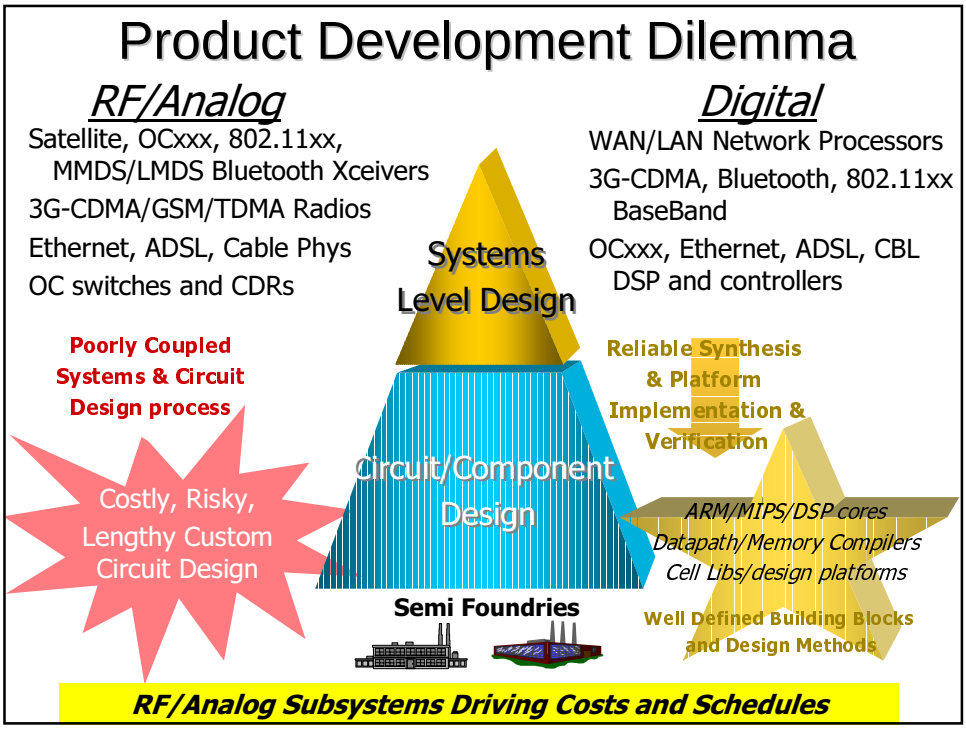
A Revolutionary Solution for Unified RF System and Circuit Design

EDP-2002 Conference
Monterey, California
April 21-23

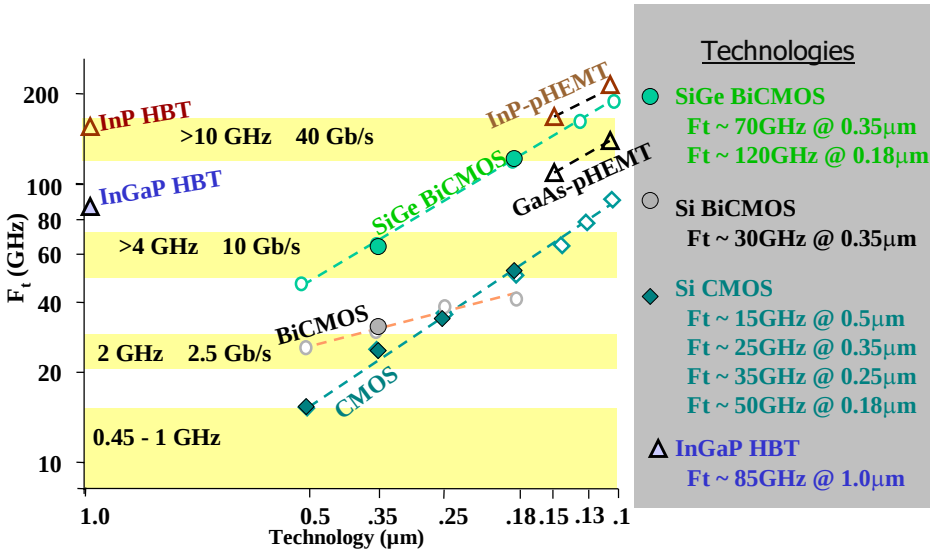
James Spoto
President and CEO
AWR

AWR

Product Development Dilemma

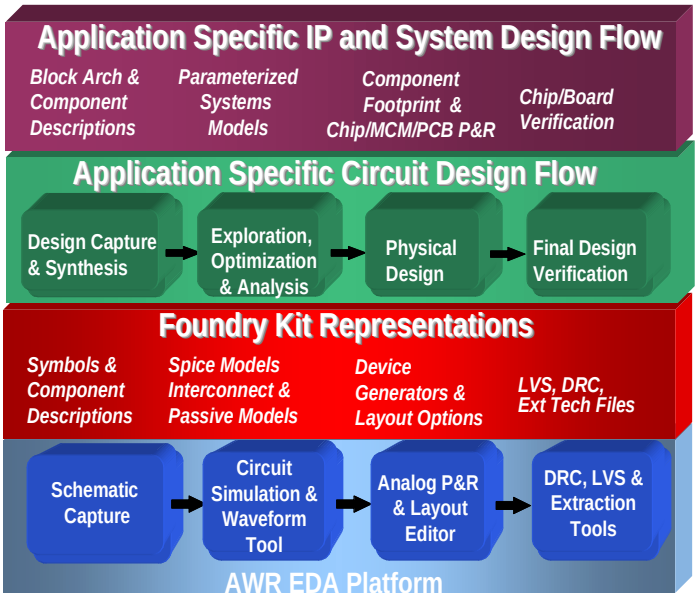


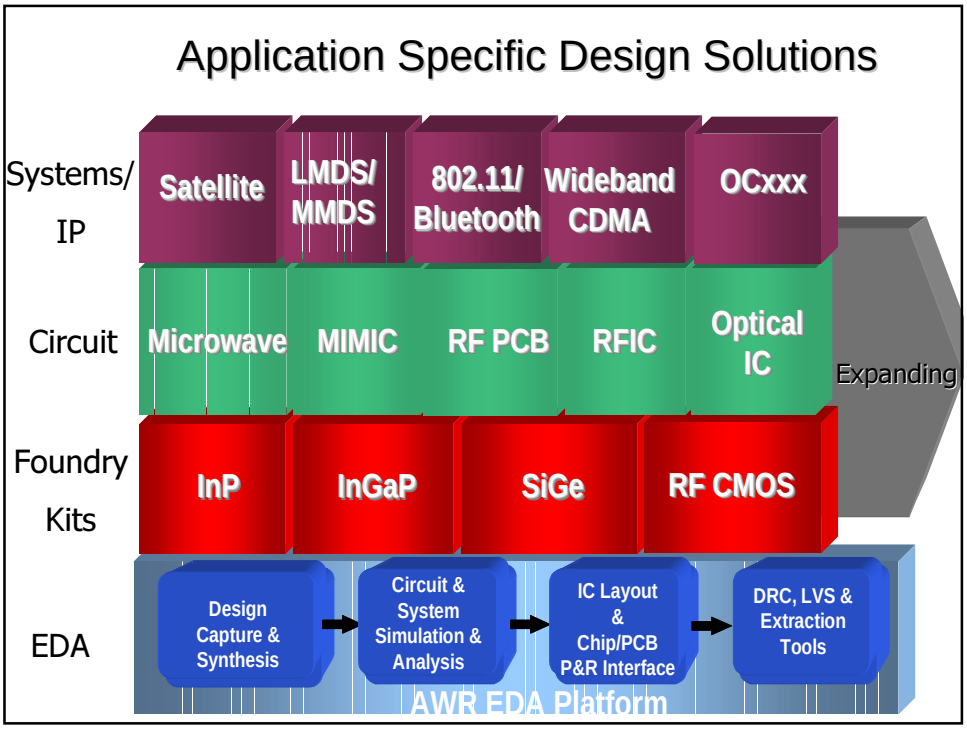
High Performance Technology Landscape

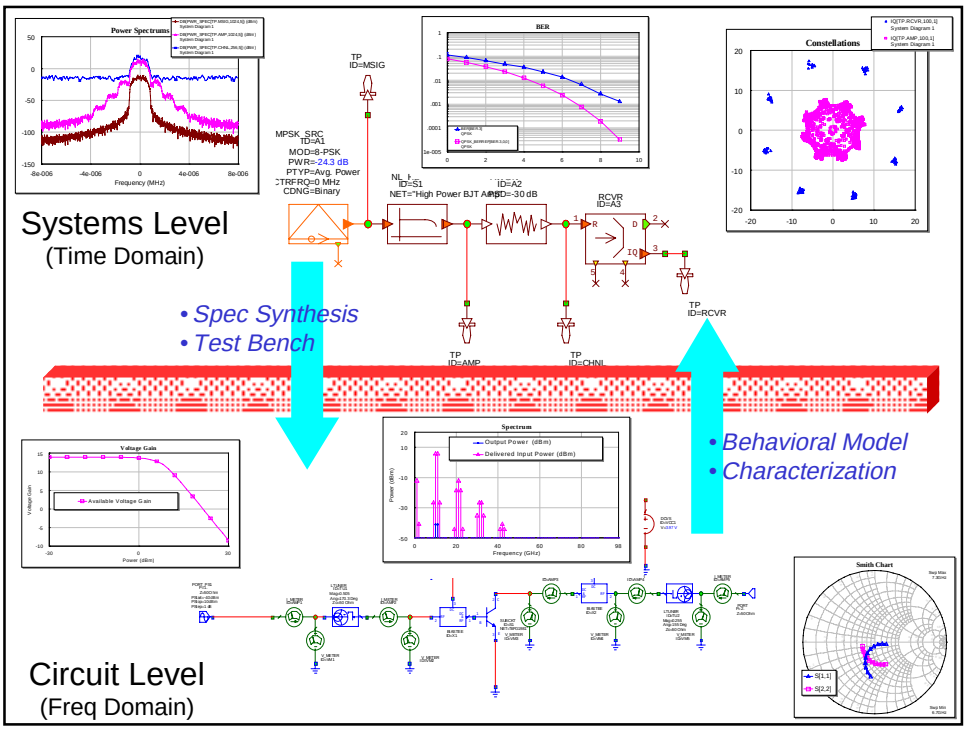


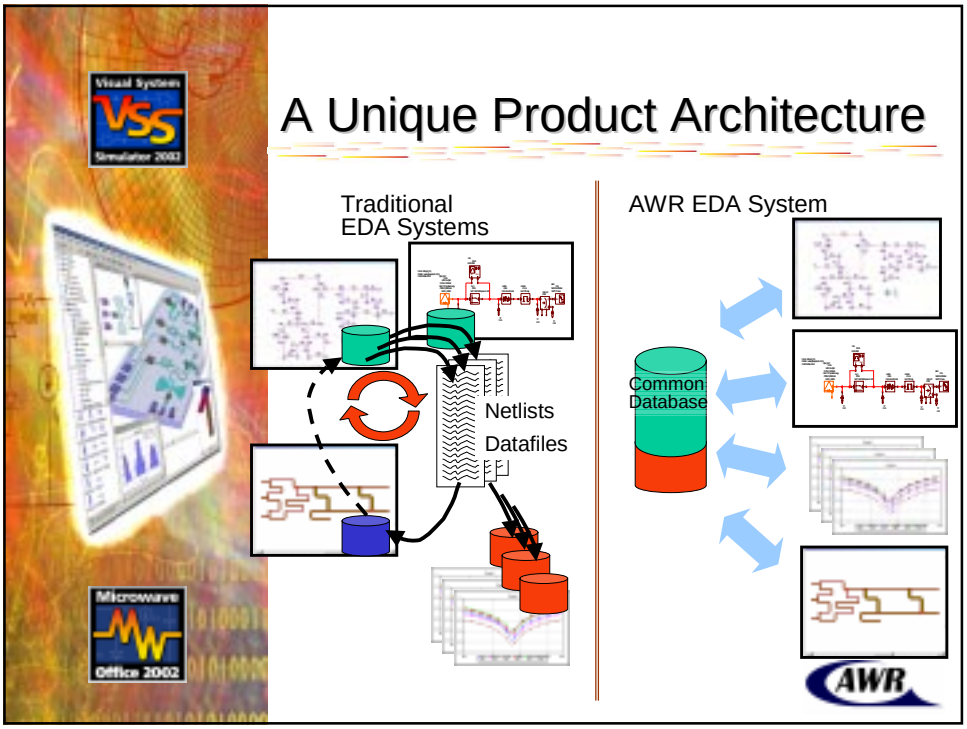
Wide Variety of Rapidly Changing Technologies

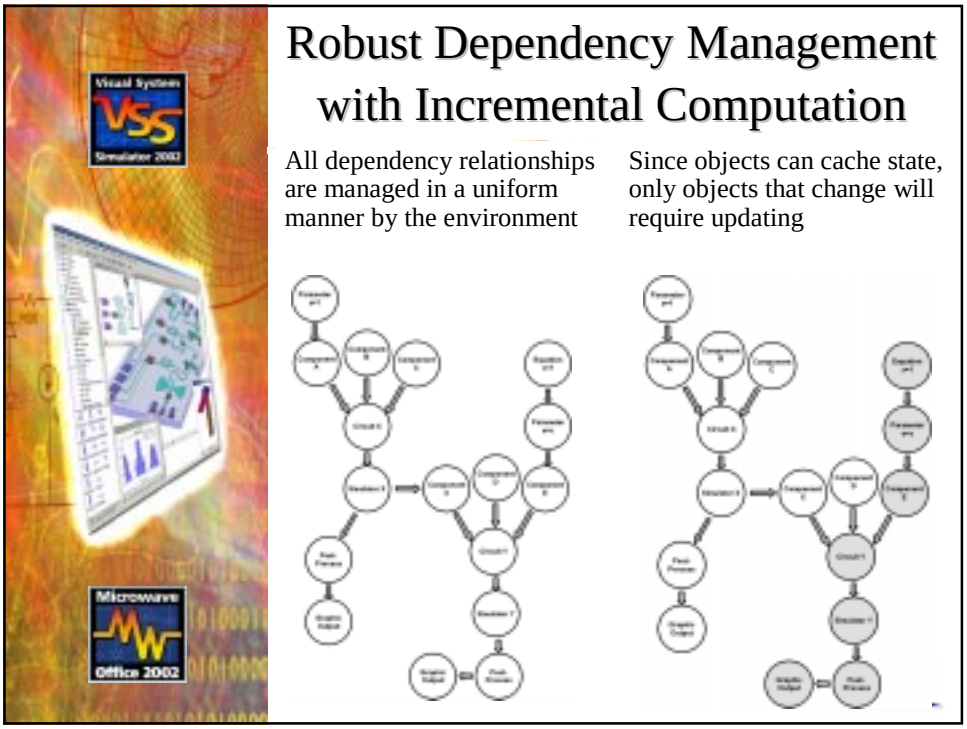
Design Platform Architecture

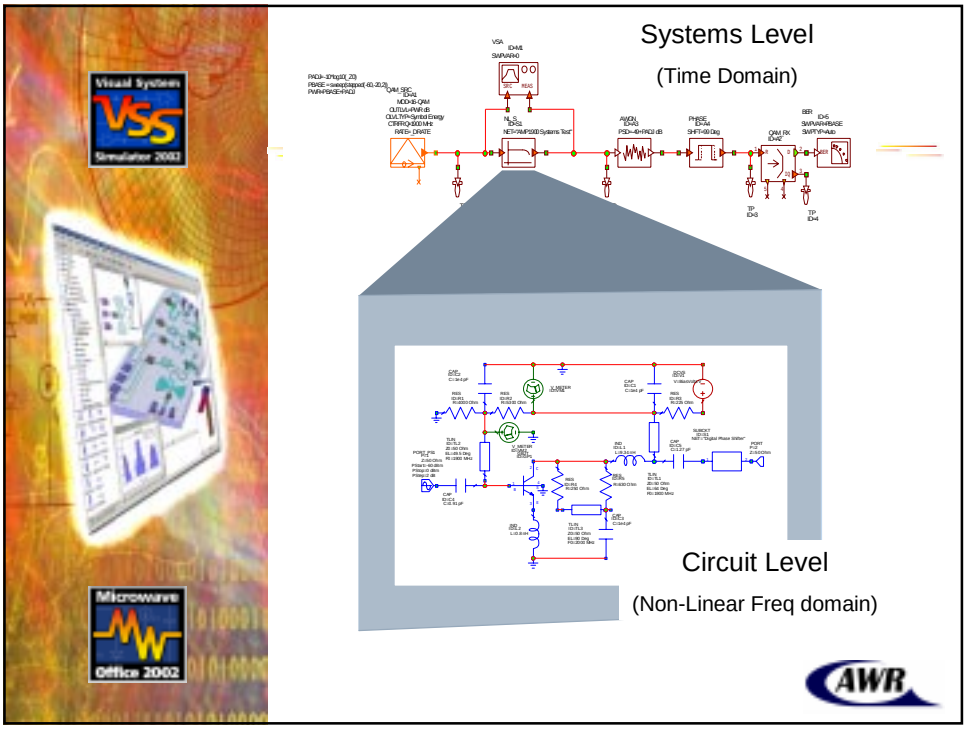


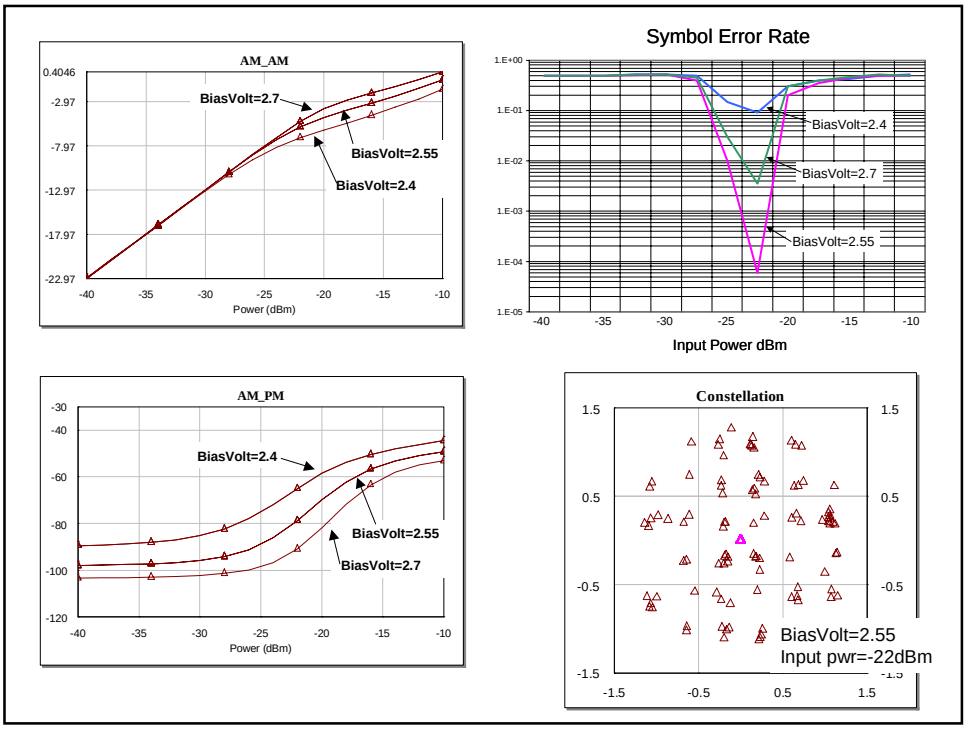

Application Specific Design Solutions
Systems/ IP
Satellite
LMDS/ MMDS
802.11/ Bluetooth
Wideband CDMA
OCxxx
Circuit
Microwave
MIMIC
RF PCB
RFIC
Optical IC
Expanding
Foundry Kits
InP
InGaP
SiGe
RF CMOS
EDA
Design Capture & Synthesis
Circuit & System Simulation & Analysis
IC Layout & Chip/PCB P&R Interface
DRC, LVS & Extraction Tools
AWR EDA Platform


Systems Level
(Time Domain)
• Spec Synthesis
• Test Bench
• Behavioral Model
• Characterization
Circuit Level
(Freq Domain)


A Unique Product Architecture
Traditional
EDA Systems
Netlists
Datafiles
AWR EDA System
Common
Database
AWR


Robust Dependency Management
with Incremental Computation
All dependency relationships are managed in a uniform manner by the environment
Since objects can cache state, only objects that change will require updating


Visual System
VSS
Simulator 2002
Microwave
Office 2002
Systems Level
(Time Domain)
Circuit Level
(Non-Linear Freq domain)
AWR


AM_AM
0.4046
-2.97
-7.97
-12.97
-17.97
-22.97
BiasVolt=2.7
BiasVolt=2.55
BiasVolt=2.4
-40
-35
-30
-25
-20
-15
-10
Power (dBm)
Symbol Error Rate
1.E+00
1.E-01
1.E-02
1.E-03
1.E-04
1.E-05
BiasVolt=2.4
BiasVolt=2.7
BiasVolt=2.55
Input Power dBm
AM_PM
-30
-40
-60
-80
-100
-120
BiasVolt=2.4
BiasVolt=2.55
BiasVolt=2.7
Power (dBm)
Constellation
1.5
0.5
-0.5
-1.5
BiasVolt=2.55
Input pwr=-22dBm

Summary

- Explosion in High-Freq applications, technologies and associated Communications product opportunities
- Comms product development cost and schedules are impaired by the disconnects between Analog/RF system and circuit design
- AWR is bridging this gap with a revolutionary new Comms design solution that seamlessly integrates the system and circuit design process