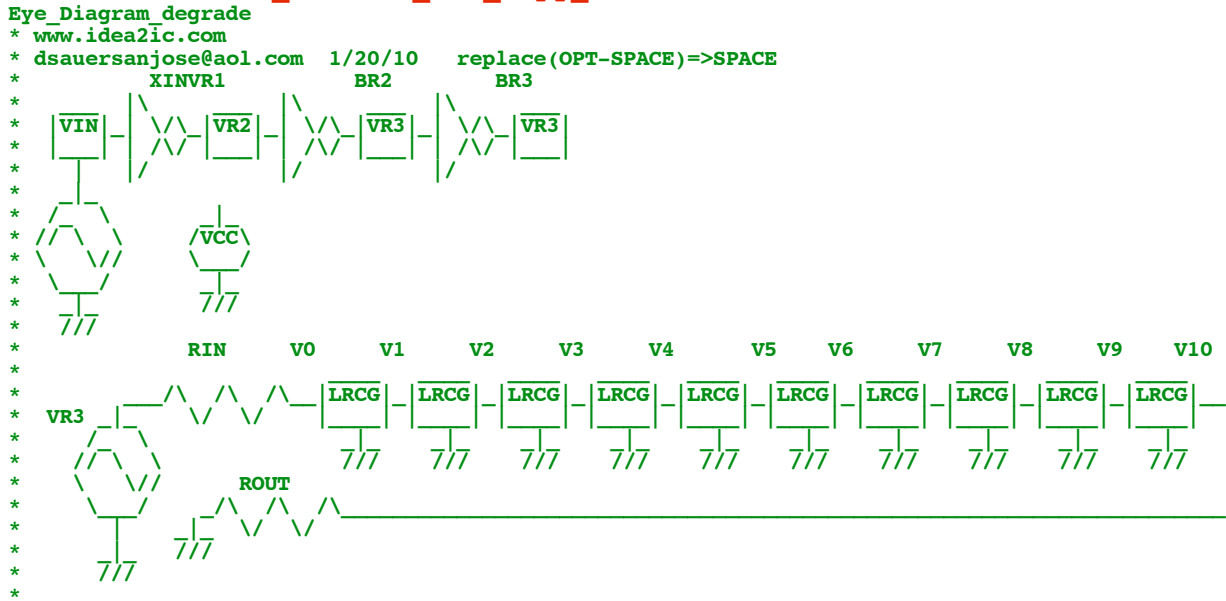






one can still make out the intended transmission. And as long as one can see things in the waveform, it should be possible to apply a high pass filter. But things get a bit more challenging when the time spread out gets greater than two clock cycles.

=====**Full\_Netlist\_For\_Copy\_Paste**=====

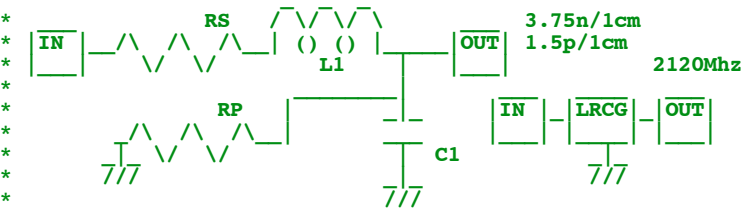


```
.options srcsteps = 1 set gminsteps = 1
*=====Test_Circuit=====
.include PWL_File.inc
Rload OUT 0 1k
V2PI V2PI 0 DC 6.283185307179586
VP VPI 0 DC 3.141592653589793
VT VT 0 PWL ( 0 0 1 1 )
BSAW VSAW 0 V = 2*atan(tan(v(V2PI)*250meg*v(VT)-v(VPI)*.4))/v(VPI)
VCC VCC 0 DC 5V
*V_PULSE NODE_P NODE_N DC VALUE PULSE( VINIT VPULSE TDELAY TRISE TFALL PWIDTH PERIOD )
VIN VIN 0 DC 0 PULSE( 0 5 1p 5p 5p .5n 1n )
VCLK VCLK 0 DC 0 PULSE( 0 5 1p 1p 1p 50p 1n )
B1 V1IN 0 V = u(v(out))
XDFE V1IN VCLK V2IN VCC D_FF
*=====MODEL_Inverters=====
XINVR1 V2IN VR2 VCC INV_B
XINVR2 VR2 VR3 VCC INV_B
C1 VR3 0 5f
*=====MODEL_Cable=====
RIN V2IN V0 50
CIN V0 0 5p
XLRCG0 V0 V1 LRCG
XLRCG1 V1 V2 LRCG
XLRCG2 V2 V3 LRCG
XLRCG3 V3 V4 LRCG
XLRCG4 V4 V5 LRCG
XLRCG5 V5 V6 LRCG
XLRCG6 V6 V7 LRCG
XLRCG7 V7 V8 LRCG
XLRCG8 V8 V9 LRCG
XLRCG9 V9 V10 LRCG
ROUT V10 0 50
*=====Run_Sim=====
.control
*TRAN TSTEP TSTOP TSTART TMAX ?UIC?
tran 1n 50n 0 1n
set pensize = 2
plot vclk out v2in
plot vr3 vsaw
*plot dff:e dff:f dff:f
plot vr3 vs vsaw
plot v10 vs vsaw
plot v0 v5 v10
.endc
*=====LRCG=====
.SUBCKT LRCG IN OUT
```

```

RS      IN    INS  1m
RBP     IN    OUT  200
L1      INS   OUT  12n
C1      OUT   0    4.8p
RP      OUT   0    1meg
.ENDS   LRCG

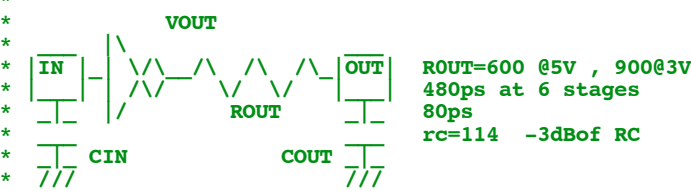
```



```

=====INV_B=====
.SUBCKT  INV_B  IN      OUT      VCC
BINV    VOUT  0        V =      .5*V(VCC)*tanh(-30*(V(IN)-.5*V(VCC))) +.5*V(VCC)
ROUT    VOUT  OUT      300
CIN     IN    0        1f
COUT    OUT  0        190f
.ENDS   INV_B

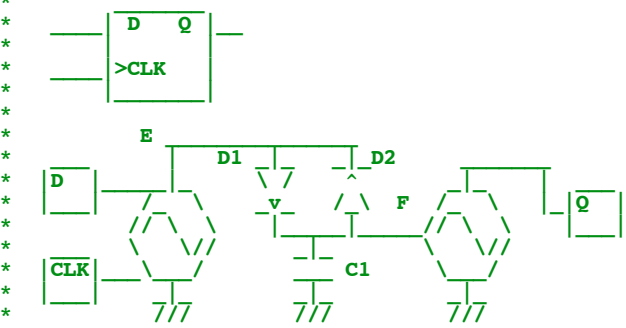
```



```

=====D_FF=====
.SUBCKT  D_FF  D        CLK      Q      VCC
B5      E      0        V =      u( v(CLK)*v(D) -.5) -u( (.9-v(D))*v(CLK)-.5)
D1      E      F        DD
D2      F      E        DD
C1      F      0        .5p
B6      Q      0        V =      v(VCC)*u( v(F) )
.ends

```



```

=====Doide_Models=====
.model  DD          D(IS=3.15e-18 RS=100 CJO=10f )
.end

```

4.11.10\_4.54PM  
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