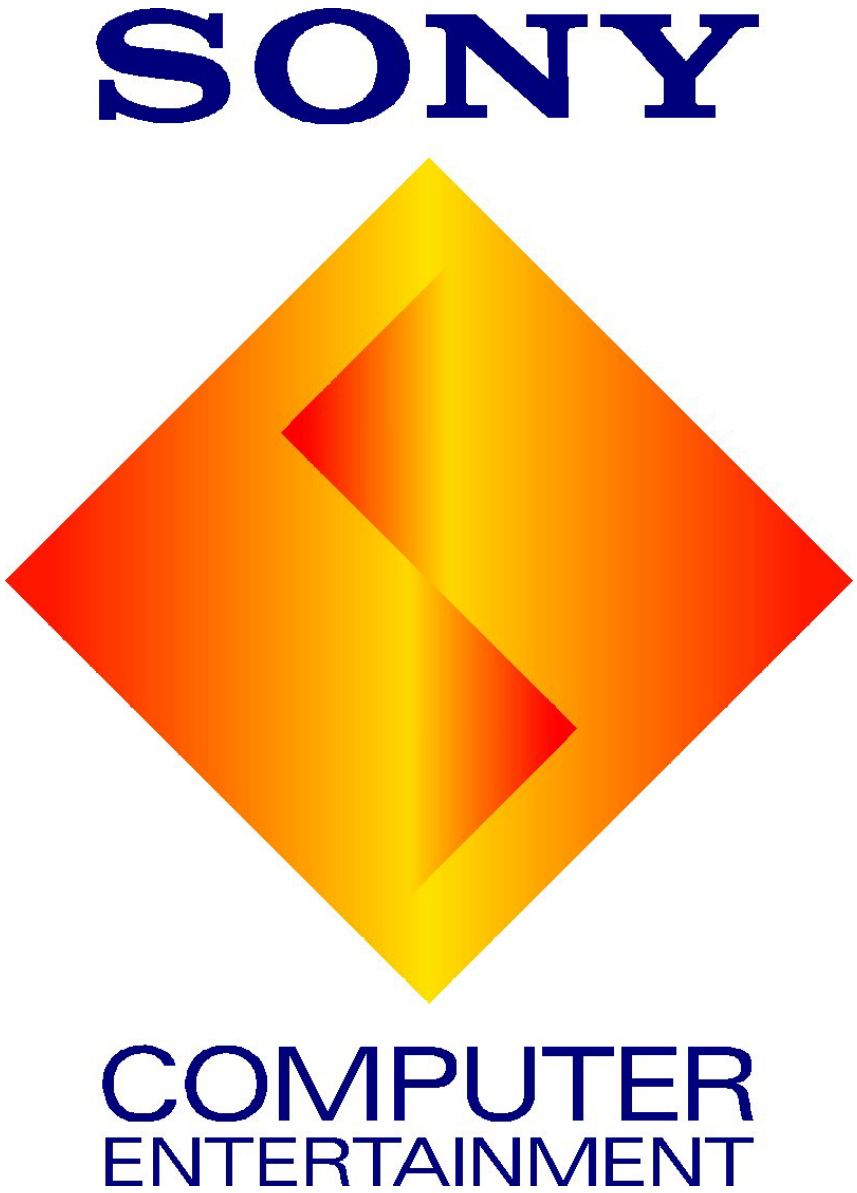

SONY
COMPUTER
ENTERTAINMENT

Computer Entertainment Technology Today and Tomorrow

Dominic Mallinson

Director of Technology, R&D
Sony Computer Entertainment America

Today's Hardware ; PS2

Today's Hardware ; PS2

- High Polygon Complexity
  - Scenes of 200,000+ polygons at 60Hz

Today's Hardware ; PS2

- High Polygon Complexity
- Super Fast Blending and Texture Engine
  - Multi-pass Rendering for Complex Shaders

Today's Hardware ; PS2

- High Polygon Complexity
- Super Fast Blending and Texture Engine
- Programmable Transform and Lighting
  - T&L for Higher Order Surfaces, Procedural Models - not just triangles

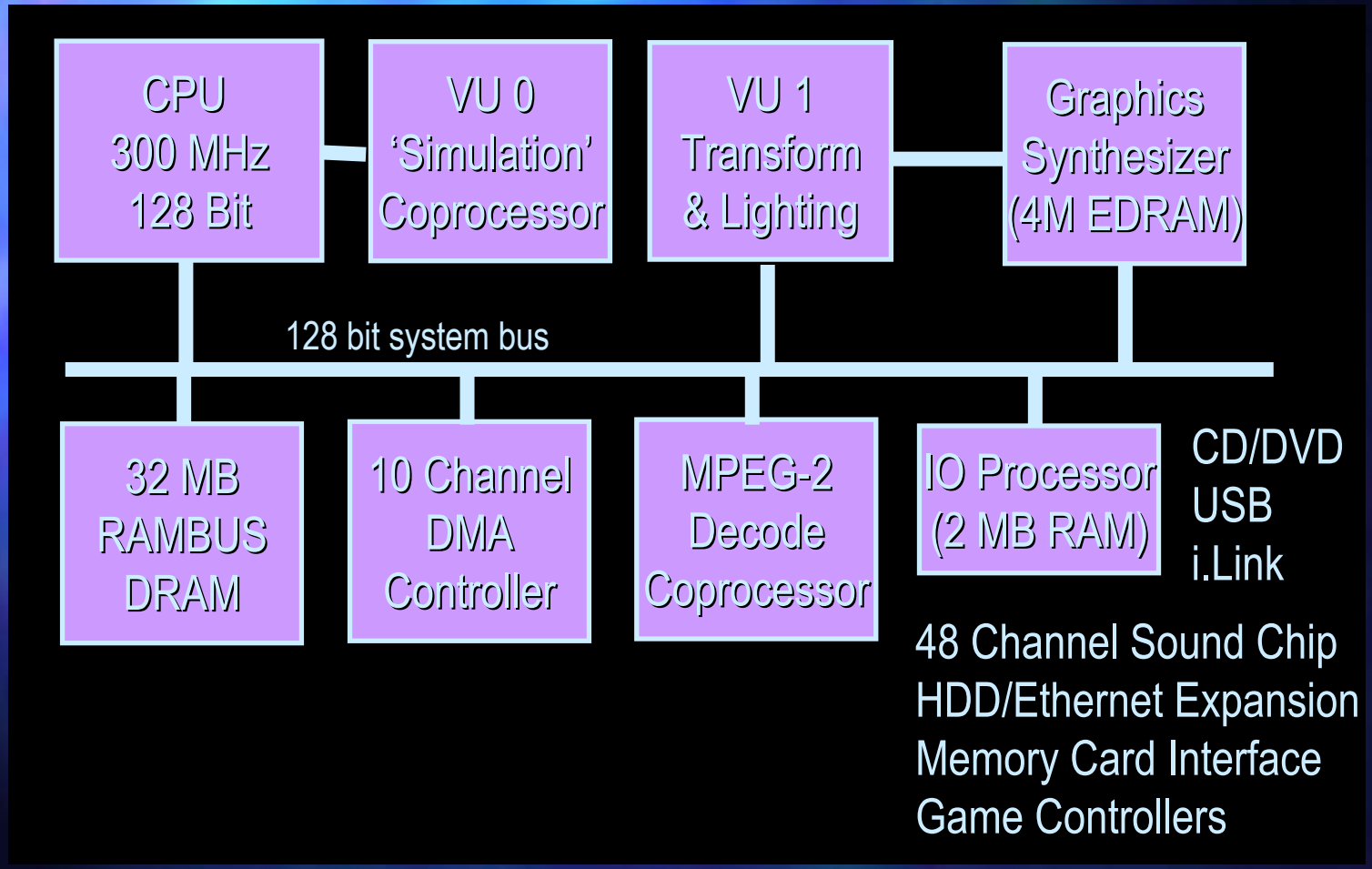
Today's Hardware ; PS2

- High Polygon Complexity
- Super Fast Blending and Texture Engine
- Programmable Transform and Lighting
- Simulation and Animation co-processor
  - Processing for Physics, I.K. etc.

Today's Hardware ; PS2

- High Polygon Complexity
- Super Fast Blending and Texture Engine
- Programmable Transform and Lighting
- Simulation and Animation co-processor
- Rich I/O digital connectivity
  - USB, i.Link, network connectivity for the home network and advanced controllers

PS2 Block Diagram



Future Research

Future Research

- HDTV 1920x1080 60Hz Progressive
  - The evolution of consumer TV
  - 12X the pixels of NTSC!
  - More pixels per second than cinema

Future Research

- HDTV 1920x1080 Progressive Output
- Advanced Rendering Schemes
  - Programmable Real-time per Pixel Shading
  - Lighting beyond phong ; radiosity and ray tracing

Future Research

- HDTV 1920x1080 Progressive Output
- Advanced Rendering Schemes
- Autonomous Characters
  - "Artificial Intelligence"
  - Behavioral Modeling
  - Cognitive Modeling

Future Research

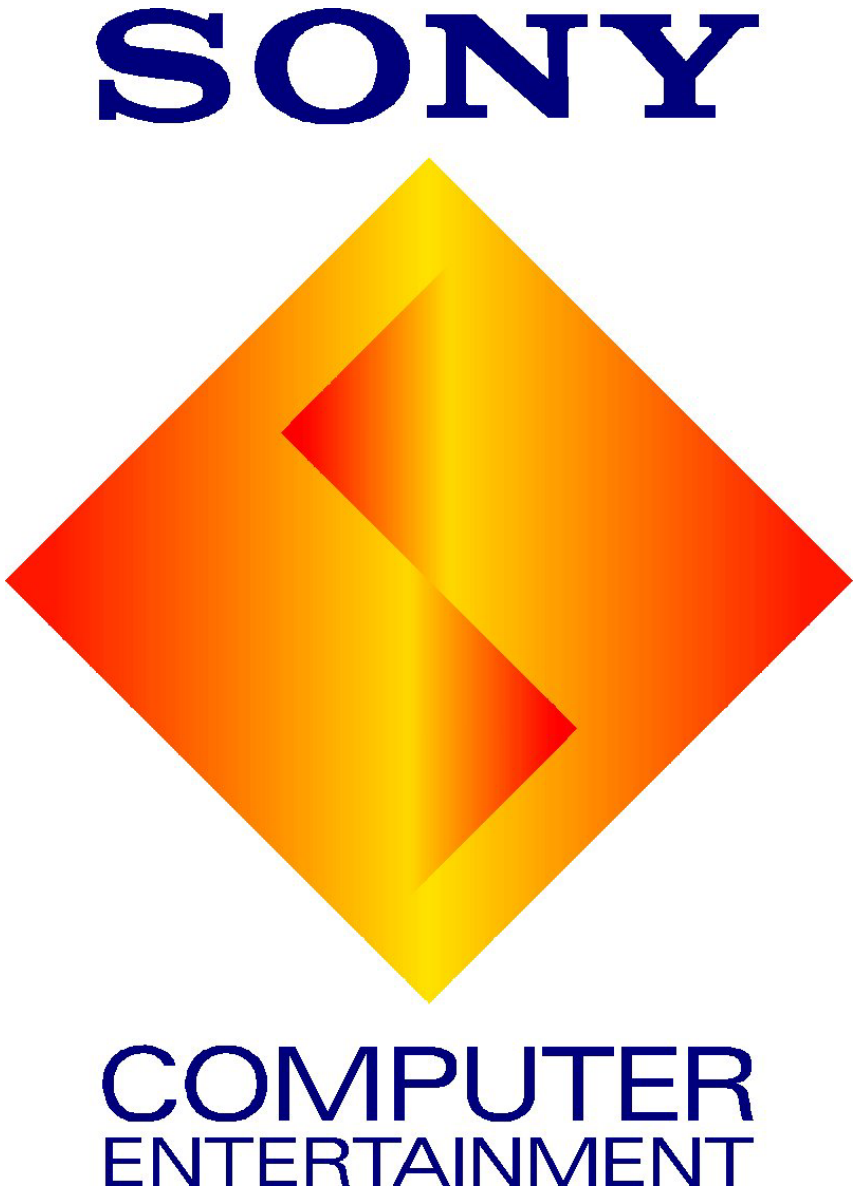
- HDTV 1920x1080 Progressive Output
- Advanced Rendering Schemes
- Autonomous Characters
- Physical Simulation
  - Rigid Body Dynamics - stable and real-time
  - Soft bodies, cloth, hair, fluids and gases

Future Research

- HDTV 1920x1080 Progressive Output
- Advanced Rendering Schemes
- Autonomous Characters
- Physical Simulation
- New User Interface Paradigms
  - Camera input, image and voice recognition

New Schemes For Interaction

- Tracking of Objects using Camera Input
  - A more natural interface than the joypad
- Enhanced Reality
  - Real-time, Interactive CG and Live Video Composition
  - Video Tape Demonstration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