

Pub_Sub_Husqvarna_Const

Design Description

Francesco Grella

Pub_Sub_Husqvarna_Const: Design Description

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Model Version

Version: 1.4

Last modified: Tue Mar 06 21:26:04 2018

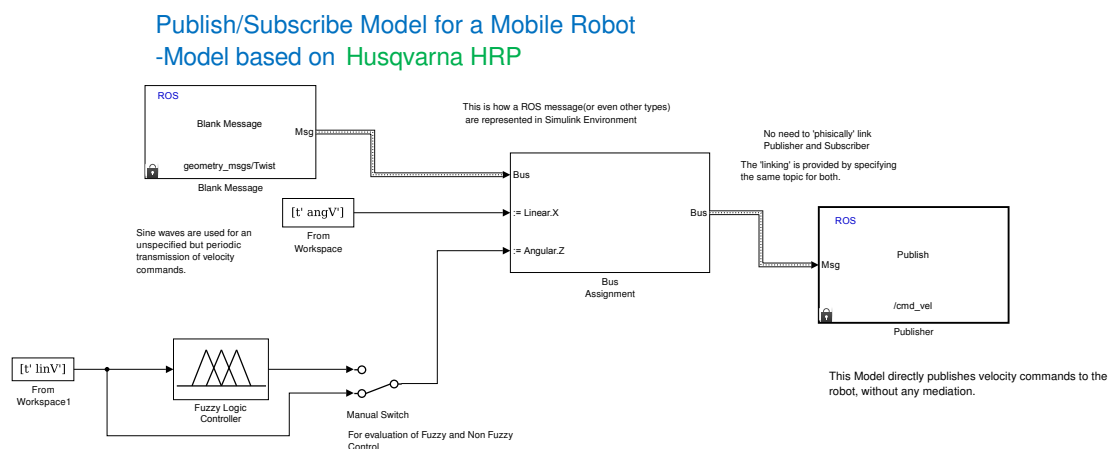
Checksum: 3187834793 2578633953 2479641360 3113564118

Root System

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Figura 1. Pub_Sub_Husqvarna_Const



Blocks

Parameters

"Blank Message" (SubSystem)

Tabella 1. "Blank Message" Parameters

Parameter	Value
roboticsrobotslrosblockmaskMessageTypePrompt	geometry_msgs/Twist
Simulinkblkprm_promptsAllSrcBlksSampleTime	inf

"Bus Assignment" (BusAssignment)

Tabella 2. "Bus Assignment" Parameters

Parameter	Value
Signals that are being assigned	Linear.X,Angular.Z
	{ Linear , X Y Z } { Angular , X Y Z }

"From Workspace" (FromWorkspace)

Tabella 3. "From Workspace" Parameters

Parameter	Value
Data	[t' angV']
Output data type	double
Sample time (-1 for inherited)	0
Interpolate data	off
Enable zero-crossing detection	off
Form output after final data value by	Setting to zero

"From Workspace1" (FromWorkspace)

Tabella 4. "From Workspace1" Parameters

Parameter	Value
Data	[t' linV']
Output data type	double
Sample time (-1 for inherited)	0
Interpolate data	off
Enable zero-crossing detection	off
Form output after final data value by	Setting to zero

"Fuzzy Logic Controller" (SubSystem)

Tabella 5. "Fuzzy Logic Controller" Parameters

Parameter	Value
FIS name (For a file, use quotes and file extension, e.-g., 'tipper.fis'.)	'LinVelDefinitivo.fis'

"Manual Switch" (ManualSwitch)

Tabella 6. "Manual Switch" Parameters

Parameter	Value
Allow the two inputs to differ in size (Results in variable-size output signal)	off
Sample time (-1 for inherited)	-1

"Publisher" (SubSystem)

Tabella 7. "Publisher" Parameters

Parameter	Value
roboticsrobotslrosblockmaskTopicSourcePrompt	Select from ROS network
roboticsrobotslrosblockmaskTopicPrompt	/cmd_vel
roboticsrobotslrosblockmaskMessageTypePrompt	geometry_msgs/Twist
roboticsrobotslrosblockmaskPublisherMsgQueuePrompt	1

Block Execution Order

1. Constant [6] (Constant)
2. From Workspace [3] (FromWorkspace)
3. From Workspace1 [3] (FromWorkspace)
4. Manual Switch [4] (ManualSwitch)

- 5. Bus Assignment [2] (BusAssignment)
- 6. *Publisher* [10]
 - 1. SinkBlock [11] (MATLABSystem)

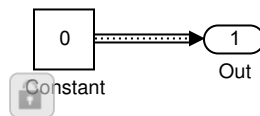
Subsystems

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Blank Message

Figura 2. Pub_Sub_Husqvarna_Const/Blank Message



Blocks

Parameters

"Constant" (Constant)

Tabella 8. "Constant" Parameters

Parameter	Value
Constant value	0
Interpret vector parameters as 1-D	on
Output minimum	[]
Output maximum	[]
Output data type	Bus: SL_Bus_Pub_Sub_Husqvarna_Const_geometry_msgs_Twist
Lock output data type setting against changes by the fixed-point tools	on
Sample time	SampleTime
Frame period	inf

"Out" (Outport)**Tabella 9. "Out" Parameters**

Parameter	Value
Port number	1
Icon display	Port number
Minimum	[]
Maximum	[]
Data type	Inherit: auto
Lock output data type setting against changes by the fixed-point tools	on
Output as nonvirtual bus in parent model	off
Unit (e.g., m, m/s ² , N*m)	inherit
Port dimensions (-1 for inherited)	-1
Variable-size signal	Inherit
Sample time (-1 for inherited)	-1
Ensure outport is virtual	off
Source of initial output value	Dialog
Output when disabled	held
Initial output	[]
MustResolveToSignalObject	off

FIS Wizard**Figura 3. Pub_Sub_Husqvarna_Const/Fuzzy Logic Controller/FIS Wizard****Blocks****Parameters**

"In1" (Inport)**Tabella 10. "In1" Parameters**

Parameter	Value
Port number	1
Port dimensions (-1 for inherited)	-1
Sample time (-1 for inherited)	-1
Minimum	[]
Maximum	[]
Data type	Inherit: auto

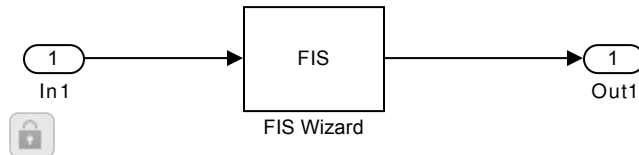
"Out1" (Outport)**Tabella 11. "Out1" Parameters**

Parameter	Value
Port number	1
Icon display	Port number
Minimum	[]
Maximum	[]
Data type	Inherit: auto
Lock output data type setting against changes by the fixed-point tools	off
Output as nonvirtual bus in parent model	off
Unit (e.g., m, m/s ² , N*m)	inherit
Port dimensions (-1 for inherited)	-1
Variable-size signal	Inherit
Sample time (-1 for inherited)	-1
Ensure output is virtual	off
Source of initial output value	Dialog
Output when disabled	held
Initial output	[]

Parameter	Value
MustResolveToSignalObject	off

Fuzzy Logic Controller

Figura 4. Pub_Sub_Husqvarna_Const/Fuzzy Logic Controller



Blocks

Parameters

"FIS Wizard" (SubSystem)

Tabella 12. "FIS Wizard" Parameters

Parameter	Value
FIS structure	[]

"In1" (Inport)

Tabella 13. "In1" Parameters

Parameter	Value
Port number	1
Port dimensions (-1 for inherited)	-1
Sample time (-1 for inherited)	-1
Minimum	[]
Maximum	[]
Data type	Inherit: auto

"Out1" (Outport)

Tabella 14. "Out1" Parameters

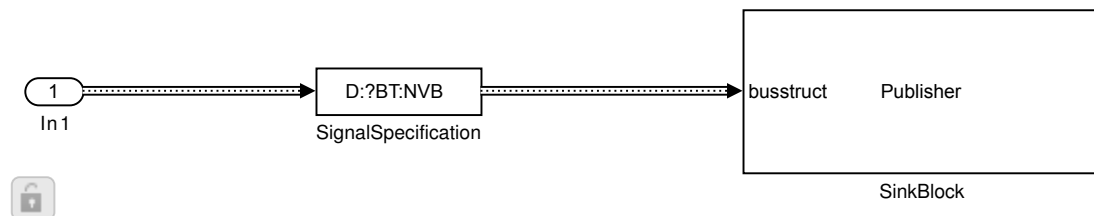
Parameter	Value
Port number	1

Parameter	Value
Icon display	Port number
Minimum	[]
Maximum	[]
Data type	Inherit: auto
Lock output data type setting against changes by the fixed-point tools	off
Output as nonvirtual bus in parent model	off
Unit (e.g., m, m/s ² , N*m)	inherit
Port dimensions (-1 for inherited)	-1
Variable-size signal	Inherit
Sample time (-1 for inherited)	-1
Ensure outport is virtual	off
Source of initial output value	Dialog
Output when disabled	held
Initial output	[]
MustResolveToSignalObject	off

Publisher

Checksum: 3373718530 791440661 1461776922 1256027356

Figura 5. Pub_Sub_Husqvarna_Const/Publisher



Blocks

Parameters

"In1" (Inport)**Tabella 15. "In1" Parameters**

Parameter	Value
Port number	1
Port dimensions (-1 for inherited)	-1
Sample time (-1 for inherited)	-1
Minimum	[]
Maximum	[]
Data type	Inherit: auto

"SignalSpecification" (SignalSpecification)**Tabella 16. "SignalSpecification" Parameters**

Parameter	Value
Minimum	[]
Maximum	[]
Data type	Bus: SL_Bus_Pub_Sub_Husqvarna_Const_geometry_msgs_Twist
Lock output data type setting against changes by the fixed-point tools	on
Require nonvirtual bus	on
Unit (e.g., m, m/s ² , N*m)	inherit
Dimensions (-1 for inherited)	-1
Variable-size signal	Inherit
Sample time (-1 for inherited)	-1

"SinkBlock" (MATLABSystem)**Tabella 17. "SinkBlock" Parameters**

Parameter	Value
Topic to publish to	/cmd_vel
Message type of topic	geometry_msgs/Twist

Parameter	Value
Length of publish queue	messageQueueLength
Simulink Bus Name for message type	SL_Bus_Pub_Sub_Husqvarna_Const_geometry_msgs_Twist
Name of Simulink model	Pub_Sub_Husqvarna_Const
Simulink Block Identifier	Pub_Pub_Sub_Husqvarna_Const_7
Simulate using	Interpreted execution

Block Execution Order

1. SinkBlock [11] (MATLABSystem)

System Design Variables

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Design Variable Summary

Tabella 18. Design Variables

[illegible]

[illegible]

16

System Design Variables

Variable Name	Parent Blocks	Size	Bytes	Class	Value
					0.5]
t	From Workspace [3] From Workspace [3] From Workspace1 [3] From Workspace1 [3]	1x999	7992	double	[1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10 10.5 11 11.5 12 12.5 13 13.5 14 14- .5 15 15.5 16 16.5 17 17.5 18 18.5 19 19.5 20 20.5 21 21.5 22 22- .5 23 23.5 24 24.5 25 25.5 26 26.5 27 27.5 28 28.5 29 29.5 30 30- .5 31 31.5 32 32.5 33 33.5 34 34.5 35 35.5 36 36.5 37 37.5 38 38- .5 39 39.5 40 40.5 41 41.5 42 42.5 43 43.5 44 44.5 45 45.5 46 46- .5 47 47.5 48 48.5 49 49.5 50 50.5 51 51.5 52 52.5 53 53.5 54 54- .5 55 55.5 56 56.5 57 57.5 58 58.5 59 59.5 60 60.5 61 61.5 62 62- .5 63 63.5 64 64.5 65 65.5 66 66.5 67 67.5 68 68.5 69 69.5 70 70- .5 71 71.5 72 72.5 73 73.5 74 74.5 75 75.5 76 76.5 77 77.5 78 78- .5 79 79.5 80 80.5 81 81.5 82 82.5 83 83.5 84 84.5 85 85.5 86 86- .5 87 87.5 88 88.5 89 89.5 90 90.5 91 91.5 92 92.5 93 93.5 94 94- .5 95 95.5 96 96.5 97 97.5 98 98.5 99 99.5 100 100.5 101 101.5 102 102.5 103 103.5 104 104.5 105 105.5 106 106.5 107 107.5 108 108.5 109 109.5 110 110.5 111 111.5 112 112.5 113 113.5 114 114.5 115 115.5 116 116.5 117 117.5 118 118.5 119 119.5]

Variable Name	Parent Blocks	Size	Bytes	Class	Value
					120 120.5 121 121.5
					122 122.5 123 123.5
					124 124.5 125 125.5
					126 126.5 127 127.5
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					220 220.5 221 221.5

System Design Variables

Variable Name	Parent Blocks	Size	Bytes	Class	Value
					222 222.5 223 223.5
					224 224.5 225 225.5
					226 226.5 227 227.5
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Variable Name	Parent Blocks	Size	Bytes	Class	Value
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Variable Name	Parent Blocks	Size	Bytes	Class	Value
					426 426.5 427 427.5 428 428.5 429 429.5 430 430.5 431 431.5 432 432.5 433 433.5 434 434.5 435 435.5 436 436.5 437 437.5 438 438.5 439 439.5 440 440.5 441 441.5 442 442.5 443 443.5 444 444.5 445 445.5 446 446.5 447 447.5 448 448.5 449 449.5 450 450.5 451 451.5 452 452.5 453 453.5 454 454.5 455 455.5 456 456.5 457 457.5 458 458.5 459 459.5 460 460.5 461 461.5 462 462.5 463 463.5 464 464.5 465 465.5 466 466.5 467 467.5 468 468.5 469 469.5 470 470.5 471 471.5 472 472.5 473 473.5 474 474.5 475 475.5 476 476.5 477 477.5 478 478.5 479 479.5 480 480.5 481 481.5 482 482.5 483 483.5 484 484.5 485 485.5 486 486.5 487 487.5 488 488.5 489 489.5 490 490.5 491 491.5 492 492.5 493 493.5 494 494.5 495 495.5 496 496.5 497 497.5 498 498.5 499 499.5 500]

Design Variable Details

[illegible]

[illegible]

Used by Blocks:

- Pub Sub Husqvarna Const/From Workspace [3]

Resolved in: base workspace

[illegible]

[illegible]

Used by Blocks:

- Pub_Sub_Husqvarna_Const/From Workspace1 [3]

Resolved in: base workspace

t.	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5																																																																																																																																																																																																																																																																										
15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27	27.5	28	28.5	29	29.5	30	30.5	31	31.5	32	32.5	33	33.5	34	34.5	35	35.5	36	36.5	37	37.5	38	38.5																																																																																																																																																																																																																																																							
39	39.5	40	40.5	41	41.5	42	42.5	43	43.5	44	44.5	45	45.5	46	46.5	47	47.5	48	48.5	49	49.5	50	50.5	51	51.5	52	52.5	53	53.5	54	54.5	55	55.5	56	56.5	57	57.5	58	58.5	59	59.5	60	60.5	61	61.5	62	62.5																																																																																																																																																																																																																																																							
63	63.5	64	64.5	65	65.5	66	66.5	67	67.5	68	68.5	69	69.5	70	70.5	71	71.5	72	72.5	73	73.5	74	74.5	75	75.5	76	76.5	77	77.5	78	78.5	79	79.5	80	80.5	81	81.5	82	82.5	83	83.5	84	84.5	85	85.5	86	86.5																																																																																																																																																																																																																																																							
87	87.5	88	88.5	89	89.5	90	90.5	91	91.5	92	92.5	93	93.5	94	94.5	95	95.5	96	96.5	97	97.5	98	98.5	99	99.5	100	100.5	101	101.5	102	102.5	103	103.5	104	104.5	105	105.5	106	106.5	107	107.5	108	108.5	109	109.5	110	110.5	111	111.5	112	112.5	113	113.5	114	114.5	115	115.5	116	116.5	117	117.5	118	118.5	119	119.5	120	120.5	121	121.5	122	122.5	123	123.5	124	124.5	125	125.5	126	126.5	127	127.5	128	128.5	129	129.5	130	130.5	131	131.5	132	132.5	133	133.5	134	134.5	135	135.5	136	136.5	137	137.5	138	138.5	139	139.5	140	140.5	141	141.5	142	142.5	143	143.5	144	144.5	145	145.5	146	146.5	147	147.5	148	148.5	149	149.5	150	150.5	151	151.5	152	152.5	153	153.5	154	154.5	155	155.5	156	156.5	157	157.5	158	158.5	159	159.5	160	160.5	161	161.5	162	162.5	163	163.5	164	164.5	165	165.5	166	166.5	167	167.5	168	168.5	169	169.5	170	170.5	171	171.5	172	172.5	173	173.5	174	174.5	175	175.5	176	176.5	177	177.5	178	178.5	179	179.5	180	180.5	181	181.5	182	182.5	183	183.5	184	184.5	185	185.5	186	186.5	187	187.5	188	188.5	189	189.5	190	190.5	191	191.5	192	192.5	193	193.5	194	194.5	195	195.5	196	196.5	197	197.5	198	198.5	199	199.5	200	200.5	201	201.5	202	202.5	203	203.5	204	204.5	205	205.5	206	206.5	207	207.5	208	208.5	209	209.5	210	210.5	211	211.5	212	212.5	213	213.5	214	214.5	215	215.5	216	216.5	217	217.5	218	218.5	219	219.5	220	220.5	221	221.5	222	222.5	223	223.5	224	224.5	225	225.5	226	226.5	227	227.5	228	228.5	229	229.5	230	230.5	231	231.5	232	232.5	233	233.5	234

234.5 235 235.5 236 236.5 237 237.5 238 238.5 239 239.5 240 240.5 241 241.5 242 242.5 243
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270.5 271 271.5 272 272.5 273 273.5 274 274.5 275 275.5 276 276.5 277 277.5 278 278.5 279
279.5 280 280.5 281 281.5 282 282.5 283 283.5 284 284.5 285 285.5 286 286.5 287 287.5 288
288.5 289 289.5 290 290.5 291 291.5 292 292.5 293 293.5 294 294.5 295 295.5 296 296.5 297
297.5 298 298.5 299 299.5 300 300.5 301 301.5 302 302.5 303 303.5 304 304.5 305 305.5 306
306.5 307 307.5 308 308.5 309 309.5 310 310.5 311 311.5 312 312.5 313 313.5 314 314.5 315
315.5 316 316.5 317 317.5 318 318.5 319 319.5 320 320.5 321 321.5 322 322.5 323 323.5 324
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351.5 352 352.5 353 353.5 354 354.5 355 355.5 356 356.5 357 357.5 358 358.5 359 359.5 360
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369.5 370 370.5 371 371.5 372 372.5 373 373.5 374 374.5 375 375.5 376 376.5 377 377.5 378
378.5 379 379.5 380 380.5 381 381.5 382 382.5 383 383.5 384 384.5 385 385.5 386 386.5 387
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396.5 397 397.5 398 398.5 399 399.5 400 400.5 401 401.5 402 402.5 403 403.5 404 404.5 405
405.5 406 406.5 407 407.5 408 408.5 409 409.5 410 410.5 411 411.5 412 412.5 413 413.5 414
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432.5 433 433.5 434 434.5 435 435.5 436 436.5 437 437.5 438 438.5 439 439.5 440 440.5 441
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459.5 460 460.5 461 461.5 462 462.5 463 463.5 464 464.5 465 465.5 466 466.5 467 467.5 468
468.5 469 469.5 470 470.5 471 471.5 472 472.5 473 473.5 474 474.5 475 475.5 476 476.5 477
477.5 478 478.5 479 479.5 480 480.5 481 481.5 482 482.5 483 483.5 484 484.5 485 485.5 486
486.5 487 487.5 488 488.5 489 489.5 490 490.5 491 491.5 492 492.5 493 493.5 494 494.5 495
495.5 496 496.5 497 497.5 498 498.5 499 499.5 500]

Used by Blocks:

- Pub_Sub_Husqvarna_Const/From Workspace [3]
- Pub_Sub_Husqvarna_Const/From Workspace1 [3]

Resolved in: base workspace

Requirements Traceability

Pub_Sub_Husqvarna_Const does not contain requirements traceability links.

System Model Configuration

Source: Model
Source Name: Pub_Sub_Husqvarna_Const

Tabella 19. Pub_Sub_Husqvarna_Const Configuration Set

Property	Value
Description	
Components	[Pub_Sub_Husqvarna_Const Configuration Set.Components(1) [29], Pub_Sub_Husqvarna_Const Configuration Set.Components(2) [30], Pub_Sub_Husqvarna_Const Configuration Set.Components(3) [31], Pub_Sub_Husqvarna_Const Configuration Set.Components(4) [32], Pub_Sub_Husqvarna_Const Configuration Set.Components(5) [35], Pub_Sub_Husqvarna_Const Configuration Set.Components(6) [37], Pub_Sub_Husqvarna_Const Configuration Set.Components(7) [37], Pub_Sub_Husqvarna_Const Configuration Set.Components(8) [38], Pub_Sub_Husqvarna_Const Configuration Set.Components(9) [40]]
Name	Configuration
SimulationMode	normal
ConfigType	Model

Tabella 20. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](1)

Property	Value
Name	Solver
Description	
Components	
StartTime	0.0
StopTime	inf
AbsTol	auto
FixedStep	auto
InitialStep	auto
MaxNumMinSteps	-1
MaxOrder	5
ZcThreshold	auto

ConsecutiveZCsStepRelTol	10*128*eps
MaxConsecutiveZCs	1000
ExtrapolationOrder	4
NumberNewtonIterations	1
MaxStep	auto
MinStep	auto
MaxConsecutiveMinStep	1
RelTol	1e-3
SolverMode	SingleTasking
EnableMultiTasking	off
EnableConcurrentExecution	off
ConcurrentTasks	off
Solver	VariableStepAuto
SolverName	VariableStepAuto
SolverType	Variable-step
SolverJacobianMethodControl	auto
ShapePreserveControl	DisableAll
ZeroCrossControl	UseLocalSettings
ZeroCrossAlgorithm	Nonadaptive
SolverResetMethod	Fast
PositivePriorityOrder	off
AutoInsertRateTranBlk	off
SampleTimeConstraint	Unconstrained
InsertRTBMode	Whenever possible
SampleTimeProperty	

Tabella 21. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](2)

Property	Value
Name	Data Import/Export
Description	
Components	
Decimation	1
ExternalInput	[t, u]
FinalStateName	xFinal
InitialState	xInitial
LimitDataPoints	off
MaxDataPoints	1000
LoadExternalInput	off

LoadInitialState	off
SaveFinalState	off
SaveCompleteFinalSimState	off
SaveFormat	Dataset
SaveOutput	on
SaveState	off
SignalLogging	on
DSMLogging	on
InspectSignalLogs	off
SaveTime	on
ReturnWorkspaceOutputs	off
StateSaveName	xout
TimeSaveName	tout
OutputSaveName	yout
SignalLoggingName	logsout
DSMLoggingName	dsmout
OutputOption	RefineOutputTimes
OutputTimes	[]
ReturnWorkspaceOutputsName	out
Refine	1
LoggingToFile	off
DatasetSignalFormat	timeseries
LoggingFileName	out.mat
LoggingIntervals	[-inf, inf]

Tabella 22. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](3)

Property	Value
Name	Optimization
Description	
Components	
BlockReduction	on
BooleanDataType	on
ConditionallyExecuteInputs	on
DefaultParameterBehavior	Tunable
InlineParams	off
UseDivisionForNetSlopeComputation	off
UseFloatMulNetSlope	off
DefaultUnderspecifiedDataType	double

UseSpecifiedMinMax	off
InlineInvariantSignals	off
OptimizeBlockIOStorage	on
BufferReuse	on
GlobalBufferReuse	on
GlobalVariableUsage	None
StrengthReduction	off
AdvancedOptControl	
EnforceIntegerDowncast	on
ExpressionFolding	on
BooleansAsBitfields	off
BitfieldContainerType	uint_T
EnableMemcpy	on
MemcpyThreshold	64
PassReuseOutputArgsAs	Structure reference
PassReuseOutputArgsThreshold	12
FoldNonRolledExpr	on
LocalBlockOutputs	on
RollThreshold	5
StateBitsets	off
DataBitsets	off
ActiveStateOutputEnumStorageType	Native Integer
UseTempVars	off
ZeroExternalMemoryAtStartup	on
ZeroInternalMemoryAtStartup	on
InitFltsAndDblsToZero	off
NoFixptDivByZeroProtection	off
EfficientFloat2IntCast	off
EfficientMapNaN2IntZero	on
LifeSpan	auto
EvaledLifeSpan	Inf
MaxStackSize	Inherit from target
BufferReusableBoundary	on
SimCompilerOptimization	off
AccelVerboseBuild	off
OptimizeBlockOrder	off
OptimizeDataStoreBuffers	on
BusAssignmentInplaceUpdate	on

Tabella 23. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](4)

Property	Value
Name	Diagnostics
Description	
Components	
RTPrefix	error
ConsistencyChecking	none
ArrayBoundsChecking	none
SignalInfNanChecking	none
SignalRangeChecking	none
ReadBeforeWriteMsg	UseLocalSettings
WriteAfterWriteMsg	UseLocalSettings
WriteAfterReadMsg	UseLocalSettings
AlgebraicLoopMsg	warning
ArtificialAlgebraicLoopMsg	warning
SaveWithDisabledLinksMsg	warning
SaveWithParameterizedLinksMsg	warning
CheckSSInitialOutputMsg	on
UnderspecifiedInitializationDetection	Simplified
MergeDetectMultiDrivingBlocksExec	error
CheckExecutionContextRuntimeOutputMsg	off
SignalResolutionControl	UseLocalSettings
BlockPriorityViolationMsg	warning
MinStepSizeMsg	warning
TimeAdjustmentMsg	none
MaxConsecutiveZCsMsg	error
MaskedZcDiagnostic	warning
IgnoredZcDiagnostic	warning
SolverPrmCheckMsg	none
InheritedTsInSrcMsg	warning
MultiTaskDSMMsg	error
MultiTaskCondExecSysMsg	error
MultiTaskRateTransMsg	error
SingleTaskRateTransMsg	none
TasksWithSamePriorityMsg	warning
SigSpecEnsureSampleTimeMsg	warning
CheckMatrixSingularityMsg	none

IntegerOverflowMsg	warning
Int32ToFloatConvMsg	warning
ParameterDowncastMsg	error
ParameterOverflowMsg	error
ParameterUnderflowMsg	none
ParameterPrecisionLossMsg	warning
ParameterTunabilityLossMsg	warning
FixptConstUnderflowMsg	none
FixptConstOverflowMsg	none
FixptConstPrecisionLossMsg	none
UnderSpecifiedDataTypeMsg	none
UnnecessaryDatatypeConvMsg	none
VectorMatrixConversionMsg	none
InvalidFcnCallConnMsg	error
FcnCallInpInsideContextMsg	error
SignalLabelMismatchMsg	none
UnconnectedInputMsg	warning
UnconnectedOutputMsg	warning
UnconnectedLineMsg	warning
UseOnlyExistingSharedCode	error
SFcnCompatibilityMsg	none
FrameProcessingCompatibilityMsg	error
UniqueDataStoreMsg	none
BusObjectLabelMismatch	warning
RootOutportRequireBusObject	warning
AssertControl	UseLocalSettings
Echo	
EnableOverflowDetection	off
AllowSymbolicDim	on
ModelReferenceIOMsg	none
ModelReferenceVersionMismatchMessage	none
ModelReferenceIOMismatchMessage	none
ModelReferenceCSMismatchMessage	none
ModelReferenceSimTargetVerbose	off
UnknownTsInhSupMsg	warning
ModelReferenceDataLoggingMessage	warning
ModelReferenceSymbolNameMessage	warning
ModelReferenceExtraNoncontSigs	error
StateNameClashWarn	none

SimStateInterfaceChecksumMismatchMsg	warning
SimStateOlderReleaseMsg	error
InitInArrayFormatMsg	warning
StrictBusMsg	ErrorLevel1
BusNameAdapt	WarnAndRepair
NonBusSignalsTreatedAsBus	none
SFUnusedDataAndEventsDiag	warning
SFUnexpectedBacktrackingDiag	error
SFInvalidInputDataAccessInChartInitDiag	warning
SFNoUnconditionalDefaultTransitionDiag	error
SFTransitionOutsideNaturalParentDiag	warning
SFUnconditionalTransitionShadowingDiag	warning
SFUnreachableExecutionPathDiag	warning
SFUndirectedBroadcastEventsDiag	warning
SFTransitionActionBeforeConditionDiag	warning
SFOutputUsedAsStateInMooreChartDiag	error
SFTemporalDelaySmallerThanSampleTimeDiag	warning
SFUnconditionalPathOutOfParentDiag	warning
SFSelfTransitionDiag	warning
SFExecutionAtInitializationDiag	warning
SFMachineParentedDataDiag	warning
SFUnreachableStateOrJunctionDiag	warning
SFDanglingTransitionDiag	warning
IntegerSaturationMsg	warning
AllowedUnitSystems	all
UnitsInconsistencyMsg	warning
AllowAutomaticUnitConversions	on

Tabella 24. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](5)

Property	Value
Name	Hardware Implementation
Description	
Components	
ProdBitPerChar	8
ProdBitPerShort	16
ProdBitPerInt	32
ProdBitPerLong	32

ProdBitPerLongLong	64
ProdBitPerFloat	32
ProdBitPerDouble	64
ProdBitPerPointer	64
ProdBitPerSizeT	64
ProdBitPerPtrDiffT	64
ProdLargestAtomicInteger	Char
ProdLargestAtomicFloat	Float
ProdIntDivRoundTo	Zero
ProdEndianess	LittleEndian
ProdWordSize	64
ProdShiftRightIntArith	on
ProdLongLongMode	off
ProdHWDeviceType	Intel->x86-64 (Windows64)
TargetBitPerChar	8
TargetBitPerShort	16
TargetBitPerInt	32
TargetBitPerLong	32
TargetBitPerLongLong	64
TargetBitPerFloat	32
TargetBitPerDouble	64
TargetBitPerPointer	32
TargetBitPerSizeT	32
TargetBitPerPtrDiffT	32
TargetLargestAtomicInteger	Char
TargetLargestAtomicFloat	None
TargetShiftRightIntArith	on
TargetLongLongMode	off
TargetIntDivRoundTo	Undefined
TargetEndianess	Unspecified
TargetWordSize	32
TargetTypeEmulationWarnSuppressLevel	0
TargetPreprocMaxBitsSint	32
TargetPreprocMaxBitsUint	32
TargetHWDeviceType	Specified
TargetUnknown	off
ProdEqTarget	on
UseEmbeddedCoderFeatures	on
UseSimulinkCoderFeatures	on

Tabella 25. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](6)

Property	Value
Name	Model Referencing
Description	
Components	
UpdateModelReferenceTargets	IfOutOfDateOrStructuralChange
SkipRefExpFcnMdlSchedulingOrderCheck	off
EnableRefExpFcnMdlSchedulingChecks	on
CheckModelReferenceTargetMessage	error
EnableParallelModelReferenceBuilds	off
ParallelModelReferenceErrorOnInvalidPool	on
ParallelModelReferenceMATLABWorkerInit	None
ModelReferenceNumInstancesAllowed	Multi
PropagateVarSize	Infer from blocks in model
ModelDependencies	
ModelReferencePassRootInputsByReference	on
ModelReferenceMinAlgLoopOccurrences	off
PropagateSignalLabelsOutOfModel	on
SupportModelReferenceSimTargetCustomCode	off

Tabella 26. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](7)

Property	Value
Name	Simulation Target
Description	
Components	
SimCustomSourceCode	
SimCustomHeaderCode	
SimCustomInitializer	
SimCustomTerminator	
SimReservedNameArray	
SimUserSources	
SimUserIncludeDirs	
SimUserLibraries	

SimUserDefines	
SFSimEnableDebug	off
SFSimOverflowDetection	on
SFSimEcho	on
SimBlas	on
SimCtrlC	on
SimExtrinsic	on
SimIntegrity	on
SimUseLocalCustomCode	off
SimParseCustomCode	on
SimBuildMode	sf_incremental_build
SimDataInitializer	
SimGenImportedTypeDefs	off
CompileTimeRecursionLimit	50
EnableRuntimeRecursion	on
MATLABDynamicMemAlloc	on
MATLABDynamicMemAllocThreshold	65536
CustomSymbolStrEMXArray	nothing
CustomSymbolStrEMXArrayFcn	nothing

Tabella 27. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](8)

Property	Value
Name	Code Generation
SystemTargetFile	grt.tlc
HardwareBoard	None
TLCOptions	
CodeGenDirectory	
GenCodeOnly	off
MakeCommand	make_rtw
GenerateMakefile	on
PackageGeneratedCodeAndArtifacts	off
PackageName	
TemplateMakefile	grt_default_tmf
PostCodeGenCommand	
Description	
GenerateReport	off
SaveLog	off
RTWVerbose	on

RetainRTWFile	off
ProfileTLC	off
TLCDebug	off
TLCCoverage	off
TLCAssert	off
ProcessScriptMode	Default
ConfigurationMode	Optimized
ProcessScript	
ConfigurationScript	
ConfigAtBuild	off
RTWUseLocalCustomCode	off
RTWUseSimCustomCode	off
CustomSourceCode	
CustomHeaderCode	
CustomInclude	
CustomSource	
CustomLibrary	
CustomDefine	
CustomLAPACKCallback	
CustomInitializer	
CustomTerminator	
Toolchain	Automatically locate an installed toolchain
BuildConfiguration	Faster Builds
CustomToolchainOptions	
IncludeHyperlinkInReport	off
LaunchReport	off
RecursionLimit	50
PortableWordSizes	off
GenerateErtSFunction	off
CreateSILPILBlock	None
CodeExecutionProfiling	off
CodeExecutionProfileVariable	executionProfile
CodeProfilingSaveOptions	SummaryOnly
CodeProfilingInstrumentation	off
CodeCoverageSettings	Pub_Sub_Husqvarna_Const Configuration Set.Components(8).CodeCoverageSettings-[41]
SILDebugging	off
TargetLang	C

IncludeERTFirstTime	off
GenerateTraceInfo	off
GenerateTraceReport	off
GenerateTraceReportSl	off
GenerateTraceReportSf	off
GenerateTraceReportEml	off
GenerateCodeInfo	off
GenerateWebview	off
GenerateCodeMetricsReport	off
GenerateCodeReplacementReport	off
RTWCompilerOptimization	off
ObjectivePriorities	
RTWCustomCompilerOptimizations	
CheckMdlBeforeBuild	Off
CustomRebuildMode	OnUpdate
DataInitializer	
Components	[Pub_Sub_Husqvarna_Const Configuration Set.Components(8).Components(1) [41], Pub_Sub_Husqvarna_Const Configuration Set.Components(8).Components(2) [43]]

Tabella 28. Pub_Sub_Husqvarna_Const Configuration Set.Components [29](9)

Property	Value
Description	Simulink Coverage Configuration Component
Components	
Name	Simulink Coverage
CovEnable	off
CovScope	EntireSystem
CovIncludeTopModel	on
RecordCoverage	off
CovPath	/
CovSaveName	covdata
CovCompData	
CovMetricSettings	dwe
CovFilter	
CovHTMLOptions	
CovNameIncrementing	off
CovHtmlReporting	off

CovForceBlockReductionOff	on
CovEnableCumulative	on
CovSaveCumulativeToWorkspaceVar	off
CovSaveSingleToWorkspaceVar	off
CovCumulativeVarName	covCumulativeData
CovCumulativeReport	off
CovSaveOutputData	on
CovOutputDir	slcov_output/\$ModelName\$
CovDataFileName	\$ModelName\$_cvdata
CovShowResultsExplorer	on
CovReportOnPause	on
CovModelRefEnable	off
CovModelRefExcluded	
CovExternalEMLEnable	on
CovSFcnEnable	on
CovBoundaryAbsTol	1.0000e-05
CovBoundaryRelTol	0.0100
CovUseTimeInterval	off
CovStartTime	0
CovStopTime	0
CovMetricStructuralLevel	Decision
CovMetricLookupTable	off
CovMetricSignalRange	off
CovMetricSignalSize	off
CovMetricObjectiveConstraint	off
CovMetricSaturateOnIntegerOverflow	off
CovMetricRelationalBoundary	off
CovLogicBlockShortCircuit	off
CovUnsupportedBlockWarning	on
CovHighlightResults	off
CovMcdcMode	Masking

Tabella 29. Pub_Sub_Husqvarna_Const Configuration Set.Components(8) [38].CodeCoverageSettings

Property	Value
TopModelCoverage	off
ReferencedModelCoverage	off
CoverageTool	None

Tabella 30. Pub_Sub_Husqvarna_Const Configuration Set.Components(8).Components [40](1)

Property	Value
Name	Code Appearance
Description	
Components	
ForceParamTrailComments	off
GenerateComments	on
CommentStyle	Auto
IgnoreCustomStorageClasses	on
IgnoreTestpoints	off
IncHierarchyInIds	off
MaxIdLength	31
PreserveName	off
PreserveNameWithParent	off
ShowEliminatedStatement	off
OperatorAnnotations	off
IncAutoGenComments	off
SimulinkDataObjDesc	off
SFDataObjDesc	off
MATLABFcnDesc	off
IncDataTypeInIds	off
PrefixModelToSubsysFcnNames	on
MangleLength	1
CustomSymbolStr	\$R\$N\$M
CustomSymbolStrGlobalVar	\$R\$N\$M
CustomSymbolStrType	\$N\$R\$M_T
CustomSymbolStrField	\$N\$M
CustomSymbolStrFcn	\$R\$N\$M\$F
CustomSymbolStrSimulinkFcn	\$R\$N
CustomSymbolStrFcnArg	rt\$I\$N\$M
CustomSymbolStrBlkIO	rtb_\$N\$M
CustomSymbolStrTmpVar	\$N\$M
CustomSymbolStrMacro	\$R\$N\$M
CustomSymbolStrUtil	\$N\$C
CustomSymbolStrEmxType	emxArray_\$M\$N
CustomSymbolStrEmxFcn	emx\$M\$N
CustomUserTokenString	
CustomCommentsFcn	

DefineNamingRule	None
DefineNamingFcn	
ParamNamingRule	None
ParamNamingFcn	
SignalNamingRule	None
SignalNamingFcn	
InsertBlockDesc	off
InsertPolySpaceComments	off
SimulinkBlockComments	on
MATLABSourceComments	off
EnableCustomComments	off
InternalIdentifier	Shortened
InlinedPrmAccess	Literals
ReqsInCode	off
UseSimReservedNames	off
ReservedNameArray	

Tabella 31. Pub_Sub_Husqvarna_Const Configuration Set.Components(8).Components [40](2)

Property	Value
Name	Target
Description	
Components	
IsERTTarget	off
TargetFcnLib	ansi_tfl_table_tmw.mat
TargetLibSuffix	
TargetPreCompLibLocation	
GenFloatMathFcnCalls	NOT IN USE
TargetLangStandard	C99 (ISO)
TargetFunctionLibrary	NOT IN USE
CodeReplacementLibrary	None
UtilityFuncGeneration	Auto
ERTMultiwordTypeDef	System defined
MultiwordTypeDef	System defined
ERTMultiwordLength	2048
MultiwordLength	2048
GenerateFullHeader	on
InferredTypesCompatibility	off
ExistingSharedCode	

GenerateSampleERTMain	off
GenerateTestInterfaces	off
ModelReferenceCompliant	on
ParMdlRefBuildCompliant	on
CompOptLevelCompliant	on
ConcurrentExecutionCompliant	on
IncludeMdlTerminateFcn	on
CombineOutputUpdateFcns	on
CombineSignalStateStructs	off
SuppressErrorStatus	off
ERTFirstTimeCompliant	off
IncludeFileDelimiter	Auto
ERTCustomFileBanners	off
SupportAbsoluteTime	on
LogVarNameModifier	rt_
MatFileLogging	on
MultiInstanceERTCode	off
CodeInterfacePackaging	Nonreusable function
SupportNonFinite	on
SupportComplex	on
PurelyIntegerCode	off
SupportContinuousTime	on
SupportNonInlinedSFcns	on
RemoveDisableFunc	off
RemoveResetFunc	off
SupportVariableSizeSignals	off
ParenthesesLevel	Nominal
CastingMode	Nominal
GenerateClassInterface	off
ModelStepFunctionPrototypeControlCompliant	off
CPPClassGenCompliant	on
GRTInterface	off
GenerateAllocFcn	off
UseToolchainInfoCompliant	on
GenerateSharedConstants	on
ExtMode	off
ExtModeStaticAlloc	off
ExtModeTesting	off

System Model Configuration

ExtModeStaticAllocSize	1000000
ExtModeTransport	0
ExtModeMexFile	ext_comm
ExtModeMexArgs	
ExtModeIntrfLevel	Level1
RTWCAPISignals	off
RTWCAPIParams	off
RTWCAPIStates	off
RTWCAPIRootIO	off
GenerateASAP2	off
MultiInstanceErrorCode	Error

Glossary

Atomic Subsystem. A subsystem treated as a unit by an implementation of the design documented in this report. The implementation computes the outputs of all the blocks in the atomic subsystem before computing the next block in the parent system's block execution order (sorted list).

Block Diagram. A Simulink block diagram represents a set of simultaneous equations that relate a system or subsystem's inputs to its outputs as a function of time. Each block in the diagram represents an equation of the form $y = f(t, x, u)$ where t is the current time, u is a block input, y is a block output, and x is a system state (see the Simulink documentation for information on the functions represented by the various types of blocks that make up the diagram). Lines connecting the blocks represent dependencies among the blocks, i.e., inputs whose current values are the outputs of other blocks. An implementation of a design described in this document computes a root or atomic system's outputs at each time step by computing the outputs of the blocks in an order determined by block input/output dependencies.

Block Parameter. A variable that determines the output of a block along with its inputs, for example, the gain parameter of a Gain block.

Block Execution Order. The order in which Simulink evaluates blocks during simulation of a model. The block execution order determined by Simulink ensures that a block executes only after all blocks on whose outputs it depends are executed.

Checksum. A number that indicates whether different versions of a model or atomic subsystem differ functionally or only cosmetically. Different checksums for different versions of the same model or subsystem indicate that the versions differ functionally.

Design Variable. A symbolic (MATLAB) variable or expression used as the value of a block parameter. Design variables allow the behavior of the model to be altered by altering the value of the design variable.

Signal. A block output, so-called because block outputs typically vary with time.

Virtual Subsystem. A subsystem that is purely graphical, i.e., is intended to reduce the visual complexity of the block diagram of which it is a subsystem. An implementation of the design treats the blocks in the subsystem as part of the first nonvirtual ancestor of the virtual subsystem (see Atomic Subsystem).

About this Report

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Report Overview

This report describes the design of the Pub_Sub_Husqvarna_Const system. The report was generated automatically from a Simulink model used to validate the design. It contains the following sections:

Model Version. Specifies information about the version of the model from which this design description was generated. Includes the model checksum, a number that indicates whether different versions of the model differ functionally or only cosmetically. Different checksums for different versions indicate that the versions differ functionally.

Root System. Describes the design's root system.

Subsystems. Describes each of the design's subsystems.

Design Variables. Describes system design variables, i.e., MATLAB variables and expressions used as block parameter values.

System Model Configuration. Lists the configuration parameters, e.g., start and stop time, of the model used to simulate the system described by this report.

Requirements Traceability. Shows design requirements associated with elements of the design model. This section appears only if the design model contains requirements links.

Glossary. Defines Simulink terms used in this report.

Root System Description

This section describes a design's root system. It contains the following sections:

Diagram. Simulink block diagram that represents the algorithm used to compute the root system's outputs.

Description. Description of the root system. This section appears only if the model's root system has a Documentation property or a Doc block.

Interface. Name, data type, width, and other properties of the root system's input and output signals. The number of the block port that outputs the signal appears in angle brackets appended to the signal name. This section appears only if the root system has input or output ports.

Blocks. This section has two subsections:

- **Parameters.** Describes key parameters of blocks in the root system. This section also includes graphical and/or tabular representations of lookup table data used by lookup table blocks, i.e., blocks that use lookup tables to compute their outputs.
- **Block Execution Order.** Order in which blocks must be executed at each time step in order to ensure that each block's inputs are available when it executes.

State Charts. Describes state charts used in the root system. This section appears only if the root system contains Stateflow blocks.

Subsystem Descriptions

This section describes a design's subsystems. Each subsystem description contains the following sections:

Checksum. This section appears only if the subsystem is an atomic subsystem. The checksum indicates whether the version of the model subsystem used to generate this report differs functionally from other versions of the model subsystem. If two model checksums differ, the corresponding versions of the model differ functionally.

Diagram. Simulink block diagram that graphically represents the algorithm used to compute the subsystem's outputs.

Description. Description of the subsystem. This section appears only if the subsystem has a Documentation property or contains a Doc block.

Interface. Name, data type, width, and other properties of the subsystem's input and output signals. The number of the block port that outputs the signal appears in angle brackets appended to the signal name. This section appears only if the subsystem is atomic and has input or output ports.

Blocks. Blocks that this subsystem contains. This section has two subsections:

- **Parameters.** Key parameters of blocks in the subsystem. This section also includes graphical and/or tabular representations of lookup table data used by lookup table blocks, blocks that use lookup tables to compute their outputs.
- **Block Execution Order.** Order in which the subsystem's blocks must be executed at each time step in order to ensure that each block's inputs are available when the block executes. This section appears only if the subsystem is atomic. Note: in Acrobat(PDF) reports, the number in square brackets next to the block name is a hyperlink to the block parameter table. The number has no model significance.

State Charts. Describes state charts used in the subsystem. This section appears only if the root system contains Stateflow blocks.

State Chart Descriptions

This section describes the state machines used by Stateflow blocks to compute their outputs, i.e., Stateflow blocks. Each state machine description contains the following sections:

Chart. Diagram representing the state machine.

States. Describes the state machine's states. Each state description includes the state's diagram and diagrams and/or descriptions of graphical functions, Simulink functions, truth tables, and MATLAB functions parented by the state.

Transitions. Transitions between the state machine's states. Each transition description specifies the values of key transition properties. Appears only if a transition has properties that do not appear on the chart.

Junctions. Transition junctions. Each junction description specifies the values of key junction properties. Appears only if a junction has properties that do not appear on the chart.

Events. Events that trigger state transitions. Each event description specifies the values of key event properties.

Data. Data types and other properties of the Stateflow block's inputs, outputs, and other state machine data.

Targets. Executable implementations of the state machine used to compute the outputs of the corresponding Stateflow block.

MATLAB Supporting Functions. List of functions invoked by MATLAB functions defined in the chart.