



Agenda

The purpose of this brown bag is to outline best practices to convert an ACE 7.5 session to ACE 8.0. This transition process includes steps in ACE 7.5 to prepare the session for conversion and then guidance on how to start capitalizing on ACE 8.0 enhancements.

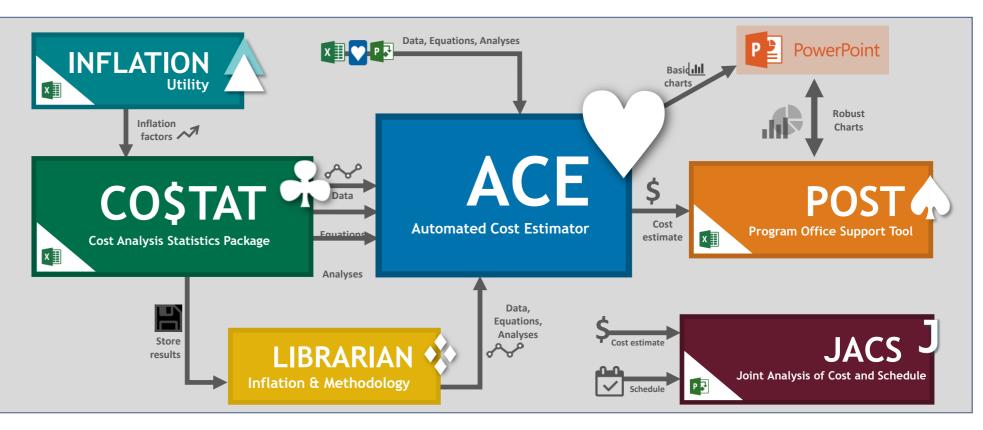
This session outlines:

- Introduction
 - High level ACEIT 8.0 change summary
 - When to transition a file to ACE 8.0
- ACE 7.5 session preparation
- Opening the session in ACE 8.0
 - Understanding file extensions & backwards compatibility
 - Checking the file in ACE 8.0
 - Considering upgrading the ACE session for ACE 8.0 new features



ACEIT 8.0 Change Summary

- ACEIT 8.0 architectural changes
 - ACDB moved to CRH (formerly JIAT)
 - POSTDoc removed
- ACE 8.0 development
 - Major changes to ACE user interface
 - Same ACE calculation engine
 - Modifications to ACE file structure for new interface





Consulting ACEIT 8.0 User References

- At ACEIT.com/User **Resources/Download** s/ Productions Software
 - 8.0 Release Notes
 - Transitioning From ACE 7.5 to 8.0
- At ACEIT.com/ACEIT Suite/Welcome ACEIT 8.0
 - Welcome to ACEIT 8.0

ACEIT 8.0 SP2-003 now available

ACET **TRANSITIONING FROM ACE 7.5 TO 8.0** **Transition visuals shown with ACE 7.5 and equivalent ACE 8.0 example files. All ACE 8.0 example files were updated to Base Year 2019 and a newer phasing schedule. Further, the new examples were modified to illustrate new features like the Weibull Phasing Method. In short, the point estimates values in the following images while similar are not the same. ACE 7.5 to 8.0 Comparison ACE 7.5 ACE 8.0 DATA ENTRY Workscreens Input Sheets (Main Pane tab) ROTES 8 63,751,31 \$ 58,542.35 \$ 715.954 Input All Form Input Form (Main Pane tab) Parightet Antonio de la contra de la cont Welcome to ACEIT 8.0



ACEIT 8.0 Release Notes

June 2019

The release notes outline the development work associated with ACEIT 8.0.

ACEIT 8.0 focuses on a major revision to ACE as well as smaller enhancements to CO\$TAT, POST, and JACS. In this version there are a few changes that may affect the calculated results These changes are clearly highlighted in this document and no other result changes are anticipated. The outline exhibits the changes to ACE, CO\$TAT, JACS and POST, in that order.

ACE

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ACFIT 8.0 Service Pack 1 **Release Notes** April 2020

These release notes outline the development work associated with ACEIT 8.0.nn, Service Pack 1. As this release is an upgrade to the major revision of ACE in ACEIT 8.0, these notes only cover the service pack. Please refer to ACEIT 8.0 Release Notes, June 2019, for complete details on the numerous changes in the original 8.0 release.

The following improvements in ACEIT are included in this service pack.

New Functionality

- Added RI\$K Fan Chart
- Added Revision Log

Improved Functionality

- Implemented significant performance upgrades throughout
- Made numerous refinements to Model Structure
- Revised RI\$K group seed editing
- Made considerable refinements to Undo/Redo functionality

Repaired Functionality

- Fixed defect in Overrides view
- Fixed issue with RI\$K Results display
- Included fixes for Excel-to-ACE and ACE-to-ACE Plugins

When Should You Transition a File to ACE 8.0?

- Confer with all organizations that are stake holders in the ACE session
 - Ensure that all organizations have access to ACEIT 8.0 before transitioning the file
 - Only make the switch to ACE 8.0 if all organizations have access to ACEIT 8.0
 - ACE 8.0 files are not backwards compatible to ACE 7.5 due to file structure modifications
 - This means once a file is transitioned into 8.0, you can not open it in 7.5 anymore
- Select one organization/team member to transition the file to ACE 8.0
 - Recommend selecting the organization where most changes to the session originate
- When complete distribute the ACE 8.0 session to all participating team members



ACE 7.5 Session Preparation ('aria-expanded', !1), h=e&& ('), b = active''), h=e&& ('), h=e&& ('),

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ACE 8.0 is Different than ACE 7.5

• ACE 8.0 is a revolutionary interface change

- To be able to tackle future cost estimating challenges we've introduced many new interface elements
- We've modified features to expand their capabilities
- We've created new visual displays to help you better understand inputs and results
- We've emphasize better understanding of row connections in the file
- We've developed some new terms or names

When the file transitions some areas of the feature set will go through more changes than others. This presentation is designed to help you best prepare your model to maximize the power of 8.0

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-70: Contractor B	76	Propulsion	RDTER	:	\$ 716.954	BE	PropMnth\$*DevDuration*NRPropComplex			DevStartDate	е
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Transitioning a File to ACE 8.0 Starts in ACE 7.5

- Prepare the session for transition by cleansing the session in ACE 7.5
 - 1. Review Definitions
 - 2. Clear Error Messages
 - 3. Review Reports
 - 4. Scan Cell Formatting
- Examine the 7.5 session to understand the extent of the file transition
 - 1. Are there summary sections in the session?
 - 2. How many DECs and Category columns does the session have?
 - 3. Are there inputs on the Yearly Phasing workscreen that are not associated with the Fiscal Years?
- Maintenance on the session
 - 1. This is a good time to review the sessions overall methodology:
 - Reduce the footprint of the model
 - Remove rows that are not core to the sessions mission

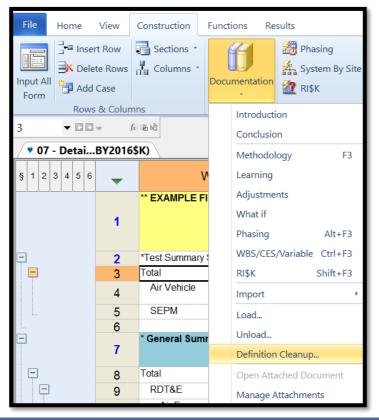


Preparing the Session: Review Definitions

Run Definition Cleanup

ACEIT

- General review of documentation: ensure documentation is current
 - Remove irrelevant notes, comments and definitions
- Remove unused definitions



Inused Definitions								
Keyword: 10 (1.13 KB) 12 (5.34 KB) 22 (1.00 KB) 26 (283 KB)	Definition: 1. Model Form and Equation Model Form and Equation		^					
	Model Form:	Weighted Linear model						
	Number of Observations Used:	13						
	Equation in Unit Space: MM = (-71.24) + 0.4181 * KLOC +							
	Error Term:	MUPE (Minimum-Unbiased-Percentage Err	ror					
	2. Fit Measures (in Fit Spac	ce)	,					

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Preparing the Session: Clear Error Messages

- Look at the error log in the session
 - Are there any fatal errors or unused variables?
 - If so, correct them before moving on

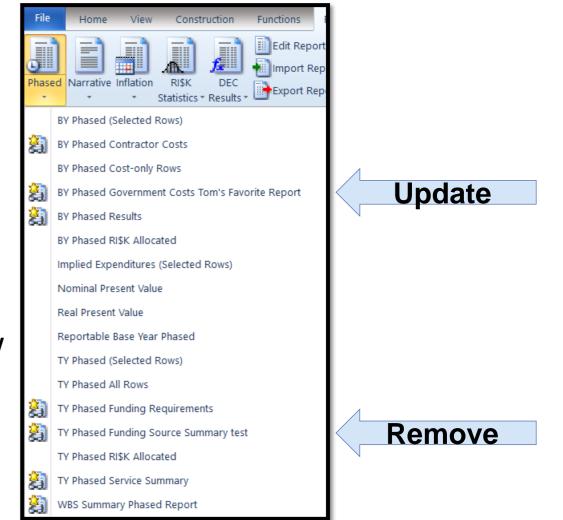
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/ MTH562	66	Warning	Unused variable 'Refine\$'.	Unique ID	
3 INF122		Information	Not using most recent system inflation table.	Equation / Thr Point Esti	
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Preparing the Session: Review Reports

• Review Session Reports

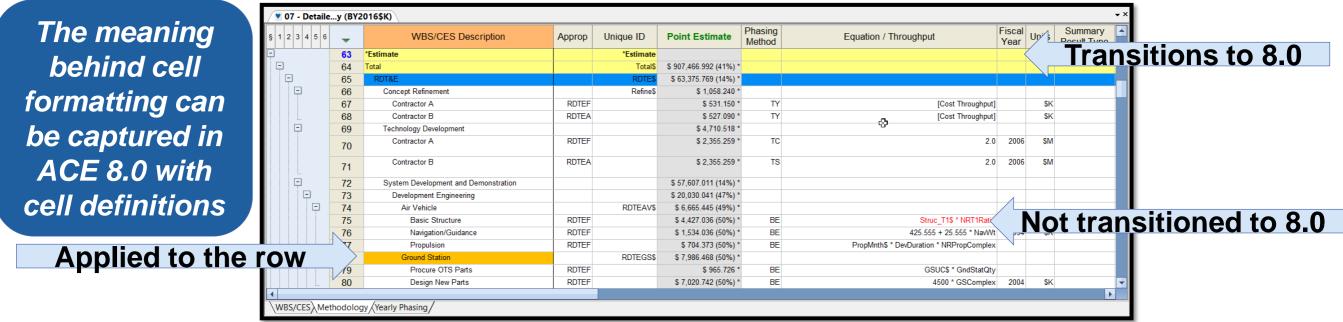
- Only transition the reports you need going forward
- Remove redundant or outdated reports
- Update reports
 - Use best practices on report titles
 - Example "Tom's Favorite Report"
 - Tom may no longer support the program
- Go to Results Ribbon > Edit Reports and review all Session Reports





Preparing the Session: Scan Cell Formatting

- Prepare cell formatting for the transition
 - ACE 8.0 only applies formatting (fonts, font colors, and cell color highlighting) to an entire row
 - When the file is transitioned
 - Formatting on entire rows will transition directly to ACE 8.0
 - If cells are individually formatted, the row will adopt the formatting of the WBS/CES Description
 - Consider updating the cell formatting before the file transition

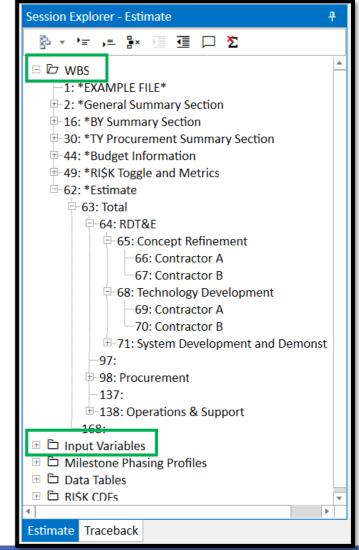




Examining the 7.5 Session: Summary Sections

- Summary sections at the top of the session translate best to 8.0
 - All rows Above the *IN_VAR Unique ID transition to WBS folder
 - All rows Below the *IN_VAR Unique ID transition to Input Variables folder
- For best results move summary sections Above the *IN_VAR row before file transition
- Sections marked with *at the beginning of the Unique ID work Best if ther row is also a comment row

1 2 3 4 5 6	-	WBS/CES Description	Approp	Unique ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year	Units	Summary Result Type	Start Date	Finish D
	1	** EXAMPLE FILE **										
	2	* General Summary Section		*Summary						Summary		
	3	Total			\$ 907,466.992 *							
P	4	RDT&E			\$ 63,375.769 *							
	5	Air Force	EF,RDTEA		\$ 60,134.291 *	F	SUMIF(CAT("APPN"), "RDTEF", @RDTE\$)					
	6	Army	EF,RDTE		\$ 3,241.479 *	F	SUMIF(CAT("APPN"), "RDTEA", @RDTE\$)					
Ģ	7	Procurement			\$ 402,552.968 *							
	8	Manufacturing (Air Force)	APF		\$ 267,696.867 *	F	AF_Proc\$					
	9	Manufacturing (Army)	APA		\$ 134,856.101 *	F	Army_Proc\$					
Ę.	10	Operations & Support			\$ 441,538.255 *							
	11	Air Force	,OMF,OMA		\$ 128,332.275 *	F	SUMIF(CAT("APPN"), "OMF", @OS\$)					
	12	Army	,OMF,OMA		\$ 30,526.045 *	F	SUMIF(CAT("APPN"), "OMA", @OS\$)					
	13	Air Force Personnel	,OMF,OMA		\$ 111,610.427 *	F	SUMIF(CAT("APPN"), "MPF", @OS\$)					
	14	Army Personnel	,OMF,OMA		\$ 171,069.508 *	F	SUMIF(CAT("APPN"), "MPA", @OS\$)					
	43											
	44	*Budget Information		*Budget								
2	45	Procurement Budget		ProcBudget\$	\$ 424,530.448 *							
	46	Air Force Aircraft (APF) Budget	APF		\$ 281,935.131 *	TY	[Cost Throughput]		\$K			
	47	Army Aircraft (APA) Budget	APA		\$ 142,595.317 *	TY	[Cost Throughput]		\$K			
	10											
	63	*Estimate		*Estimate								
-	64	Total		Total\$	\$ 907,466.992 (41%) *							
e,	65	RDT&E		RDTE\$	\$ 63,375.769 (14%) *							
	66	Concept Refinement		Refine\$	\$ 1,058.240 *							
	67	Contractor A	RDTEF		\$ 531.150 *	TY	[Cost Throughput]		\$K			
	68	Contractor B	RDTEA		\$ 527.090 *	TY	[Cost Throughput]		\$K			
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WBS/CES Methodology (Yearly Phasing

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Examining the 7.5 Session: Category Columns and DECs

- Does the session contain Category Columns or DECs?
- Category Columns mainly support
 - Summary sections with SumIF functions
 - Report filter and summary options
- DECs commonly support
 - Multiple equation columns
 - ACE Plug-ins

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 In ACE 8.0 Category columns and DECs are *automatically* combined into one column type called Custom Columns

More on Custom Columns later in this presentation

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		102	Basic Structure (AF)			2.1.1.1.1				AF			
		103	Navigation/Guidance (AF	=)		2.1.1.1.2				AF			
		104	Propulsion (AF)			2.1.1.1.3				AF			
		105	Integration & Test (AF)			2.1.1.2	2 5	APF		AF		WBS	
		106	Ground Station LRIP Supp	ort (AF)		2.1.1.3	8 5	APF		AF		WBS	
		107	Transportation (AF)			2.1.1.4	4 5	APF		AF	Govt	WBS	
		108	Initial Operational Test & E	val (AF)		2.1.1.5	5 5	APF		AF	Govt	WBS	
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		111	Navigation/Guidance Init	Sprs (AF)		2.1.1.6.2	2 6	6 APF		AF			
		112	Propulsion Init Sprs (AF)		2.1.1.6.3	8 6	6 APF		AF			
		113	Quality Control (AF)			2.1.1.7	′ 5	APF		Joint		WBS	
		114	SEPM (AF)			2.1.2	2 4	APF		Joint		WBS	
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WRS	/CES (Met	hodology	/ (Yearly Phasing /										
1103/		liouology	/ rearry masing/										

Examining the 7.5 Session: Inputs Stored in Yearly Phasing Columns

- Are there inputs on the Yearly Phasing workscreen that are not associated with the Fiscal Years?
- In ACE 7.5 the Yearly Phasing workscreen could store a matrix data table that was independent of the Fiscal Year
 - Example: Mission Schedule Inputs: # Missions per year and Avg Hours per Mission

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- Service data is stored in the first two fiscal years of the session but not associated with FY 2011 or 2012
- In ACE 8.0 FY independent data inputs are good candidates to transition to new Data Tables
 - FY data inputs like this are not automatically converted to ACE 8.0 Data Tables, it is up to the model builder to make the decision to make that modeling change and move the data to a Data Table

9 1 2 3 4 5 6			Phasing	Approp	Lead/Lag	Sunk Cost Interpretati	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	• ×
	230	*Buy Quantities	Wethou			Interpretati									
Ē	231	Total Air Vehicle Buy Quantity													
Ģ	232	Air Force Buy Quantities													
	233	Low Rate Initial Production	IS							1	1	1	1		
	234	Full Rate Production	IS											15	
—	235	Army Buy Quantities													
	236	Low Rate Initial Production	IS							0	0	1	1		
	237	Full Rate Production	IS											10	
	238	Army Transportable Ground Station Quantity	IS									1	2		
	239								1						
	273	* Mission Schedule Inputs (see yearly Phasing workscreen)					#Missions/yr	Avg Hrs/Mission							
-	274	Mission Hours/Year												-	
	275	Air Force	F				9	12						4	, ,
	276	Army	F				8	14							
	077														
\WBS/CES/Me	thodolog	gy Yearly Phasing Keywords													

Final 7.5 Thoughts Before Moving to 8.0

- This is a good time to examine the overall session before transitioning to ACE 8.0
- Considering the following:
 - Are major sections of the model commented out?
 - Consider removing these rows before going forward
 - Do you no longer need the same level of detail on a section of the model?
 - Maybe a section can be trimmed before moving forward
 - Are all the summary sections still needed or can summary results be generate with a report?
 - Consider implementing a different modeling approach for results to improve the efficiency of the model
 - Has the original mission of the session changed?
 - Now might be a good time to make some model revisions

• Finally, after all updates are made calculate and save the file before closing 7.5



Opening the Session in ACE 8.0 "> .active"),h=e&& ("aria-expanded",!1),h=e&& (),h=e&& (){return a.fn.t



Understanding File Extensions & Backwards Compatibility

- In ACE 7.5 the file name was session.aces
- In ACE 8.0 the file name is session.acex

ACE 8.0 files may be smaller than its 7.5 version

Name	Date modified	Туре	Size
07 - Detailed LCC Estimate - 7.5 Version	4/1/2020 9:51 AM	ACE Session	309 KB
07 - Detailed LCC Estimate - 8.0 Version	4/1/2020 9:58 AM	ACE Session	175 KB

- ACE 7.5 and ACE 8.0 can be installed on the same computer
 - If you double click on a ACE 7.5 File, ACE 7.5 will open
 - If you double click on a ACE 8.0 File, ACE 8.0 will open
- ACE 8.0 files will not open in ACE 7.5; further 8.0 files cannot be saved in 7.5 format

Always save a backup copy of the session before transitioning versions



Starting the ACE 8.0 Transition

- Save a back up copy of your ACE 7.5 session
 - Save the back up file to a different folder prior to file transition
- Time for the transition
 - 1. Open ACE 8.0
 - 2. Go to File \rightarrow Open
 - 3. Navigate to the 7.5 file and select "Open"
 - 4. ACE will prompt you if you want to transition the file to 8.0
 - 5. Select "OK"
 - 6. ACE will save the session as an ACE 8.0 file; .acex



Note: No backwards compatibility. When you first save this file, it will be saved as a new file with an .acex extension.

READ

Don't ask me again



Understanding Name Changes between 7.5 and 8.0

• Key ACE 8.0 name and term changes outlined in "Transitioning From 7.5 to 8.0"

ACE 7.5	ACE 8.0
Input All Form	Input Form
Workscreens	Input Sheets
DECs, Category Columns	Custom Columns
Inputs / Results Viewer	Results tab of Main Pane

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TRANSITIONING FROM ACE 7.5 TO 8.0

**Transition visuals shown with ACE 7.5 and equivalent ACE 8.0 example files. All ACE 8.0 example files were updated to Base Year 2019 and a newer phasing schedule. Further, the new examples were modified to illustrate new features like the Weibull Phasing Method. In short, the point estimates values in the following images while similar are not the same.

ACE 7.5 to 8.0 Comparison ACE 7.5 to 8.0 Comparison Colspan="2">Colspan="2" Colspan="2">Colspan="2" Colspan="2" Colspan="2"

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=-36: RDT&E		37	 Concept Refinement 			\$ 1,067.220					stridDete /s 🖸
□ 37: Concept Refinement		38	Contractor A	RDTEF		\$ 536.734	TY	[Cost Throughput]		\$K	
		39	Contractor B	RDTEA		\$ 530.487	TY	[Cost Throughput]		\$K	
□ 39: Contractor B □ 40: Technology Development		40	 Technology Development 			\$ 4,678.474					
-40: Technology Development		41	Contractor A	RDTEF		\$ 2,339.237	TC	2	2009	\$M	
42: Contractor B		42	Contractor B	RDTEA		\$ 2,339.237	TS	2	2009	\$M	
= 43: System Development and Demonstra		43	 System Development and Demonst 	rati		\$ 57,763.217					
⊨-44: Development Engineering		44	 Development Engineering 			\$ 19,681.254					
⊨-45: Air Vehicle		45	 Air Vehicle 		RDTEAV\$	\$ 6,755.589					
-46: Basic Structure		46	Basic Structure	RDTEF		\$ 4,506.110	BE	Struc_T1\$*NRT1Ratio			
-47: Navigation/Guidance		47	Navigation/Guidance	RDTEF		\$ 1,532.524	BE	425.555+25.555*NavWt	1997	\$K	
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Understanding the 8.0 Interface

 Use the embedded ACE Help Text
 > ACE Layout topic

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-56: Total Estimate at Probabilit 📩	73			\$ 20,030.041 (47%)			TCu1			
-57: Procurement Estimate at P	74 Air Vehicle		RDTEAVS	\$ 6,665.445 (49%)						
-58:	75 Basic Structure	RDTEF		\$ 4,427.036 (50%)	BE	Struc_T1\$ * NRT1Ra	io			DevStartDate
-59: Delta between PE and Prot	76 Navigation/Guidance	RDTEF	7	\$ 1,534.036 (50%)	BE	425.555 + 25.555 * Nav	Wt 1994	\$K		DevStartDate
-60: Delta between Procuremer	77 Propulsion	RDTEF	•	\$ 704.373 (50%)	BE	PropMnth\$ * DevDuration * NRPropCompl	эх			DevStartDate
-61: -62: 6	78		RDTEGS\$	\$ 7,986.468 (50%)						
= 63: *Estimate	79 Procure OTS Parts	RDTEF		\$ 965.726	BE	GSUC\$ * GndState	ity		DATEADD(DevS	tartDate, 0, 0, 120
e-64: Total	80 Design New Parts	RDTEF		\$ 7,020.742 (50%)		4500 * GSCompl		SK	DATEADD(DevS	tartDate, 0, 0, 120
0-65: RDT&E	81 Software	RDTEF		\$ 3,180.341 (50%)		SWLab\$ * SWManMont				SWDevStartDate
-66: Concept Refinement	82 Int & Assy	RDTEF		\$ 2,197.787 (50%)		.15 * (TTOT(@RDTEAV\$) + TTOT(@RDTEGS\$))		DATEADE)(DevEndDate, - 1
-67: Contractor A	83 Prototype Manufacturing			\$ 3,280.499 (43%)						
-68: Contractor B	84 Air Vehicle	RDTEF		\$ 2,921.369 (50%)		1.5 * AV_T				ProtoStartDat
B−69: Technology Develop	85 Mobile Ground Station	RDTEA		\$ 359.129 (27%)	BE	1.75 * TGS_T	1\$			ProtoStartDat
-70: Contractor A									_	
-71: Contractor B -72: System Developmen	Cases									C 3 6
= 72: System Development En	+ × 🗅 🖪 🖪 🧕									
-74: Air Vehicle										
-75: Basic Strue	Case Name	Compare	Time Last Calculate	d	Descri	ption Overridden Rows	Has Total O	Overrides	Has RI\$K Overrides	
-76: Navigatior	Point Estimate	✓	3/18/2019 2:04:4			0				
-77: Propulsior	Higher Uncertainty	\$				n Production inputs 4			Yes	
P-78: Ground Static	S Lower Propulsion Cost Scenario					t cost with lower cost. 4	Yes			
-79: Procure O	New 3010 Budget and AF Buy Quantities					ow to slip money to later 3				
-80: Design Ne	Propulsion and OM Mods					plexity factor and Propuls 8	Yes			
-81: Software	Propulsion, Ground Station and OM Mods	i 🗆		Overrides to	o NREC comp	plexity factor and Propuls 11	Yes			
timate Traceback	Documentation Found Matches Cases Vis	ualization	Successors							
. accorden	vocumentation round matches Cases Vis	duriz durion	0000000000							

Checking the Session in ACE 8.0

- Save a copy of the new ACE 8.0 file
 - At this point you should have a backup 7.5 file, a backup 8.0 file and a new working 8.0 copy of the file (this is recommended for any file upgrade project)
- In the working copy, perform a Full Calculate and look at the Error Log
 - Did the session fully calculate?
 - Are the results the same as ACE 7.5?
- Review the documentation
- Review and update Custom Columns properties
- Consider transitioning FY independent inputs stored in Yearly Phasing Fiscal Years to Data Tables



Compare ACE 7.5 Calculated Result to ACE 8.0

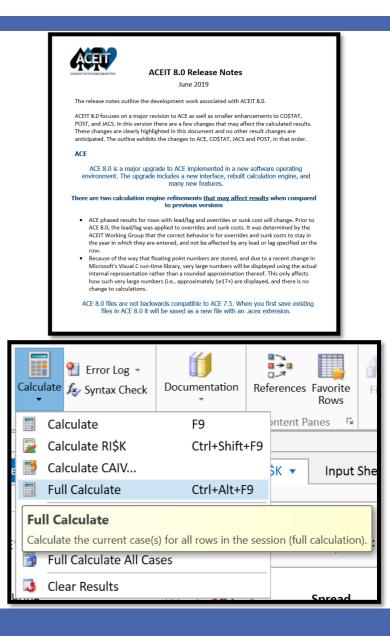
- Compare the 7.5 calculated result within 8.0 results both within the 8.0 interface
- ACE 8.0 offers multiple instances
 - Open the working copy and the back up copy of the session to begin to compare results
 - Multiple instances can be set up on dual monitors
 - Perform side by side comparison

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ILE HOME LAYOUT CONSTRUCTION FUNC		iled LCC Estimate.acex (Read-On	ly) - Methodology (BY201	19\$K) - ACE 8.0	- 0	C III III IIII IIII IIII IIIII IIIIIIII		LCC Estimate Back Up Copy.a	cex - Methodology (BY2019\$K	1) - ACE 8.0	- □ × ^ @
↓ Cut Default ▲a Copy B ✓ Format Painter B	Arrange Sheet Add New Sheet Delete Sheet Column Methodolo	gy WBS/CES Yearly Spread Le Phasing Total	ear	Worki	ng	Sort Sort	Add New Sheet	NBS/CES Yearly Spread I Phasing Total		Back	Up
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E> WBS ▲ □1: *EXAMPLE FILE* ■ □2: *General Summary Section ■ ■ 16: *BY Summary Section ■ ■ 30: *TV Procurement Summary Section ■ ■ 64: RDT&E ■ ■ 63: Total ■ ■ 64: RDT&E ■ ■ 65: Concept Refinement ■ ■ 66: Contractor A ■ ■ 67: Contractor B ■ ■ 68: Technology Development ■ ■ 68: Technology Development and Demo ● ■ 71: System Development Engineering ■ ■ 71: System Development Engineering ■ ■ 72: Development Engineering ■ ■ 73: Air Vehicle ■ ■ 75: Airyairation/Guidance	62 * Estimate 63 * Total 64 * RDT&E 65 * Concept Refinement 66 Contractor A 67 Contractor B 68 * Technology Development 69 Contractor A 70 Contractor A 71 4 System Development and Demon: 72 * Development Engineering 73 * Air Vehicle 74 Basic Structure 75 Navigation/Guidance 76 Propulsion 77 * Ground Station 78 Procure OTS Parts 79 Design New Parts 80 Software	RDTEF RDTEF RDTEF RDTEF RDTEA	\$ 909,863,284 \$ 63,508,912 \$ 1,067,220 \$ 536,734 \$ 2,339,237 \$ 2,339,237 \$ 5,77,63,217 \$ 19,681,254 \$ 6,755,589 \$ 4,506,110 \$ 1,532,524 \$ 7,16,954 \$ 7,503,106 \$ 976,217 \$ 6,525,6899 \$ 3,283,755	TY [Cost Throughput] TY [Cost Throughput] TC 2 TS 2 BE Struc_T15*NRTIRatio BE 425.555-25.55*NawWt BE YropMnth5*DevDuration*NRPropComplex BE GSUC5*GndStatChy BE 4500*GSComplex MS SWLab5*SWManMonths	SK SK SK 2009 SM #rtDate.015.0) Sta 2009 SM #rtDate.015.0) Sta DevStartDate 1997 SK DevStartDate DevStartDate rtDate.0.0.120) Sta		Contractor A Contractor A Contractor A Contractor A Contractor A Contractor A Contractor B Contractor B Contractor A Contractor B Contractor A Contractor A Contractor A Contractor B Contractor A Contractor B C	RDTEF RDTEF RDTEA RDTEA RDTEA RDTEA RDTEA RDTEA RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF RDTEF	\$ 909,863.284 \$ 63,508.912 \$ 1,067.20 \$ 536,734 TY \$ 530,487 TY \$ 4,678.474 \$ 2,339.237 \$ 57,763.217 \$ 19,681.254 \$ 6,575.589 \$ 4,506.110 E \$ 7,150.316 \$ 7,150.316 \$ 7,150.316 \$ 7,55.589 \$ 7,55.589 \$ 5,55.589 \$ 5,	[Cost Throughput] [Cost Throughput] 2 2 Struc_T15*NRTIRatio 425.555+25.555*NavWt 'ropMnth\$*DevDuration*NRPropComplex GSUC\$*GndStatQty 4500*GSComplex	DevStartDate De rtDate,0,0,120) Start[
7:6: Propulsion 7:6: Propulsion 7:7: Ground Station 7:9: Design New Parts 80: Software 81: Int & Assy 81: Int & Assy 84: Mobile Ground Station 84: Mobile Ground Station 85: SEPM	Cases + X Case Name Case Name Point Estimate Cose Name New APF Budget and AF Buy Quantities Propulsion and O&S Mods Propulsion. Ground Station. and O&S Mod Visualization References Successors Favo		Lower Propulsion Override APF Bu Overrides to NRE Overrides to NRE	0 n T1 Cost 1 dget row to slip money to later y 3 EC complexity factor and Propuls 8 EC complexity factor and Propuls 11	Ves Yes Yes	-76: Propulsion -77: Ground Station -78: Procure OTS Parts -80: Software 81: Int & Assy 82: Prototype Manufacturing -83: Air Vehicle -84: Mobile Ground Station -85: SEPM		Compare Time Last Cakulat	Lower Propulsion T1 Override APF Budget Overrides to NREC co Overrides to NREC co	0 Cost 1 row to slip money to later y 3 mplexity factor and Propuls 8 molexity factor and Propuls 11	Yes Yes

Calculating the Session in ACE 8.0

- Compare the results of the working session to the back up copy
 - If the results are different consult the ACEIT 8.0 release notes: there are a few refinements that might affect the results of the session
- Calculate the working session
 - ACE now performs Incremental Calculations as the default calculate (F9) on the Input Form and Input Sheet.
 - This only calculates the rows that have changed since the last calculation for the default case
 - A Full Calculate (Ctrl+Alt+F9) will calculate all rows in the session for the default case. Full Calc is the default on Results, Overrides, and Charts tabs of Main Pane.
 - Recommend performing a full calculate after a series of changes are made to the session and before results presentations





Review the Documentation

- Documentation in ACE 8.0 is now associated with cells not rows
 - Documentation will automatically be converted on file conversion
 - WBS/CES/Variable definition converts to WBS/CES Description
 - Methodology definition converts to Equation/Throughput
 - Cells with documentation shown with red triangles
 - A row with documentation on any cell indicated with red triangles
 - View the definition text and attached documents in the Documentation Content Pane

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Paste D Copy	<u>* 12 *</u> A* A* ❷ ⊟* ⊟* "豆* 律律 X. X* <mark>登 * A</mark> * 1 1 三 吾 吾 ■ △ *	🕉 Next Spelling Error	Table Sele	ect Propertie	25		
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§र र 4 हर 1	Row WBS/CES Description	Comments	Арргор	Unique ID	Point Estimate	Phasing Method	Equation / Throughput
B−62: *Estimate B−63: Total	63 4 Total			Total\$	\$ 909,863.284		
- 63: IOLAI	64 4 RDT&E			RDTE\$	\$ 63,508.912		
- 65: Concept Refinement	65 Concept Refinement		_		\$ 1,067.220		
- 66: Contractor A	66 Contractor A		RDTEF		\$ 536.734	TY	[Cost Throughput
67: Contractor B	67 Contractor B	Used Army Approp because Contractor A	RDTEA		\$ 530.487	TY	[Cost Throughput
-68: Technology Develop	68				\$ 4,678.474		
-69: Contractor A	69 Contractor A I	Used AIr Force Approp because Contracto	RDTEF		\$ 2,339.237	TC	
-70: Contractor B	70 Contractor B	Used Army Approp because Contractor A	RDTEA		\$ 2,339.237	TS	:
-71: System Developmen	71				\$ 57,763.217		
- 72: Development En	72				\$ 19,681.254		
⊐-73: Air Vehicle	73 Air Vehicle	Air Force is the lead on Air Vehcile		RDTEAV\$	\$ 6,755.589		
-74: Basic Struc							•
-75: Navigatior -76: Propulsior	Documentation - Contractor A			2			C 2
□-77: Ground Static					.	F	
-78: Procure O	Approp				Ŧ		🔅 🕒 📎 💾 🏷 🗙
-79: Design Ne	Used Alr Force Approp because Contractor A su	pports the Air Force Activity					
-80: Software							
01. Int 9. Acor	·						
•							
stimate Traceback	References Favorite Rows Documentation Visu	alization Cases					

- Common 7.5 DEC comment technique for leaving notes in the session
 - Consider moving the comments to the associated column for better context about the information and to include more detailed descriptions
 - Ex: Comment provide notes about appropriation selection: moved to Approp Column

Updating Custom Columns in ACE 8.0

- DECs and Category columns have been combined into one new column type called Custom Columns
- New Input Form for Custom Columns
 - Enter values for all columns with drop down selection
- There are five Custom Column types:
 - Non-Cost, Cost, Text, Date, and Comment
- A Tag can be used to label sets of Custom Columns associated with different applications
 - Ex: Custom Columns associated with Plug In data

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FILE HOME LAYOUT CONSTRUCTION	FUNCTIONS	REPORTS							∧ ⊘	
Image: Solution of the solut	heck Documentation	Rows Content Panes 🕞	Replace	Insert Rows 👻 Delete Rows Columns 👻	🔳 Unindent 🎽 T	oggle Comment 👻 oggle No-Sum esult Format				
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Session Explorer - Estimate 4	Input Form - Cust	com Columns 🔻 🛛 In	put Sheet - Meth	odology 🔻	Results - Phase	ed Costs 🔻 🛛 C	Overrides - Phased 🔻	Charts - Estimate 🔻		
।	Title: Cont	ractor A								
=-54. Estimate	Unique ID:		CES#:		WBS#:		PE Value:	\$ 536.734		
=-56: RDT&E										
-57: Concept Refinement -58: Contractor A	Column Title 🔨	Column	ID Tag	Туре	Value				Group by: None *	
-59: Contractor B	Approp Reporta	ble BY AppnRE	3Y	Text			•			
□-60: Technology Developme	Comments	Comme	onts	Comment	Used Air	Force Approp be				
-61: Contractor A -62: Contractor B					Contrac		-			
⊡-63: System Development a	Funding Source		-	Text		tor	*			
⊟-64: Development Engin	Service	Service		Text	Joint		*			
⊟–65: Air Vehicle —66: Basic Structu	WBS Summary	WBS		Text			*			
-67: Navigation/G										
-68: Propulsion		that use Contractor A					7		()⊠ ×	
⊖ 69: Ground Station −70: Procure OTS I	📓 💴 🔸 🐫							Show C	Column References 🧕 🥹	
-71: Design New F	Row N	WBS/CES Description	Unique ID		Equation		Located In	Result	<u>*</u>	
-72: Software	5 Air Force				SumIf(App	pn, "RDTEF", @R	RDTE\$) Equation / Throug	ghput \$ 60,155.834		
-73: Int & Assy	19 Air Force				SumIf(App	pn, "RDTEF", @R	RDTE\$) Equation / Throug	ghput \$ 58,976.308		
-74: Prototype Manufact	33 Air Force						RDTE\$) Equation / Throug			
	47 Contractor						Total\$) Equation / Throug	ghput \$ 436,047.367	v	
Estimate Traceback	References Favor	ite Rows Documenta	tion Visualizatio	n Cases Su	accessors Error Lo	og				
Ready									+ 100%	



Updating Custom Columns in ACE 8.0

- The transition from DEC to Custom Column happens automatically at file conversion
- In ACE 7.5 DECs that fed into Model Summary sections that used SumIf functions could be non-cost DEC types
- ACE 8.0 Custom Columns that feed SumIF functions must be set to "text"
 - Check the Column Properties to make sure they are setup up as "Text" not "Non-cost"

Input Form	- Methodology Input Sheet - WBS/CES							
Title:	Air Vehicle							
Unique ID:	CES#:							
Periodic	Equation/Value SumIf(Cat("Summary"), "Air Vehicle",@Total\$)							

Non-cost Custom Columns that are parameters of SumIf functions will generate Fatal Errors: change to Text Custom Columns

Edit Column Propertie	S	?	Q,	×						
Column Title:	Summary									
Unique ID:	Summary									
I	Change all instances of old ID to new ID?									
Column Description:										
Tag:										
$_{\!$	ie:			_						
O Non-cost - Colu	umn holds non-cost data and/or equations									
🔿 Cost - Column	holds cost data and/or equations									
🛛 🖲 Text - Column H	holds text that can be used for filtering									
O Date - Column	holds dates of the form DDMMMYYYY									
○ Comment - Co	lumn holds comments and text that is not evaluated	I								
Inheritance Behavior	·			_						
Text value only applie	es to rows explicitly labeled with text value (no inher	itano	ce)	Ŧ						
	ОК	Car	ncel							



Transitioning Inputs Stored in Yearly Phasing Columns to Data Tables

- In ACE 7.5 inputs stored in Yearly Phasing columns that were not associated with the Fiscal Years were commonly referred to as Matrix Data Tables
- A main requirement for Matrix Data Tables in ACE 7.5 was that the data must be entered in the first Fiscal Year of the session
- To accommodate large data tables some sessions had to add Fiscal Years to the session to store the full table. Note: more Fiscal Years means that the session takes longer to calculate

§ 1 2 3 4 5	6 🖵	WBS/CES Description		Approp	Lead/Lag	Sunk Cost Interpretati	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Ę	230	*Buy Quantities												
Ē	231	Total Air Vehicle Buy Quantity												
	232	Air Force Buy Quantities												
	233	Low Rate Initial Production	IS	;						1	1	1	1	
	234	Full Rate Production	IS	;										15
Ē	235	Army Buy Quantities												
	236	Low Rate Initial Production	IS	;						0	0	1	1	
	237	Full Rate Production	IS	;										10
	238	Army Transportable Ground Station Quantity	IS	;								1	2	
	239					-			1					
	273	* Mission Schedule Inputs (see yearly Phasing workscreen)	1				#Missions/yr	Avg Hrs/Mission						
Ģ	274	Mission Hours/Year												-
	275	Air Force	F	:			9	12						<u>୍</u> ଚ
	276	Army	F	:			8	14						
	077		İ											



Transitioning Inputs Stored in Yearly Phasing Columns to Data Tables

- For ACE 8.0 there is now an option to store FY Independent inputs in Data Tables rather than the Fiscal Year columns
- The New Data Tables offer an approach to set up your model differently
- Data Tables are not calculated with the session calculation, they are simply a place to store and draw on data to be used in other calculations
 - Using Data Tables can save model calculation effort
- On file conversion for ACE 7.5 to ACE 8.0 Matrix Data Tables *do not* automatically convert to Data Tables
 - Traditional Matrix Data Table set ups will calculate exactly as the did in ACE 7.5
- Changing the structure of the session to use the new Data Tables is an analyst modeling decision – consider the functions that call the data tables

Inpu	t Form - Methodology Input Sheet - Yearly P	hasing 🔻	Results	- Phased Co	sts 🔻 Overri	Charts - Estimate 🔻				
Row			Approp	Lead/Lag	Sunk Cost Interpretation	FY 2011	FY 2012	FY 2013	FY 2014	A
273	*Mission Schedule Inputs (see yearly Phasing workscreen)					#Missions/yr	Avg Hrs/Mission			
274	 Mission Hours/Year 									
275	Air Force	F				9	12			
276	Army	F				8	14			



Transitioning Matrix Data into Data Tables

If you choose to transition to a new Data Table

ACEIT

- 1. Set up inputs in a FY Independent Data Table
- 2. Use Matrix Functions to pull values out of the table and use them in the WBS

Data Table										
Name:	Mission Schedule	Unique ID:	Mission							
Type:	FY Independent	Ŧ								
Rows:	2	Columns:	3							
🗌 Is Cost										
	scription and fill in values in the co			bel the						
columns, check "Include header row" and enter headers on the "*" row.				Form - Methodology 🔻	Input Sh	eet - Methodology 🔻	Results -	- Phased Costs 🔻 Overrides - Phased 🔻 Charts - Esti	mate 🔻	
Save Cancel				Row	WBS/CES Description	ie ID	Point Estimate	Phasing Method	Equation / Throughput	Fiscal Year
Row	Description			268	Operational Life (years)	Life	10	С		10
	Description			269	 Total Fielding 		1760			
*		#Mission/yr	Avg Hrs/Mission	270	AF Fielded Quantities	AFFieldQty	1190	F	OPFIELDEDUNITS(@AFBuyQty, Life, Li	ig)
	ir Force	9	12	271	Army Fielded Quantitie	ArmyFieldQty	570	F	OPFIELDEDUNITS(@ArmyBuyQty, Life, Li	ig)
2 A	rmy	8	14	272						
				273	*Mission Schedule Inputs					
				274	Mission Hours/Year	TotMsnHrs	192360			
				275	Air Force	AFMsnHrs	128520	F	MATVAL(@Mission,1,1)*MATVAL(@Mission,1,2)*AFField	Qty

ArmvMsnHrs

63840

MATVAL(@Mission.2.1)*MATVAL(@Mission.2.2)*ArmvFieldQtv

Conclusion

- When transitioning a model from 7.5 to 8.0 be sure to:
 - Consult with all the session stake holders before transitioning the file to ACE 8.0
 - Review and prepare the session in 7.5 to ease the transition process, making some adjustments to the file in 7.5 can provide benefits in 8.0
 - Save a back up copy of the 7.5 file: ACE 8.0 sessions are not backwards compatible
 - Save a back up copy of the file in ACE 8.0 before making further changes to the session in 8.0
 - Familiarize yourself with new terminology and interface elements as you start working in 8.0
 - Familiarize yourself with new ACE 8.0 features to better understand new modeling approaches that can be applied in 8.0
 - Consider model enhancements to take advantage of ACE 8.0 capabilities and efficiencies

