
CLS Control System Progress Report

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- EPICS Environment
 - EPICS 3.14
 - Development: RedHat Linux 7.2
 - Servers: RedHat Linux 7.2
 - OPI: RedHat Linux 7.2
MS-Windows 2000
 - IOC: RTEMS
RedHat Linux 7.2
 - PLC: MODICON Momentum
S7/300 or S7/400

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- Linac – Complete
 - Old CAMAC and NeXT hardware replaced.
 - Modulator control and most vacuum control converted to MODICON Momentum PLC hardware
 - IOC connection: MODBUS over Ethernet
 - Old Power supplies upgraded with single board computers running IOC software.
 - NI FieldPoint used for slow parameters
 - IOC Connection: RS-232

- **Booster**
 - Nearly complete
 - Vacuum control using MODICON Momentum
 - Diagnostics using VME hardware and PowerEdge Server/Linux
 - RF Control using S7/300 hardware
 - link to EPICS still under development
 - Magnet Power Supplies controlled over RS232

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- Storage Ring, Beamlines
 - System Design and Implementation has started
 - Based on similar technologies and design strategies to linac and booster
 - Motor control on beamlines will be based on the CLS standard motor control hardware

- Control Room Software
 - The Canadian Nuclear Safety Commission requires CLS to conduct detailed task analysis, this activity is driving our operator screen layouts
 - EDM has been selected for operator consoles under Linux
 - Standard EPICS applications (strip tool, alarm handler etc.) are being used
 - Augmented with some customizations or custom applications
 - Some specialised applications running under MS-Windows 2000

- Services
 - HVAC and Cooling Towers with Invensys DMS complete, integration with EPICS postponed
 - Secondary Cooling System - MODICON Momentum and NI FieldPoint – complete
 - Power Metering/Transformer Control – under development
 - Cryogenics Plant - S7/400 - under development

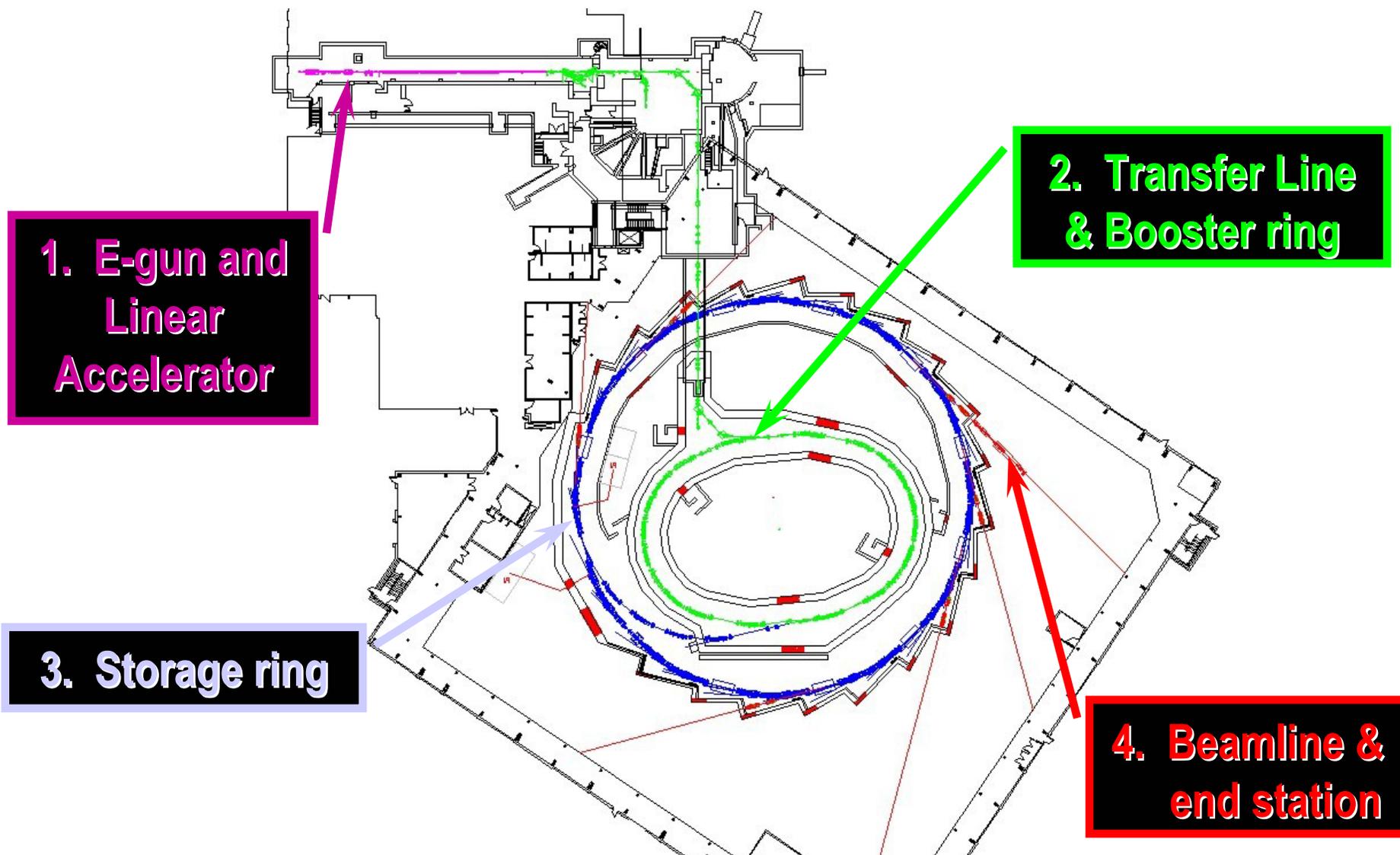


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Existing Linear Accelerator

