Strategy

- Maximize MIPS/Watt
- Minimize components to be qualified

Conclusion:

- The needed computing will be high
- Qualify low power, hi perf chip (R4000?, PowerPC?)
- Use same chip for DSP, CPU, Controller

Holes

- Compression (whats needed)
- Sensors

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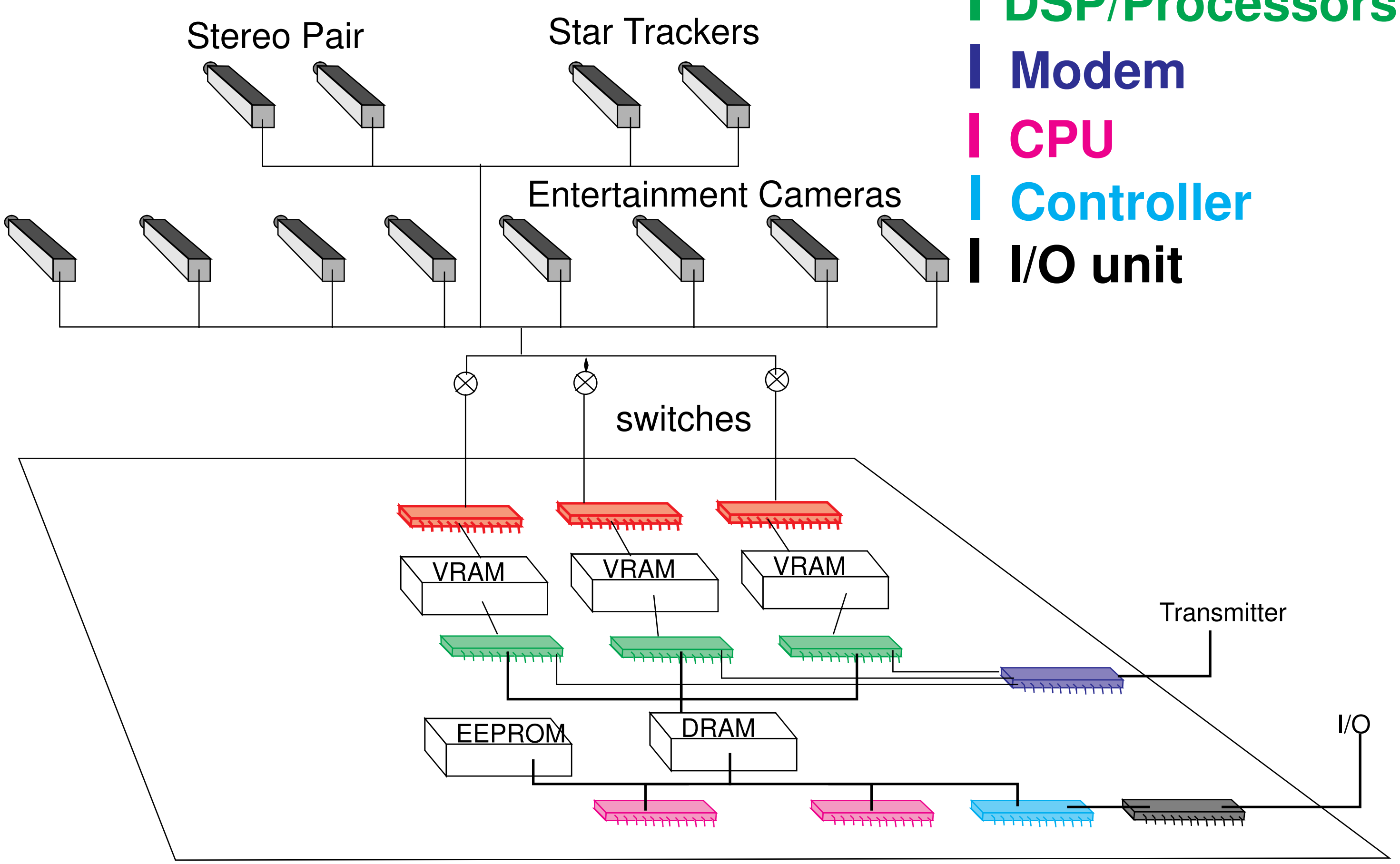
System Design

- Framegrabber
- DSP/Processors
- Modem
- CPU
- Controller
- I/O unit



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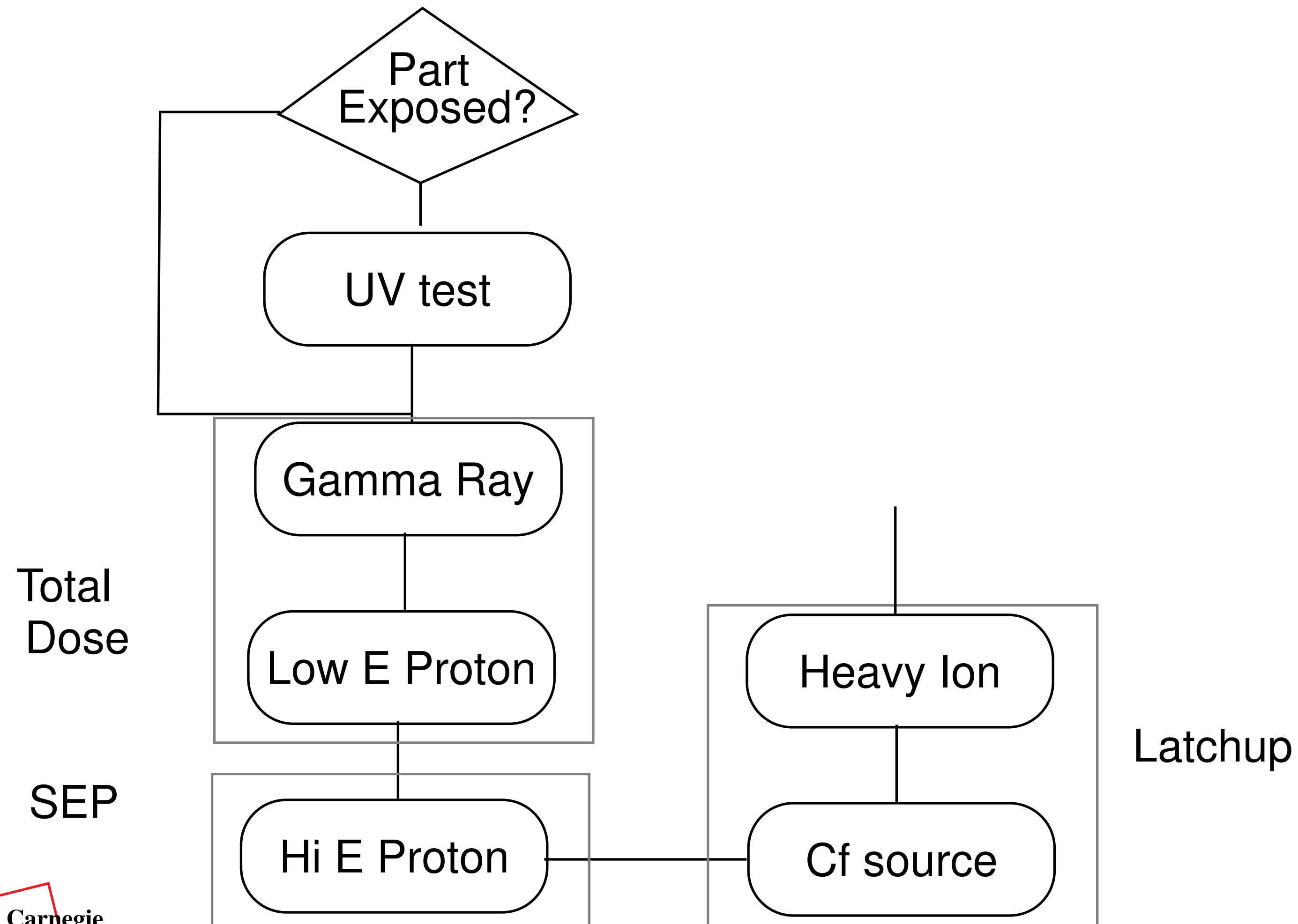
Testing Process



Available CPUs

- **Mips R3000 compatible**
  0.1. Mongoose: 3Mrad, Heavy ion LET ~85, error LET > 25 Mev, SEU 1 upset/ 105 years. Core CPU candidate; < 5 W, 25 MHz-scalable,
  0.2. R3081: 3 W, 66 MHz CPU, Space approved (27 MIPS, 11 MFlops)

- **IBM Risc 6000**
  0.3. RAD6000-SC: SEU 1 upset/yr, 16.9 W-20 MHz, 20 MIPS (spec)

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Summary of Activity

- Cost framework
- Testing framework
- Available CPUs, boards
- Available architecture
- Compression

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