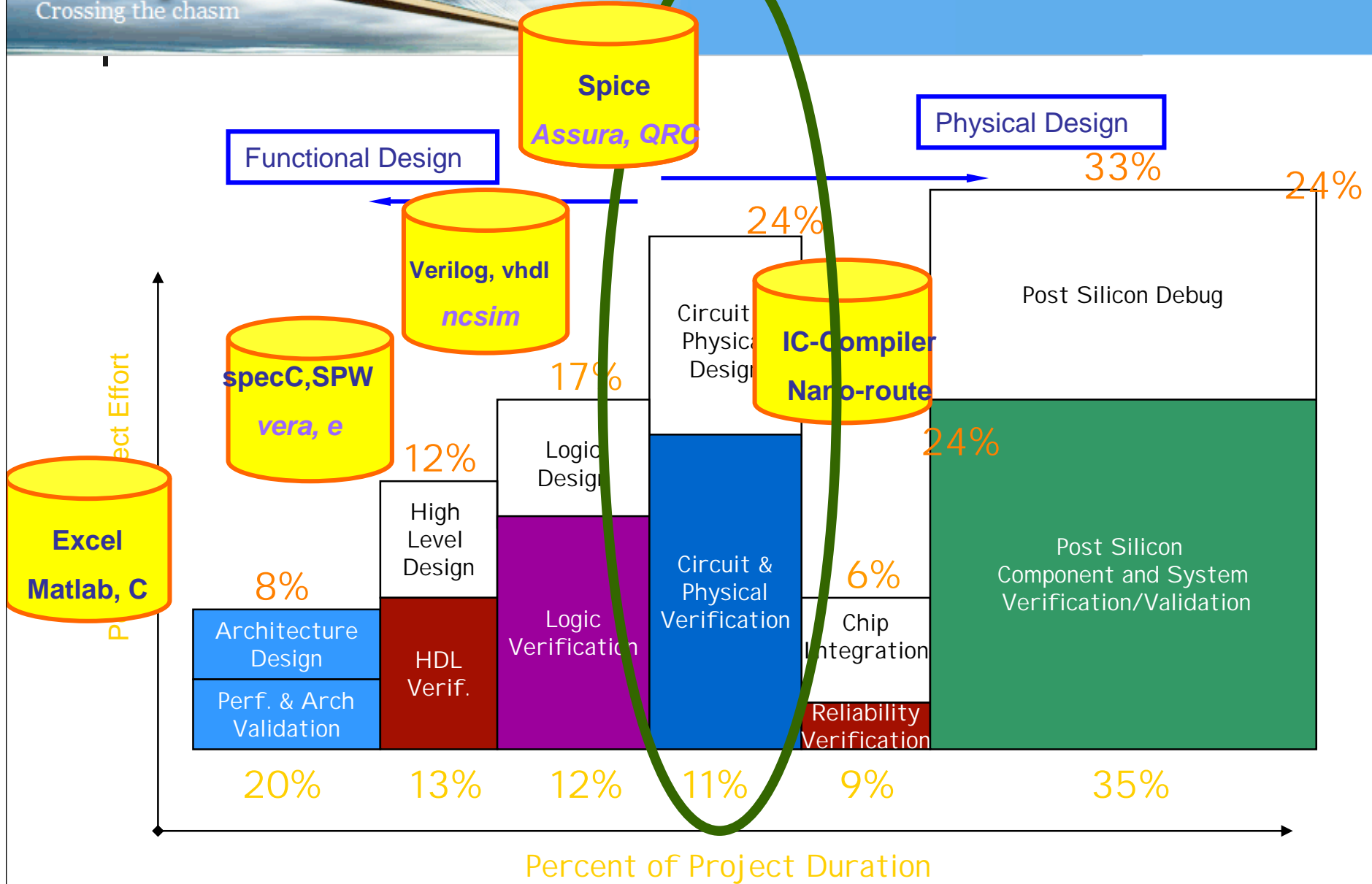
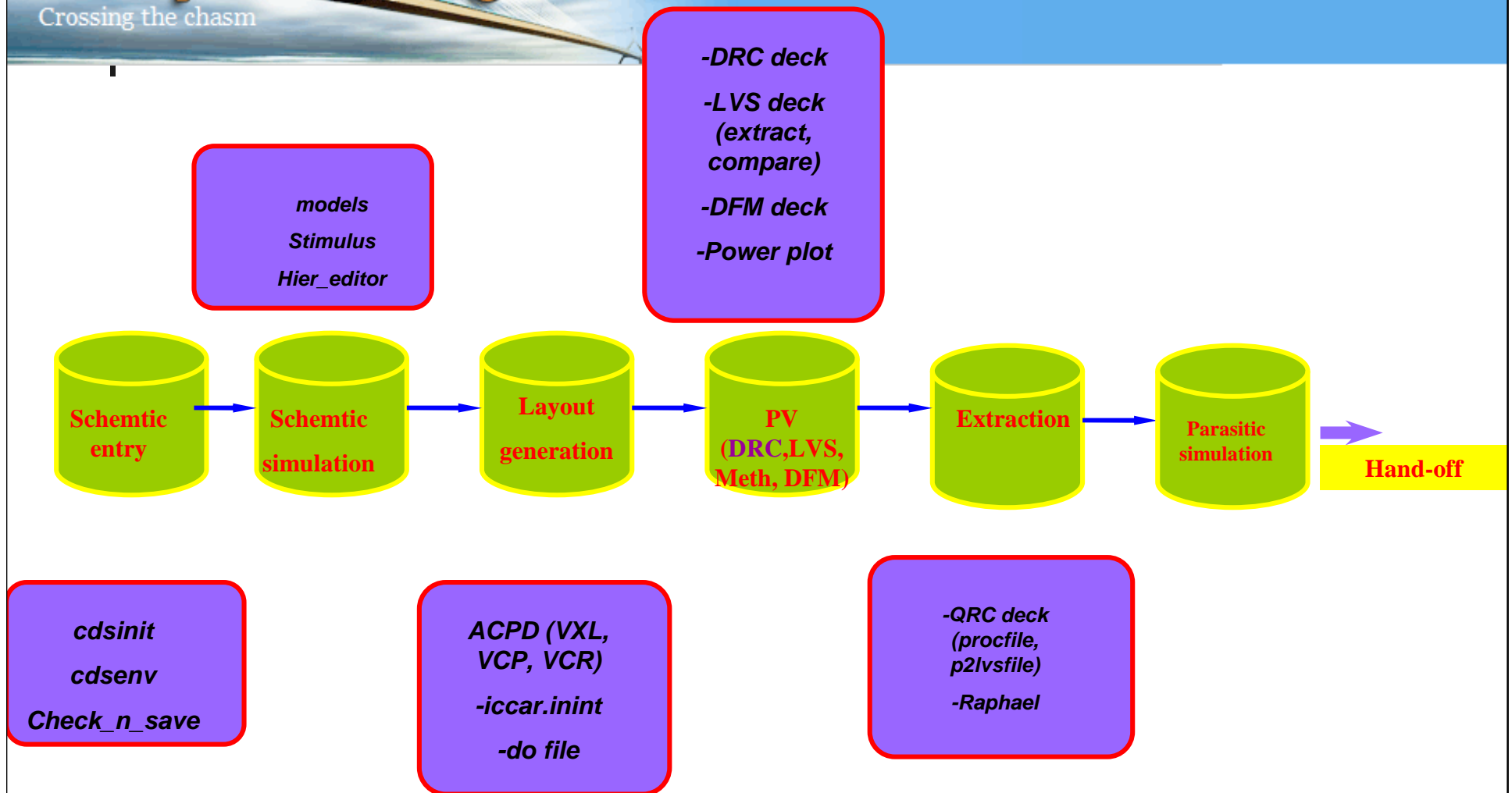


Catalyte IC Design

Crossing the chasm

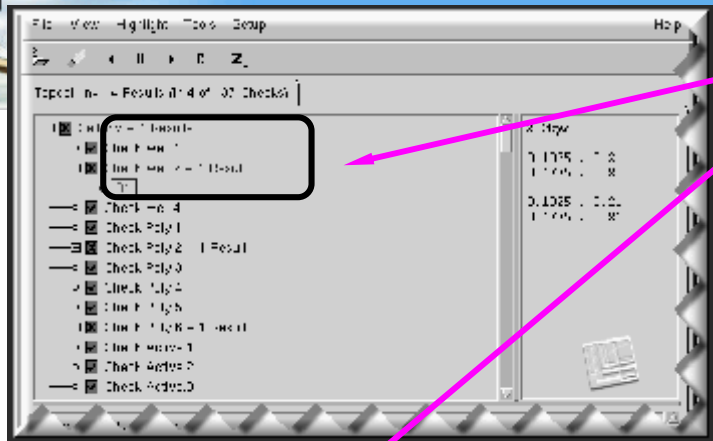
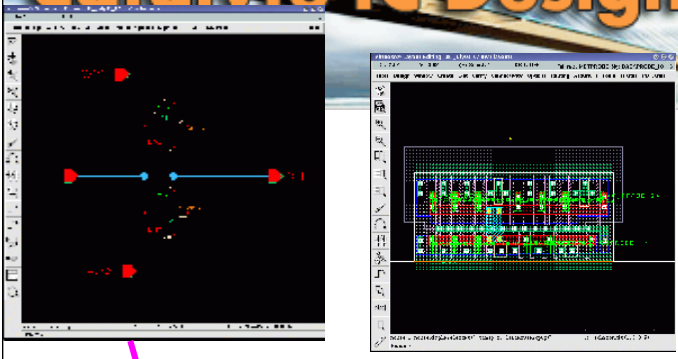
Typical custom Design- As part of SOC design



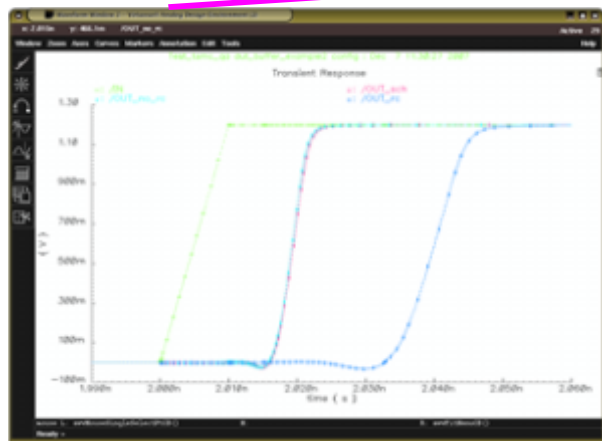
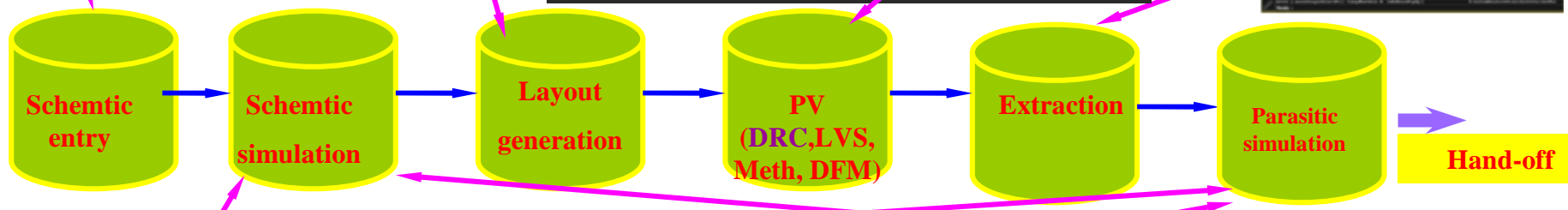
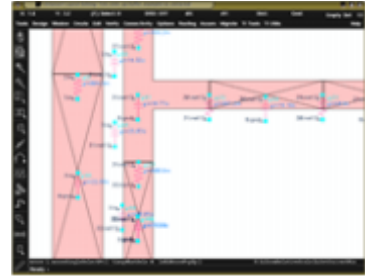


Catalyze IC Design

Circuit and Physical Design Implementation Flow (Phases, Views)



DRC- Nwell spacing violation



Buffer output- schem. Vs parasitic simulation

```

    -Parameter Definition for INV_2
    SUBCKT INV_IG_VDD_VSS_A_Y
    SUBCIRCUIT CALLS
    YoutPMSV_L_1 asC5 AP11 D10B2
    - value=1.24 parameter=1.24 model="DIODE_NSD2_demo4."
    - hdiModel="D_NW" area=1.24
    -----
    TRANSISTOR CARDS
    M1 104 A1G A1G VSSA1 asC5 RCH L_B_02H W_D_47H
    - Finger=0.47 model="RCH_Lay_V_demo4." m=1 hdiModel="RCH" appNum=1.31
    -----
    RESISTOR AND CAP/DIODE CARDS
    Rn1_1 A1L A1R 116.8244 $F01V
    Rn1_2 A1G A1G 30.2751 $F01V
    Rn1_3 A1G A1G 30.2757 $F01V
    Rn1_4 VDD41 VDD42 49.2109 $M1T1
    Rn1_5 VDD42 VDD42 46.8308 $M1T1
    Rn1_6 VDD43 VDD44 49.2177 $M1T1
    Rn1_7 VDD44 VDD45 48.8174 $M1T1
    Rn1_8 VSS12 VSS12 46.7800 $M1T1
    Rn2_1 VDD44 VDD45 0.1671 $M1T2
    Rn2_2 VDD45 VDD 0.1422 $M1T2
    Rn2_3 VDD42 VDD45 1.3062 $M1T2
    -----
    CAP/DIODE CARDS
    C1 asC5 AP11 D_NW 7.050E-14
    - value=0.0705 model="DIODE_NSD_Iv_V_A_demo4." hdiModel="D_NW"
    -----
    CAP/DIODE PARAMS
    C1 VSS46 asC5 2.084E-17
    C2 V11 VDD43 2.644E-18
    C3 VSS46 V14 2.170E-17
    -----
    C22 A1G VSS 1.086E-18
    C21 A14 VSS 1.027E-19
    -----
    ENDS INV_IG
  
```

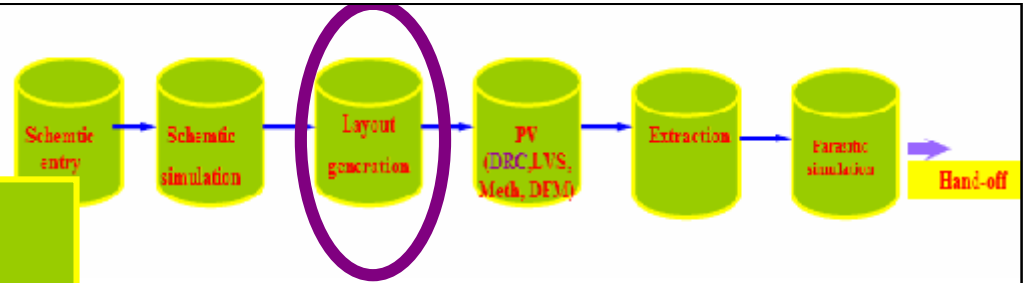
Designed device

Parasitic Res

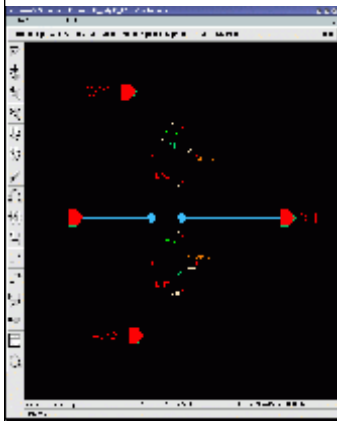
schem. Vs parasitic netList

Catalyte IC Design

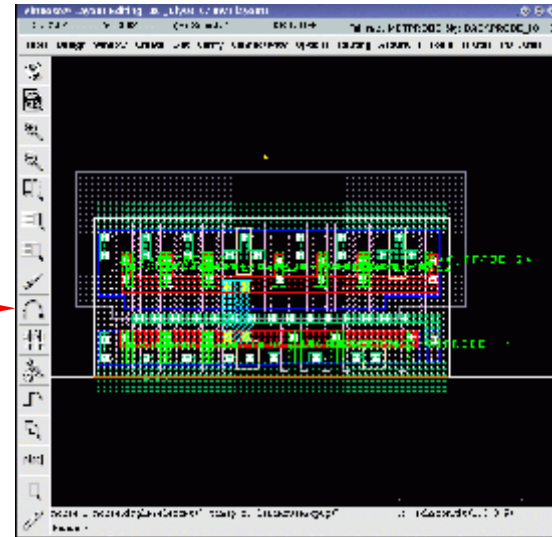
Layout generation



- Tool specific
1. Full Custom
 2. ACPD (VXL, VCP, VCR)
 3. Skill procedure (pinReport, zoom2Point, trimLSW, ..)



Layout generation

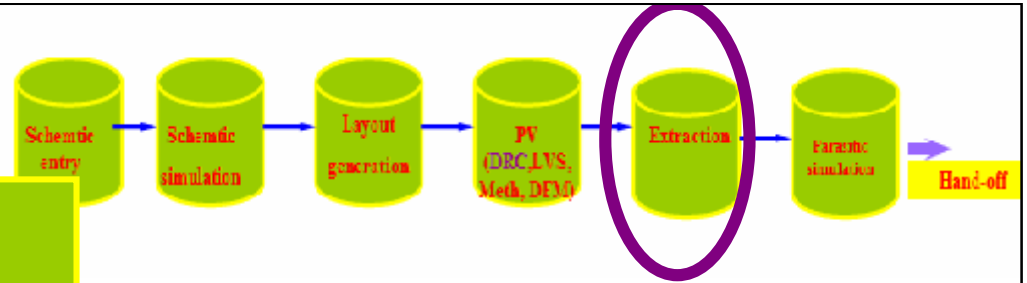


- PDK input
- Techfile
 - display.drf
 - pcell
 - icc.rul

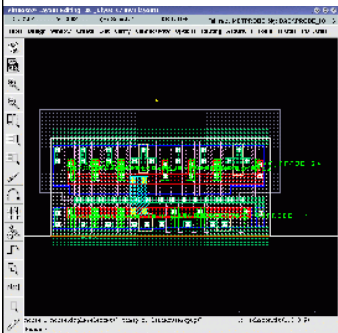
- Major tool-
- Virtuoso
 - IC Station

Catalyte IC Design

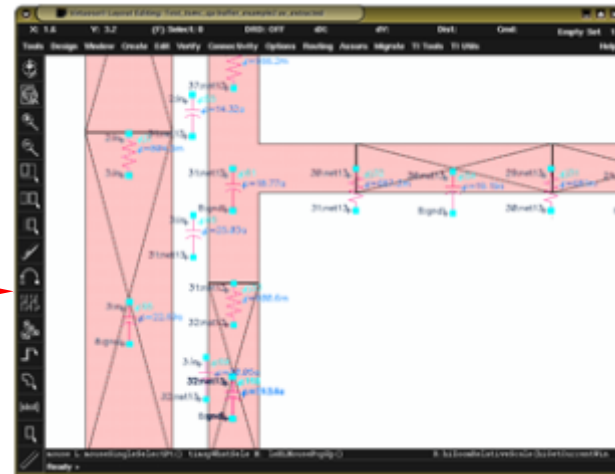
Parasitic Extraction



Tool specific
-Performance vs. accuracy
(extType, Filter, outputNetlist)



Parasitic extraction
(R, C, L, K)



PDK input
-procfile (cap)
-p2lvsfile (Res)

Major tool-
-QRC/RCX
-startXT
-calibre xRC