## Hybrid-type Power System Simulator

**Purpose:** To vitalize power transactions and maximize the benefit under the electric power market, it becomes more and more important to establish stable operation scheme of a wide area power system. The hybrid-type power system simulator makes it possible to develop control schemes of a wide area power system by simulating the system dynamics of an actual power system precisely.

## **Main Specifications:**

The hybrid-type simulator, which is a combination of analogue and digital simulators, makes it possible to simulate an actual power system precisely by adding the following devices to an existing analogue simulator.

- (a) Real time digital simulator
  - Computer system to simulate a part of power system with real time
  - Power system with about 10 generators can be simulated
- (b) Connection interface
  - Interface using two inverters with BTB configuration to connect between existing analogue simulator and the above (a) digital simulator
- (c) Control equipment of generator station and substation
  - Workstation system to simulate control equipment (8 sets) of generator station or substation
- (d) Operation and monitoring equipment, communication system model
  - Overall system operation and monitoring equipment model
  - Communication system model using LAN
- (e) Load, shunt devices
  - System load (150kW=50kW\*3)
  - Shunt capacitor (70kVar), Shunt reactor (60kVar)

## Location and Date of Installation:

System Engineering Research Laboratory, March 2004

Configuration of the hybrid-type power system simulator

