

The Past and the Future of Real Time Digital Simulation



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Kansai Electric Power Company Analog Simulator 1989



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30 generators

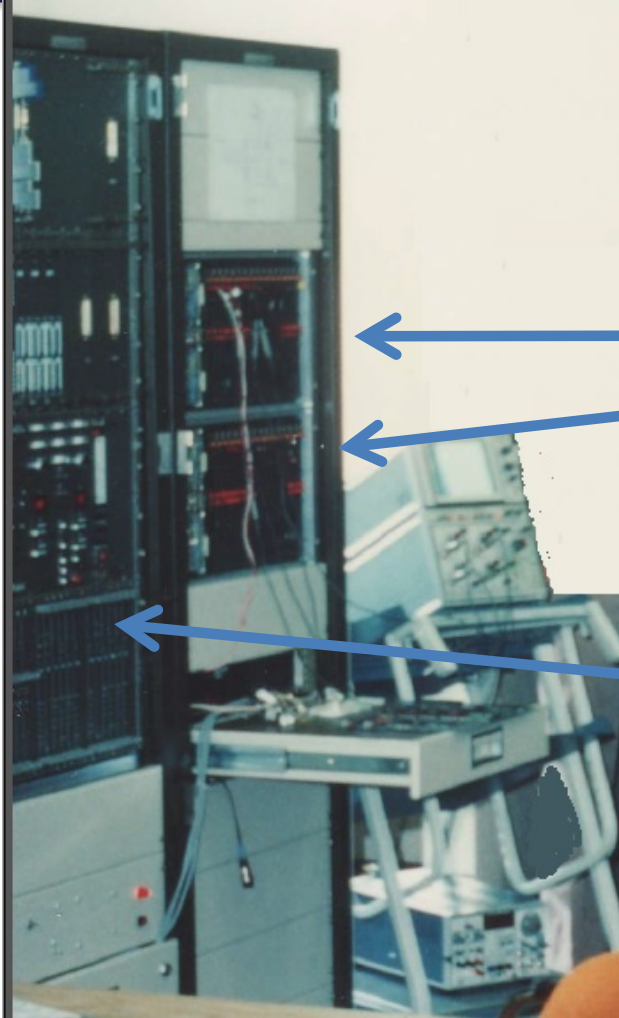
304 transmission
lines (π sections)

20 loads

DC Transmission
converters &
SVC

Manitoba HVDC Research Centre

First RTDS 1990



First two RTDS
Racks

Set of Original
HVDC Controls
for Blackwater

Manitoba HVDC Research Centre

The Team that Developed the First RTDS



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RTDS Technologies

The RTDS in 2001



RTDS Simulation Requirements for the Future

- All types of power electronic devices
- Provide a way that competing equipment suppliers can test their controls and protections in the one set-up
- Accommodate testing for controls and protections of micro grids
- Test for Harmonics, Power Quality and interactions between power electronic devices
- SSR/SSCI, and other special studies

RTDS Simulation Requirements for the Future

Knowing a lot about RTDS is becoming sexy at parties



The End