

More than Moore & Productivity

Secondary Equipment Market: Everything Old is New Again

SEMICON West 2011

July 12, 2011

Joanne Itow

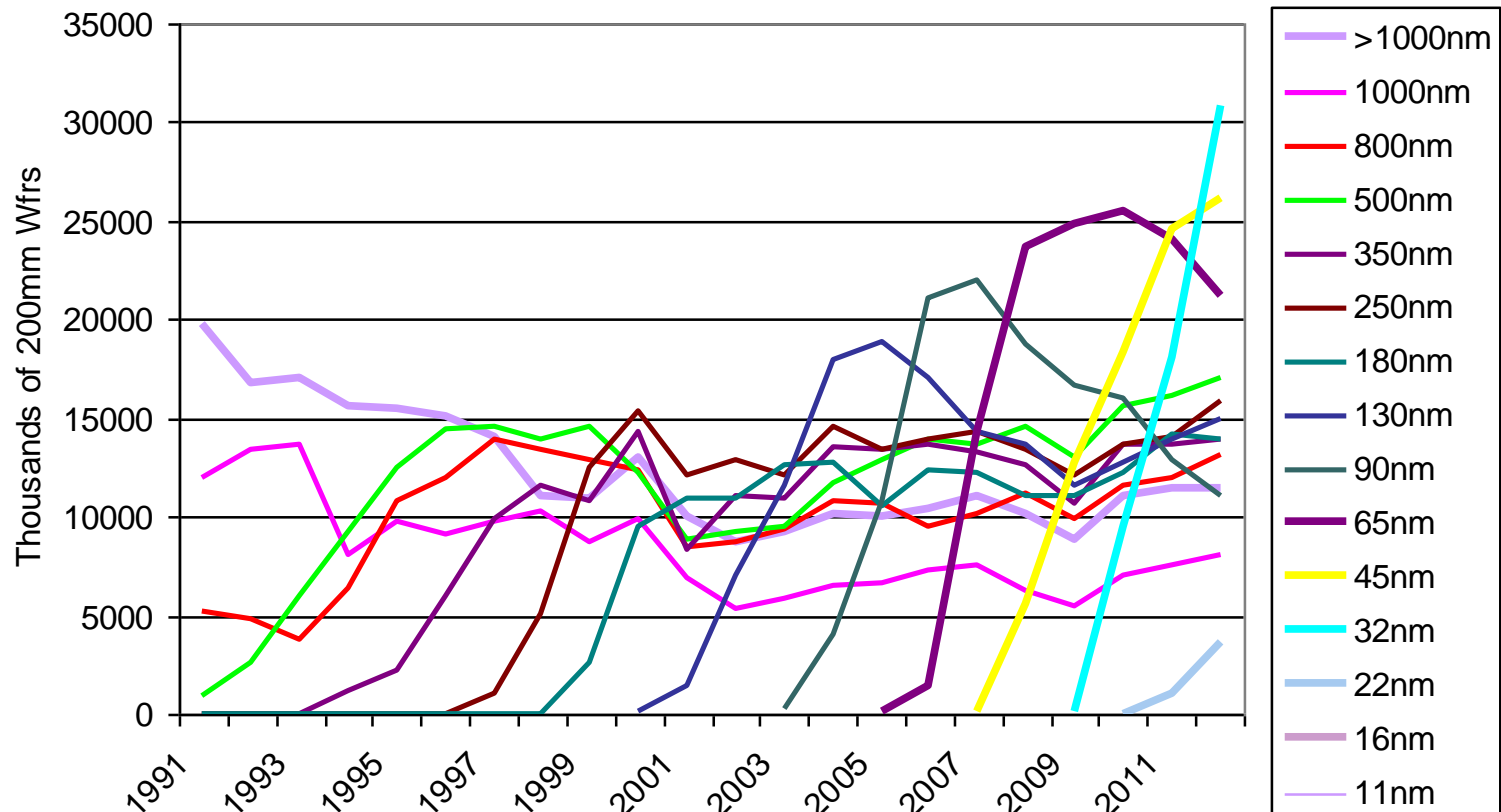
Semico Research Corp

Secondary Equipment Market

- What's driving the market?
- What are we measuring?
- How big is it?

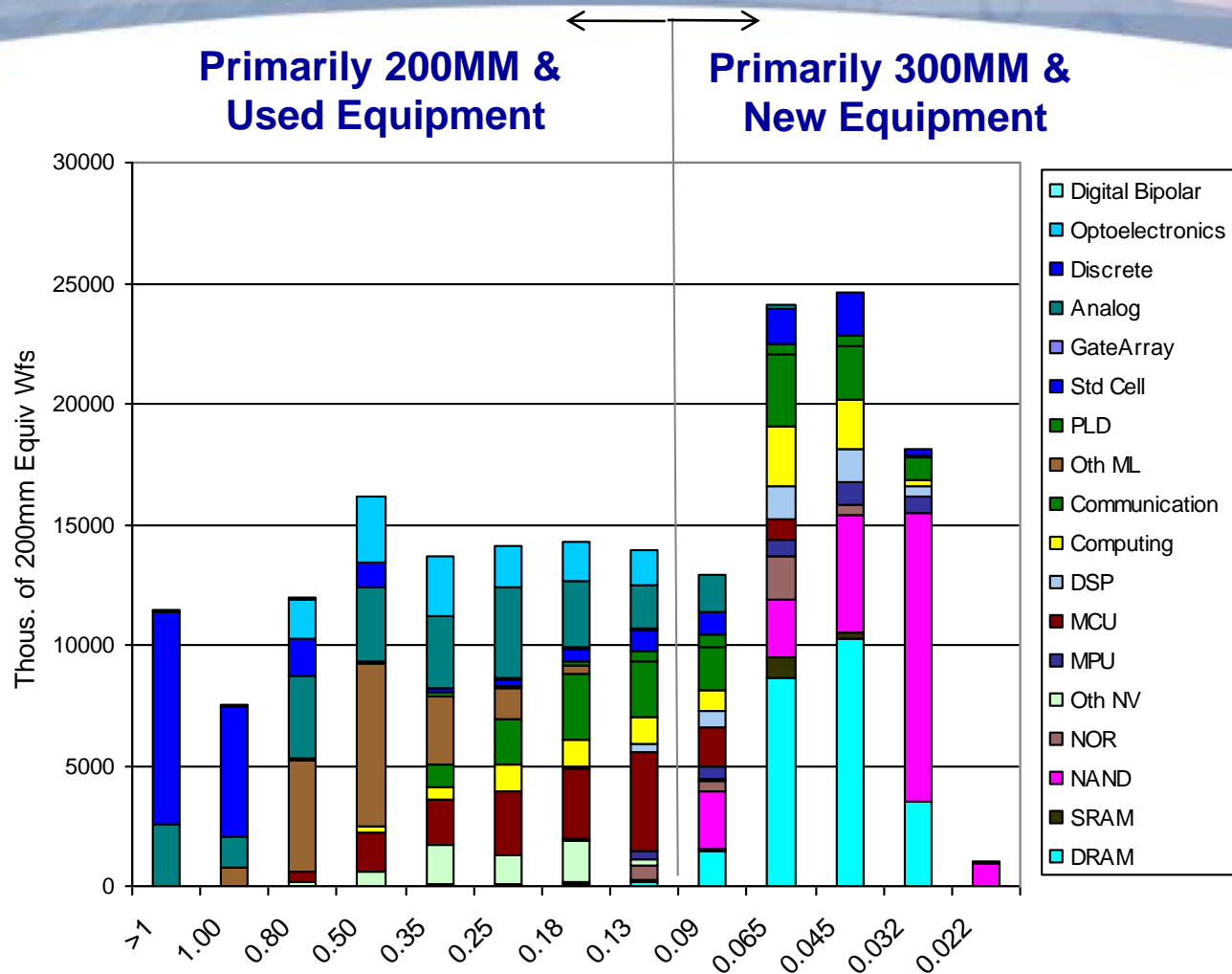
Mature Technologies Never Go Away

Total Wafers by Technology



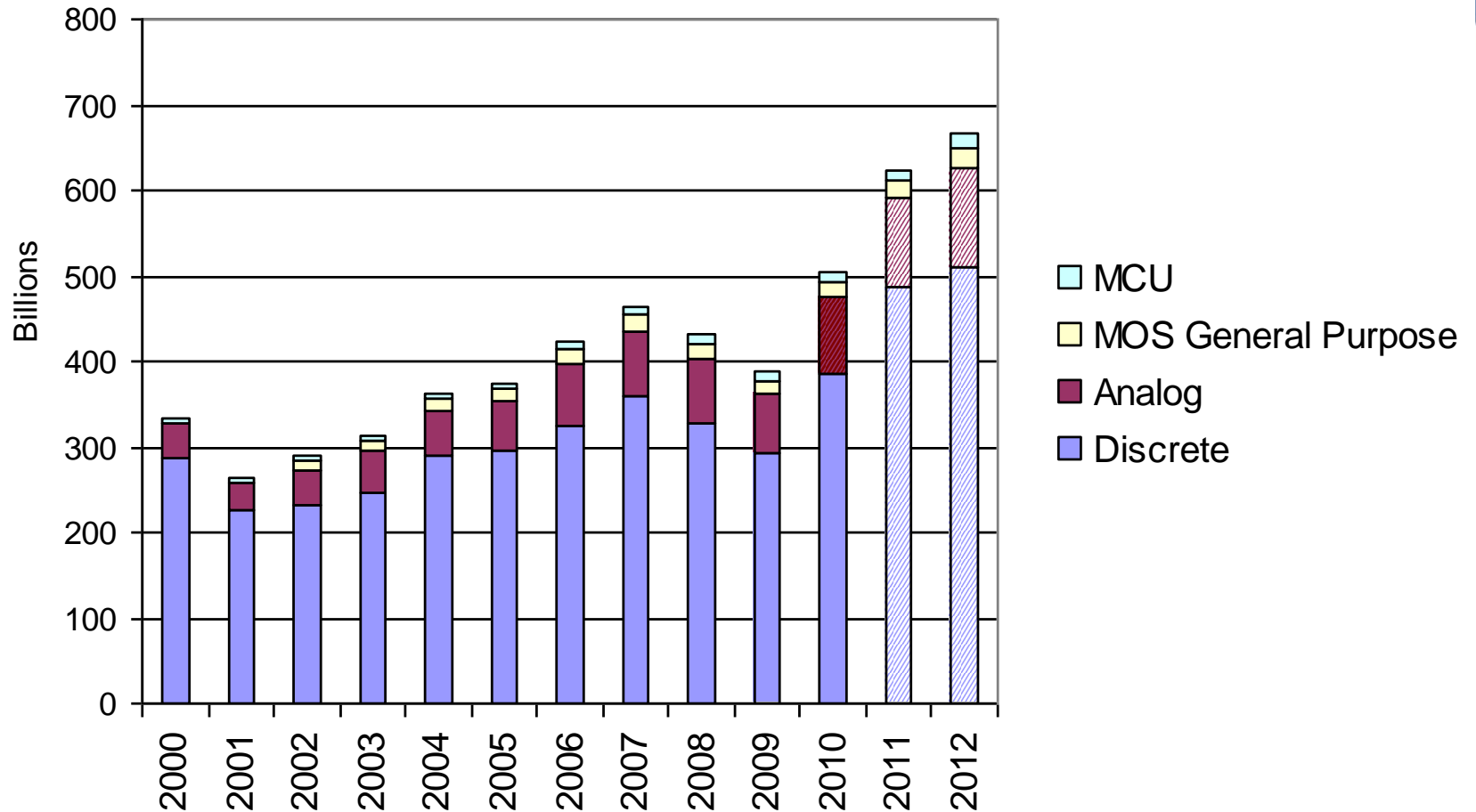
2011 Wafer Demand

By Product by Technology



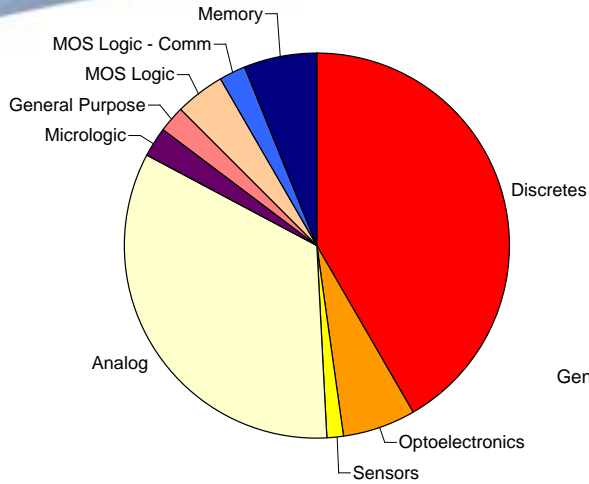
Products Utilizing $\leq 200\text{mm}$ Wafers

Billions of Units

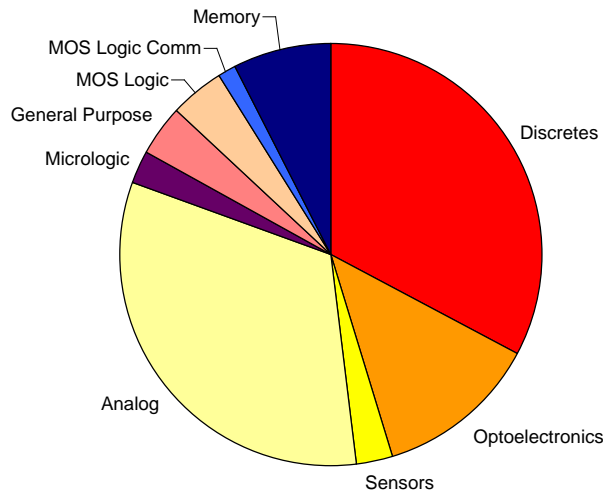


2011 Cell Phone BOM

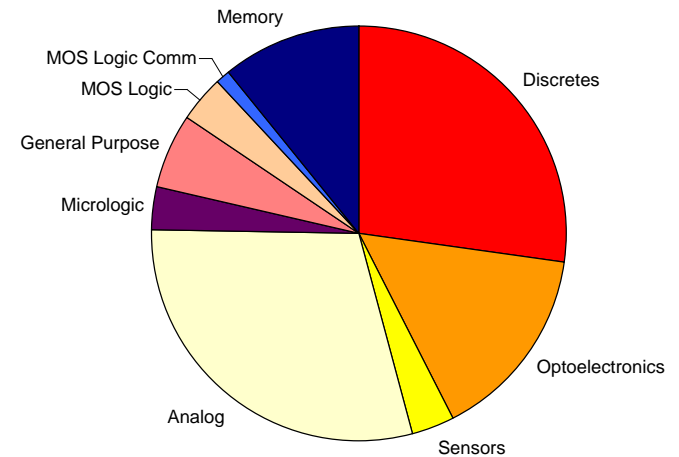
1.5 billion Cell Phones in 2011



Basic Phone



Mid-Range Phone

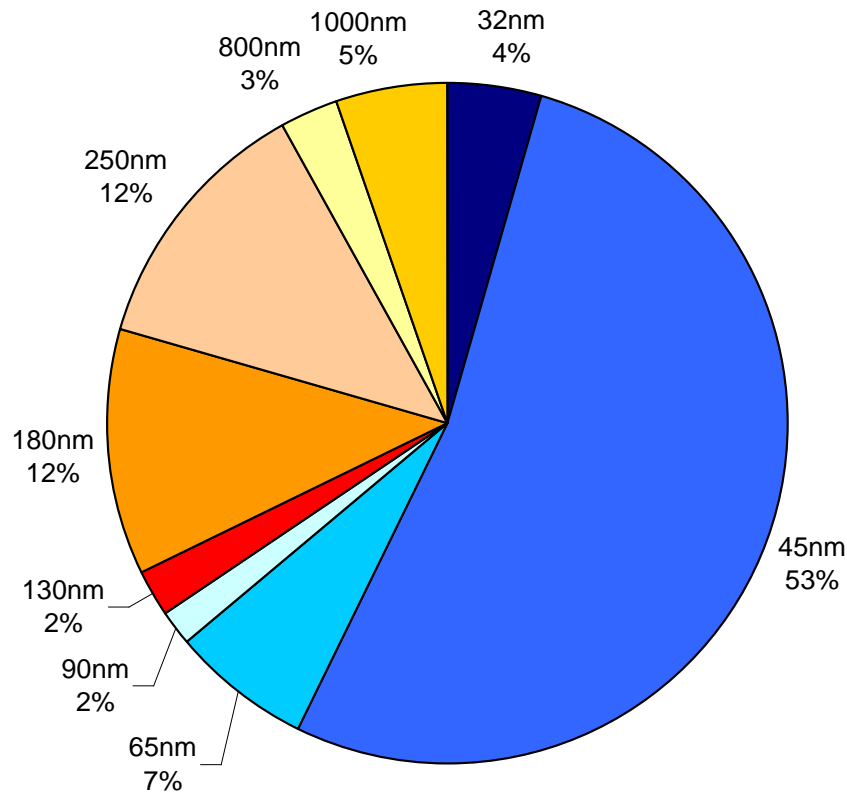


High-End Phone

Cell Phone Wafers by Technology

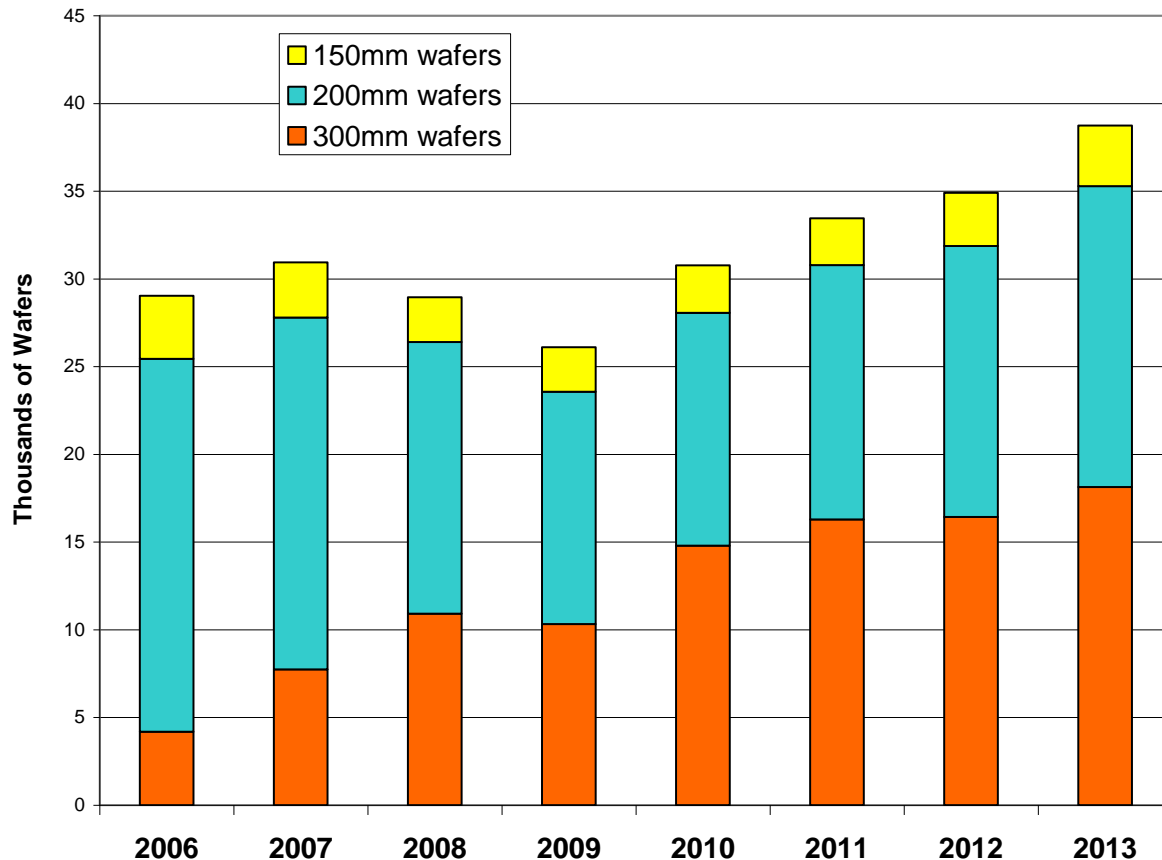
2011

Wafers in 200mm Wafer Equivalents



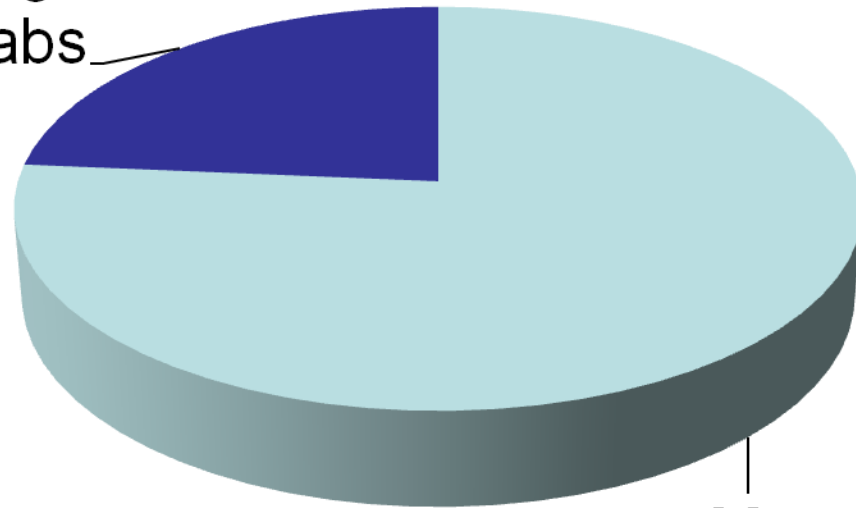
Semiconductors in Cell Phones utilize 200mm wafers

Cell Phone Wafers
Number of Actual Wafers



Can We Keep Up?

Leading
Edge
Fabs



Mature
Fabs

SEMI / SEA Responds To Market Need

How big is it?

Secondary Equipment Market

Who?

What?

Where?

Buying?

Selling?

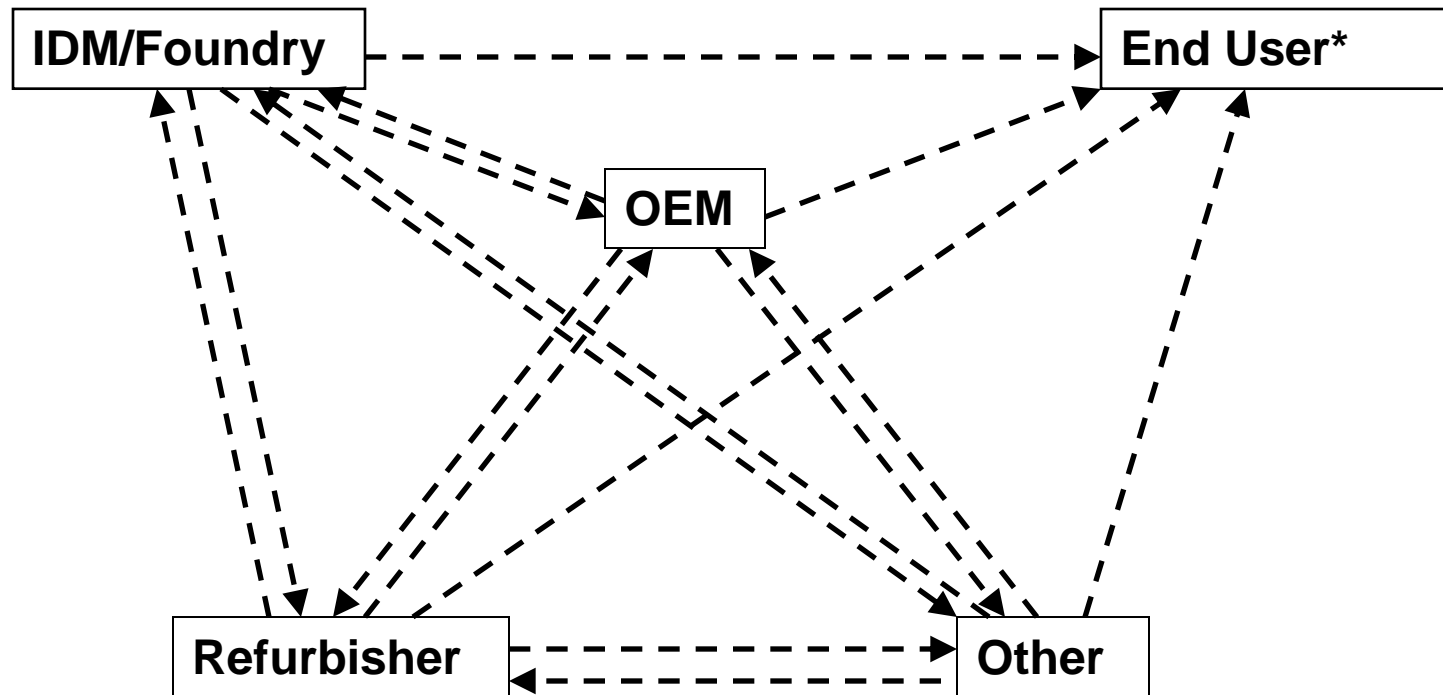


What Are We Measuring?

Secondary Equipment Study

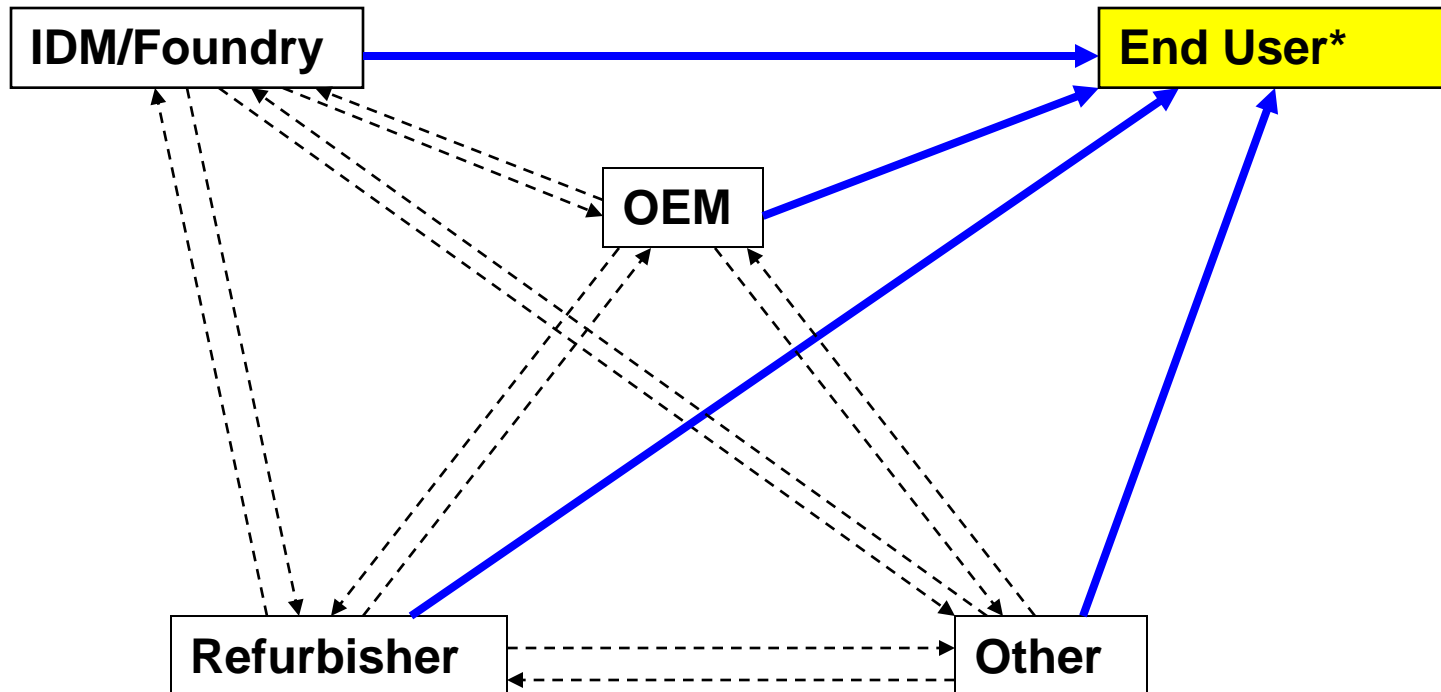
- Total secondary equipment sales
- Secondary equipment sales by vendor type
- Secondary equipment sales by wafer size
- Secondary equipment sales by region
- Secondary equipment sales by equipment type

Secondary Equipment Supply Chain



*End User includes IDMs, foundries, Alternate Device Manufacturers (i.e. MEMS, III-V, PV, etc.), Advanced Packaging, universities and research labs.

Measuring TAM



*End User includes IDMs, foundries, Alternate Device Manufacturers (i.e. MEMS, III-V, PV, etc.), Advanced Packaging, universities and research labs.

Study Methodology

- Primary research
 - Surveys personal interviews and questionnaires
 - IDM/Foundry/OEM/Broker/Dealer/Refurbisher
- Secondary data analysis
 - Fab database
 - company financial reports
 - company analyst presentations
 - capital expenditures
 - wafer demand

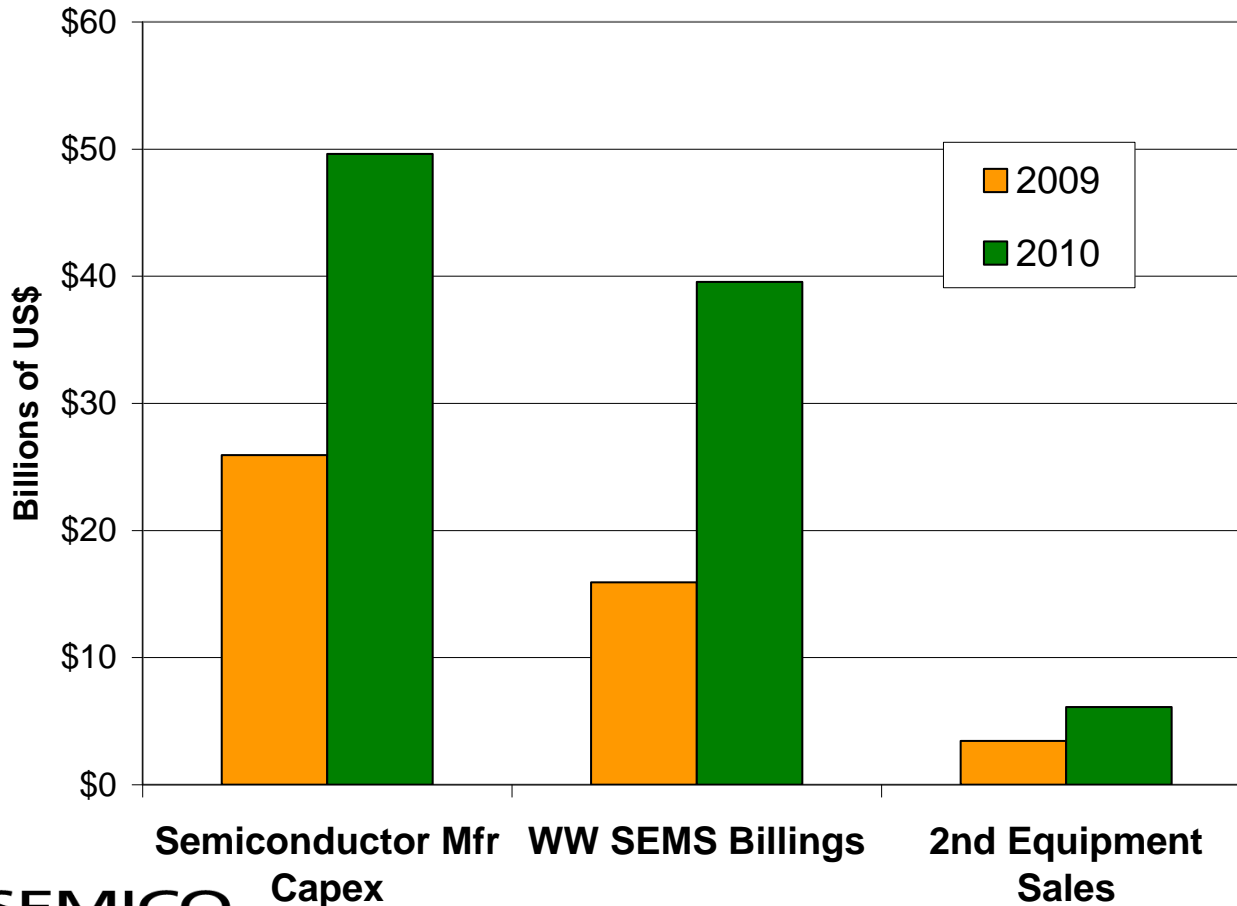
Semiconductor CapEx and Equipment Sales

Growth Yr / Yr

91.4%

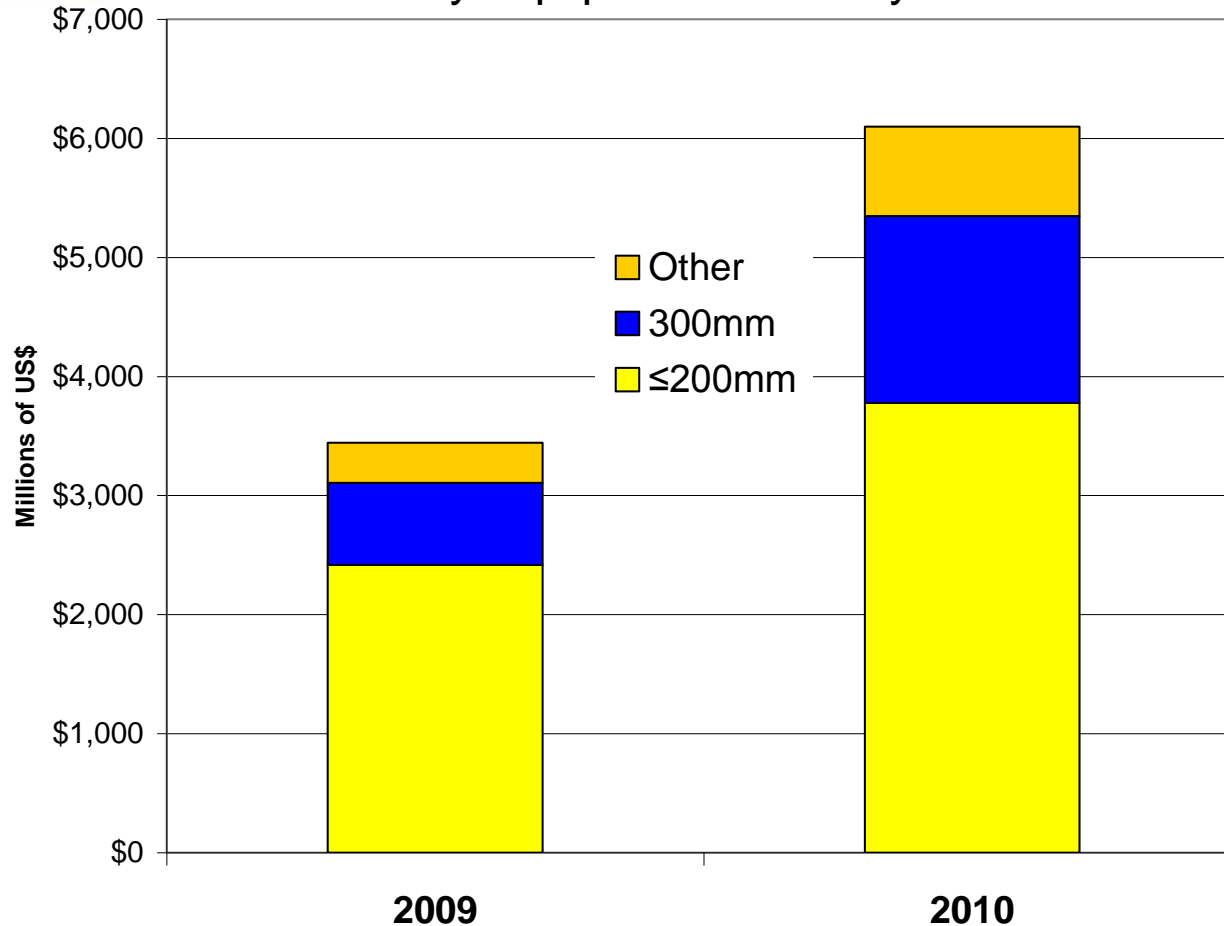
148.4%

77.2%

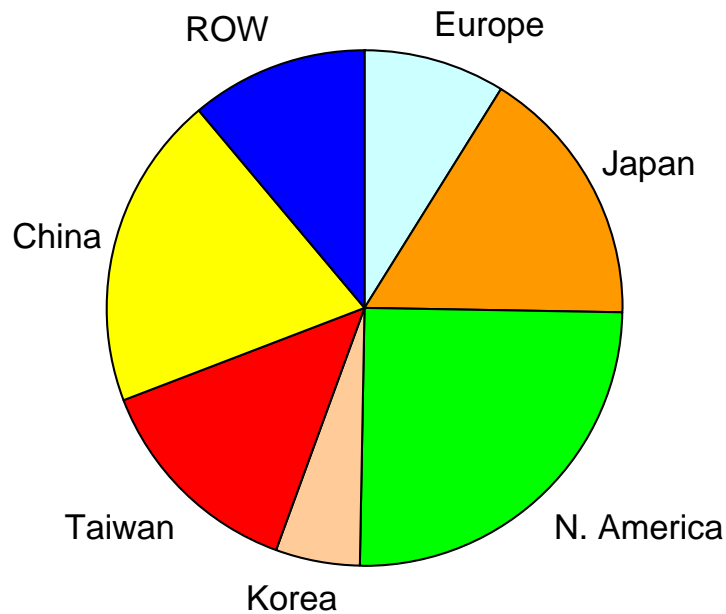


Demand for Used 300mm Equipment Growing

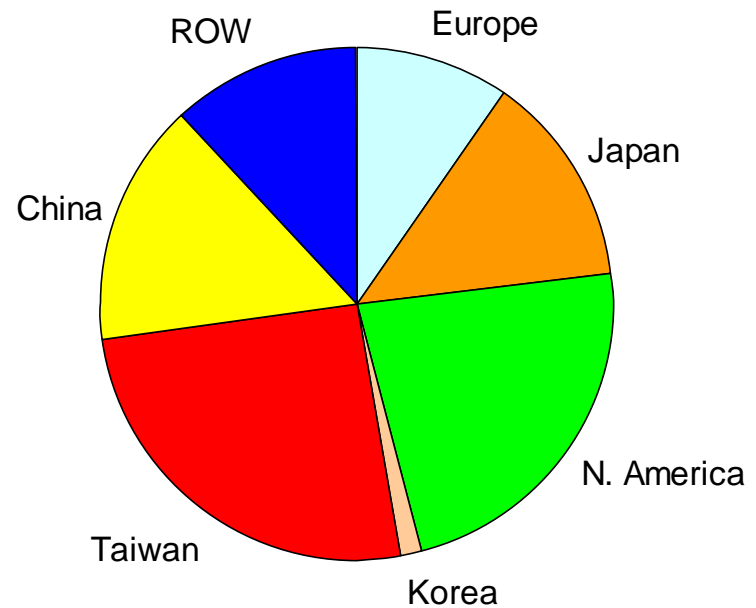
Secondary Equipment Sales by Wafer Size



Secondary Equipment Sales by Region



2009



2010

Summary

- Need for secondary equipment will continue.
- 300mm used equipment will be the next growth segment.
- Sales by region will shift as demand for 300mm used equipment grows.