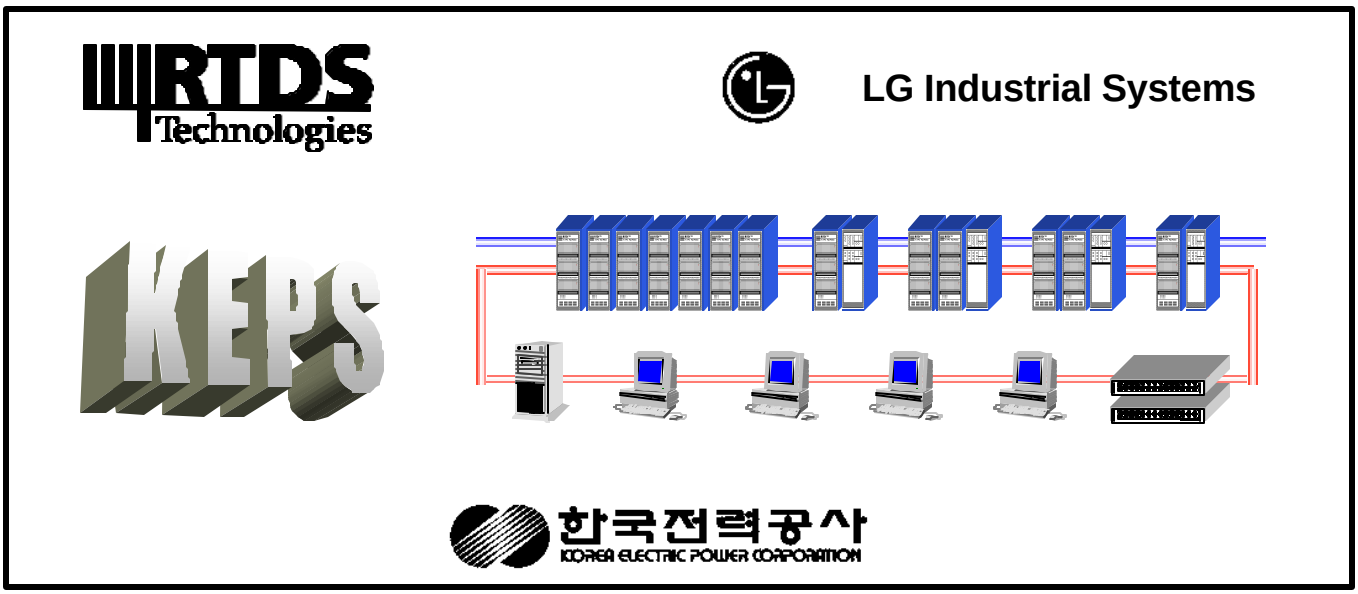
RTDS NEWS

December 1998



RTDS to Supply Large Scale Power System Simulator in Korea

RTDS Technologies Inc. has recently been awarded a contract to build the world's largest and most advanced real time power system simulator. The simulator, which will be built for the Korean Electric Power Corporation (KEPCO) under a sub contract agreement between RTDS Technologies and LG Industrial Systems (LGIS), represents the biggest project of it's kind to date.

According to the contract and schedule, the simulator will consist of 26 RTDS racks to be put into operation at KEPCO's research center (KEPRI) before the end of year 2000. The simulator to be supplied is based on combined TPC and 3PC hardware and software technology. In its full configuration, the simulator will be used to study the KEPCO system from the 345 kV level and above, including its HVDC link and planned FACTS devices. In particular, interactive simulation of electromagnetic transient phenomena will be carried out including: study of interactions between equipment like protective relays, controllers, and power electronic devices; validation of protection systems, regulators, and stability control devices; development of FACTS devices; and general power system training for engineers and system operators.

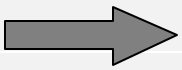
In addition to providing simulator hardware and software, RTDS Technologies and LGIS will jointly develop a number of new features for the simulator. It is expected that many of these new developments will benefit other RTDS users in the future.

As part of the project, RTDS Technologies will provide a comprehensive On-the-Job Training and Participation (OJTP) program and formal classroom training throughout the project. It is expected that several engineers from both LGIS and KEPRI will reside in Winnipeg from mid 1999 through to the final shipping date for the training. Although RTDS Technologies will support the simulator after its installation

through an extended warranty and maintenance program, LGIS and KEPRI engineers are expected to gain enough practical experience during their residency to provide front line support functions in the longer term.

As part of the simulator selection process, KEPRI performed a detailed analysis of the RTDS simulator capabilities and compared them to capabilities of other simulation systems being developed and offered by TEQSIM (Canada) and EDF (France). Included in this comparison was a set of benchmark or validation cases where the results of the real time simulator were compared with field test results, emtp simulation results, transient stability simulation results, and benchmark results published by IEEE and CIGRE. RTDS Technologies was the only simulator supplier to successfully complete and submit all required benchmark and validation cases.

This project represents an important milestone not only for RTDS Technologies, but also for real-time digital simulation in general. All previous large-scale simulator projects have been based on fully analogue or analogue hybrid techniques. Recent advancements, many of which are the result of research and development projects at RTDS Technologies, have made it possible to achieve real-time, large-scale simulation of power systems using fully digital techniques. Fully digital simulators now provide superior capability, accuracy, and flexibility at a fraction of the cost.



Email Reminder

Note that our email addresses are no longer at:
_@hvdc.ca

Please be sure to use our new addresses at:
@rtds.com

Conferences

IEEE/PES Winter Meeting
We invite you to visit our hospitality suite during the IEEE/PES Winter Meeting in New York Jan. 31 thru Feb. 3, 1998.

ICDS - International Conference on Digital Simulation
RTDS Technologies will be participating in the next ICDS to be held in Vasteras, Sweden May 25 – 28, 1998

Real Time Network Solution

Since reporting on it in our last RTDS News, the Real Time Network Solution has gone into full commercial operation. It has been very well received by users and is quickly becoming the preferred approach in RTDS simulations. With the capability of running 42 nodes and 56 switches on one rack (21 nodes and 28 switches per subsystem), this is no surprise.

In our next RTDS News, we will report more on the new 6 pulse HVDC converter (with internal valve faults), implemented using the Real Time Network Solution.

RTDS is ready for Y2K !

The RTDS Hardware/Software has been successfully tested for Y2K compatibility. An RTDS Simulator was operated with a computer workstation whose clock was set to 23:59 1999. The system was then operated until after the workstation's clock had rolled over to the year 2000. PSCAD was shown to correctly detect that files created in 1999 preceded those created after the year 2000. Furthermore, embedded code within the RTDS is date free.

RTDS Users should ensure, however, that the Unix Operating System Version installed on their workstation is also Y2K compatible.