

“Project Management Using Earned Value”
Case Study Solution 30.1

30.1

C A S E

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**Control
Account Plan
Exercise 2**

“Project Management Using Earned Value”, “Solution to Case Study 30.1

SOLUTIONS

Exercise # 1:

Thad has spent the first year immersed in Interface Processor design problems. He has spent very little time attending to his CAM responsibilities. Consequently, results reported for his control accounts have been ambiguous. Karen decides to sit down with Thad and review the actual performance of his control account status. The Control Account Plan (CAP) on the next page shows the solution to Exercise 1 and includes the updated status of milestones for this part of the CAP. Previously reported performance, if any, has been omitted to avoid confusion.

Exercise #2:

Review Thad’s control account and based on the status as shown on the next page Control Account Plan (CAP), enter the appropriate values for BCWP by month and by work task. After entering the monthly hours and dollars of BCWP for each work package, enter the total dollars and hours for BCWP for each month, through month-end June, at the bottom of the CAP. The solution for Exercise #2 is shown on the last page.

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CONTROL ACCOUNT PLAN				PROGRAM: Engineering Data Integration System	DATE: 7/15/Yr1	REV NO. Orig.	CONTROL ACCOUNT TITLE/NO.: 1040ADC PRE-SRR DOC MGMT SOFTWARE DEVELOPMENT								PAGE: 1 OF 1	
WBS REFERENCE: 1010201				YEAR 01				YEAR 02				TOTAL 12				
SCHEDULE REFERENCE: ADA LVL 1 001 R0				JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	MOS.
Element of Cost (EOC)				System Requirements Review				Integrated Baseline Review				Engineering Prototype Available				System Software Review
L-Labor S-SubKtr M-Mat'l O-ODC				MILESTONES:												
WORK TASK NO./EOC	WORK TASK DESCRIPTION	EV METHOD	CWA NO.	YEAR 01												TOTAL 12
				JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	MOS.
1	Management/administration of developing system software	1 LOE	A3G01	▲												
		BCWS-HRS			23	30	35	20	20	20	20	20	20	20	20	35
		BCWS-\$			\$1,650	\$2,153	\$2,511	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$2,511
		BCWP-HRS														
		BCWP-\$														
EOC: L																\$0
2	Requirements Definition & Analysis to support SRR	5 % Complete	A3G01	▲	31% WS 31% WP	43% WS 43% WP	26% WS 26% WP									
		BCWS-HRS			57	80	50									187
		BCWS-\$			\$4,090	\$5,740	\$3,588									\$13,418
		BCWP-HRS														0
		BCWP-\$														\$0
EOC: L																\$0
3	Support Risk Identification & Assessment	2 Milestone	A3G01	■ 1 ▲	■ 2 ■ 3	■ 4 ■ 5	■ 6	■ 7	■ 8	■ 9	■ 10	■ 11	■ 12	■ 13	■ 14	■ 15
		BCWS-HRS			20	40	40	10	10	10	10					140
		BCWS-\$			\$1,435	\$2,870	\$2,870	\$718	\$718	\$718	\$718					\$10,047
		BCWP-HRS														0
		BCWP-\$														\$0
EOC: L																\$0
4	Software Integration Testing & Software/Hardware Interface Testing	5 % Complete	A3G01									▲ 7% WS 5% WP	22% WS 15% WP	35% WS 20% WP	36% WS 20% WP	
		BCWS-HRS										50	160	250	260	720
		BCWS-\$										\$3,588	\$11,480	\$17,938	\$18,655	\$51,661
		BCWP-HRS														0
		BCWP-\$														\$0
EOC: L																\$0
5	Test Planning 150 Requirements (5 hrs per requirement)	6 Units	A3G01		Units WS Units WP	2 0	16 12	20 15	20 22	38 40	30 25	20 20	4 10	0 6		
		BCWS-HRS				10	80	100	100	190	150	100	20			750
		BCWS-\$				\$718	\$5,740	\$7,175	\$7,175	\$13,633	\$10,763	\$7,175	\$1,435			\$53,814
		BCWP-HRS														0
		BCWP-\$														\$0
EOC: L																\$0
6	Design, Code & Unit Test	5 % Complete	A3G01	▲	1% WS 1% WP	4% WS 2% WP	7% WS 5% WP	7% WS 6% WP	15% WS 10% WP	15% WS 14% WP	14% WS 14% WP	14% WS 14% WP	12% WS 10% WP	11% WS 10% WP		
		BCWS-HRS			59	173	336	336	709	709	664	664	600	550		4800
		BCWS-\$			\$4,233	\$12,413	\$24,108	\$24,108	\$50,871	\$50,871	\$47,642	\$47,642	\$43,050	\$39,463		\$344,401
		BCWP-HRS														0
		BCWP-\$														\$0
EOC: L																\$0
7	Software Input - Preliminary Documentation & Release	3 50/50	A3G01										▲	70	70	140
		BCWS-HRS												5,023	5,023	\$10,046
		BCWS-\$														0
		BCWP-HRS														\$0
		BCWP-\$														\$0
EOC: L																\$0
8	Interpret, analyze, & coordinate document management software design with System Engineering & other subsystems (10% of WP #6)	7 Apportioned	A3G01	▲		6	17	34	34	71	71	66	66	60	55	480
		BCWS-HRS				\$431	\$1,220	\$2,440	\$2,440	\$5,094	\$5,094	\$4,736	\$4,736	\$4,305	\$3,946	\$34,442
		BCWS-\$														0
		BCWP-HRS														\$0
		BCWP-\$														\$0
EOC: L																\$0
9	Purchase of compilers, research materials, DNA specialists, etc. supporting design	5 % Complete	A3G01					▲ 12% WS 12% WP	24% WS 24% WP	24% WS 24% WP	24% WS 24% WP	16% WS 16% WP				
		BCWS-HRS						\$2,500	\$5,000	\$5,000	\$5,000	\$3,000				\$20,500
		BCWS-\$														0
		BCWP-HRS														\$0
		BCWP-\$														\$0
EOC: M																\$0
PAGE TOTALS	MONTHLY BCWS	HOURS		100	150	200	300	500	500	1000	950	900	1000	1000	900	7500
		DOLLARS		\$7,175	\$10,763	\$14,351	\$21,526	\$38,376	\$40,876	\$76,751	\$73,163	\$67,676	\$71,751	\$71,751	\$64,675	\$558,634
	CUM BCWS	HOURS		100	250	450	750	1250	1750	2750	3700	4600	5600	6600	7500	
		DOLLARS		\$7,175	\$17,938	\$32,289	\$53,815	\$92,191	\$133,067	\$209,818	\$282,981	\$350,557	\$422,308	\$494,059	\$558,634	
	MONTHLY BCWP	HOURS														
		DOLLARS														
MONTHLY ACWP	HOURS															
	DOLLARS															

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CONTROL ACCOUNT PLAN				PROGRAM: Engineering Data Integration System		DATE: 7/15/Yr1	REV NO. Orig.	CONTROL ACCOUNT TITLE/NO.: 1040ADC PRE-SRR DOC MGMT SOFTWARE DEVELOPMENT								PAGE: 1 OF 1							
WBS REFERENCE: 1010201 SCHEDULE REFERENCE: ADA LVL 1 001 R0				YEAR 01				YEAR 02				TOTAL 12 MOS.											
Element of Cost (EOC)		REFERENCE MILESTONES:		System Requirements Review				Integrated Baseline Review				Preliminary Design Review				Engineering Prototype Available				System Software Review			
WORK TASK NO./EOC	WORK TASK DESCRIPTION	EV METHOD	CWA NO.	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL 12 MOS.							
1	Management/administration of developing system software	1 LOE	A3G01	▲																			
EOC: L		BCWS-HRS			23	30	35	20	20	20	20	20	20	20	20	35							
		BCWS-\$			\$1,650	\$2,153	\$2,511	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$2,511							
		BCWP-HRS			23	30	35	20	20	20	20	20	20	20	20	35							
		BCWP-\$			\$1,650	\$2,153	\$2,511	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$2,511							
		BCWP-\$			\$1,650	\$2,153	\$2,511	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$1,435	\$2,511							
2	Requirements Definition & Analysis to support SRR	5 % Complete	A3G01	▲	31% WS 31% WP	43% WS 43% WP	26% WS 26% WP																
EOC: L		BCWS-HRS			57	80	50									187							
		BCWS-\$			\$4,090	\$5,740	\$3,588									\$13,418							
		BCWP-HRS			57	80	50									187							
		BCWP-\$			\$4,090	\$5,740	\$3,588									\$13,418							
3	Support Risk Identification & Assessment	2 Milestone	A3G01	■	1 ▲	2 ■	3 ■	4 ■	5 ■	6 ■	7 ■	8 ■	9 ■										
EOC: L		BCWS-HRS			20	40	40	10	10	10	10	10	10	10	10	140							
		BCWS-\$			\$1,435	\$2,870	\$2,870	\$718	\$718	\$718	\$718	\$718	\$718	\$718	\$718	\$10,047							
		BCWP-HRS			20	40	40	10	10	10	10	10	10	10	10	140							
		BCWP-\$			\$1,435	\$2,870	\$2,870	\$718	\$718	\$718	\$718	\$718	\$718	\$718	\$718	\$10,047							
4	Software Integration Testing & Software/Hardware Interface Testing	5 % Complete	A3G01									▲	7% WS 5% WP	22% WS 15% WP	35% WS 20% WP	36% WS 20% WP							
EOC: L		BCWS-HRS											50	160	250	260							
		BCWS-\$											\$3,588	\$11,480	\$17,938	\$18,655							
		BCWP-HRS											36	108	144	144							
		BCWP-\$											\$2,583	\$7,749	\$10,332	\$10,332							
5	Test Planning 150 Requirements (5 hrs per requirement)	6 Units	A3G01			▲	2 .	16	20	20	38	30	20	4	0								
EOC: L		BCWS-HRS					10	80	100	100	190	150	100	20	0	750							
		BCWS-\$					\$718	\$5,740	\$7,175	\$7,175	\$13,633	\$10,763	\$7,175	\$1,435	0	\$53,814							
		BCWP-HRS					0	60	75	110	200	125	100	50	30	750							
		BCWP-\$					\$0	\$4,305	\$5,381	\$7,893	\$14,350	\$8,969	\$7,175	\$3,588	\$2,153	\$53,814							
6	Design, Code & Unit Test	5 % Complete	A3G01	▲	1% WS 1% WP	4% WS 2% WP	7% WS 5% WP	7% WS 6% WP	15% WS 10% WP	15% WS 14% WP	14% WS 14% WP	14% WS 14% WP	12% WS 10% WP	11% WS 10% WP									
EOC: L		BCWS-HRS			59	173	336	336	709	709	664	664	600	550	4800								
		BCWS-\$			\$4,233	\$12,413	\$24,108	\$24,108	\$50,871	\$50,871	\$47,642	\$47,642	\$43,050	\$39,463	\$344,401								
		BCWP-HRS			59	86	240	240	480	480	664	664	480	480	4105								
		BCWP-\$			\$4,233	\$6,171	\$17,220	\$20,664	\$34,440	\$47,642	\$47,642	\$47,642	\$34,440	\$34,440	\$294,534								
7	Software Input - Preliminary Documentation & Release	3 50/50	A3G01																				
EOC: L		BCWS-HRS											70	70	140								
		BCWS-\$											\$5,023	\$5,023	\$10,046								
		BCWP-HRS											70	0	70								
		BCWP-\$											\$5,023	\$0	\$5,023								
8	Interpret, analyze, & coordinate document management software design with System Engineering & other subsystems (10% of WP #6)	7 Apportioned	A3G01	▲																			
EOC: L		BCWS-HRS			6	17	34	34	71	71	66	66	60	55	480								
		BCWS-\$			\$431	\$1,220	\$2,440	\$2,440	\$5,094	\$5,094	\$4,736	\$4,736	\$4,305	\$3,946	\$34,442								
		BCWP-HRS			6	9	24	29	48	66	66	66	48	48	410								
		BCWP-\$			\$431	\$646	\$1,722	\$2,066	\$3,444	\$4,736	\$4,736	\$4,736	\$3,444	\$3,444	\$29,405								
9	Purchase of compilers, research materials, DNA specialists, etc. supporting design	5 % Complete	A3G01					▲	12% WS 12% WP	24% WS 24% WP	24% WS 24% WP	24% WS 24% WP	16% WS 16% WP										
EOC: M		BCWS-HRS							\$2,500	\$5,000	\$5,000	\$5,000	\$3,000		0								
		BCWS-\$							\$2,500	\$5,000	\$5,000	\$5,000	\$3,000		\$20,500								
		BCWP-HRS													0								
		BCWP-\$													\$0								
PAGE TOTALS	MONTHLY BCWS	HOURS		100	150	200	300	500	500	1000	950	900	1000	1000	900	7500							
		DOLLARS		\$7,175	\$10,763	\$14,351	\$21,526	\$38,376	\$40,876	\$76,751	\$73,163	\$67,676	\$71,751	\$71,751	\$64,575	\$558,634							
	CUM BCWS	HOURS		100	250	450	750	1250	1750	2750	3700	4600	5600	6600	7500								
		DOLLARS		\$7,175	\$17,938	\$32,289	\$53,815	\$92,191	\$133,067	\$209,818	\$282,981	\$350,557	\$422,308	\$494,059	\$558,634								
	MONTHLY BCWP	HOURS		100	150	190	185	389	457	748	885	886	878	722	777	6447							
		DOLLARS		\$7,175	\$10,763	\$13,633	\$13,275	\$28,876	\$37,776	\$58,669	\$68,500	\$66,671	\$70,173	\$51,804	\$55,750	\$483,065							
CUM BCWP	HOURS		100	250	440	625	994	1451	2199	3084	3970	4848	5670	6447									
	DOLLARS		\$7,175	\$17,938	\$31,571	\$44,846	\$73,822	\$111,598	\$170,267	\$238,767	\$305,338	\$375,511	\$427,315	\$483,065									
	MONTHLY ACWP	HOURS													0								
		DOLLARS													\$0								