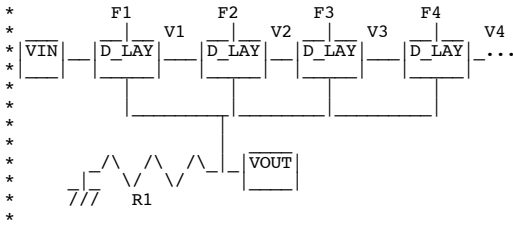


=====FIR_Hilbert_Impulse=====



Defining the impulse response from DC voltages makes the construction of the Hilbert response straight forward.

XZ_DLAY	VIN	VINZ	CLK	Z_DLAY
XS_DLAY1	VINZ	V1	VOUT CLK F17N	S_DLAY
XS_DLAY2	V1	V2	VOUT CLK F16N	S_DLAY
XS_DLAY3	V2	V3	VOUT CLK F15N	S_DLAY
XS_DLAY4	V3	V4	VOUT CLK F14N	S_DLAY
XS_DLAY5	V4	V5	VOUT CLK F13N	S_DLAY
XS_DLAY6	V5	V6	VOUT CLK F12N	S_DLAY
XS_DLAY7	V6	V7	VOUT CLK F11N	S_DLAY
XS_DLAY8	V7	V8	VOUT CLK F10N	S_DLAY
XS_DLAY9	V8	V9	VOUT CLK F9N	S_DLAY
XS_DLAY10	V9	V10	VOUT CLK F8N	S_DLAY
XS_DLAY11	V10	V11	VOUT CLK F7N	S_DLAY
XS_DLAY12	V11	V12	VOUT CLK F6N	S_DLAY
XS_DLAY13	V12	V13	VOUT CLK F5N	S_DLAY
XS_DLAY14	V13	V14	VOUT CLK F4N	S_DLAY
XS_DLAY15	V14	V15	VOUT CLK F3N	S_DLAY
XS_DLAY16	V15	V16	VOUT CLK F2N	S_DLAY
XS_DLAY17	V16	V17	VOUT CLK F1	S_DLAY
XS_DLAY18	V17	V18	VOUT CLK F2	S_DLAY
XS_DLAY19	V18	V19	VOUT CLK F3	S_DLAY
XS_DLAY20	V19	V20	VOUT CLK F4	S_DLAY
XS_DLAY21	V20	V21	VOUT CLK F5	S_DLAY
XS_DLAY22	V21	V22	VOUT CLK F6	S_DLAY
XS_DLAY23	V22	V23	VOUT CLK F7	S_DLAY
XS_DLAY24	V23	V24	VOUT CLK F8	S_DLAY
XS_DLAY25	V24	V25	VOUT CLK F9	S_DLAY
XS_DLAY26	V25	V26	VOUT CLK F10	S_DLAY
XS_DLAY27	V26	V27	VOUT CLK F11	S_DLAY
XS_DLAY28	V27	V28	VOUT CLK F12	S_DLAY
XS_DLAY29	V28	V29	VOUT CLK F13	S_DLAY
XS_DLAY30	V29	V30	VOUT CLK F14	S_DLAY
XS_DLAY31	V30	V31	VOUT CLK F15	S_DLAY
XS_DLAY32	V31	V32	VOUT CLK F16	S_DLAY
XS_DLAY33	V32	V33	VOUT CLK F16	S_DLAY

The DC voltages will follow sort of a $-1/n \cdot \pi$ magnitude for only the odd n terms. In this case the sign term has not been set to be necessarily correct in order to see what that does to the output.

VF1	F1	0	DC	0
VF2	F2	0	DC	+0.318
VF3	F3	0	DC	+0.000
VF4	F4	0	DC	+0.106
VF5	F5	0	DC	+0.000
VF6	F6	0	DC	+0.064
VF7	F7	0	DC	+0.000
VF8	F8	0	DC	+0.045
VF9	F9	0	DC	+0.000
VF10	F10	0	DC	+0.035
VF11	F11	0	DC	+0.000
VF12	F12	0	DC	+0.029
VF13	F13	0	DC	+0.000
VF14	F14	0	DC	+0.025
VF15	F15	0	DC	+0.000
VF16	F16	0	DC	+0.020
VF17	F17	0	DC	+0.000
VF1N	F1N	0	DC	0
VF2N	F2N	0	DC	-0.318
VF3N	F3N	0	DC	-0.000
VF4N	F4N	0	DC	-0.106
VF5N	F5N	0	DC	-0.000
VF6N	F6N	0	DC	-0.064
VF7N	F7N	0	DC	-0.000
VF8N	F8N	0	DC	-0.045
VF9N	F9N	0	DC	-0.000
VF10N	F10N	0	DC	-0.035
VF11N	F11N	0	DC	-0.000
VF12N	F12N	0	DC	-0.029
VF13N	F13N	0	DC	-0.000
VF14N	F14N	0	DC	-0.025
VF15N	F15N	0	DC	-0.000
VF16N	F16N	0	DC	-0.020
VF17N	F17N	0	DC	-0.000

```

*TRAN      TSTEP  TSTOP  TSTART  TMAX  ?UIC?
.tran      30u    1      0      30u   UIC
.control
run
set        pensize = 2
plot      v17      vout
    
```



```
C1      V2      0      1u
B5      V3      0      V =    V(V2)
S2      V3      V4     PE    0      SW
R2      V4      0      100Meg
C2      V4      0      100u
B6      OUT     0      V =    V(V4)
.ENDS   Z_DLAY
```

.end

6.7.11_12.59PM
dsauersanjose@aol.com
Don Sauer