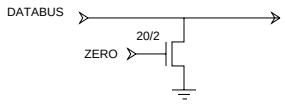
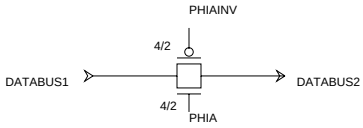
zero Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
ZERO	DATABUS		0.10	N/A	0.00	N/A	0.62
			0.50	N/A	0.62	N/A	1.23
			1.00	N/A	1.08	N/A	1.89
			2.50	N/A	2.31	N/A	4.13

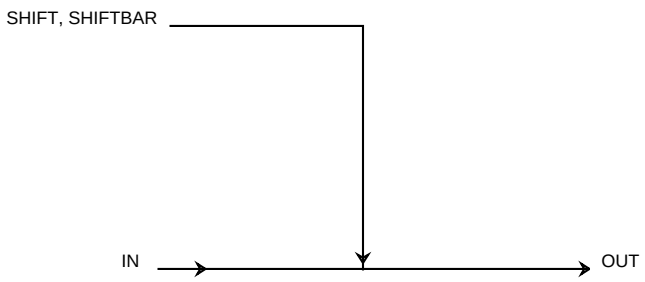


zero

xfer_gate Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
PHIA/INV	DATABUS2		0.10	0.84	0.64	2.27	1.35
			0.50	2.34	1.91	7.65	3.90
			1.00	4.29	3.48	14.72	7.37
			2.50	10.17	8.20	36.21	18.10



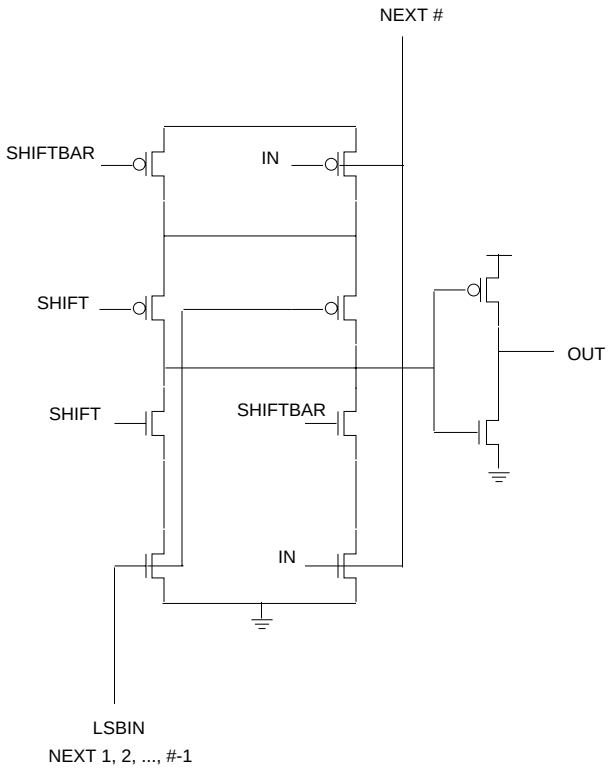
xfer_gate



where

#=1, 2, 4, 8, or 16

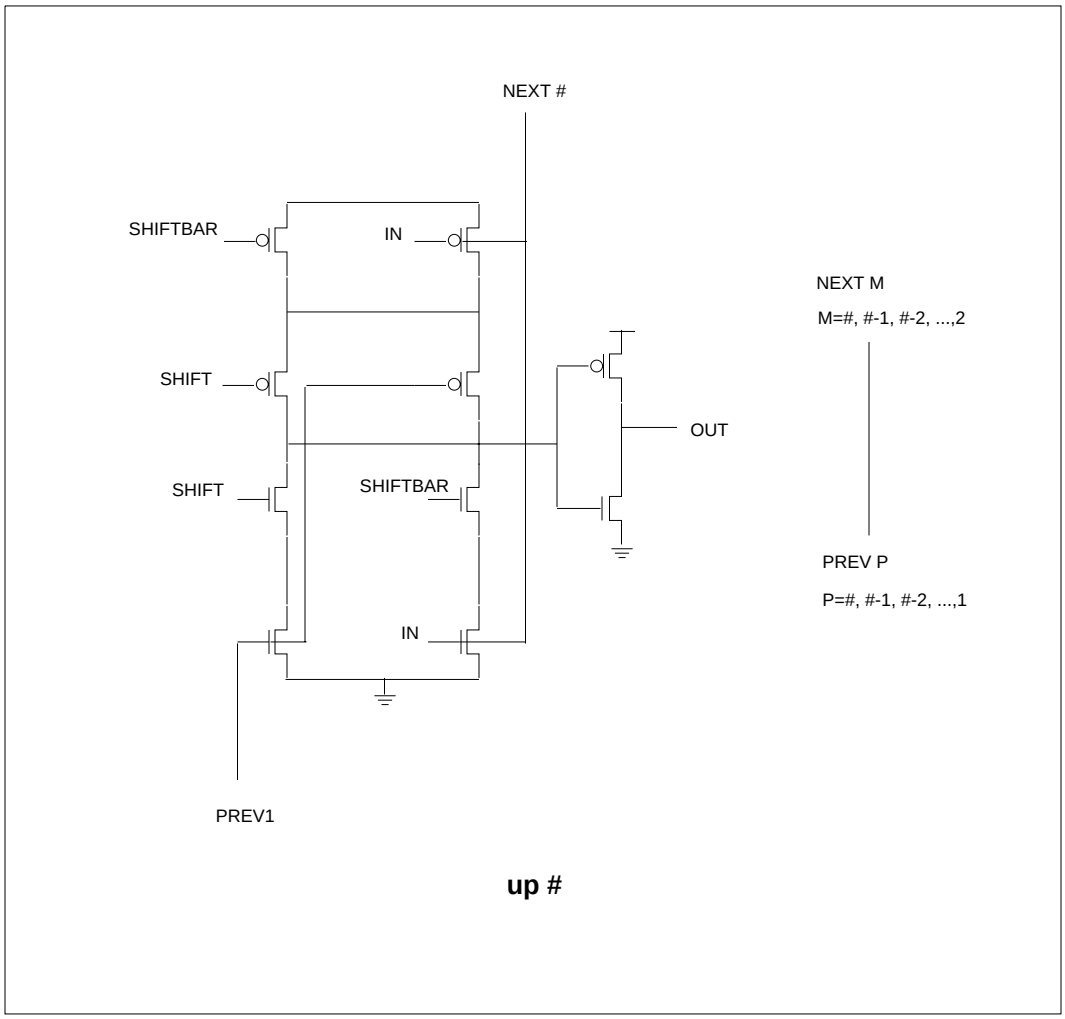
up#msb



where
#=1, 2, 4, 8, or 16

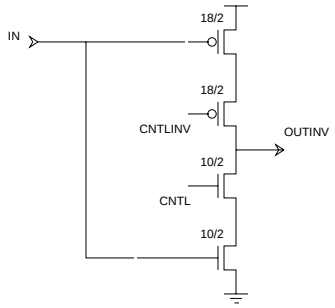
up#lsb

Leafcell Propagation Delays							
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl (ns)	Tlh (ns)	Thl (ns)
IN	OUT	SHIFT=0, SHIFTBAR=1	0.1	1.45	1.55	1.55	1.09
			0.5	2.91	2.61	4.49	3.29
			1.0	4.71	3.84	8.37	5.72
			2.5	9.89	7.34	20.59	11.80
PREV	OUT	SHIFT=1, SHIFTBAR=0	0.1	1.27	1.25	1.43	1.26
			0.5	2.68	2.34	4.51	3.19
			1.0	4.47	3.51	8.43	5.57
			2.5	9.67	7.06	20.52	11.85
SHIFT	OUT	IN=1, PREV=0	0.1	1.51	1.33	1.61	1.25
			0.5	2.95	2.43	4.47	3.21
			1.0	4.75	3.62	8.35	5.62
			2.5	9.92	7.14	20.59	11.83
SHIFT	OUT	IN=0, PREV=1	0.1	1.27	1.25	1.43	1.27
			0.5	2.69	2.34	4.51	3.21
			1.0	4.48	3.52	8.42	5.59
			2.5	9.68	7.07	20.52	11.85


NEXT #
SHIFTBAR
IN
NEXT M
M=#, #-1, #-2, ...,2
SHIFT
OUT
SHIFT
SHIFTBAR
PREV P
P=#, #-1, #-2, ...,1
IN
PREV1

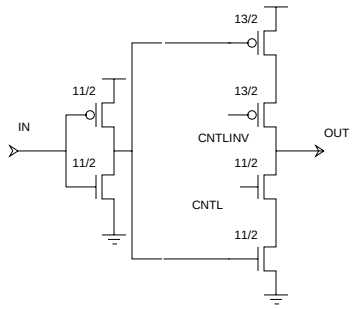
up #

Leaf cell Propagation Delays					
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl
*** SAMPLE TABLE FORMAT *** IN	OUTINV	CNIL=1, CNILINV=0	0.1	1.00	
			0.5	2.29	
			1.0	4.06	
			2.5	9.32	
CNIL, CNILINV	OUTINV		0.1	0.71	
			0.5	2.07	
			1.0	3.87	
			2.5	9.17	

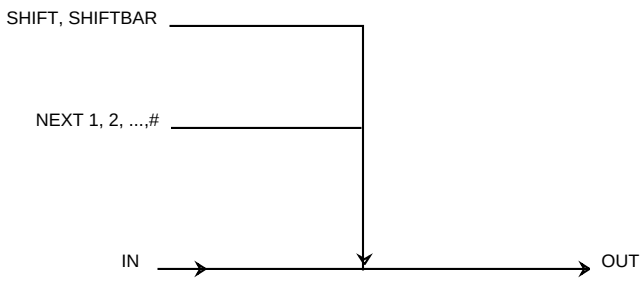


trist_inverter

Leafcell Propagation Delays							
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl (ns)	Tlh (ns)	Thl (ns)
IN	OUT	CNIL=1, CNILINV=0	0.1	1.28	1.01	2.16	1.37
			0.5	2.84	1.90	6.29	2.95
			1.0	5.23	3.04	11.92	5.36
			2.5	12.33	6.60	28.34	13.40
CNIL, CNILINV	OUT		0.1	0.83	0.46	2.15	1.49
			0.5	2.72	1.42	6.32	3.05
			1.0	5.10	2.59	11.94	5.21
			2.5	12.18	6.04	28.29	13.43



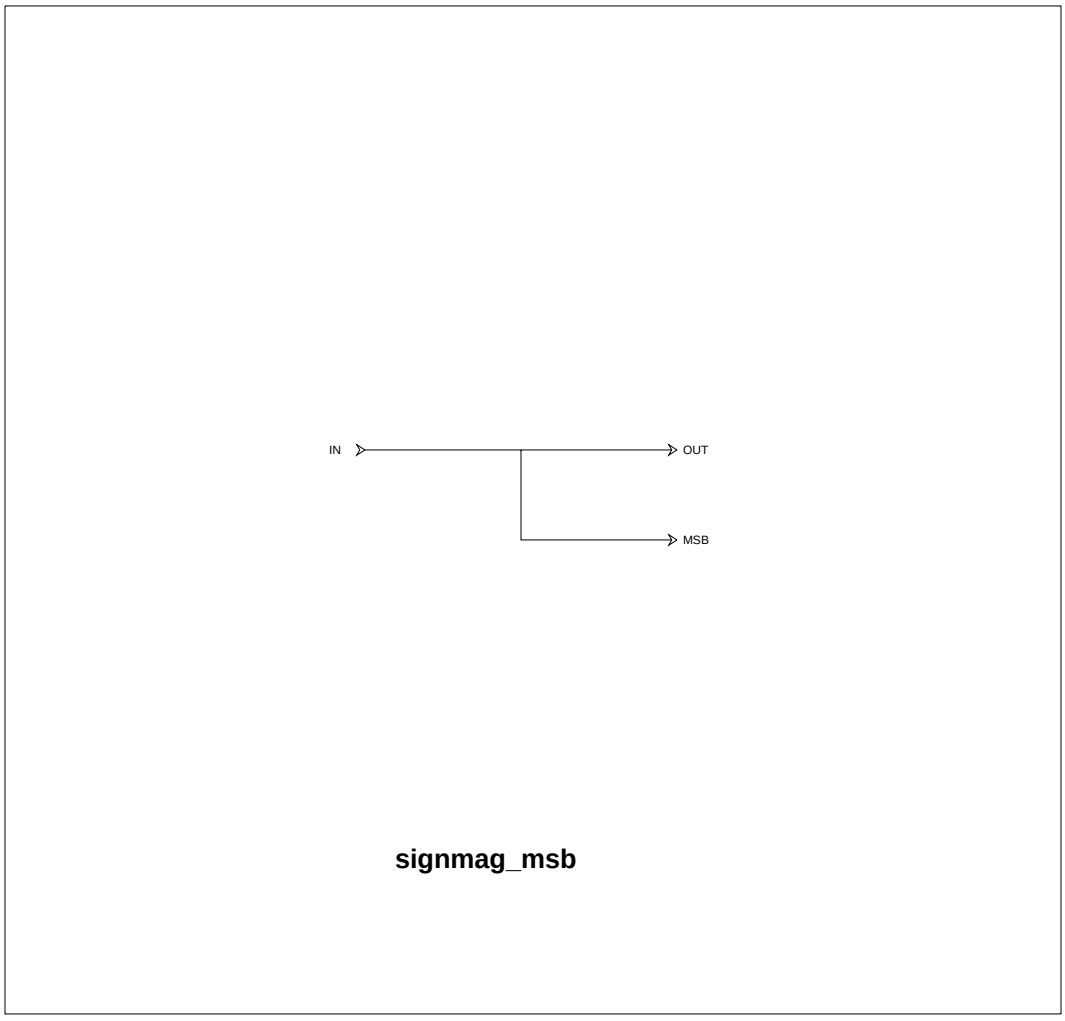
trist_buffer



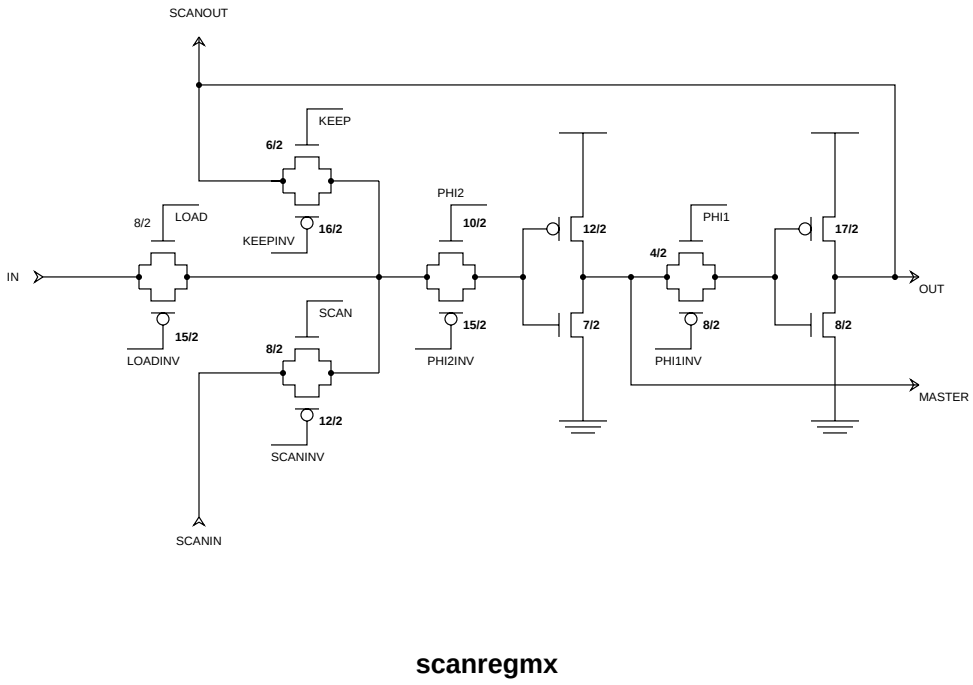
where

#=1, 2, 4, 8, or 16

sxdown#msb

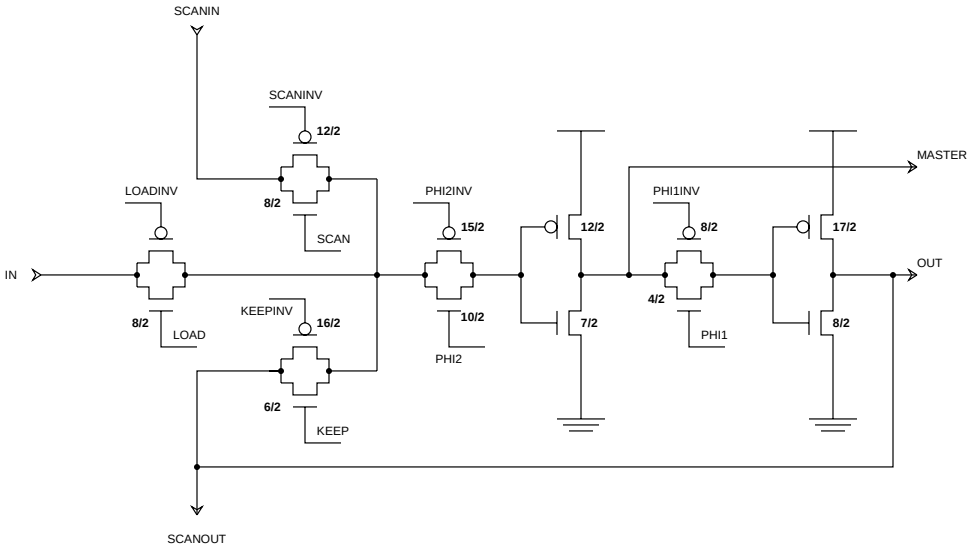

IN
OUT
MSB
signmag_msb

scanregmx Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
LOAD/	OUT	PHI2=1 PHI2INV=0	0.10	1.82	1.90	1.21	1.22
LOADINV		PHI1=1 PHI1INV=0	0.50	2.55	2.79	2.61	2.59
		NO CAP AT MASTER	1.00	3.44	3.80	4.64	4.43
			2.50	6.13	6.86	10.90	10.25
	MASTER			1.07	1.10	1.49	1.28
PHI1	OUT	PHI2=1 PHI2INV=0	0.10	0.87	1.12	1.25	1.22
		LOAD=1 LOADINV=0	0.50	1.64	1.96	2.68	2.58
		NO CAP AT MASTER	1.00	2.53	2.98	4.65	4.39
			2.50	5.23	6.02	10.90	10.25
PHI2/	OUT	PHI1=1 PHI1INV=0	0.10	0.60	1.38	1.72	1.20
PHI2INV	V(2)	LOAD=1 LOADINV=0	0.50	1.30	2.28	2.93	2.58
		NO CAP AT MASTER	1.00	2.12	3.30	4.86	4.43
			2.50	4.73	6.35	10.94	10.25
	MASTER			0.54	-0.19	1.45	4.71
LOAD/	OUT	PHI2=1 PHI2INV=0	0.10	2.16	2.26	1.33	1.38
LOADINV	V(2)	PHI1=1 PHI1INV=0	0.50	2.93	3.19	2.72	2.72
	V(2)	CAP AT MASTER=.1PF	1.00	3.82	4.23	4.71	4.53
	V(2)		2.50	6.50	7.28	10.91	10.30
	MASTER			1.35	1.37	1.94	1.68
PHI1/	OUT	PHI2=1 PHI2INV=0	0.10	0.86	1.07	1.25	1.22
PHI1INV		LOAD=1 LOADINV=0	0.50	1.64	1.94	2.69	2.61
		CAP AT MASTER=.1PF	1.00	2.53	2.97	4.66	4.42
			2.50	5.23	6.02	10.90	10.26
PHI2/	OUT	PHI1=1 PHI1INV=0	0.10	0.83	1.75	1.47	1.36
PHI2INV		LOAD=1 LOADINV=0	0.50	1.59	2.67	2.96	2.71
		CAP AT MASTER=.1PF	1.00	2.44	3.67	4.82	4.52
			2.50	5.07	6.75	10.94	10.30
	MASTER			0.82	0.08	1.92	4.97
Note: Scan and Keep passgates are off in all simulations							


SCANOUT
KEEP
6/2
PHI2
8/2
LOAD
KEEPINV
16/2
10/2
12/2
PHI1
17/2
4/2
IN
OUT
SCAN
15/2
15/2
7/2
8/2
8/2
LOADINV
PHI2INV
PHI1INV
MASTER
12/2
SCANINV
SCANIN

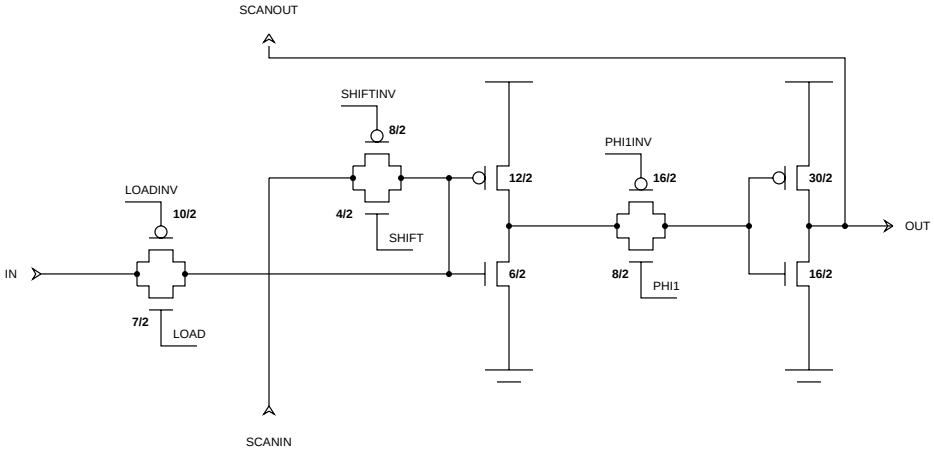
scanregmx

scanreg Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
LOAD/	OUT	PHI1=1 PHI1INV=0	0.10	1.90	1.85	1.30	1.24
LOADINV		PHI2=1 PHI2INV=0	0.50	2.81	2.73	3.20	2.56
		NO CAP AT MASTER	1.00	3.93	3.74	5.80	4.42
			2.50	7.35	6.79	13.74	10.24
	MASTER			1.05	1.10	1.46	1.27
PHI1/	OUT	PHI2=1 PHI2INV=0	0.10	0.96	1.02	1.42	1.19
PHI1INV		LOAD=1 LOADINV=0	0.50	1.88	1.89	3.25	2.58
		NO CAP AT MASTER	1.00	3.01	2.91	5.80	4.38
			2.50	6.43	5.96	13.75	10.24
PHI2/	OUT	PHI1=1 PHI1INV=0	0.10	0.75	1.34	1.62	1.24
PHI2INV		LOAD=1 LOADINV=0	0.50	1.62	2.23	3.48	2.55
		NO CAP AT MASTER	1.00	2.68	3.25	5.91	4.41
			2.50	6.00	6.30	13.76	10.25
	MASTER			0.54	-0.14	1.41	4.76
LOAD/	OUT	PHI2=1 PHI2INV=0	0.10	2.26	2.19	1.42	1.37
LOADINV		PHI1=1 PHI1INV=0	0.50	3.20	3.13	3.30	2.70
		CAP AT MASTER=.1PF	1.00	4.32	4.17	5.84	4.51
			2.50	7.73	7.21	13.76	10.28
	MASTER			1.34	1.37	1.91	1.67
PHI1/	OUT	PHI2=1 PHI2INV=0	0.10	0.94	0.98	1.43	1.18
PHI1INV		LOAD=1 LOADINV=0	0.50	1.88	1.88	3.26	2.60
		CAP AT MASTER=.1PF	1.00	3.00	2.91	5.81	4.41
			2.50	6.43	5.96	13.75	10.26
PHI2/	OUT	PHI1=1 PHI1INV=0	0.10	1.03	1.68	1.69	1.35
PHI2INV		LOAD=1 LOADINV=0	0.50	1.92	2.61	3.41	2.68
		CAP AT MASTER=.1PF	1.00	2.99	3.64	5.94	4.51
			2.50	6.34	6.69	13.77	10.29
	MASTER			0.81	0.11	1.89	5.01
Note: Scan and Keep passgates are off in all simulations							


SCANIN
SCANINV
12/2
8/2
SCAN
LOADINV
IN
8/2
LOAD
KEEPINV
16/2
6/2
KEEP
SCANOUT
PHI2INV
15/2
10/2
PHI2
12/2
7/2
PHI1INV
8/2
4/2
PHI1
MASTER
17/2
8/2
OUT

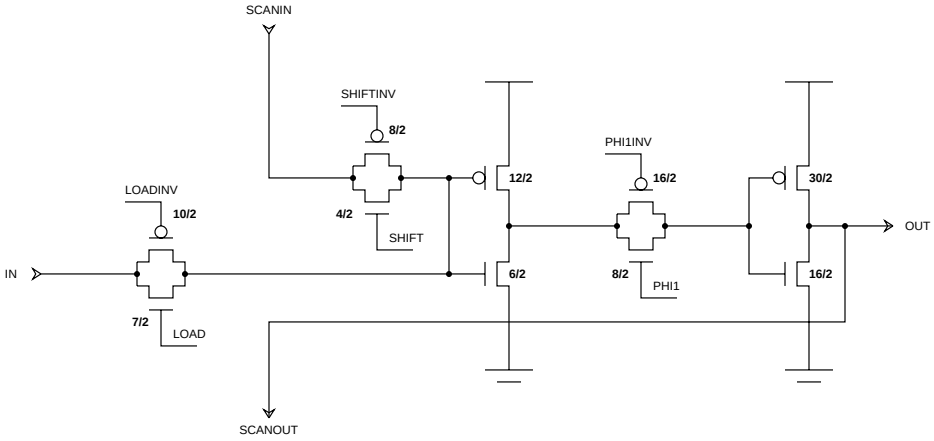
scanreg

scannslatchmx Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
SHIFT/	OUT	SCANIN=1 (L-H)	0.10	1.44	1.35	0.75	0.71
SHIFTINV		SCANIN=0 (H-L)	0.50	1.96	1.88	1.77	1.43
		LOAD=0 LOADINV=1 IN=0	1.00	2.56	2.43	3.13	2.36
		PHI1=1 PHI1INV=0	2.50	4.36	3.98	7.34	5.25
PHI1/	OUT	SCANIN=1 (L-H)	0.10	0.76	0.84	0.76	0.75
PHI1INV		SCANIN=0 (H-L)	0.50	1.28	1.36	1.77	1.46
		LOAD=0 LOADINV=1 IN=0	1.00	1.88	1.91	3.13	2.37
		SHIFT=1 SHIFTINV=0	2.50	3.67	3.46	7.34	5.25



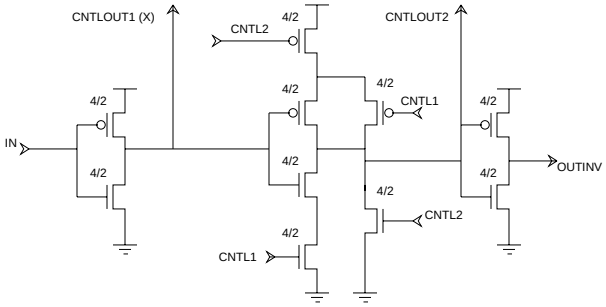
scanmslatchmx

scanmslatch Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
SHIFT/	OUT	LOADINV=1 LOAD=0 IN=0	0.10	1.42	1.39	0.72	0.73
SHIFTINV		SCANIN=1 (L-H)	0.50	1.90	1.91	1.63	1.45
		SCANIN=0 (H-L)	1.00	2.44	2.47	2.82	2.38
		PHI1=0 PHI1INV=1	2.50	4.03	4.02	6.56	5.26
PHI1/	OUT	LOADINV=1 LOAD=0 IN=0	0.10	0.76	0.90	0.74	0.77
PHI1INV		SCANIN=1 (L-H)	0.50	1.22	1.41	1.63	1.47
		SCANIN=0 (H-L)	1.00	1.76	1.96	2.82	2.39
		SHIFT=1 SHIFTINV=0	2.50	3.35	3.51	6.56	5.26



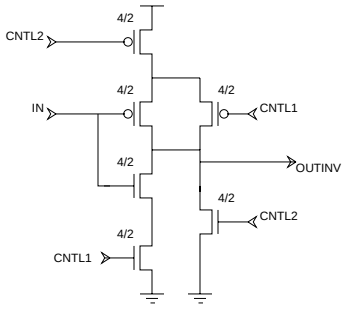
scanmslatch

saturator_nsb Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN	OUTINV	CNIL1=1, CNIL2=0	0.10	5.09	4.98	4.54	4.11
			0.50	16.60	16.18	12.25	10.52
			1.00	30.71	30.42	21.80	18.17
			2.50	71.07	73.22	53.08	42.58
	CNILOUT1	CNIL1=1, CNIL2=0	0.10	1.51	0.92	2.87	1.57
			0.50	4.66	2.57	10.14	5.20
			1.00	8.55	4.68	19.07	9.00
			2.50	20.19	10.90	45.92	20.68
	CNILOUT2	CNIL1=1, CNIL2=0	0.10	3.63	3.06	5.77	3.49
			0.50	11.93	10.20	20.09	10.85
			1.00	22.26	18.71	37.51	18.68
			2.50	53.09	41.94	90.00	43.75
CNIL1	OUTINV	IN=0, CNIL2=0	0.10	3.08	4.12	3.51	3.44
			0.50	10.20	12.91	11.72	10.47
			1.00	18.90	24.34	21.48	18.16
			2.50	45.18	58.48	51.27	43.00
	CNILOUT2	IN=0, CNIL2=0	0.10	2.89	1.36	6.53	2.57
			0.50	8.82	3.95	19.85	8.27
			1.00	16.19	7.20	37.16	14.50
			2.50	38.37	16.96	88.86	34.56
CNIL2	OUTINV	IN=0, CNIL1=0	0.10	2.46	4.24	2.66	3.42
			0.50	8.35	13.06	10.68	10.45
			1.00	15.12	24.49	19.83	18.18
			2.50	35.90	58.69	48.13	42.85
	CNILOUT2	IN=0, CNIL1=0	0.10	2.99	1.06	6.54	1.94
			0.50	8.96	2.71	19.83	5.52
			1.00	16.34	4.82	37.17	9.28
			2.50	38.55	11.02	88.85	20.90



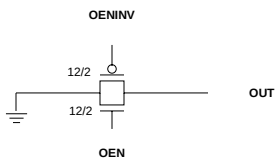
saturator_msb

saturator Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN, CNIL1	OUTINV	CNIL1=0, CNIL2=0	0.10	2.76	1.30	5.76	2.30
			0.50	8.71	3.89	19.45	8.08
			1.00	16.07	7.14	36.70	14.29
			2.50	38.26	16.90	88.36	34.42
CNIL2	OUTINV	IN=0, CNIL1=0	0.10	2.14	1.03	4.51	1.78
			0.50	6.70	2.68	14.70	5.39
			1.00	12.27	4.79	27.37	9.17
			2.50	28.96	11.00	66.15	20.80



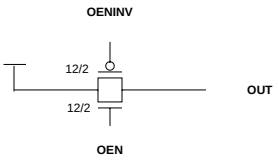
saturator

Leafcell Propagation Delays							
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl (ns)	Tlh (ns)	Thl (ns)
OEN, OENNV	OUT		0.1	N/A	0.30	N/A	1.33
			0.5	N/A	0.83	N/A	1.91
			1.0	N/A	1.35	N/A	2.98
			2.5	N/A	2.91	N/A	6.98



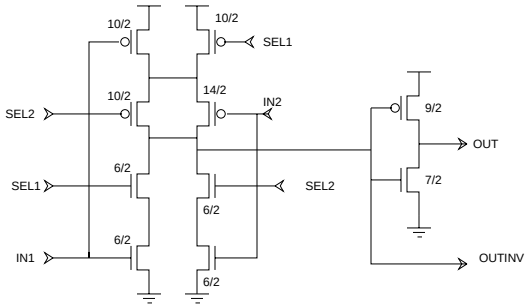
regzero

Leafcell Propagation Delays							
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl (ns)	Tlh (ns)	Thl (ns)
CEN, CENNW	OUT		0.1	0.46		1.58	
			0.5	1.03		3.16	
			1.0	1.64		5.33	
			2.5	3.48		12.03	



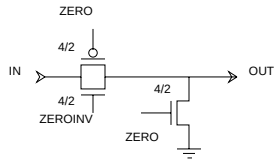
regone

mux2to1 Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN1, SEL1	OUT	IN2=0, SEL1=1, SEL2=0	0.10	2.25	1.86	2.09	1.65
			0.50	6.36	5.24	6.83	5.58
			1.00	11.23	9.47	11.84	8.55
			2.50	25.75	21.92	25.71	18.62
	OUTINV	IN2=0, SEL1=1, SEL2=0	0.10	1.30	1.35	2.57	2.35
			0.50	3.05	3.06	6.78	6.09
			1.00	5.23	5.24	11.55	10.09
			2.50	11.72	11.54	26.49	23.52
IN2, SEL2	OUT	IN1=0, SEL1=0, SEL2=1	0.10	1.96	1.56	1.58	1.19
			0.50	6.03	4.63	6.76	4.95
			1.00	10.83	8.39	11.65	8.42
			2.50	25.38	19.71	25.59	17.68
	OUTINV	IN1=0, SEL1=0, SEL2=1	0.10	1.01	1.10	2.14	2.04
			0.50	2.49	2.78	5.25	5.78
			1.00	4.39	4.96	9.61	9.81
			2.50	9.82	11.26	22.75	23.08


10/2
10/2
SEL1
10/2
14/2
IN2
SEL2
9/2
OUT
6/2
SEL2
7/2
SEL1
6/2
6/2
IN1
OUTINV
6/2

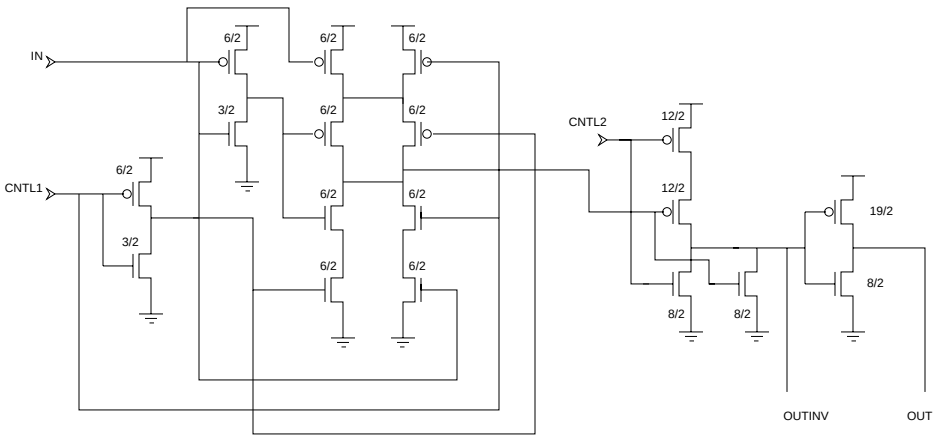
mux2to1

isozero Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
ZERO/	OUT	IN=0 (H-L)	0.10	0.91	0.81	2.22	1.34
ZEROINV		IN=1 (L-H)	0.50	2.37	2.45	7.71	4.26
			1.00	4.30	4.51	14.89	8.24
			2.50	10.14	10.73	36.62	20.24



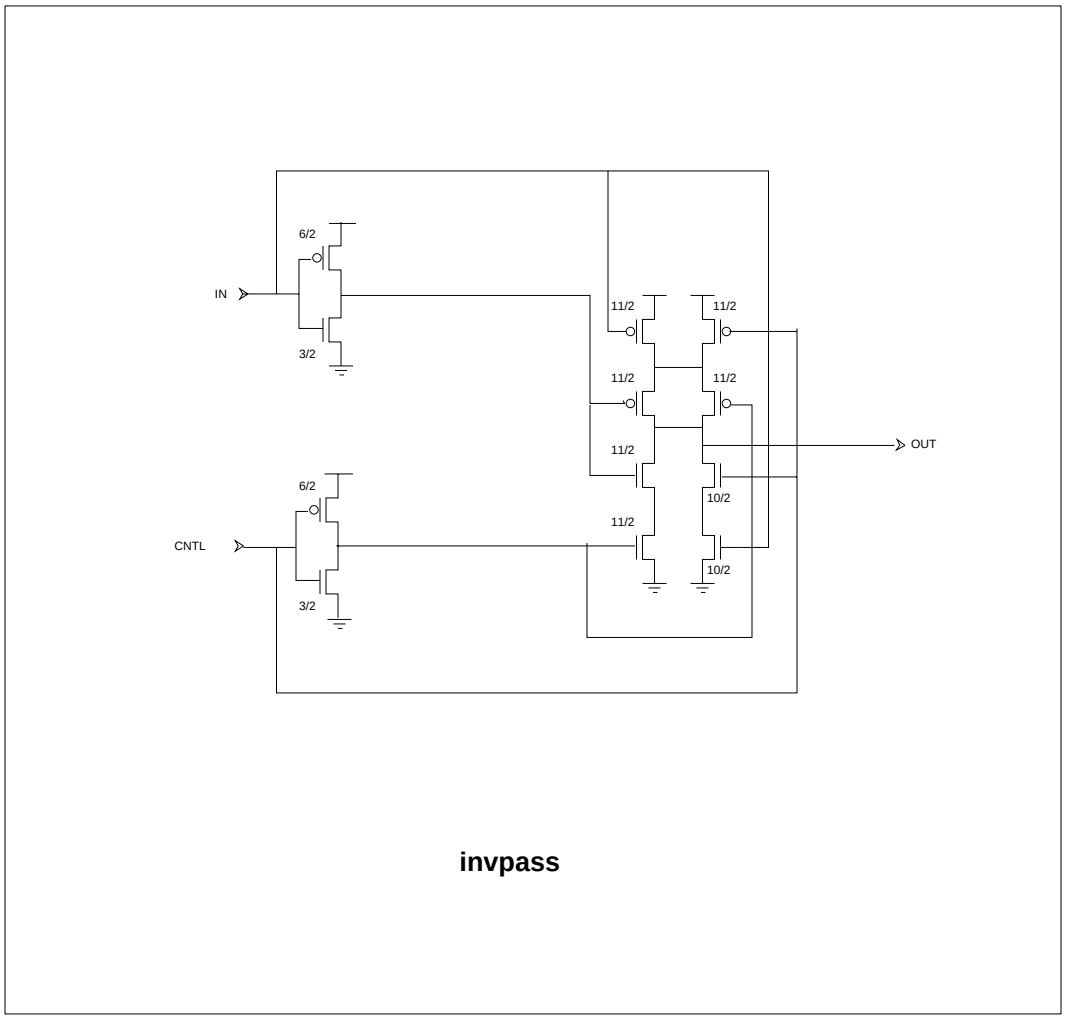
isozero

isoinvzero Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN	OUT	CNIL2=0 CNIL1=1	0.10	2.36	2.38	0.85	1.10
			0.50	4.34	6.02	2.68	3.85
			1.00	6.69	10.59	5.14	7.37
			2.50	13.50	24.28	12.28	17.74
	OUTINV		0.10	1.74	1.94	2.39	1.31
			0.50	3.73	2.93	7.07	2.74
			1.00	6.25	4.02	12.99	4.66
			2.50	13.78	7.08	30.79	10.39
CNIL2	OUT	CNIL1=1 IN=1	0.10	1.07	1.87	0.79	1.10
		Both OUT and	0.50	2.91	5.48	2.64	3.85
		OUTINV loaded	1.00	5.18	10.02	5.11	7.37
			2.50	11.98	23.70	12.28	17.74
	OUTINV		0.10	1.22	0.67	2.44	1.18
			0.50	3.19	1.51	7.06	2.52
			1.00	5.69	2.51	12.98	4.46
			2.50	13.20	5.56	30.80	10.28



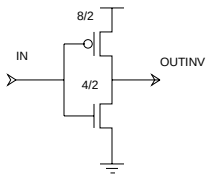
isoinvzero

invpass Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN	OUT	CNIL=1	0.10	1.38	0.66	2.83	1.46
			0.50	3.53	1.60	8.15	3.39
			1.00	6.30	2.77	14.44	5.97
			2.50	14.50	6.23	33.72	13.00
CNIL	OUT	IN=1	0.10	1.37	0.69	2.57	1.48
			0.50	3.55	1.65	7.86	3.41
			1.00	6.32	2.82	14.13	5.72
			2.50	14.52	6.28	33.41	13.00



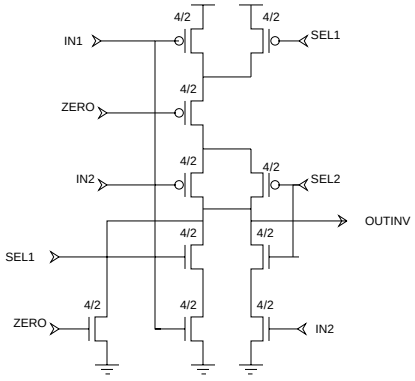
invpass

Leaf cell Propagation Delays							
IN	OUT	Conditions	Load (pF)	Tplh (ns)	Tphl (ns)	Tlh (ns)	Thl (ns)
IN	OUTINV		0.1	0.81	0.81	1.60	1.45
			0.5	2.36	2.49	4.87	4.60
			1.0	4.38	4.40	9.00	8.27
			2.5	10.24	10.79	23.35	20.61



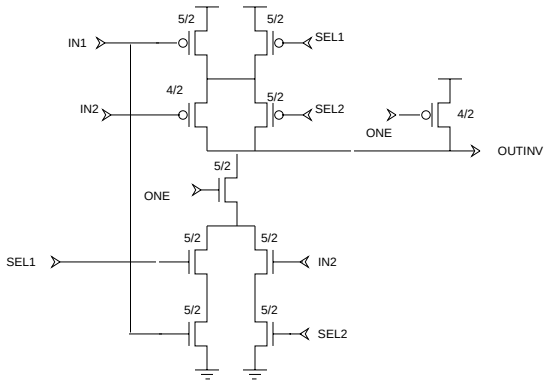
inverter

inv2to1mxzero Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tflh	Thl
IN1, SEL1	OUTINV	IN2=0, SEL1=1, SEL2=0, ZERO=0	0.10	3.34	1.41	7.24	2.74
			0.50	10.69	4.03	23.72	7.91
			1.00	19.73	7.29	45.02	14.63
			2.50	46.89	17.07	109.00	34.66
IN2, SEL2	OUTINV	IN1=0, SEL1=0, SEL2=1, ZERO=0	0.10	3.02	1.20	6.91	2.20
			0.50	10.27	3.78	23.45	7.84
			1.00	19.39	7.03	44.85	14.02
			2.50	46.69	16.78	109.00	34.25
ZERO	OUTINV	IN1=0, IN2=0, SEL1=0, SEL2=0	0.10	2.55	0.96	5.05	1.61
			0.50	8.45	2.62	18.84	4.69
			1.00	15.70	4.73	35.81	9.09
			2.50	37.49	10.94	86.72	20.74



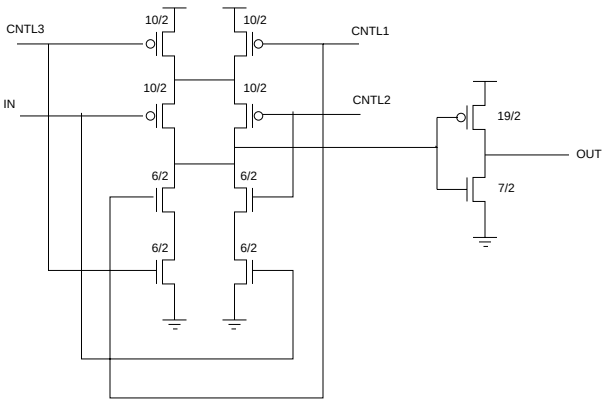
inv2to1muxzero

inv2to1mux one Leaf cell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
IN1, SEL1	OUTINV	IN2=0, SEL1=1, SEL2=0, ONE=1	0.10	2.04	1.56	4.23	3.06
			0.50	5.76	4.43	12.30	9.18
			1.00	10.39	7.99	23.11	16.59
			2.50	24.20	18.53	55.39	39.24
IN2, SEL2	OUTINV	IN1=0, SEL1=0, SEL2=1, ONE=1	0.10	2.04	1.34	4.36	2.61
			0.50	6.27	4.14	13.86	8.83
			1.00	11.57	7.72	25.97	16.26
			2.50	27.33	18.29	62.62	38.91
ONE	OUTINV	IN1=1, IN2=0, SEL1=1, SEL2=0	0.10	1.54	1.47	3.29	3.05
			0.50	4.70	4.31	10.56	9.18
			1.00	8.59	7.86	19.33	16.57
			2.50	20.20	18.42	46.23	39.23



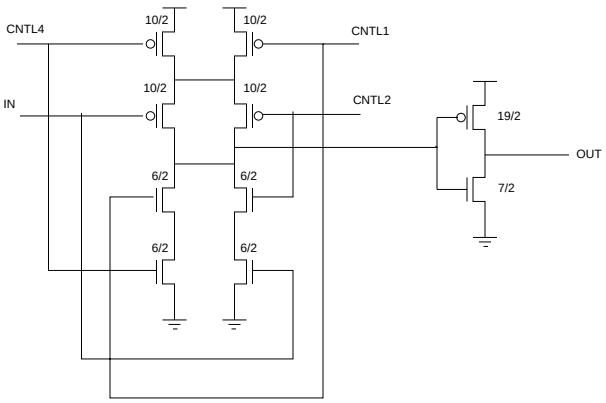
inv2to1muxone

inconmx_other Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
CNIL1/	OUT	IN=0 CNIL4=0	0.10	1.52	1.32	1.25	0.89
CNIL2		CNIL3=1	0.50	2.92	2.36	4.36	2.57
			1.00	4.67	3.50	8.39	4.76
			2.50	9.89	7.02	20.57	11.50
CNIL3	OUT	CNIL1=1 CNIL2=0	0.10	1.55	1.35	1.25	0.89
		CNIL4=0 IN=0	0.50	2.95	2.38	4.37	2.56
			1.00	4.69	3.52	8.39	4.75
			2.50	9.91	7.04	20.56	11.49
IN	OUT	CNIL1=0 CNIL2=1	0.10	1.23	1.08	1.17	0.81
		CNIL3=0 CNIL4=0	0.50	2.63	2.06	4.32	2.48
			1.00	4.37	3.19	8.37	4.70
			2.50	9.60	6.70	20.55	11.48



inconmx_other

inconmx_lsb Leafcell Propagation Delays							
IN	OUT	Conditions	Load	Tplh	Tphl	Tlh	Thl
CNIL1/	OUT	CNIL3=0 CNIL4=1	0.10	1.52	1.32	1.25	0.89
CNIL2		IN=0	0.50	2.92	2.36	4.36	2.57
			1.00	4.67	3.50	8.39	4.76
			2.50	9.89	7.02	20.57	11.50
CNIL4	OUT	CNIL1=1 CNIL2=0	0.10	1.55	1.35	1.25	0.89
		CNIL3=0 IN=0	0.50	2.95	2.38	4.37	2.56
			1.00	4.69	3.52	8.39	4.75
			2.50	9.91	7.04	20.56	11.49
IN	OUT	CNIL1=0 CNIL2=1	0.10	1.23	1.08	1.17	0.81
		CNIL3=0 CNIL4=0	0.50	2.63	2.06	4.32	2.48
			1.00	4.37	3.19	8.37	4.70
			2.50	9.60	6.70	20.55	11.48



inconmx_lsb

Leafcell Circuit Diagrams

This documentation contains the transistor-level circuit diagrams for the leafcells used in the blocks described in the previous sections, as well as simulation results for cell performance under various loading conditions.

In general, the loads chosen were 0.1, 0.5, 1.0, and 2.5 pF, placed at the outputs of the leafcells. Supply voltages were set at 5V; inputs were pulsed between low to high values with 2nsec rise/fall times. In cases where the leafcells are to be cascaded in multiple stages (eg. the adder), output loading was also simulated with the input gate capacitance of the "next" stage.

For the tables, all "Load" values are in pF, all time values are in nsec. The interpretation of the delay values is as follows:

- Tplh: time from 50% at the input (2.5V) to 50% of rise at the output (2.5V)
- Tphl: time from 50% at the input (2.5V) to 50% of fall at the output (2.5V)
- Tlh: time from 10% to 90% rise at the output (.5V to 4.5V)
- Thl: time from 10% to 90% fall at the output (4.5V to .5V)

All simulations were done with the SPICE circuit simulator. The following spice model was used:

```
*
* Typical model
*
.option reltol=.01 abstol=1.0e-8 pivtol=1e-18 vntol=1mv chgtol=1e-11
+ gmin=1e-8 limtim=500 cptime=900 limpts=1000
+ tnom=65 nomod lvltim=1
.width out=80
* remove LDEL and WDEL from models
* and add their values to the L and W of all devices.
*
.model n nmos level=2 vto=0.7 tox=490e-10 nsub=4.5e15 xj=0.35e-6 ld=0.31e-6
+ uo=690 ucrit=0.82e5 uexp=0.16 vmax=5.0e4 neff=4.4 delta=3.6 rsh=22
+ cgso=2.20e-10 cgdo=2.2e-10 cj=90e-6 cjsw=675e-12 mj=0.45 mjsw=0.35 pb=0.60
*+ ldel=-0.1e-6
*+ wdel=-0.90e-6
*
.model p pmos level=2 vto=-0.7 tox=490e-10 nsub=4.3e15 xj=0.10e-6 ld=0.4e-6
+ uo=255 ucrit=0.71e5 uexp=0.28 vmax=3.2e4 neff=2.7 delta=0.95 rsh=86
+ cgso=2.8e-10 cgdo=2.8e-10 cj=195e-6 cjsw=385e-12 mj=0.51 mjsw=0.36 pb=0.70
*+ ldel=-0.1e-6
*+ wdel=-0.90e-6
*
.end
```

LagerIV Datapath Leafcell Library Documentation: Vol II (i-z)

University of California, Berkeley

December 3, 1988

This report documents the datapath leafcells used by datapath blocks described in the block library documentation.