Monitoring and Controlling Process Group Artifacts

7.4 Control Cost

7.4.2 Earned Value Management (Tools and Techniques)

PMGT 690, ERAU, Prof. Sherman

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7.4.2 Earned Value Management (Tools and Techniques): This artifact was taken from a homework assignment from PMGT 501. These set of problems shows earned value, actual value and the different variances affiliated with the cost and schedule. These problems show at certain % of completion the earned value of the project. These variables can tell project managers if the project is under/over budget at certain time frames of the project. This is something that needs to be monitored closely. This is a valuable tool in controlling costs.

4.

Per 2	% Complete	EV	AC	PV	CV	SV
A	75%	30	25	20	5	10
B	50%	16	12	12	4	4
Cumulative		46	37	32	9	14

EV=(% complete) x (original amount for that period)
CV=EV-AC; SV=EV-PV

Per 4	%Complete	EV	AC	PV	CV	SV
A	100%	40	35	40	5	0
B	100%	32	24	24	8	8
Cumulative		72	59	64	13	8

Per 6	%Complete	EV	AC	PV	CV	SV
A	100%	40	35	40	5	0
B	100%	32	24	32	8	0
C	75%	36	24	24	12	12
D	0%	0	0	6	0	-6
E	50%	14	10	8	4	6

Cumulative		122	93	110	29	12

Per 8	%Complete	EV	AC	PV	CV	SV
A	100%	40	35	40	5	0
B	100%	32	24	32	8	0
C	100%	48	32	48	16	0
D	33%	6	20	10	-14	-4
E	100%	28	20	28	8	0
Cumulative		154	131	158	23	-4

Period	EV	AC	PV	SPI	CPI	PCI-B(EV/BAC=206)
2	46	37	32	1.44	1.24	22%
4	72	59	64	1.13	1.22	35%
6	122	93	110	1.11	1.31	59%
8	154	131	158	.97	1.18	75%

EAC= $\frac{\text{BAC-EV}}{\text{(EV/AC)}}$ + AC = $\frac{206 - 154}{154/131}$ + 131 = 175

VAC= BAC – EAC = 206-175= 31 under budget

6.

After filling out the network from the schedule of information, we know the critical path to be 1-4-6-7.

Per 1	%Complete	EV	AC	PV	CV	SV
1	**50%**	**1000**	**500**	**1000**	**500**	**-500**
Per 2						
1	**100%**	**2000**	**1500**	**2000**	**500**	**-500**
Per 3						
1	100%	2000	1500	2000	0	-500
2	0%	0	0	1000	0	-1000

3	10%	300	200	500	100	-300
4	20%	500	500	1000	0	-500
Cumulative		**2800**	**2200**	**4500**	**100**	**-2300**

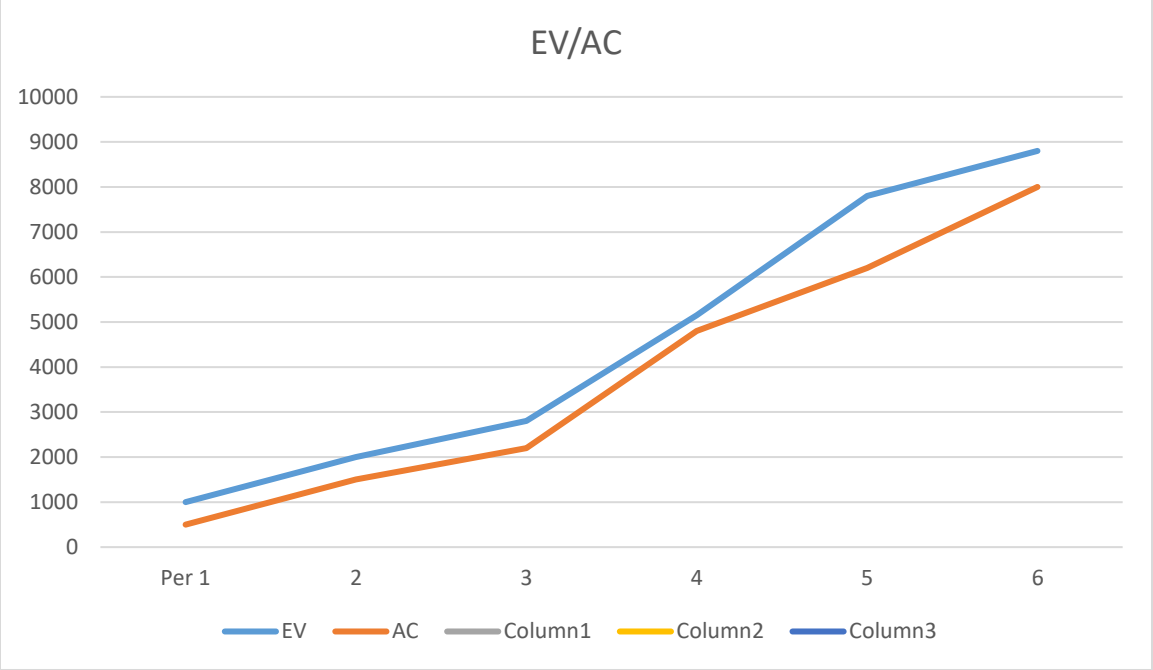
Per 4	%Complete	EV	AC	PV	CV	SV
1	100%	2000	1500	2000	500	-500
2	50%	1250	1000	2400	250	-1400
3	30%	900	800	1000	100	-200
4	40%	1000	1500	2000	-500	-500
Cumulative		**5150**	**4800**	**7400**	**350**	**-2600**

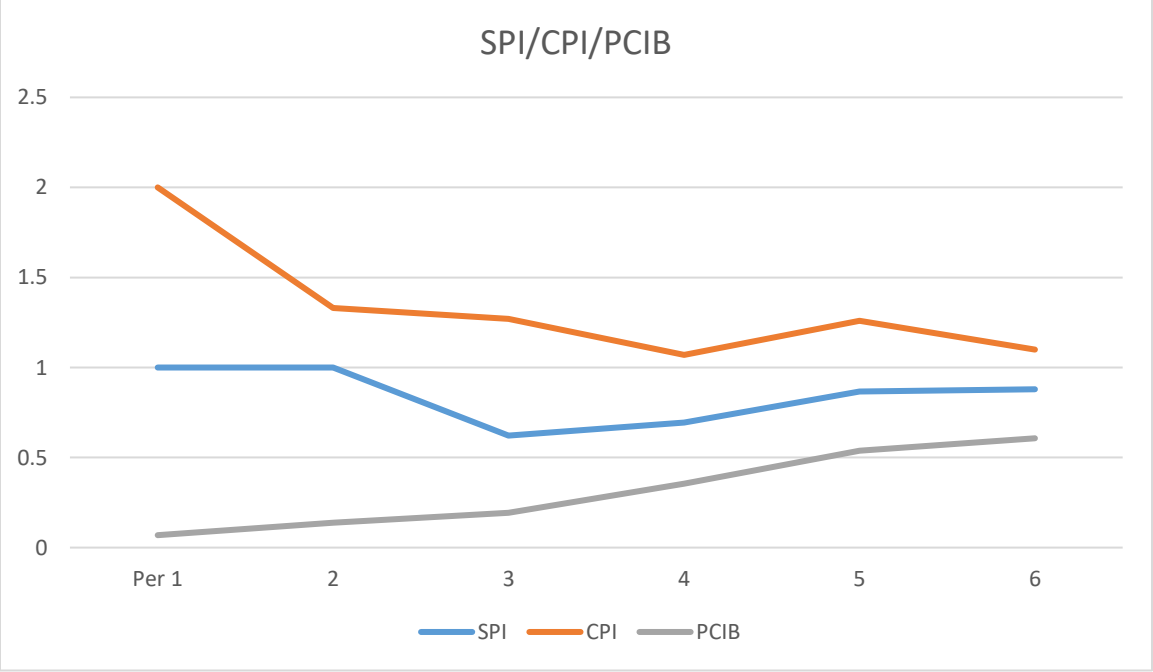
Per 5						
1	100%	2000	1500	2000	500	-500
2	100%	2400	2000	2400	400	-400
3	50%	1500	800	2000	700	-200
4	60%	1500	1500	2200	0	-700
5	25%	400	400	400	0	0
Cumulative		**7800**	**6200**	**9000**	**1600**	**-1800**

Per 6						
1	100%	2000	1500	2000	500	-500
2	100%	2400	2000	2400	400	-400
3	80%	2400	2100	2300	300	-200
4	80%	2000	1800	2400	200	-600
5	50%	800	600	800	200	-200
Cumulative		**8800**	**8000**	**9900**	**1600**	**-1900**

Per	**EV**	**AC**	**PV**	**SPI**	**CPI**	**PCI-B**
1	**1000**	**500**	**1000**	**1.0**	**2.0**	**6.9%**

2	**2000**	**1500**	**2000**	**1.0**	**1.33**	**13.8%**
3	**2800**	**2200**	**4500**	**.622**	**1.27**	**19.3%**
4	**5150**	**4800**	**7400**	**.695**	**1.07**	**35.5%**
5	**7800**	**6200**	**9000**	**.866**	**1.26**	**53.8%**
6	**8800**	**8000**	**9900**	**.888**	**1.1**	**60.7%**





**PCI-B was not to scale, but the graph shows the trend. Considering that this project is supposed to be completed after week 13 after completing the network. After week 6, we show that our CPI is 1.1 and the VAC translates that we are $1318 under budget. Also, after week 6 we are 61% complete with the project. This project appears to be on track and under budget.