

SuperCDMS at SNOLAB Project Office BASIS of ESTIMATE FORM (BoE)		Document Number:	
		Date of Estimate: 21-Aug-15	
		Prepared by: Scott Oser	
UID Number:	WBS Section: 2.6		
Task Name: DAQ Software (pre-CD1 work)			
Cost Type:	Costing Method:	<input type="checkbox"/> Prior purchase or experience Source: _____	<input type="checkbox"/> Catalog Price Source: _____
<input checked="" type="checkbox"/> M&S <input checked="" type="checkbox"/> Labor	<input checked="" type="checkbox"/> Engineering Estimate <input type="checkbox"/> Vendor Quote (attached)	<input type="checkbox"/> Other- Description: _____	
Attach Relevant Documents (including but not limited to): RFP, Responses to RFP, Technical Evaluation of RFP, Vendor Quotes, Technical Specifications, drawing numbers			
Task Duration: (calendar weeks, 85% achievable): weeks (this applies only for BoE's written at lowest task level)			
Task M&S Cost (FY14\$): \$2K See cost table below Task M&S Contingency (%): 15 %		Task Labor (resource type & work hours or % for duration of task, 85% efficiency assumed): 410 hours See labor table below Task Labor Contingency (%): 45 %	

Change Log

Date	Description
2015/08/21	Initial version based on June 8, 2015 version of WBS 1.6.2 BoE

Details of Estimate: A summary of the costs at level 4 is included in the table below. Tasks are separated by M&S and labor. Labor is estimated in hours.

This BoE includes DAQ/trigger work planned for completion prior to January 7, 2016. The particular tasks are all transferred here from WBS 1.6.2, and chiefly concern producing an initial device driver and tower front-end for use with DCRC Rev D boards.

The effort required is estimated based upon the time required to develop the prototype DCRC device driver and front-end.

Travel is included for one two-week trip from Texas A&M to FNAL to collaborate on the DCRC register. Travel costs are based on the cost of past trips, and include \$400 plane fare, \$50/day per diem, \$100/day hotel (Berkeley only), and \$60/day rental car costs (FNAL only).

W.B.S	Item	Cost(\$K)	Contingency	
			Fraction	Cost(\$K)
2.6.2.1	Travel to FNAL to consult on DCRC register map	\$2.0	0.15	0.30
	Total	\$2.0	0.15	\$0.3

W.B.S	Item	Labor type			
		DAQ engineer	Postdoc/student	Programmer	Software developer
2.6.2.1	MIDAS DCRC driver (pre-CD1 work)				
2.6.2.1.1	Specify design criteria		42		
2.6.2.1.2	Define DCRC register map		24		
2.6.2.1.3	DCRC RevD firmware and register map complete				
2.6.2.1.4	Define ODB structure		24		
2.6.2.1.5	Review of architecture by TRIUMF experts	12	12		
2.6.2.1.6	Port code to DCRC RevD		48		
2.6.2.1.7	Add failsafe and locking functionality		96		
2.6.2.1.8	DCRC RevD delivered to UBC				
2.6.2.1.9	Test without detectors at UBC		24		
2.6.2.1.10	Bug fixes after testing without detectors		64		
2.6.2.2	MIDAS tower front-end (pre-CD1)				
2.6.2.2.1	Port for RevD boards		64		
	Total	12	398	0	0

