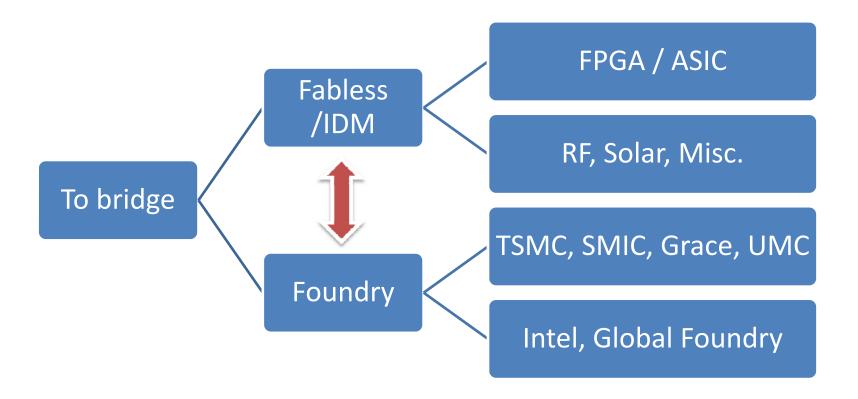
APEXPROMOTION

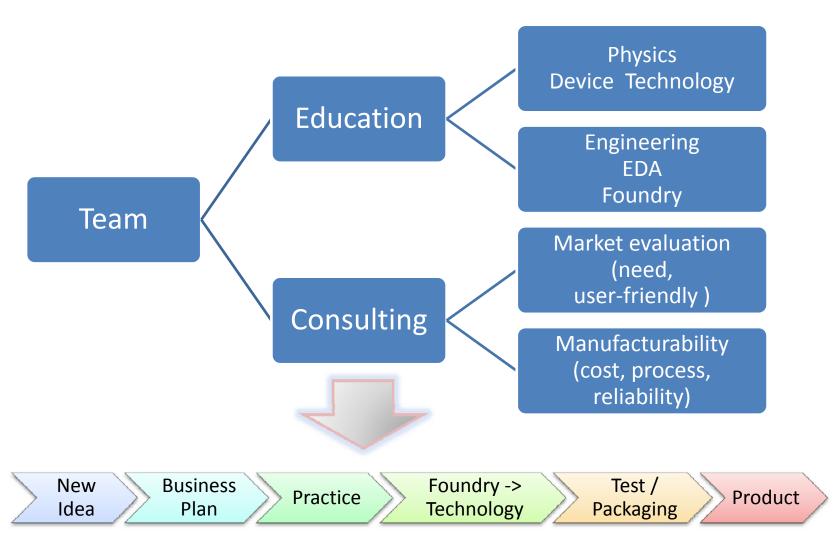
APEX Semiconductor Consulting

Mission



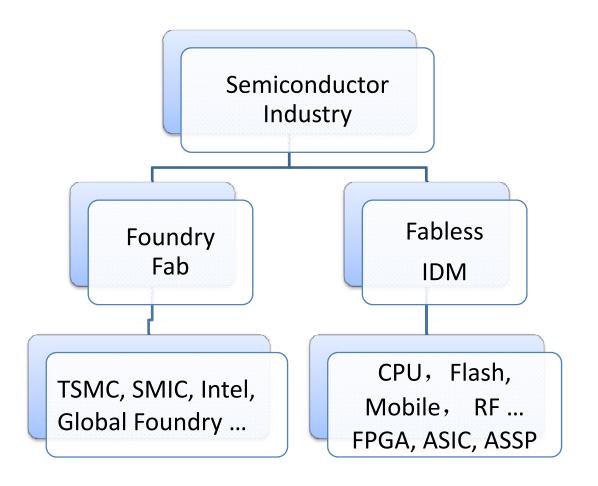
"Matchmaker" of the two big Semiconductor families

Two Services



Jobs and knowledge on Semiconductor / IC Industry Franklin Duan

IC Engineering



IDM, fabless

SoC of ...

FPGA-Field Programmable Gate Array

CPLD-Complex Programmable Logic Device

ASSP, ASIC, IP

FLASH, SRAM, Anti-FUSE

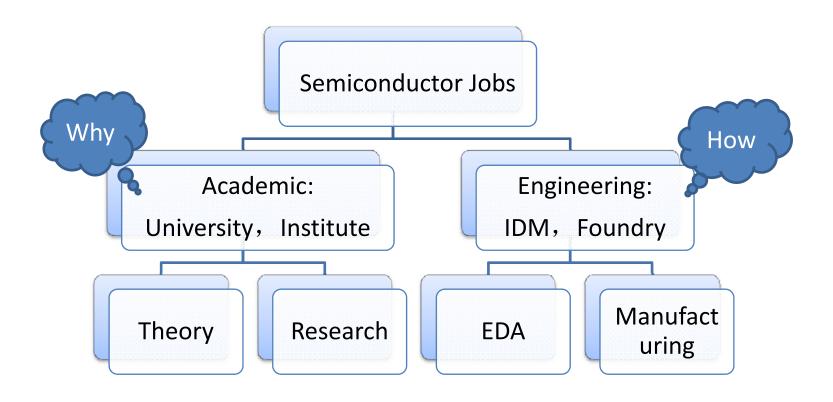
Wireless, Radio frequency (RF) and analog mixed-signal (AMS)

A/Ds, DSP (Digital Signal Processing)

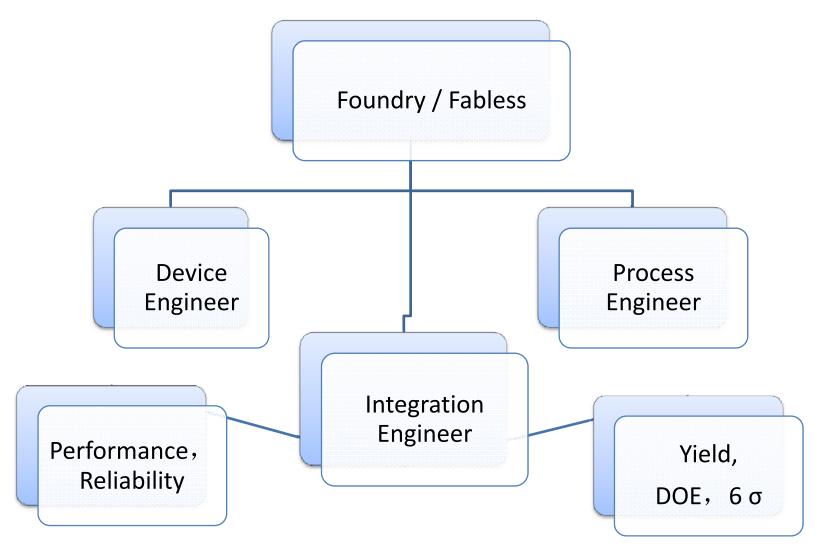
Mini microprocessors, RISC, ARM, MIPS

- •Faster time-to-market
- Low NRE (Non Recurring Expenses)
- •No or shared layout, masks or other manufacturing steps

Academic and Engineering



IC Jobs





Duty Matrix of 3 Basic Engineers

Design Engineer In

Out

Model (Vt, Idsat, Ileak, C, R..), Design Rules Corners Function, Power, Speed, Noise Margin ...

Device Engineer In

Out

Structure (outlook, Dimensions ...) Material (type, Na, stress, ε , ρ ...) Model

Model (Vt, Idsat, Ileak, environment ... Reliability (TDDB, HCI, NBTI, EM...)
C & R (MOS, Cu & ILD, ...,

Process Engineer ln

Out

Equipment (litho, etch, ... Ambient (T, P, air, plasma, Material (wafer. High K, metal gate, Structure (X and Y ...)
Profile (Na, SEM ...)
Interface (Si/SiO2, junctions ...)
Integrity (Target and variation)

2012/5/6

Samples Sildes
Franklin Duan

2012

Chart1: Tree of Information Technology

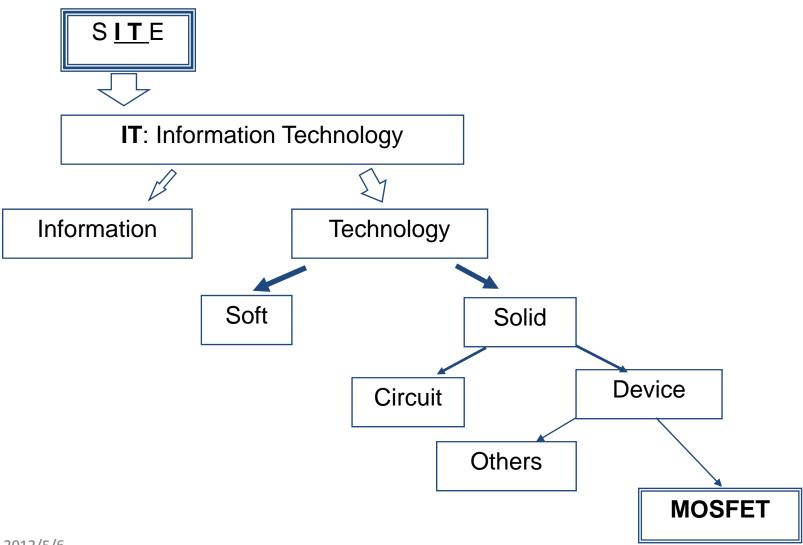


Chart2: Virtually Fabricated SOI MOSFET (by SUPREM)

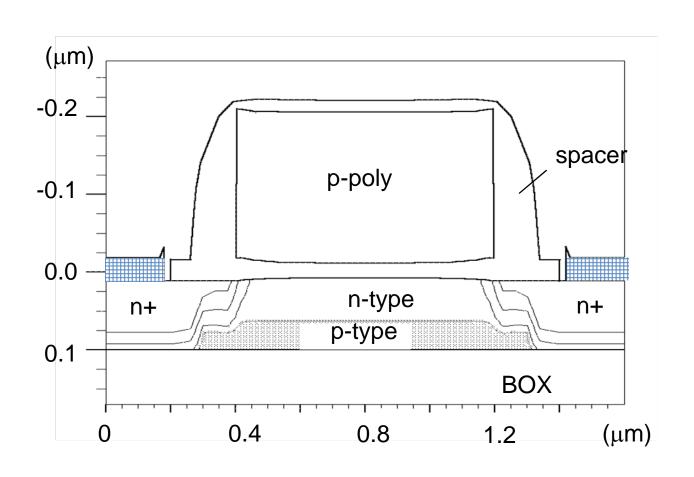
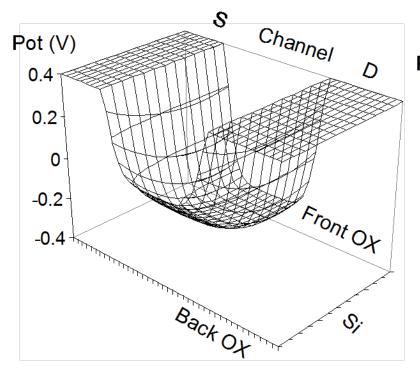
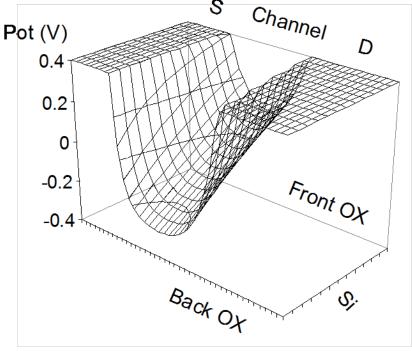


Chart3: Simulation: Ф Profile of SOI MOSFET





Inversion Mode

Accumulation Mode