

PHILIPS

Consumer Electronics is Now in the
Driver's Seat for Electronics.
Where Will it Drive EDA?

Bob Payne

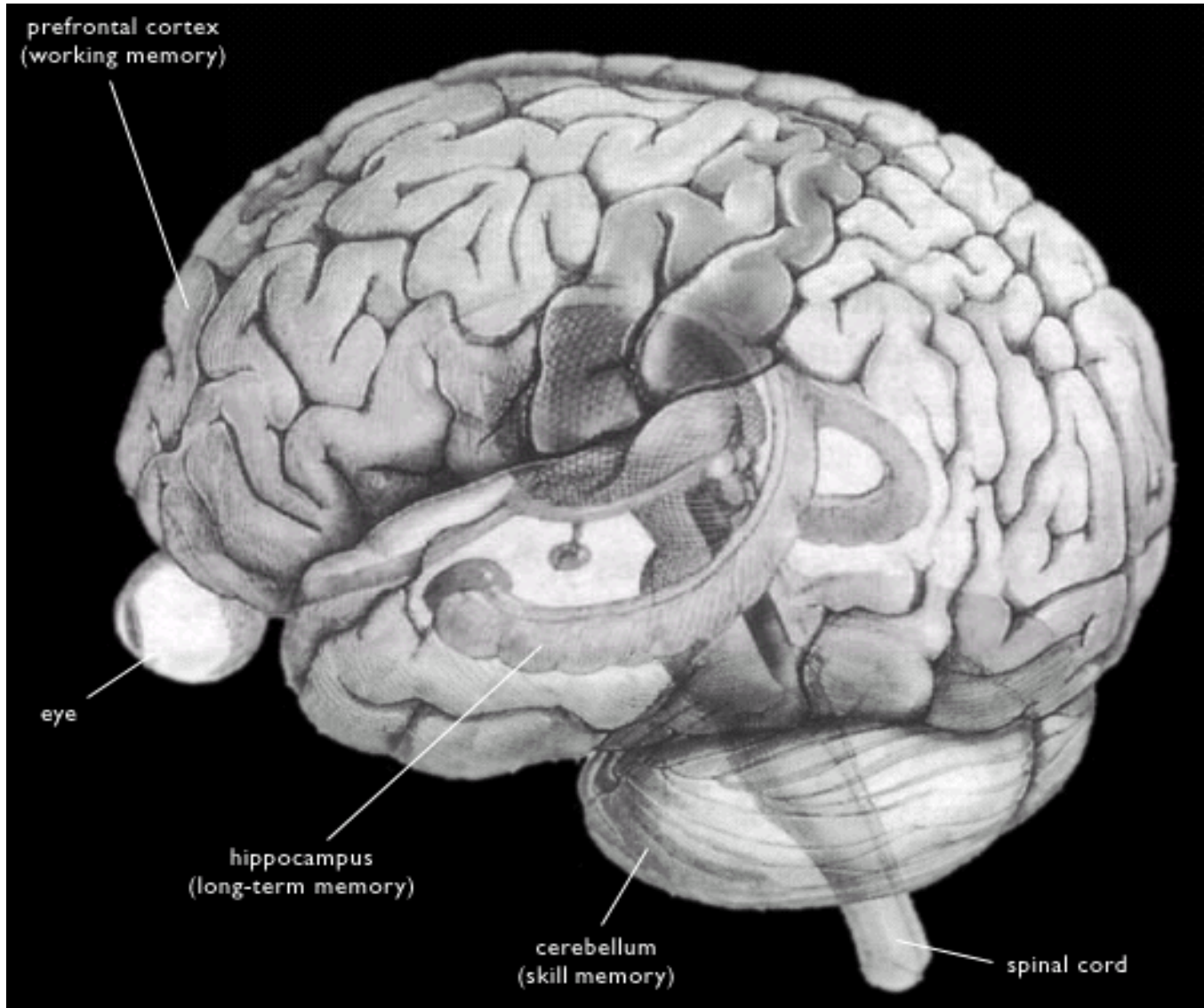
Sr VP/GM Advanced Systems Technology

Philips Semiconductors

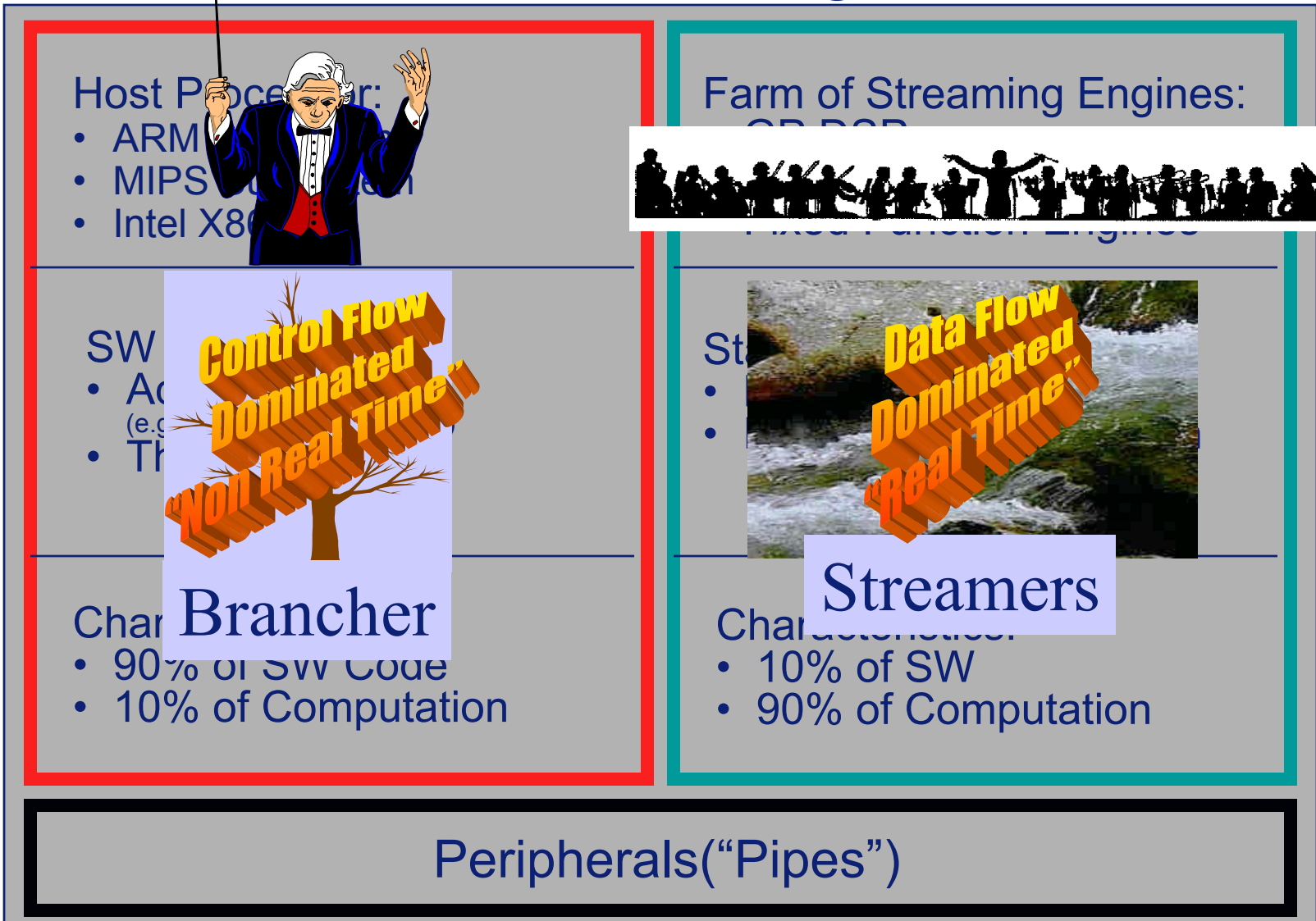
CE Market Characteristics

- **Time to Market Critical – Short Product Life Cycle**
- **Power Consumption Critical – Mobile Multimedia Devices**
- **Highly Competitive – Value for Money**
- **Cost Critical – Below Multi-Spouse Approval Threshold**
- **Ease of Use – “Granny Friendly”**
- **Very High Volume – Development Cost Amortization**
- **Insatiable Computational Demand Requiring Latest Process Integration Technology**
- **“Ambient Intelligence” Networked Consumer (Home, Office, Car, Airport, Starbucks,...)**
- **Clients, Servers, Storage Containers, Roaming and Resynchronization**
- **Transparent Device Discovery / Service Discovery**
- **Electronic e-Commerce Transactions and Rights Management**
- **Devices Become Context Aware**

Intelligent Consumer Electronic Devices:



Left Side Brain –and- Right Side Brain



Implementation Megatrends:

- Serial Data – Repeal Rents Rule
- Standard Information “Pipes” Sinking and Sourcing Streaming Data
- System in a Package Especially for RF
- Globally Asynchronous Locally Synchronous (GALS) “Islands of Synchronicity”
- V^2f Power Management “Islands of Power”
- Rapid Development of Platform Derivative Designs
- Full Speed/Real Time FPGA Based Prototyping
- Quality of Service Issues
- Increased demand for Memory Bandwidth
- Level 2 On Chip Memory

Consumer Electronics Influence on EDA

- System Architecture Plays Dominant Role
- Increased Importance of Embedded Systems Tooling and SW Productivity
- Full Speed/Real Time FPGA Based Prototyping
- Need for Rapid Platform Derivative Design
- Power Management/Optimization
- Power Domains/Distribution
- Quality of Service Alarms and Back Off
- Speed Testing and Design Debug
- Asynchronous Design (GALS, Islands of Synch)

