncate]) function added to recognize and operate on partial years and months.
 - Truncate=1 truncates fractional portion of years and months (default prior to ACE 7.2)
 - Truncate=0 or blank operates on partial years/months being added (<u>new default behavior</u>) Examples:
 - DateAdd(01May2008,1.3) will now return 18Aug2009
 - DateAdd(01May2008,1.3, 0, 0, 1) returns 01May2009
- New FYUnitFactor() function to return the ACE session units as a factor (i.e., 1, 1000, 1000000, 100000000)
- New RandBetween(LowValue, HighValue[, IsInteger]) function to return a random number between the two numbers you specify

	ACE Session Properties
	General Calculation Errors Inflation RI\$K Format Summary
	RandBetween Function
Uncheck the box to cause the	Generate new random number (and seed) for each calc
random number to be repeated for subsequent calculations	Seed: 2893877
	STRATION IN



Documentation and Reporting

- Added an optional Case Description field to the Add, Copy, and Rename Case dialogs to enter/edit a case description (up to 500 chars.)
- Added an optional **DEC Description** field to the DEC dialog (up to 500 chars.)

Narrative Report improvements:	Narrative Report Options	$\mathbf{ imes}$
 added a "Page x of x" option for the report footer Include Introduction, Case and DEC descriptions Include/exclude User Entered definitions 	Description Header Footer Rows Layout Fomat Available Items Add >> Ite and Result WBS/CES/Var Definition RISK Results Successor Table Image: Content of the second of the sec	



Documentation and Reporting

Reporting by Category now allows up to three Category and value specifications

	Desc	ription	Header Footer Page Layout F	ormat Rows Filter	Columns RI\$K
	0	Deta	iled Matrix (All WBS/CES Rows)		
	0	- Deta	iled Matrix by Category		
			Category:	Sub Category:	
	Γ	✓	Funding Source	Contractor	~
AND -	Г	~	Арргор	3600	~
OR	-1	~	Арргор	2040	~

Support **multi-select non-continuous rows** for reports created with the "Selected Row Range" option on the Rows tab



Documentation and Reporting

Provided icons for putting date, page #, etc. in the Header and Footer on reports

⊂ Text ——	*	I			
Left Section: &S	~	Center Section Page -	n: &P	Right Section: Report I	Date &D 🔨

ACE built-in editor:

- Added right-click menu options for common commands such as cut, copy, paste
- Now supports the creation and modification of:
 - Tables
 - Bullet lists
 - Numbered lists



Case Overrides Report

0

0

1

Two format options

5

6

7

<

Ready

Air Force Buy Quantities Low Rate Initial Production

Full Rate Production

7 - Detailed LCC Estimate.aceit - Multi-Case (Total Overrides) (FY2010 \$K, Tota... Case Overrides Report Options Eile Edit View Calc Window Help _ 8 × Description Header Footer Page Layout Format Rows Columns 🗄 🗋 🚰 🛃 🖂 🛕 🖷 🗐 🔞 🖕 Type of Report τ× 💙 07 - Detailed L...logy (BY2010\$K) 07 - Detailed L..., For 2 Cases) Show total overrides for selected cases ^ Lower Propulsion Ground Station Mods WBS/CES Description Approp Show total and yearly overrides for a single case Cost Scenario Ground Station S/W Labor Hours 10000 1 Select Case(s) With Case Overrides 2 Complexity Factor 1.1 3 Number of Ground Stations 3 Cases Propulsion Unit Cost 3010 450 BY2005 \$K 4 Lower Propulsion Cost Scenario New 3010 Budget and AF Buy Quantities ~ Ground Station Mode < > Readv Single-Case (Phased Overrides) 🔽 07 - Detailed LCC Estimate.aceit - Single Case (Phased overrides) (FY2010 SK, Total and Yearly Overrides, For case: New 3010 ... Eile Edit View Calc Window Help . 8 × 🗄 🗋 💕 🔚 🎿 🛕 📭 📓 🞯 🖕 🔍 07 - Detailed L...logy (BY2010\$K) 📄 07 - Detailed ...uy Quantities) ÷× Cost WBS/CES Description Total FY 2007 FY 2008 FY 2009 FY 2010 FY 2011 Approp Interpretation Total Budget 1 Procurement Budget 2 3010 TY\$K 20000 20000 20000 3 3010 Budget 0 0 Total Air Vehicle Buy Quantity 4

Multi-Case (Total Overrides)

~

>

1

2

0

NUM



RI\$K Enhancements

- Added the Student's-t and Log-t distributions in ACE and CO\$TAT. These are the "fat-tail" versions of the normal and lognormal. Added a Degrees of Freedom column for use in the specification.
- Added a "High Truncation" column for RI\$K distributions (off by default). Requires a value (not %).
- Added the capability to obtain risk results when the point estimate equals 0, on a row-by-row basis. To turn on this new feature, enter Yes in the new column "Allow RI\$K when PE=0"
 - Off by default for backwards compatibility
 - When turned on, may require low truncation set to "off"



RI\$K Grouping and Correlation Wizard

- Enhanced the Grouping and Correlation wizard, walks the user through adding correlation to WBS elements or Input Variables
 - New options for easily correlating WBS elements or Input Variables that are not already members of a correlation group, and put a specified correlation *(default 0.25)* on these rows

Grouping and Correlation Wizard Step 1		Grouping	and Correlation Wizard	Step 2		
This wizard helps you apply correlation to rows contain uncertainty. You can create a group of assign a correlation value, create a group stre correlation matrix. Note that group correlation any existing functional correlation.	in your estimate that frelated elements and ngth vector, or create a is applied in addition to	Please s Group N Show Se Session	elect the members for group lame: NewGroup ection: All Rows WBS/CES:		Show Ungrouped R	ows Only Icertainty Only
 Manually create new group 		Row	WBS/CES Description	Group RI\$	\$K Form Unique ID	Point Est 🔨
		102 103	Air Vehide Mobile Ground S	Nori Nori Tria	mal mal	\$ 3,309. \$ 382.
 Apply correlation to WBS elements 		108	Test Facilities	Nor	mgular mal form Const\$	\$ 9,141. \$ 342. \$ 11.426
O Apply correlation to Input Variables		112 113 114 125 140	Equip ACQ/Mod Other Government Initial Operational Initial Operational	Nori Unif Tria Tria	mal form angular	\$ 1,920 \$ 3,427. \$ 1,916. \$ 5,146. \$ 8,577
O Edit existing group		<	Add	Remove		
		Selected	Items			
		Row	WBS/CES Description	RI\$K Form Uni	ique ID Point Estim	
< Back Next >	Cancel Help			< Back Ne	ext > Cancel	Help

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RI\$K Grouping and Correlation Wizard

Enhanced the Grouping and Correlation wizard (cont.):

• New option for entering a full correlation matrix and let ACE pick the appropriate vector as the Group Strength



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Phasing RI\$K allocated dollars

- RI\$K phasing profile options are on the File Properties RI\$K tab:
 - Prorate (default)
 - BackLoad
 - FrontLoad
 - FullLoad
 - StretchLoad
 - The phasing profile can be specified at the **session** level and overwritten at the **row** level using the column, **RI\$K Phasing Profile**

RI\$K PE Percent Adjustment spreads available RI\$K dollars by adjusting the point estimate (PE) BY phased results by the specified percentage. The default is "0". This field is ignored when applying the Prorate method.

ACE Session Properties	
General Calculation Errors	Inflation RI\$K Format Summary
Solution Method: Latin Hy	percube Custom CDFs
Number of Iterations: 5000	Group Seeds
Percentile	Report default setting
Low: 15 %	Display every 5th percentile
High: 85 %	O Display five user-defined percentiles
	Level Value
Sunk Years	2 25.00
Last Year 2006	3 50.00
	5 90.00
Allocation This is an experimental heuri confidence level results to su Allocate at 50	istic process that causes um, please see help. % confidence
Allocation markers defined in	n: <level 2="" elements="" wbs=""> 💌</level>
RI\$K Phasing Profile: Ba	ackLoad 💌
RI\$K PE Percent Adjustment	t: 0 %
Note: Allocation options are selected in a report (Phased,	only used when allocation is Budgetary, or Cost Category).
ок с	ancel Set as Default Help



Default RI\$K Phasing Profile

Prior to ACEIT 7.2, risk dollars were prorated based on the point estimate BY phasing





New RI\$K Phasing Profiles



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RI\$K PE % Adjustment

RI\$K PE Percent Adjustment spreads RI\$K dollars by increasing/decreasing the point estimate (PE) phased results by the specified percentage. Remaining RI\$K dollars are spread according to the RI\$K phasing profile specified.
Remaining RI\$K





RI\$K POST Fan Chart

- **New** Fan Chart shows annual or cumulative uncertainty bands
 - In annual mode, the chart illustrate the uncertainty associated on a year by year basis
 - In cumulative mode, the chart illustrates the cumulative uncertainty by year

Presents Image: Statistical Years Display sead lats to target/point estimate Image: Nick results are calculated using a simple heurisic process based on the ratio of Point Estimate BY to form or detail on this process. Image: Allocated These results are calculated by performing risk allocation the defined allocation level for each confidence level. Years Display yearly values from 2003 in to 2025 in Show Point Estimate Show blank leading/trailing years Risk Herations: 500 My Reports OK Cancel My Reports OK Cancel	Fan Chart Data Rows Target Options Display Inflation Base Year Then Year Same Year Rowitte Rowitte Securite Securite	Coptions for RI\$K statistical or allocated results Data Round aget Options Display	Display results in absolute or "delta" mode
TYSY totals. See help for more detail on this process. Allocated These results are calculated by performing risk allocation the defined allocation level for each confidence level. Show Point Estimate Show prior/to complete totals Show plank leading/trailing years Risk Iterations: 500 My Reports OK OK Cancel	 Statistical TY and SY RI\$K results are calculated using a simple heuristic process based on the ratio of Point Estimate BY 	 Display cumulative yearly values Display as deltas to target/point estimate In row units As percentages 	Point Estimate
Years Display yearly values from 2003 to 2025 to 15% and 95% Show blank leading/trailing years Show blank leading/trailing years NK Iterations: 500 My Reports OK Cancel My Reports OK Cancel Wy Reports OK Cancel Wy Reports OK Cancel OK Cancel OK Cancel OK Cancel OK <td>TY/SY totals. See help for more detail on this process. Allocated These results are calculated by performing risk allocatio the defined allocation level for each confidence level</td> <td>Confidence Bounds</td> <td>Potential Annual BY2010\$K Over/Under Target Calculated with 500 iterations Statistics</td>	TY/SY totals. See help for more detail on this process. Allocated These results are calculated by performing risk allocatio the defined allocation level for each confidence level	Confidence Bounds	Potential Annual BY2010\$K Over/Under Target Calculated with 500 iterations Statistics
Display yearly values from 2003 to 2025 Show prior/to complete totals Show blank leading/trailing years RISK Iterations: 500 My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK </td <td>Years</td> <td>Show Mean Area Bounds</td> <td>\$42,000</td>	Years	Show Mean Area Bounds	\$42,000
Show blank leading/trailing years RISK Iterations: 500 My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel	Display yearly values from 2003 📚 to 2025 📚	5% and 95% Additional Bounds	\$30,000 S S S S S S S S
Iterations: 500 Iterations: 500 My Reports OK Cancel My Reports My Reports OK Cancel Symmetric My Reports OK Cancel Solution My Reports OK Cancel Solution My Reports OK Cancel Solution Solution Solution Solution Solution Solution Solution OK Cancel Solution Solution Solution S	Show blank leading/trailing years	30% and 70% ✓ Symmetric Symmetric	ti o 2 \$18,000
My Reports OK Cancel My Reports OK Cancel My Reports OK Cancel S0 2003 2004 2005 2006 2007 2008 2009 S6,000 <	Iterations: 500	Symmetric Symmetric	\$12,000 \$6,000
	My Reports OK Cancel	My Reports OK Cancel	\$0 2003 2004 2005 2006 2007 2008 2009 -\$6,000

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RI\$K Fan Chart

- **New** Fan Chart shows annual or cumulative uncertainty bands
 - In annual mode, the chart illustrate the uncertainty associated on a year by year basis
 - In cumulative mode, the chart illustrates the cumulative uncertainty by year
 - Options for RI\$K statistical or allocated results in absolute or "delta" mode



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RI\$K Fan Chart





2011

2013

2015

Point Estimate

2017

---- 30%

2019

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2021

----70%





ACE Plug-in Enhancements

ACE to ACE Plug-in

- Added an option for selecting which **what-if case** to import data from
- Import CES and or WBS Numbers, if they exist, into the corresponding columns in the current session
- Added an option on the plug-in's Tools>Options screen for specifying the **number of RI\$K CDF points** to store

Excel to ACE Plug-in

- Added capability to import Start Date, Finish Date, Learning (Slope, Prior Qty, Buy Qty, Theory, and Ref Cost Type), and Adjustments (Fee, G&A, and Overhead Rates) data into the corresponding columns in ACE
- Excel Plug-in Example and Template files now have the Approp col/row formatted as Text. This was done so that approp codes such as "0105" will retain the leading zero when imported into ACE.

SEER to ACE Plug-in

The SEER Plug-in now works with the most recent version of SEER SEM 7.3





POST New Reports



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Multi-Axis Line Chart

New Multi-Axis Line Chart - Plots phased results for multiple rows against two y-axes (e.g., plot cost and quantity)





Sand Chart Enhancements

Sand Chart for Ground Station Mods in 07 - Detailed LCC Estimate.aceit

Costs in BY2006 \$K, 500 iterations

Friday, 20 November 2009, 11:41 am

Sand Chart of Row 116: Procurement





RI\$K Convergence Chart

New RI\$K Convergence Chart provides guidance on the number of RI\$K iterations to choose for a selected ACE session



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Joint Probability Chart

New Joint Probability Chart illustrates the joint probability between two rows. The user can move "crosshairs" to divide the points into quadrants and display the joint probability contained therein.





POST 7.2 Enhancements

Added a **Find Row** option to the right-click menu on all report Row selection tabs

Time Phased Row Delta	
Data Target Comparison Options	
Selected Row	
S *BY Summary Section S *Total S *TY Procurement Summary Section S *Budget Information S *Data Budget S *D RDT&E Budget S *D RDT&E Budget	
■ S A Find Row	
■ § Find what:	
Procurement Budget	Find Next
Search: Match case Match entire contents only	Close
✓ Cost Non-Cost Information Comments	
Cost Non-Cost Information Comments My Reports OK Cancel Help	

New Time Phased Row Delta report plots yearly delta between a target row and selected comparison row(s)

Delta Comparison							
Costs in BY2010 \$K	2007	2008	2009	2010	2011	2012	2013
Procurement Budget	\$20,408.818	\$20,089.189	\$23,741.220	\$29,257.699	\$71,913.358	\$98,883.408	\$97,134.978
Procurement	\$19,753.932	\$23,330.756	\$23,602.332	\$27,666.332	\$66,382.037	\$86,408.243	\$124,900.315
Delta (Δ)	-\$654.886	\$3,241.567	-\$138.888	-\$1,591.367	-\$5,531.320	-\$12,475.165	\$27,765.337
Percent Δ	(3.21%)	16.14%	(0.59%)	(5.44%)	(7.69%)	(12.62%)	28.58%
Threshold	Under Target	High	Under Target	Under Target	Under Target	Under Target	High



POST 7.2 Enhancements

Added an Excel 2007 style ribbon for POST



- **Improved POST Cache performance** to reduce the number of times POST has to recalculate
- **Right-click pop-up dialog added to Cost Interpretation** column of the Inputs/Results Viewer (IRV) for guidance on specifying the base year and units for cost overrides
- **DEC Results** can be viewed in the IRV. Use the Settings toolbar button to customize the view
- Added the option Link to another session to the Reports menu
- Added an Autosave Cache File option under POST>Options





CO\$TAT 7.2 Enhancements

Added an Excel 2007 style ribbon for CO\$TAT



- Modified CO\$TAT to support the new ACE **RI\$K Student's t-distribution and Log-t distribution**. When the dataset contains less than 40 data points, Student's-t is the default distribution exported to ACE, rather than Normal. The same applies for Log-t and LogNormal.
- Added Precision as a Dataset Property and as an Analysis Case option for reporting
- Added the General Rules of Thumb for Regression Statistics help topic to the main CO\$TAT menu
- Added an Example Files menu option to the main CO\$TAT menu



CO\$TAT 7.2 Enhancements

- **Export to ACE/Librarian** selections are now remembered
- Increased the maximum variable ID length to 100 characters (previously 50)
- Added a histogram beta curve graph to the Beta report in addition to the S-curve
- Rather than displaying the message "The selected sheet does not appear to be a dataset" when an Analyze option is selected, the worksheet containing the dataset automatically becomes the active worksheet
 - CO\$TAT now **reports the actual weights** used in the computation in the percentage error table for MUPE equations. (Prior to 7.2, weights were multiplied by the square of the largest predicted value to make them easier to read.)



Other ACEIT 7.2 Enhancements

- ACEIT Librarian Added a Degrees of Freedom column to support the new Student's t and Log-t distributions
 - ACEIT Admin Updated interface





ACDB 7.2 Enhancements

In the Resource selection form, "default" resources appear at the root of the selection tree (in addition to their usual location under the Non-Recurring, Recurring and Total folders)

Main Form	
Choose Database:	
ACDB Computer Systems Demo [12/04/2009]	Deptions Entire WBS Form
C:\Documents and Settings\sbeane\My Documents\ACEIT Data\ACDB Data\ACDB Browse Raw Data: Cost Reports Cost Reports Select WBS Elements and Associated Resources Select Entire WBS and One Resource Retrieve Stored Query:	DEMO CO Step 1: Select a standard WBS COMPUTER SYSTEM TEMPLATE Template WBSs Only Step 2: Select a resource FECUREING TOTAL, TOTAL DOLLARS (RECURRING) ** TOTAL, TOTAL DOLLARS (TOTAL)
	Total : 27 Selected : 0 ** Resource representing Total, Total Dollars

- Made default size larger for windows and drop-down boxes
- Export by Entire WBS, One Resource outputs additional summary rows, one per top-level CES item, for the top level WBS item



Calc engine changes that may affect results

ACE

- Previously, the default behavior for the DateAdd() function was to truncate the years or months being added. DateAdd() now has an optional argument to control how partial years/months are treated. The default behavior has been changed to recognize partial years and months.
- The functions FYCMin() and FYCMinYr() were modified to exclude years with a 0 result when calculating minimums. Now FYCMin() will return the smallest non-zero value for a range of calculated values. FYCMinYr() will return the year where the smallest non-zero value occurs.

CO\$TAT

CO\$TAT was exporting the confidence interval associated with the mean rather than the prediction interval about a specific point when performing Univariate analysis. Additionally, CO\$TAT was exporting the bound values rather than bounds as a percent of the mean (i.e., the point estimate) and placing these values in the low/high percent columns when performing Univariate analysis. CO\$TAT now exports the correct Univariate prediction interval in terms of percent of the point estimate and places the data in the correct columns.

Conclusion



ACEIT 7.2 contains hundreds of usability and stability enhancements

Key ACE enhancements

- Window and Workscreen tabs
- New functions
- Inputs/Results Viewer improvements
- Four new RI\$K phasing profiles

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metho		• <u>3</u> - 20 @	. 22 10	H A A Σ Σ	ar ar lua	- se -
	<u>- fe @a A</u>					
01	- Basic ACE.aceit 🛄 03 - Enhancing t Es	stimate.aceit	06c - /	Advanced Risk.ace	it	
	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation
54	*Estimate		*Estimate			
55	Total		TotalS	\$ 703,668.413 (37%) *		
56	RDT&E		RDT&E\$	\$ 86,222.741 (24%) *		
57	Concept Refinement			\$ 1,064.723 *		
58	Contractor A	3600		\$ 534.565 *	TY	
59	Contractor B	2040		\$ 530.158 *	TY	
60	Technology Development			\$ 4,000.000 *		
61	Contractor A	3600		\$ 2,000.000 *	TC	
62	Contractor B	2040		\$ 2,000.000 *	TS	
63	System Development and Demonstration			\$ 81,158.018 (24%) *		
64	Development Engineering			\$ 38,346.045 (36%) *		
65	Air Vehicle	3600	AV\$	\$ 10,197.461 (20%) *	BE	
66	Basic Structure	3600		\$ 4,732.678 (52%) *		

New POST reports



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New Session Analyzer Tests

Additional Session Analyzer tests:

- Yearly gap/overlap by phase
 - RDT&E extends > 2 years into Production
 - Production starts > 2 years before RDT&E ends
 - O&M starts > 2 years before Production starts
 - Zero cost years between first and last years with cost
- Sunk costs beyond today's GFY, plus one year.
- Overrides in the baseline case.
- (Army) Crosschecks the CES numbers (if they exist) with all appropriations to check if they are consistent with the CES phase.
- (Army) Crosscheck standard Army External Codes with CES numbers

lests	Status	Run
Base Year		Report
Units		
Add Leading Fiscal Years		Close
Add Trailing Fiscal Years		
Undefined Variables		Help
Yearly Gap/Overlap by Phase		
Sunk Cost		
Baseline Override		
Army CES Appropriation		
Army CES External Code		
Army CES RI\$K		
RI\$K CV Test		
RI\$K Correlation		

- (Army) Basic risk checks top level CES items, e.g., 1.0, 2.0, 3.0, and flags rows where the point estimate confidence level is <10% or >50%.
- RI\$K Coefficient of Variation test flags WBS level 1 and 2 rows with CV<.1 or CV>.5
- RI\$K Correlation checks for correlation within the estimate and input variables. This
 is a session, not a row level test.



ACE 7.2 RI\$K Enhancements

Risk Group Seeds dialog added for viewing/editing random seeds associated with correlation Groups. If no dominant element is defined for a Group, ACE generates <u>and now maintains</u> a random seed for the Group which preserves the stability of calculated results.

ACE Session Properties		×
General Calculation Errors	Inflation RI\$K Format Summary	
Column Matheads I are th		
Solution Method: Latin Hy	/percube Custom CDFs	
Number of Iterations: 2500	Group Seeds	
Percentile	Report default setting	
Low: 15 %	 Display every 5th percentile 	
	 Display five user-defined percentiles 	
High: 85 %	Level Value	
- Sunk Years	1 25.00	
	3 50.00	
Last Year: 2006	4 60.00	
	5 75.00	
Allocation		
This is an experimental heur	istic process that causes	
confidence level results to s	um, please see help.	
Allocate at 50	% confidence	
Allocation markers defined in	n: <level 2="" elements="" wbs=""> 💙</level>	127
RI\$K Phasing Profile: Pr	rorate 🗸	
RI\$K PE Percent Adjustmen	it: 0 %	
Note: Allocation options are	only used when allocation is	
selected in a report (Phased	, Budgetary, or Cost Category).	
ОКС	ancel Set as Default Help	

🚈 RI\$K Group Seeds

You may assign a random seed to any group. The seed must be an integer between 1 and 161,000,000 (no commas). The seed is used to initialize the random number generator responsible for selecting Latin Hypercube draws.

Grouping	Random Seed					
OpsLabor	23405					
UAVHW	7584					
SummaryMatch [D]	3944904					
Summary [D]	1121225					
OpLife	5828					
GroundCosts 19164						
MissionOps	27477					
Maintenance	5413					
IA&T	25795					
RDTEInputs 22125						
<	>					

NOTE: ACE will generate new seeds for groups whose seeds are blank or "0." If the group contains a dominant element (denoted with a [D]), the random seed for that element will always be used for the group.

WARNING: This dialog does not test for uniqueness of entered seeds; ACE may replace what is shown here during syntax check.

OK

Cancel

06c - Advanced Risk.aceit session

Clear All

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Help



System by Site Wizard

System	m By Site Wi In the table be each year ider	zard - Site Proc slow list the sites to (ntify the total numbe	which the items will l which the items will l r of completed syste	fute be procured/de ems required.	sployed. In		# of Systems needed each year for each Site
	Site 1 Site 2 Site 3	Sites	FY 2010 FY 5 2 5 5	2011 FY 10 2 1	2012 FY 20 10 2 5		
3 6 7 <		In the to Also spi the cos Price U column, Cost Ty	e Wizard - Con able below, list all o ecify unit price or le t per unit in the Pric nits. For learning o , together with the a pe, Prior Quantity, a	nponent Ur f the compone arining curve in ce column, togr curves, specify associated Bas and the option	nit Prices nts that will be used nformation. For fixe- ether with associate the unit reference ise Year, Units, Slop al Rate Slope.	l at one or d cost item d Base Ye cost in the e, Theory,	ne or more sites. t items, specify se Year and n the Price leory, Reference
		Unit Cost App 1 comp 2 comp 3 comp	Components Components Conent 1 Conent 2 Conent 3	0 - MIPF Price 500 50 200	Price Base Year 2008 1 2007 1 2009 1	Price Units	System By Site Wizard - Configuration Matrix # of Components ice In the table below you will specify a configuration table. This table will identify the quantity of each component required at each site to comprise one (1) system. This configuration table will be multiplied by the annual system quantities per site, specified in "Site Buy Schedules" step of this wizard, to develop the total quantity needed per year for each component.
		4 compr 5 <	<pre>section 4 </pre>	Next >	Cancel	Finish	Site 1 Site 2 Site 3 1 component 1 10 5 2 2 component 2 20 10 2 3 component 3 20 10 2 4 component 4 20 10 2
			1	$\left \right $	+	$\overline{\left\langle \cdot \right\rangle}$	<pre></pre>

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System by Site Wizard (cont.)

Automated Cost Estimating Integrated Tools

14 "Vy Pogram Estimate "Estimate "Estimate 15 ABC Site Number for Subsystem Cost Site number for SSCost function Each set is a what-if case. ABC_SITED 1. * C 16 ABC Subsystem Cost Site number for SSCost function Each set is a what-if case. ABC_SISCOST \$723.431 17 component 1 \$152.250 F SiteSSCost(4, @ABC_OTY, @ABC_CONF_@ABC_SSCO @ABC_LTC, ABC_SITED, NAL 18 component 2 2 \$31.181 F SiteSSCost(4, @ABC_OTY, @ABC_CONF_@ABC_SSCO @ABC_LTC, ABC_SITED, NAL 20 component 3 3 \$120.000 F SiteSSCost(4, @ABC_OTY, @ABC_CONF_@ABC_SSCO @ABC_LTC, ABC_SITED, NAL 20 component 4 4 \$420.000 F SiteSSCost(4, @ABC_OTY, @ABC_CONF_@ABC_SSCO @ABC_LTC, ABC_SITED, NAL 20 component Cost 15 ABC_Site Number for Subsystem Cost 1. Site 3 Component Cost 15 21 Foint Estimate Site 3 Component Cost 15 ABC Site Number for Subsystem Cost 2. \$2.53.75 \$25.375 \$50.750 \$5.075 2 Foint Estimate Site 3 Component Cost 16 ABC Site Number for Subsystem Cost 2. \$2.911 FY 2011			WBS/CES Description		Comment (*) Comment	Unique ID	Point Estimate	Phasing Method	E	put		
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POST 7.2 Enhancements

- Variance Chart: added options to report results in terms of Standard Deviation or Relative Contribution (default) for the "WBS Rollup Elements" option (previously only reported the variance, which are generally very big numbers)
- Coefficient of Variation (CV) was added to the risk statistics table below the RI\$K S-curve chart and as an option to report on the chart.
 - Increased the number of **selectable risk plot points to four** (e.g. 50%, mean, 60%, 80%) on the RI\$K S-curve chart.
- Added a section for RI\$K Defaults to the POST>Options Reports tab. This allows the user to set the default for RI\$K reports for ALL sessions, not just the open session.

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Show Session Names for Cases						
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O Session options						
Override:						
Confidence Interval: 5.00 🗢 %						
Start at 0%						
Allow 100%						
Histogram Bins: 50						
OK Cancel Help						



RI\$K Convergence Chart

- New RI\$K Convergence Chart provides guidance on the number of RI\$K iterations to choose for a selected ACE session
 - Iteration data is stored on the sheet below the chart and for this chart you can populate the table with data from any other source
 - Note that when data is supplied by ACE, the table is populated with factors of the point estimate. There are check boxes at the top of the table to tell POST how to interpret the data



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RI\$K Cumulative Fan Chart

Automated Lost Estimating Integrated Tools





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Joint Probability Chart

New Joint Probability Chart illustrates the joint probability between two rows. The user can move "crosshairs" to divide the points into quadrants and display the joint probability contained therein



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Calc engine changes that may affect results

ACE

- In ACE 7.2, the truncation point (if there is one) is calculated analytically rather than estimated for the Triangular and Uniform distribution. Our testing shows that this faster and more accurate approach results in percentile differences of less than 0.1% for a single row. When testing the impact of summing 20 such rows, the difference is less than 0.5%. However, in the rare event that you are summing 20 such rows and they are highly correlated, the impact at low percentiles (less than 20%) could be slightly more than 0.5%.
- In ACE 7.2, if a uniform risk distribution is applied, the PE position is undefined, the point estimate is outside the 0/100 low/high bounds, AND a penalty factor is applied, a fatal error is generated requiring the user to either a) remove the penalty factor or b) assign a mode within the low/high for the purpose of applying the penalty factor. Assigning a mode within a uniform distribution will not affect the uncertainty results if no penalty factor is applied.



Other Calc engine changes that may affect results

ACE

- Using Spread and Skew parameters to define a RI\$K distribution produces a documented (see Help) result, but only when the point estimate (PE) position is the default (i.e., Median for LogNormal/Logt, and Mode for all other distributions). To avoid unexpected results, a fatal error will result if Spread or Skew is used and the PE position is not the default.
- In ACE 7.2, RI\$K distributions can be truncated at both the low and high end. When sessions are converted to 7.2, any truncation information in the old session will be placed in the Low Truncation column. This is a problem if RI\$K is being performed on negative numbers because the truncation is actually at the high rather than the low end. To capture this potential inconsistency, ACE 7.2 will generate a fatal error if the Low Truncation specification is greater than the mean. To address the problem, move the truncation to the High Truncation column.