NCSX Work Approval Form (WAF)

WBS Number: 53 WBS Title: Data Acquistion & Facility Computing Systems Job Number: 5301 **Job Title: Data Acquistion & Facility Computing Systems** Job Manager: Paul Sichta Description: The Diagnostic Data Acquisition System will provide a data management software structure to catalog and manage experimental results for subsequent retrieval and analysis. The design will use the existing MIT developed MDSplus software for data acquisition, data archiving and display. Individual diagnostic local control and data acquisition hardware will be designed with standard PC architecture or in Compact PCI chassis. Schedule: See Attached Approvals: Job Manager Date Responsible Line Manager Date **Project Manager** Date **Engineering Department Head** Date

NCSX June 2007 ETC TABLE I - DESIGN LABOR

WBS N	lumber: 53												
	itle: Data Acquistion & Fa	acility C	omput	ina Sv	etame						-	-	
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JOD NU	ımber: 5301												
Job Tit	le: Data Acquistion & Fad Inager: Paul Sichta	cility Co	mputir	າg Sys	tems								
Job Ma	nager: Paul Sichta												
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Description	on:												
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Activity ID	Activity Description	11MS	13M	18MS	878	35T	Ö	ECTB	EMTB	EASB		EETB	Basis of Estimate
Activity is	Houvily Docomption	7	4	4	(*)	(1)	ш	В	ш		ш	ш	Busic of Estimate
													Originally manhours estimate based on NSTX experience.
													However, this estimate has been updated to reflect experience
													of experieince on other similar networking installation projects.
	Preliminary Design						40						
	Final Design						80						
	Procurement	\$17.0K	\$3.0K		\$2.0K		20						
	Installation							40					
	MDSplus Installation						80						
	MDSplus Programming - Tree Design MDSplus Programming - Shot Sync	+					80 80						
	MDSplus Programming - Shot Sync MDSplus Programming - Dispatcher						160						
	MDSplus Programming - Dispatcher MDSplus Programming - Acquisition				+		80						
	Programming - Misc.	+			+		160						
53-120	Test						40	40					
00 .20								.0					
	Subtotal Job 5301	\$17K	\$3K	\$0K	\$2K	\$0K	820	80	0	0	0	0	
	M&S Details:	K\$					of M&S Es						
	Linux MDSplus Server							ther lab infra					
	SAN - disk space (500 GB)							ther lab infra			ļ	ļ	
	misc. PC appl. TBD							ther lab infra				ļ	
	Total M&S	\$10.0K E \$22.0K	sased on re	ecent purc	mased of pa	arts for No	or y and o	ther lab infra	astructure	projects		<u> </u>	
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NCSX June 2007 ETC TABLE II - Materials and Subcontracts

WBS Number: 53					
WBS Title: Data Acquistion & Facilit	y Computing Systems				
Job Number: 5301					
Job Title: Data Acquistion & Facility	Computing Systems				
Job Manager: Paul Sichta					
Materials and Subcontracts (M&S)			Bas	is of Estimate	
Materials and Subcontracts (M&S) Description:			Bas	is of Estimate	
			Bas	is of Estimate	
Description:			Bas	is of Estimate	
Description:			Bas	is of Estimate	
Description:			Bas	is of Estimate	

NCSX June 2007 ETC TABLE III - Fabrication/Assembly Installation

14/5-0-11						
WBS Number: 53						
WBS Title: Data Acquistion & Facility Co	mput	ing Sy	ystems			
Job Number: 5301						
Job Title: Data Acquistion & Facility Cor	nputir	na Sv	stems			
Job Manager: Paul Sichta	- p	.g - , .				
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In-house Fabrication and Assembly and Insta	llation					
See Table I						
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NCSX June 2007 ETC TABLE IV - Uncertainty of Estimate and Residual Risk Assessment

WR:	S Number: 53											
	S Title: Data Acquistion & Facility	Compu	tina Sva	stoms								
		Compu	ung Sys	SICIIIS								
	Number: 5301											
	Title: Data Acquistion & Facility C	omputi	ng Syst	ems								
Job	Manager: Paul Sichta											
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Unce	rtainty of the Estimate			Uncertainty								
	High	Medium	Low	Uncertainty Range (%)				Ca	mments/O	thar Cana	idorotiono	
		X	Low	Kange (70)	Although	PDR, some more design	naadad ta		mments/O	ther Cons	iderations	
	Design Maturity	^		-10%/+15%	Aithough	רטה, some more design	needed to	manze.				
	Design Complexity		Х	-10/0/+13/0	Duplication	on of NSTX architecture						
	200.g.: 00pioty				_ aprioatio							
Note:	High/Medium/Low uncertainty assessment from Job M	anager. Un	certainty ran	ige based on A	ACEI recor	nmended practice 18R-97	as amend	ed for NC	SX.			
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D ! - ! - ! -	••											
Residi	ual Impacts											
Residi	Jai Impacts								Cost I	mpact	Schedule	Impact
				Likelihood of	Misi	otion Plan						
Job	Risk Description			Likelihood of Occurring	Mitig	ation Plan Ba	sis of estin	nate	Cost I	mpact High	Schedule	Impact High
Job	Risk Description				Mitig	ation Plan Ba	sis of estin	nate				
	Risk Description				Mitig	ation Plan Ba	sis of estin	nate				
Job	Risk Description				Mitig	ation Plan Ba	sis of estin	nate				
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Job	Risk Description				Mitig	ation Plan Ba	sis of estin	nate				
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Job NONE Notes:	Risk Description Low cost and schedule impacts are considered the millingh cost and schedule impacts	aximum (10	0-percentile	Occurring pacts should to impacts should to impact should to imp	he event o	ccur.	sis of estin	nate				
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