Enhancing and Extending the rPeANUt Illustrative Computer Simulator

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Outline

- Introduction
- Goals
Introduction

- What is the Illustrative Computer Simulator?

  A simulation of real computer systems with illustration.

- What is the rPeANUt?

  The rPeANUt Computer is a simple microprocessor which was created for teaching computer systems at the ANU. There is a Java implementation of a simulator along with an assembler.
Introduction

- 16 bit addresses
- 32 bit register
- Memories that is addressable in words of 32 bits
Goals

- implement a #include facility
- enable the display of a memory cell in decimal
- display a complete decoding of assembled instructions
- enable multiple cores
Goals

- implement a Virtual Memory mode with an MMU
- implement simulated hard disk that backs onto a file
- implement a simulated sound card
Thanks!