

DO-178C/ED-12C Table A-4 Verification of Outputs of Software Design Process									
DO-178C/ED-12C (Core) Annex A				DO-333 Formal Methods (FM)		DO-331 Model Based (MB)		DO-332 Object Oriented (OO)	
Objective	Description	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference	Objective Reference	Output/Data Reference
A-4 #1	Low-level requirements comply with high-level requirements.	6.3.2.a, 6.3.2	11.14	FM.6.3.a, FM.6.3.2.a, FM.6.3.2	-	MB.6.3.2.a, MB.6.3.2, MB.6.7, MB.6.8.1	MB.11.14	-	OO.11.14
A-4 #2	Low-level requirements are accurate and consistent.	6.3.2.b, 6.3.2	11.14	FM.6.3.b, FM.6.3.c, FM.6.3.2.b, FM.6.3.2	-	MB.6.3.2.b, MB.6.3.2, MB.6.8.1	MB.11.14	-	OO.11.14
A-4 #3	Low-level requirements are compatible with target computer.	6.3.2.c, 6.3.2	11.14	FM.6.3.d, FM.6.3.2.c, FM.6.3.2	-	MB.6.3.2.c, MB.6.3.2	MB.11.14	-	OO.11.14
A-4 #4	Low-level requirements are verifiable.	6.3.2.d, 6.3.2	11.14	FM.6.3.e, FM.6.3.2.d, FM.6.3.2	-	MB.6.3.2.d, MB.6.3.2, MB.6.8.1	MB.11.14	-	OO.11.14
A-4 #5	Low-level requirements conform to standards.	6.3.2.e, 6.3.2	11.14	FM.6.3.f, FM.6.3.2.e, FM.6.3.2	-	MB.6.3.2.e, MB.6.3.2	MB.11.14	-	OO.11.14
A-4 #6	Low-level requirements are traceable to high-level requirements.	6.3.2.f, 6.3.2	11.14	FM.6.3.g, FM.6.3.2.f, FM.6.3.2	-	MB.6.3.2.f, MB.6.3.2	MB.11.14	-	OO.11.14
A-4 #7	Algorithms are accurate.	6.3.2.g, 6.3.2	SWCI	FM.6.3.h, FM.6.3.2.g, FM.6.3.2	-	MB.6.3.2.g, MB.6.3.2, MB.6.8.1	MB.11.14	-	OO.11.14
A-4 #8	Software architecture is compatible with high-level requirements.	6.3.3.a, 6.3.3	11.14	FM.6.3.3.a, FM.6.3.3	-	MB.6.3.3.a, MB.6.3.3, MB.6.8.1	MB.11.14	OO.6.3.3.a	OO.11.14
A-4 #9	Software architecture is consistent.	6.3.3.b, 6.3.3	11.14	FM.6.3.c, FM.6.3.3.b, FM.6.3.3	-	MB.6.3.3.b, MB.6.3.3, MB.6.8.1	MB.11.14	OO.6.3.3.b	OO.11.14
A-4 #10	Software architecture is compatible with target computer.	6.3.3.c, 6.3.3	11.14	FM.6.3.d, FM.6.3.3.c, FM.6.3.3	-	MB.6.3.3.c, MB.6.3.3	MB.11.14	OO.6.3.3.c	OO.11.14
A-4 #11	Software architecture is verifiable.	6.3.3.d, 6.3.3	11.14	FM.6.3.e, FM.6.3.3.d, FM.6.3.3	-	MB.6.3.3.d, MB.6.3.3, MB.6.8.1	MB.11.14	OO.6.3.3.d	OO.11.14
A-4 #12	Software architecture conforms to standards.	6.3.3.e, 6.3.3	11.14	FM.6.3.f, FM.6.3.3.e, FM.6.3.3	-	MB.6.3.3.e, MB.6.3.3	MB.11.14	OO.6.3.3.e	OO.11.14
A-4 #13	Software partitioning integrity is confirmed.	6.3.3.f, 6.3.3	11.14	FM.6.3.3.f, FM.6.3.3	-	MB.6.8.3.2.a, MB.6.8.1, MB.6.8.3.2	MB.11.14	OO.6.3.3.f	OO.11.14

A-4 #FM14	Formal analysis cases and procedures are correct.			FM.6.3.6.a, FM6.3.6.b, FM.6.3.6	-				
A-4 #FM15	Formal analysis results are correct and discrepancies explained.			FM.6.3.6.c, FM.6.3.6	-				
A-4 #FM16	Requirements formalization is correct.			FM.6.3.i	-				
A-4 #FM17	Formal method is correctly defined, justified, and appropriate.			FM.6.2.1, FM.6.2.1.a, FM.6.2.1.b, FM.6.2.1.c	-				
A-4 #MB14	Simulation cases are correct.					MG.6.8.3.2.a, MB.6.8.1, MB.6.8.3.2	MB.11.14		
A-4 #MB15	Simulation procedures are correct.					MG.6.8.3.2.b, MB.6.8.1, MB.6.8.3.2	MB.11.14		
A-4 #MB16	Simulation results are correct and discrepancies are explained.					MG.6.8.3.2.c, MB.6.8.1, MB.6.8.3.2	MB.11.14		