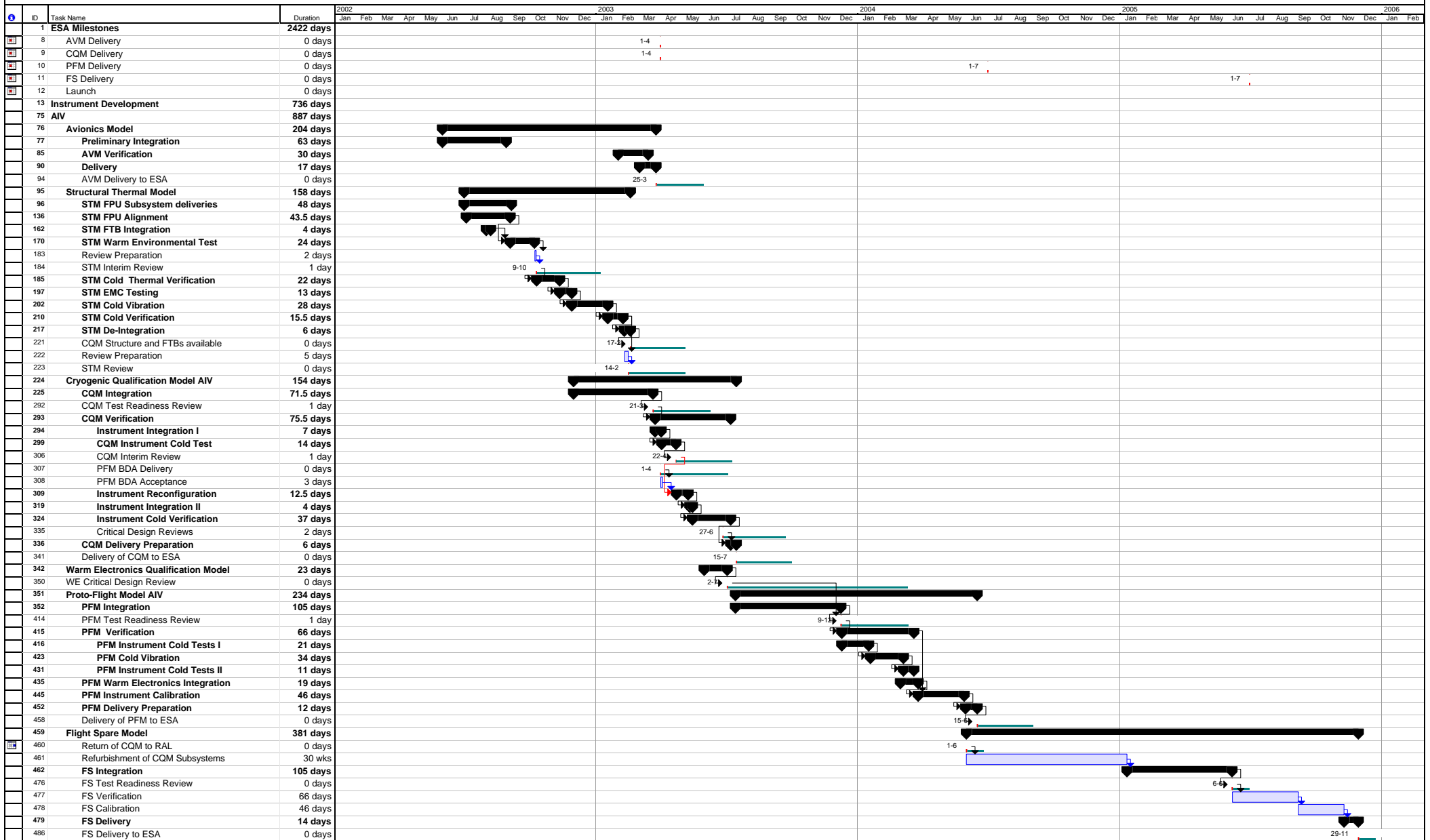


# SPIRE AIV Overview



# SPIRE AVM Overview

ID	Task Name	Duration	2002												2003												2004	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
76	<b>Avionics Model</b>	<b>204 days</b>																										
77	<b>Preliminary Integration</b>	<b>63 days</b>																										
78	AVM DPU Delivery to RAL	0 days																										
79	AVM DPU Acceptance	3 days																										
80	DRCU Simulator#2 Delivery to RAL	0 days																										
81	DRCU Simulator#2 Acceptance	3 days																										
82	EGSE#2 Available	0 days																										
83	DPU Verification	12 wks																										
84	AVM DPU Available for CQM Testing	0 days																										
85	<b>AVM Verification</b>	<b>30 days</b>																										
86	AVM DPU Available for Delivery	0 days																										
87	EGSE#4 Available for Delivery	0 wks																										
88	DRCU Simulator#3 Delivery to RAL	0 days																										
89	AVM Verification	2 wks																										
90	<b>Delivery</b>	<b>17 days</b>																										
91	Preparation of Delivery Data Package	2 wks																										
92	AVM Readiness Review	2 days																										
93	Pack and Ship to ESA	1 wk																										
94	AVM Delivery to ESA	0 days																										

## SPIRE STM Overview

ID	Task Name	Duration	2002												2003												2004	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
95	<b>Structural Thermal Model</b>	<b>158 days</b>																										
96	<b>STM FPU Subsystem deliveries</b>	<b>48 days</b>																										
136	<b>STM FPU Alignment</b>	<b>43.5 days</b>																										
137	3-D Metrology	11 days																										
145	Alignment during Integration	20 days																										
154	Cold Alignment Verification	12.5 days																										
162	<b>STM FTB Integration</b>	<b>4 days</b>																										
170	<b>STM Warm Environmental Test</b>	<b>24 days</b>																										
171	Preparation of STM	14 days																										
179	STM Warm Vibration	10 days																										
183	Review Preparation	2 days																										
184	STM Interim Review	1 day																										
185	<b>STM Cold Thermal Verification</b>	<b>22 days</b>																										
186	Remove Instrument Covers and Place in MGSE	2 days																										
187	Remove STM Cooler and Integrate CQM Cooler	2 days																										
188	Refit Covers and mount on FOB Simulator	2 days																										
189	Prepare and Transport to Cryolab	0.5 days																										
190	Integrate into Cryostat and Thermometry	3 days																										
191	Cold Thermal Test Readiness Review	1 day																										
192	Pump Down	1 day																										
193	Cooldown	2 days																										
194	Thermal Verification Tests	5 days																										
195	Warm up and let up to ambient pressure	3 days																										
196	De-integrate Instrument from Cryostat and return to Integrate	1.5 days																										
197	<b>STM EMC Testing</b>	<b>13 days</b>																										
198	Instrument Preparation for EMC Tests	3 days																										
199	Instrument Placed in Transport Container and packing	3 days																										
200	Transport to facility	2 days																										
201	EMC Testing	5 days																										
202	<b>STM Cold Vibration</b>	<b>28 days</b>																										
203	Cold Vibration Test Readiness Review	1 day																										
204	Instrument preparation for Vibration	3 days																										
205	Instrument Placed in Transport Container(s) and packing	3 days																										
206	Transport to facility	2 days																										
207	Cold Vibration Campaign	15 days																										
208	Instrument Placed in Transport Container and packing	3 days																										
209	Transport to RAL	2 days																										
210	<b>STM Cold Verification</b>	<b>15.5 days</b>																										
211	Integrate into Cryostat and Thermometry	3 days																										
212	Pump Down	1 day																										
213	Cooldown	2 days																										
214	Thermal verification and Cold Alignment Tests	5 days																										
215	Warm up and let up to ambient pressure	3 days																										
216	De-integrate Instrument from Cryostat and return to Integrate	1.5 days																										
217	<b>STM De-Integration</b>	<b>6 days</b>																										
221	CQM Structure and FTBs available	0 days																										
222	Review Preparation	5 days																										
223	STM Review	0 days																										

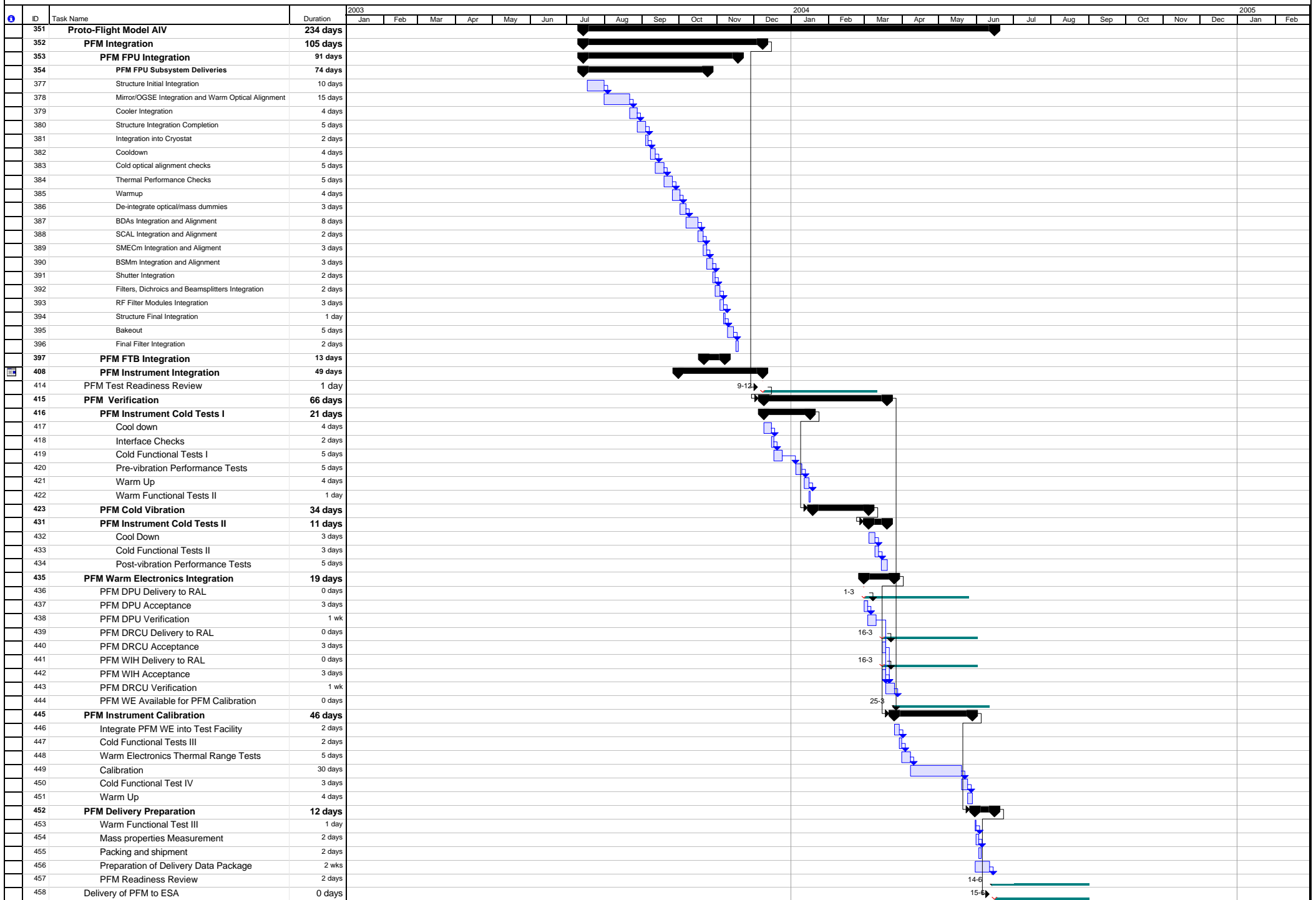
# SPIRE CQM Overview

ID	Task Name	Duration	2002												2003												2004	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
			Gantt Chart																									
224	<b>Cryogenic Qualification Model AIV</b>	<b>154 days</b>	[Gantt bar from Dec 2002 to Jul 2003]																									
225	<b>CQM Integration</b>	<b>71.5 days</b>	[Gantt bar from Dec 2002 to Feb 2003]																									
226	CQM FPU Subsystem Deliveries	3 days	[Gantt bar in Dec 2002]																									
241	CQM FPU Integration	21.5 days	[Gantt bar from Dec 2002 to Jan 2003]																									
242	Photometer Detector Box Integration	4 days	[Gantt bar in Jan 2003]																									
247	Spectrometer Detector Box Integration	3 days	[Gantt bar in Jan 2003]																									
251	Detector Box Integration with Structure	4.5 days	[Gantt bar in Jan 2003]																									
258	Subsystem Integration	10 days	[Gantt bar in Jan 2003]																									
266	CQM FTB Subsystem Deliveries	3 days	[Gantt bar in Feb 2003]																									
271	CQM FTB Integration	8 days	[Gantt bar in Feb 2003]																									
275	FPU/FTB Integration with FOB Simulator	2 days	[Gantt bar in Feb 2003]																									
278	CQM Warm electronics Deliveries	3 days	[Gantt bar in Dec 2002]																									
285	<b>CQM Warm Electronics Integration</b>	<b>54 days</b>	[Gantt bar from Dec 2002 to Feb 2003]																									
286	Warm Electronics Integration Test	4 wks	[Gantt bar in Dec 2002]																									
287	EGSE#3 Available	0 days	[Gantt bar in Dec 2002]																									
288	QM DPU Delivery to RAL	0 days	[Gantt bar in Dec 2002]																									
289	QM DPU Acceptance	2 wks	[Gantt bar in Dec 2002]																									
290	Test Facility Integration	2 wks	[Gantt bar in Dec 2002]																									
291	AVM DPU Release for Delivery	0 days	[Gantt bar in Dec 2002]																									
292	CQM Test Readiness Review	1 day	[Gantt bar in Dec 2002]																									
293	<b>CQM Verification</b>	<b>75.5 days</b>	[Gantt bar from Dec 2002 to Feb 2003]																									
294	<b>Instrument Integration I</b>	<b>7 days</b>	[Gantt bar in Dec 2002]																									
299	<b>CQM Instrument Cold Test</b>	<b>14 days</b>	[Gantt bar in Dec 2002]																									
300	Pumpdown	1 day	[Gantt bar in Dec 2002]																									
301	Cooldown	2 days	[Gantt bar in Dec 2002]																									
302	Cold Functional Test I	1 day	[Gantt bar in Dec 2002]																									
303	Thermal Performance Verification	3 days	[Gantt bar in Dec 2002]																									
304	Cold Functional Test II	2 days	[Gantt bar in Dec 2002]																									
305	FIR Alignment Verification	5 days	[Gantt bar in Dec 2002]																									
306	CQM Interim Review	1 day	[Gantt bar in Dec 2002]																									
307	PFM BDA Delivery	0 days	[Gantt bar in Dec 2002]																									
308	PFM BDA Acceptance	3 days	[Gantt bar in Dec 2002]																									
309	<b>Instrument Reconfiguration</b>	<b>12.5 days</b>	[Gantt bar in Dec 2002]																									
319	<b>Instrument Integration II</b>	<b>4 days</b>	[Gantt bar in Dec 2002]																									
324	<b>Instrument Cold Verification</b>	<b>37 days</b>	[Gantt bar from Dec 2002 to Feb 2003]																									
325	Pumpdown	1 day	[Gantt bar in Dec 2002]																									
326	Cooldown	2 days	[Gantt bar in Dec 2002]																									
327	Cold Functional Test III	2 days	[Gantt bar in Dec 2002]																									
328	Subsystem Performance Verification	5 days	[Gantt bar in Dec 2002]																									
329	Instrument Performance Verification	10 days	[Gantt bar in Dec 2002]																									
330	Instrument Observing Mode Verification	10 days	[Gantt bar in Dec 2002]																									
331	Cold Functional Test IV	2 days	[Gantt bar in Dec 2002]																									
332	Warmup	3 days	[Gantt bar in Dec 2002]																									
333	FPU/FTB De-integration from Cryostat	1.5 days	[Gantt bar in Dec 2002]																									
334	FPU/FTB Preparation and transport to AIV facility	0.5 days	[Gantt bar in Dec 2002]																									
335	Critical Design Reviews	2 days	[Gantt bar in Dec 2002]																									
336	<b>CQM Delivery Preparation</b>	<b>6 days</b>	[Gantt bar in Dec 2002]																									
341	Delivery of CQM to ESA	0 days	[Gantt bar in Dec 2002]																									

# SPIRE EQM Overview

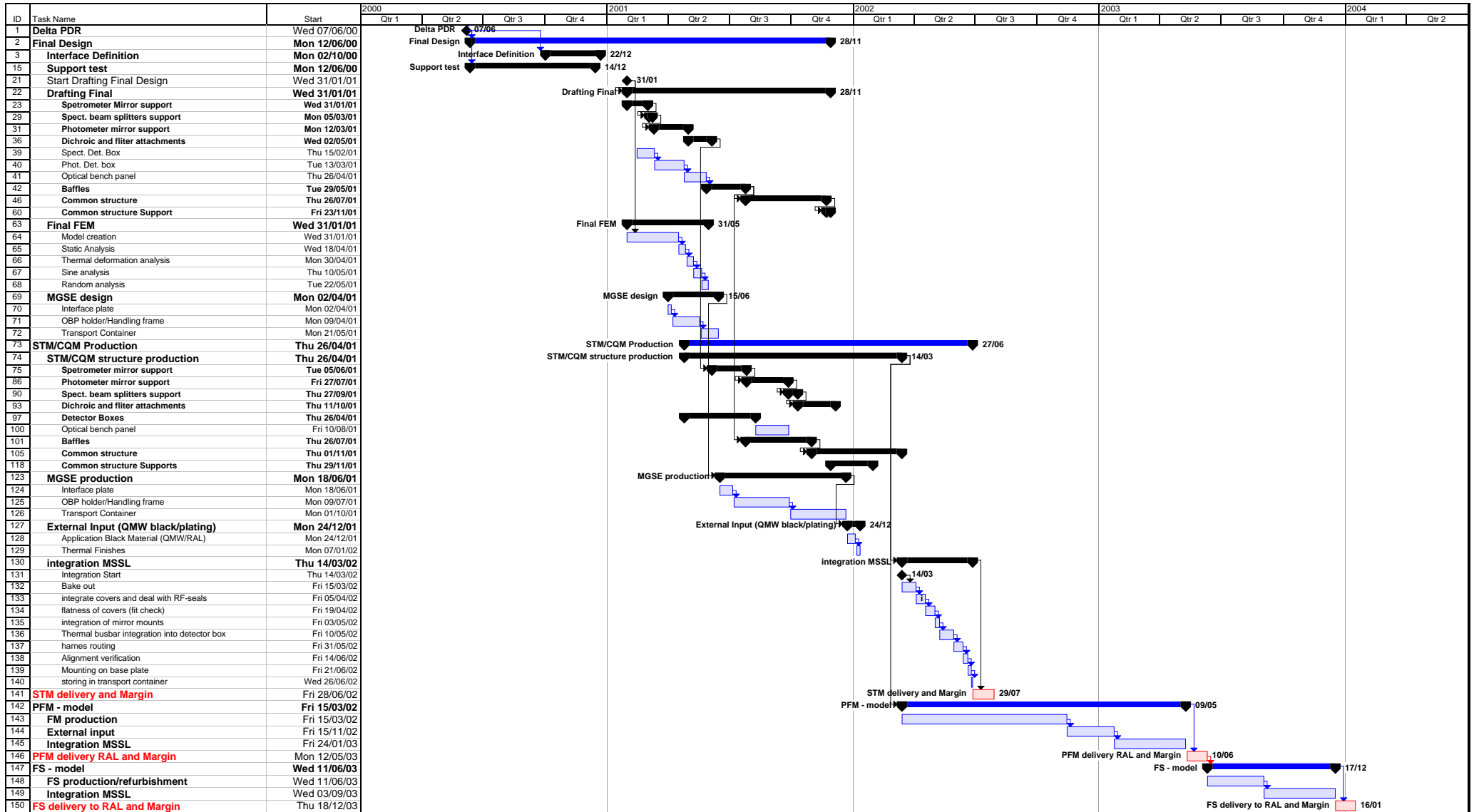
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				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
				342	<b>Warm Electronics Qualification Model</b>	<b>23 days</b>																							
343	QM2 DRCU Delivery to RAL	0 days																											
344	QM2 DRCU Acceptance	3 days																											
345	QM2 WIH Delivery to RAL	0 days																											
346	QM2 WIH Acceptance	3 days																											
347	FPU Simulator#2 Delivery to RAL	0 days																											
348	FPU Simulator#2 Acceptance	3 days																											
349	QM Warm Electronics Integration Test	4 wks																											
350	WE Critical Design Review	0 days																											

# SPIRE PFM Overview



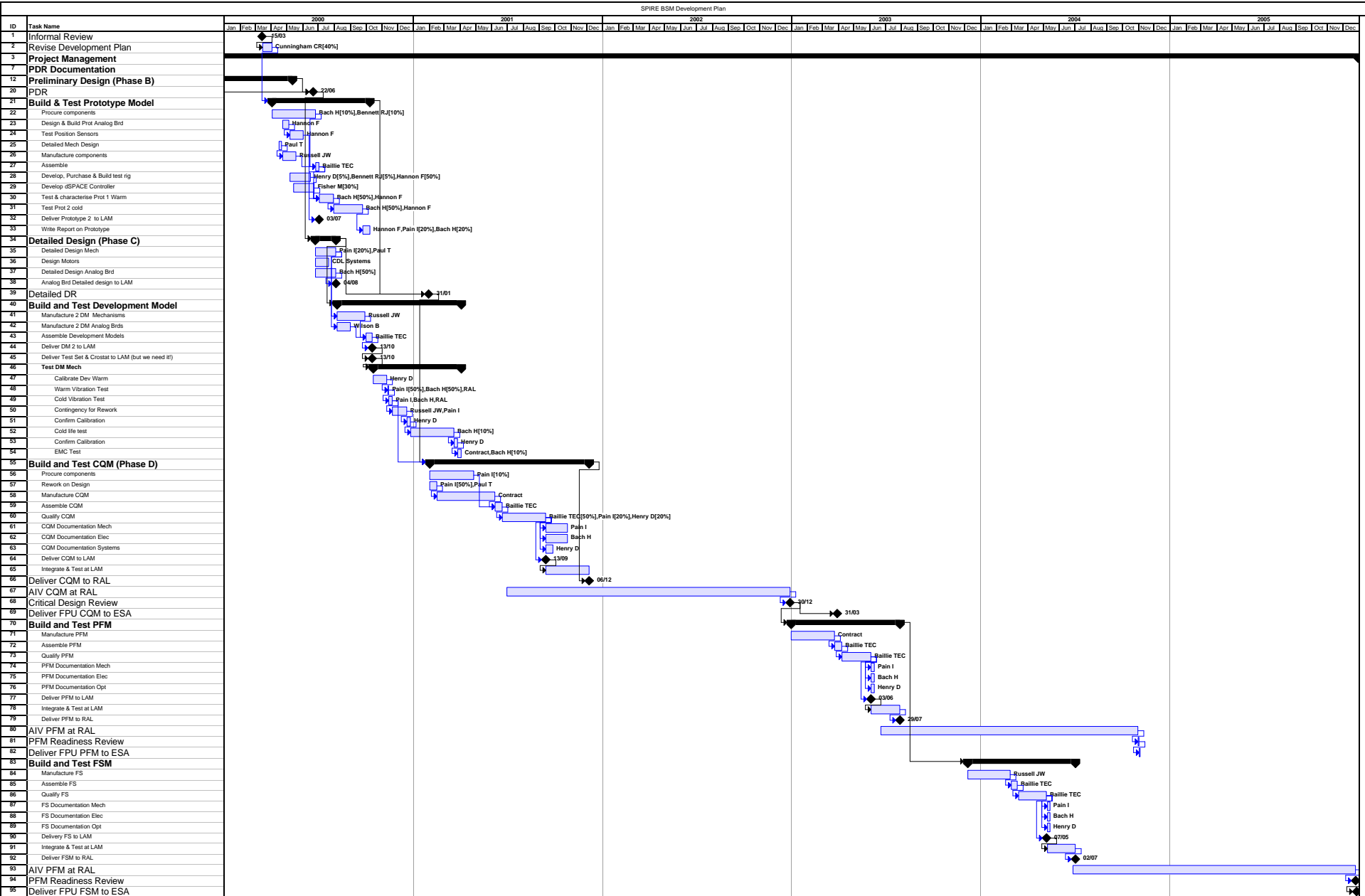
# SPIRE FS Overview

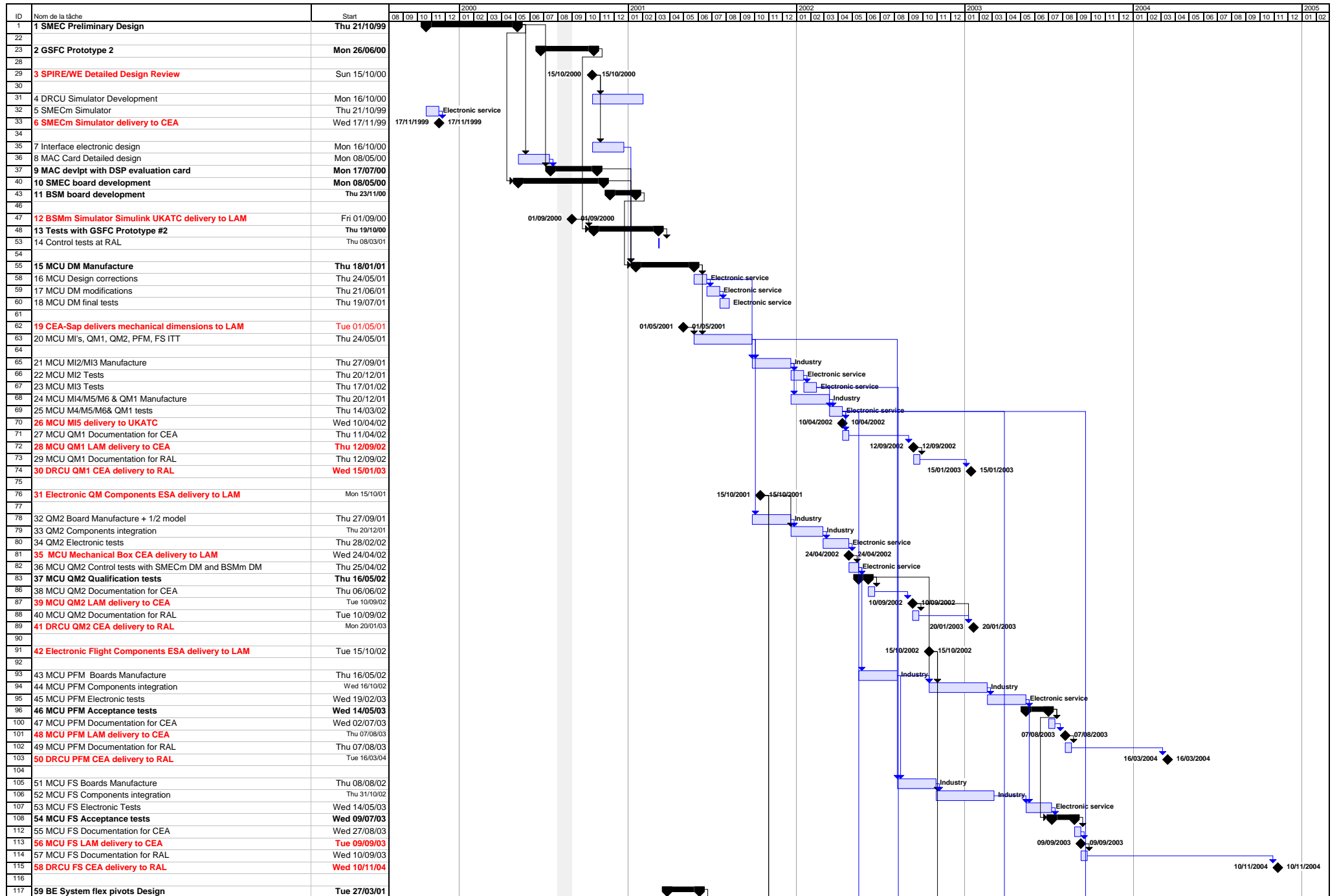
ID	Task Name	Duration	2004												2005												2006	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
459	<b>Flight Spare Model</b>	<b>381 days</b>																										
460	Return of CQM to RAL	0 days																										
461	Refurbishment of CQM Subsystems	30 wks																										
462	<b>FS Integration</b>	<b>105 days</b>																										
476	FS Test Readiness Review	0 days																										
477	FS Verification	66 days																										
478	FS Calibration	46 days																										
479	<b>FS Delivery</b>	<b>14 days</b>																										
486	FS Delivery to ESA	0 days																										







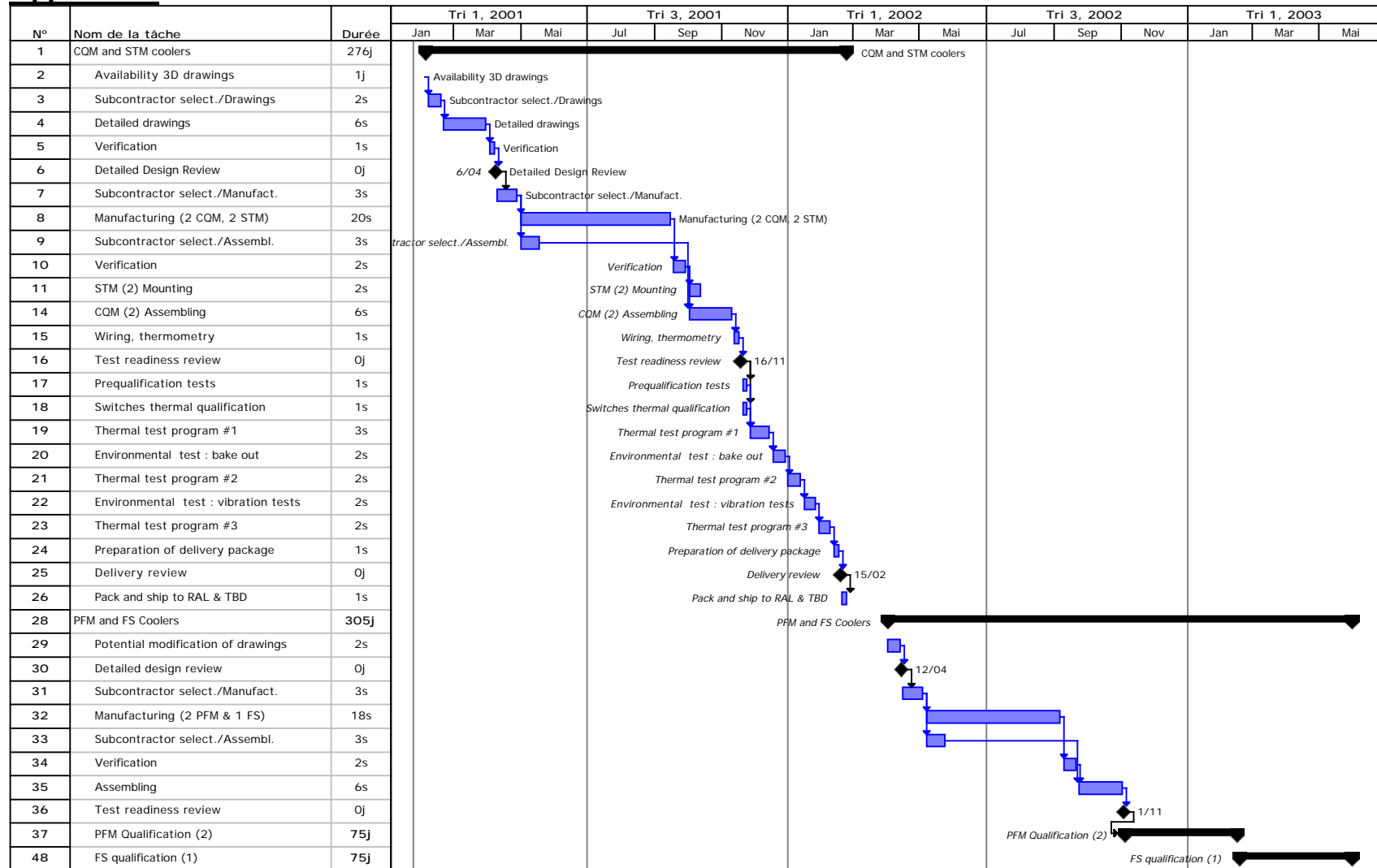








### Appendix A

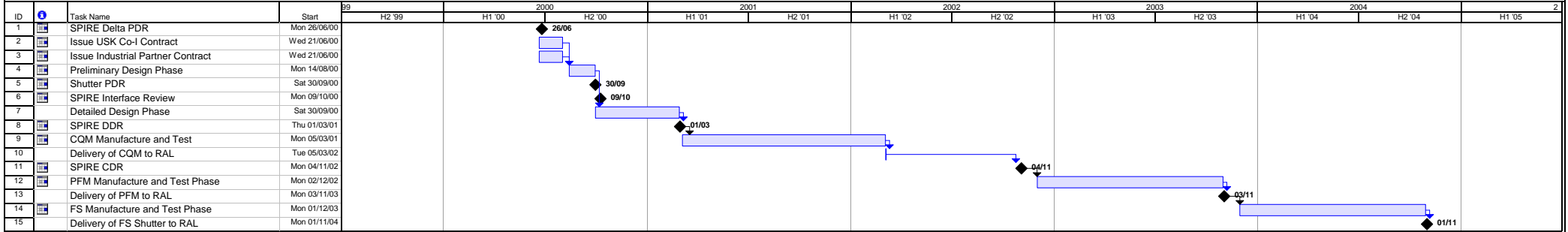








SPIRE SHUTTER DEVELOPMENT SCHEDULE





# HSO DPU/ICU

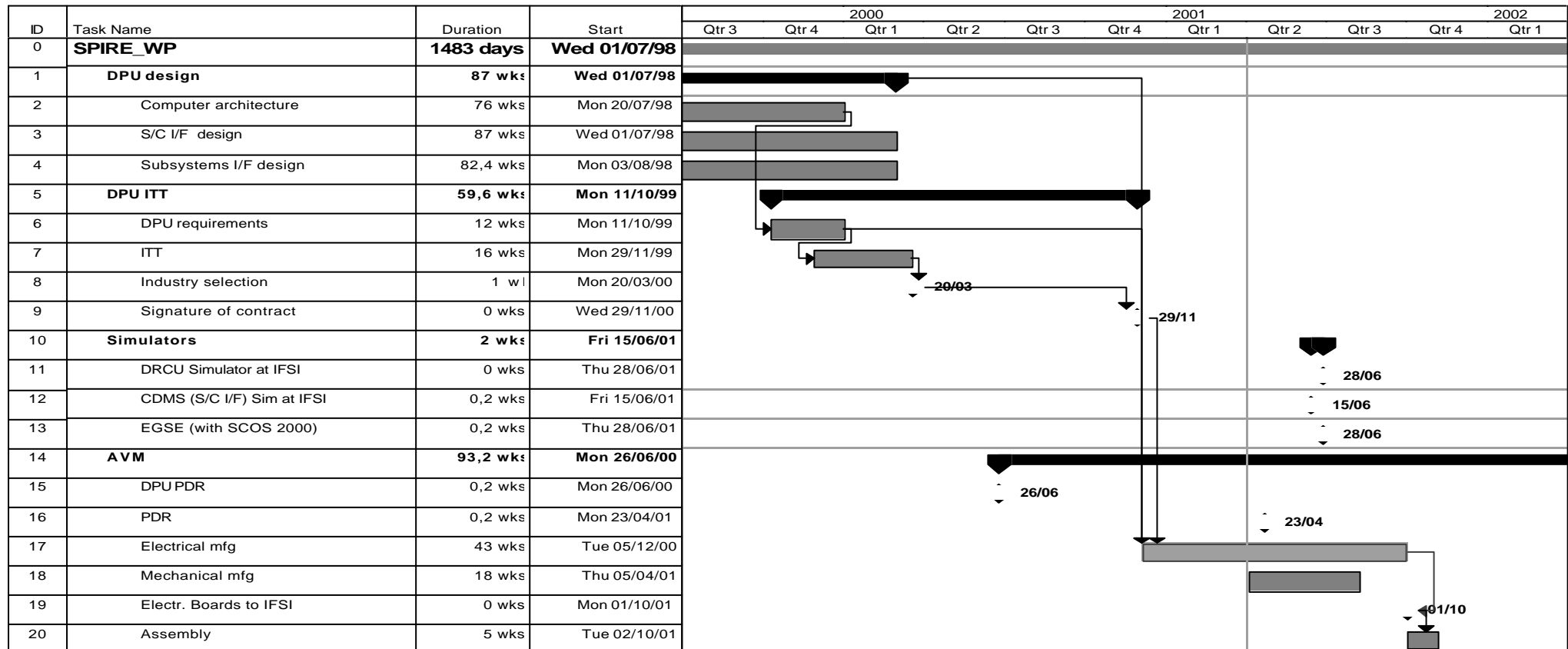
## Subsystem Development Plan

**Ref.: IFSI/ICU/PL/2000-001 Issue: Issue 1**

**Date: 13/6/00**

**Page: Page 42 of 40**

### 9.3 SPIRE





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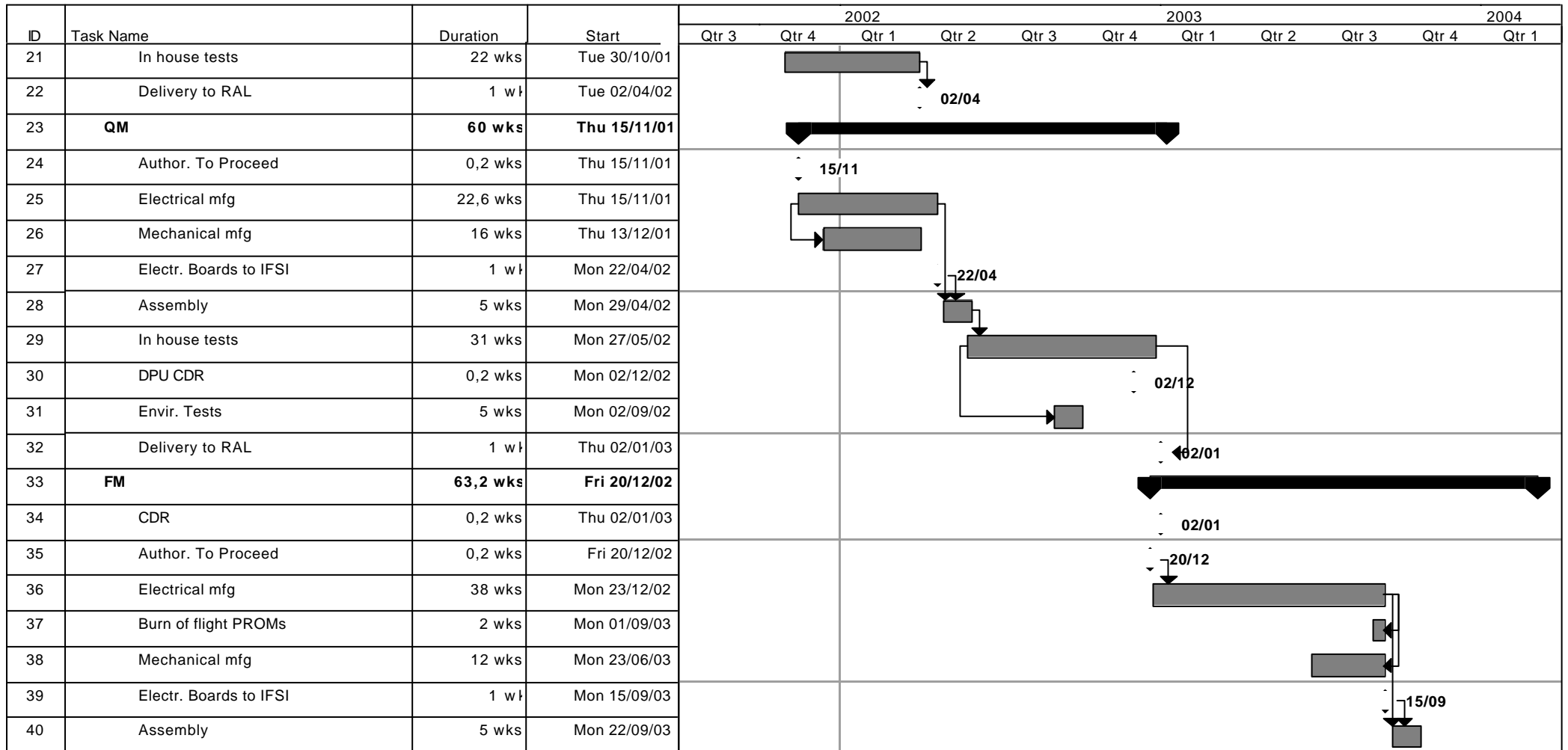
# HSO DPU/ICU

## Subsystem Development Plan

**Ref.: IFSI/ICU/PL/2000-001 Issue: Issue 1**

**Date: 13/6/00**

**Page: Page 43 of 40**





# HSO DPU/ICU

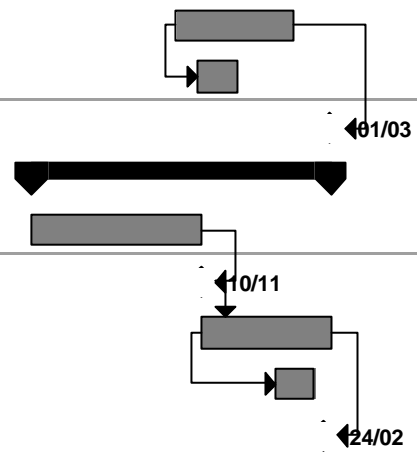
## Subsystem Development Plan

**Ref.: IFSI/ICU/PL/2000-001 Issue: Issue 1**

**Date: 13/6/00**

**Page: Page 44 of 40**

ID	Task Name	Duration	Start	2003				2004				2005				
				Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Qtr 1		
41	In house tests	14,6 wks	Mon 20/10/03													
42	Envir. Tests	5 wks	Fri 07/11/03													
43	Delivery to RAL	1 wks	Mon 01/03/04													
44	<b>FS</b>	<b>37 wks</b>	<b>Tue 17/06/03</b>													
45	Electrical mfg	21 wks	Tue 17/06/03													
46	Electr. Boards to IFSI	0,2 wks	Mon 10/11/03													
47	In house tests	16 wks	Tue 11/11/03													
48	Envir. Tests	5 wks	Tue 13/01/04													
49	Ready for Delivery	1 wks	Tue 24/02/04													





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# HSO DPU/ICU

## Subsystem Development Plan

Ref.: IFSI/ICU/PL/2000-001 Issue: Issue 1

Date:13/6/00

Page:Page 45 of 40

ID	Task Name	Duration																		
50	<b>OBS</b>	<b>217,4 wks</b>																		
51	<b>Reviews</b>	<b>152,2 wks</b>																		
52	Req/Arch design	0,2 wks																		
53	AVM TRR	0,2 wks																		
54	AVM Delivery	0,2 wks																		
55	PFM TRR	0,2 wks																		
56	PFM delivery	0,2 wks																		
57	<b>Development</b>	<b>217,4 wks</b>																		
58	S/C I/F module	116,8 wks																		
59	Subsys. I/F mod.	117 wks																		
60	OBS Controller	117 wks																		
61	Data packetiser	117 wks																		
62	OBS Intern. Review	0,2 wks																		
63	Health autonomy mod	39 wks																		
64	AVM issue	0,2 wks																		
65	OBS 2nd review	0,2 wks																		
66	PFM issue	100 wks																		
67	<b>Documentation</b>	<b>199,6 wks</b>																		
68	URD - User Requir. Doc	26 wks																		
69	SSD - SW spec. Doc	32 wks																		
70	DDD - Detail design doc	56,4 wks																		
71	SVVP - SW Val. & Ver. Plan	50 wks																		
72	OBS User Manual	152 wks																		
73	<b>Support activities</b>	<b>208,8 wks</b>																		
74	Virtuoso OS	48 wks																		
75	Decision on OS use	0,2 wks																		
76	Test mod.	172 wks																		



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CNR

# HSO DPU/ICU Subsystem Development Plan

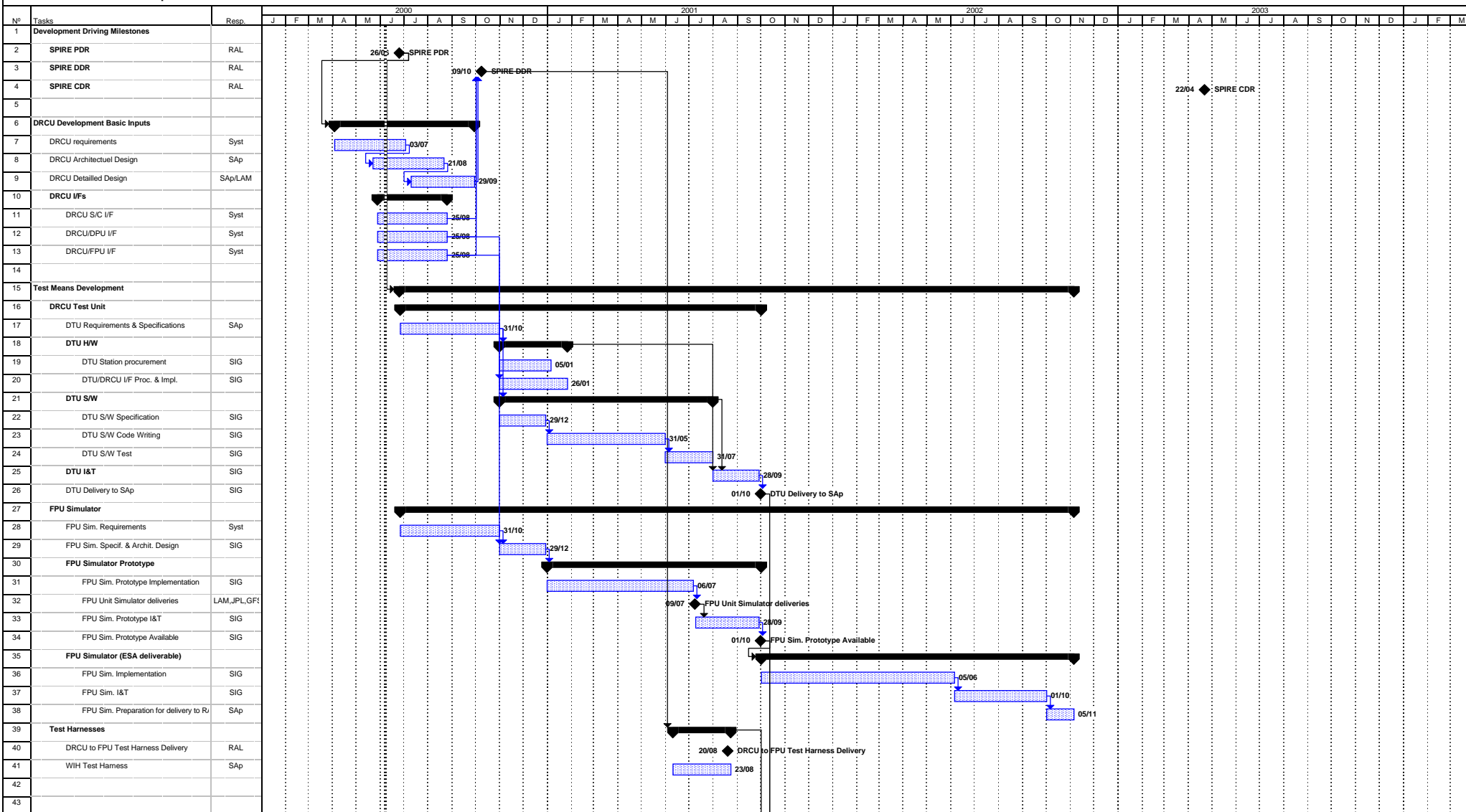
Ref.: IFSI/ICU/PL/2000-  
001 Issue: Issue 1

Date:13/6/00

Page:Page 46 of 40

ID	Task Name	Duration	Gantt Chart											
50	<b>OBS</b>	<b>217,4 wks</b>	[Gantt bar for OBS]											
51	<b>Reviews</b>	<b>152,2 wks</b>	[Gantt bar for Reviews]											
52	Req/Arch design	0,2 wks	[Gantt bar for Req/Arch design]											
53	AVM TRR	0,2 wks	[Gantt bar for AVM TRR]											
54	AVM Delivery	0,2 wks	[Gantt bar for AVM Delivery]											
55	PFM TRR	0,2 wks	[Gantt bar for PFM TRR]											
56	PFM delivery	0,2 wks	[Gantt bar for PFM delivery]											
57	<b>Development</b>	<b>217,4 wks</b>	[Gantt bar for Development]											
58	S/C I/F module	116,8 wks	[Gantt bar for S/C I/F module]											
59	Subsys. I/F mod.	117 wks	[Gantt bar for Subsys. I/F mod.]											
60	OBS Controller	117 wks	[Gantt bar for OBS Controller]											
61	Data packetiser	117 wks	[Gantt bar for Data packetiser]											
62	OBS Intern. Review	0,2 wks	[Gantt bar for OBS Intern. Review]											
63	Health autonomy mod	39 wks	[Gantt bar for Health autonomy mod]											
64	AVM issue	0,2 wks	[Gantt bar for AVM issue]											
65	OBS 2nd review	0,2 wks	[Gantt bar for OBS 2nd review]											
66	PFM issue	100 wks	[Gantt bar for PFM issue]											
67	<b>Documentation</b>	<b>199,6 wks</b>	[Gantt bar for Documentation]											
68	URD - User Requir. Doc	26 wks	[Gantt bar for URD - User Requir. Doc]											
69	SSD - SW spec. Doc	32 wks	[Gantt bar for SSD - SW spec. Doc]											
70	DDD - Detail design doc	56,4 wks	[Gantt bar for DDD - Detail design doc]											
71	SVVP - SW Val. & Ver. Plan	50 wks	[Gantt bar for SVVP - SW Val. & Ver. Plan]											
72	OBS User Manual	152 wks	[Gantt bar for OBS User Manual]											
73	<b>Support activities</b>	<b>208,8 wks</b>	[Gantt bar for Support activities]											
74	Virtuoso OS	48 wks	[Gantt bar for Virtuoso OS]											
75	Decision on OS use	0,2 wks	[Gantt bar for Decision on OS use]											
76	Test mod.	172 wks	[Gantt bar for Test mod.]											

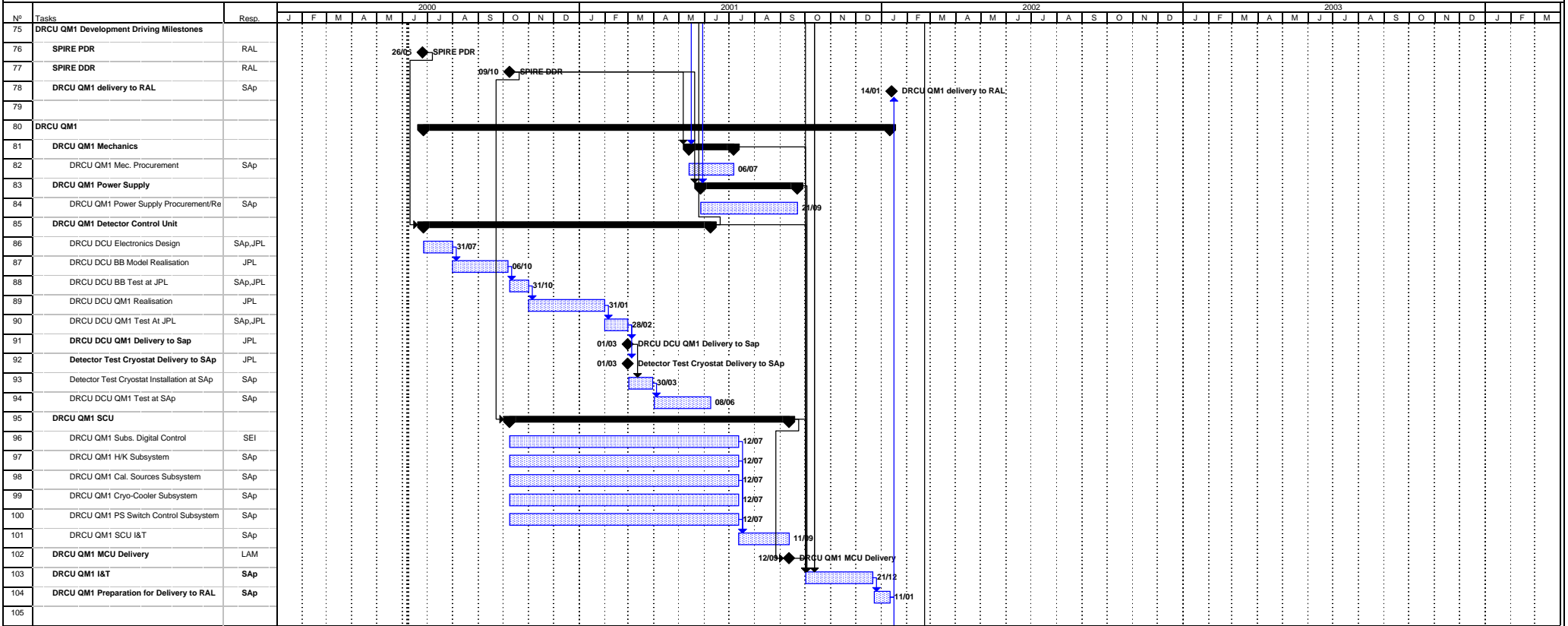
**SPIRE: SPIRE DRCU Development Schedule**







**SPiRE: SPiRE DRCU Development Schedule**



**SPIRE: SPIRE DRCU Development Schedule**

