

## Small Animal MRI Scanner Lab



Sam Hurley

Advanced MRI: MP/BME710

04-Oct-2018

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### Overview

- MRI System Block Diagram
  - PSG/Control System
  - Radiofrequency (RF) System
  - Gradient System
  - Support Systems (Cryogenics)



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### Host Computer and VnmrJ



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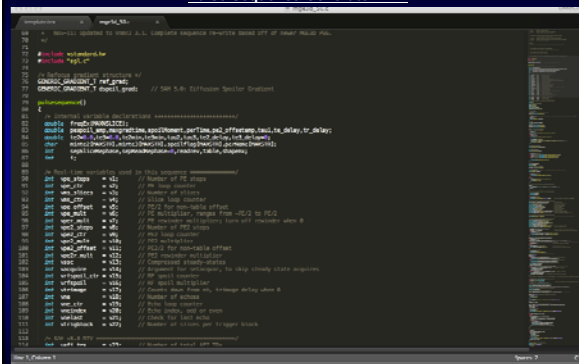
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### Pulse Sequence Generator in C



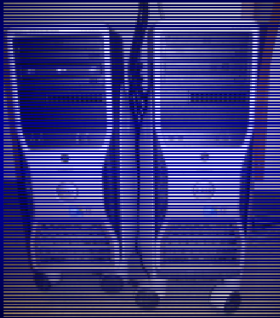
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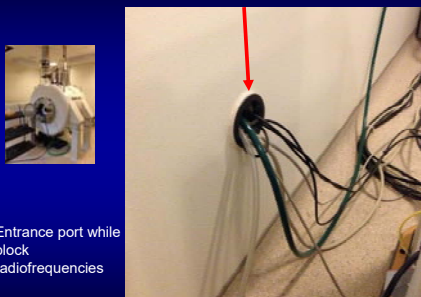
Mirror Host Computers – vnmr1 and vnmr2



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Magnet Room <-- Wave guide --> Control Room




- Entrance port while block radiofrequencies

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Console with embedded linux




- Limited set of commands and RAM
- Guaranteed 4us timing resolution

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Console door opened up



Linux computer and clock

4us timing for x, y, and z gradient waveforms and RF waveform

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Radiofrequency Coil – <sup>1</sup>H Mouse quadrature



Tuning Rods

Matching Rods

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