

# RTDS NEWS

January 1997



*Happy New Year from Everyone at RTDS Technologies*

## RTDS™ IN JAPAN

Nowhere has the use of the Real-Time Digital Simulator (RTDS™) taken off more so than in Japan. There are more RTDS users in Japan than any other country. Large and small manufactures of power system equipment, electric utilities, as well as research institutions are included in the Japanese customer list.

With the construction of new transmission systems, manufactures are using the RTDS to test new control system concepts and demonstrate their capabilities to the end customers. Hitachi, for example, has been using the RTDS

for several years to develop and test power system stabilizers and HVDC controls.

Japanese utilities are using the RTDS to investigate the impact of the new transmission facilities on their system. In particular, the Chugoku Electric Power Company is using a large RTDS to study the effect of the Kii Channel HVDC System, which is now under construction, on their network. Mr. Sugihara and Mr. Tomiyama, working at the Chugoku Research Centre, have constructed a detailed model of the Chugoku

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area power system including the Kii Channel HVDC link. Presently they are using the RTDS to simulate their model in real-time. It is also possible for them to interface physical HVDC controls to the model so that the effect of operating sequences such as start-up, shut-down, as well as protection sequences can be studied.

Manufactures of equipment such as protective relays and other power system monitoring devices are improving the capability of their products by incorporating digital processing and more sophisticated algorithms. The RTDS is being used by these manufactures to test the new features of their products and to demonstrate the application to potential customers. When compared to an analogue simulator capable of modelling an equivalent power system network, the RTDS gives the manufactures a tremendous savings in installation and operating cost.

Due to the fact that the RTDS is fully digital it is also easy for various groups within a single organization to share the use of the simulator. The time required to run an entirely new simulation case is only a matter of minutes or seconds since no physical wiring is required to interconnect power system components.

Development of RTDS software is largely driven by the customer feedback and many additional features now available as part of the RTDS are due to the response from users in Japan. Judging by this enthusiastic interaction, it is anticipated that the number of RTDS users in Japan will continue to grow.

### DPSP '97

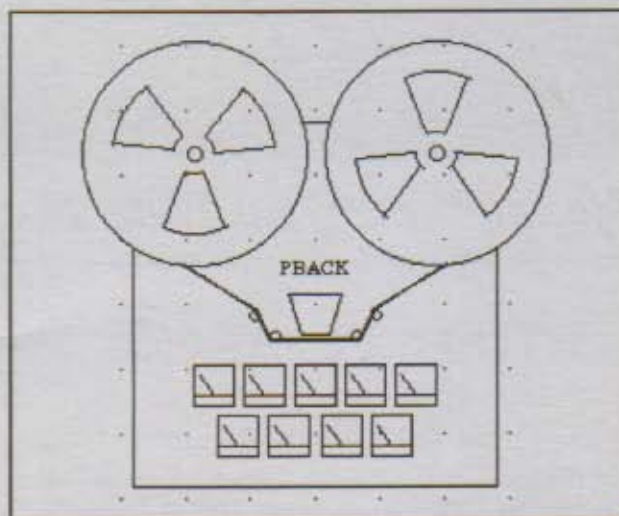
*RTDS Technologies will participate in both the academic and the exhibition portions of the Developments in Power System Protection conference to be held March 25-27, 1997 in Nottingham, England.*

### ICDS-97

*The second International Conference on Digital Power System Simulators (ICDS-97) will be held May 28-30, 1997 in Montreal, Canada. RTDS Technologies will be there to present papers and exhibit the latest RTDS simulator equipment. We would encourage anyone interested in real-time simulators to attend and/or take part in the conference.*

### COMTRADE PLAYBACK

The ability to playback COMTRADE files recorded from other simulation packages or recording equipment has recently been added to the RTDS. This new feature was added with the needs of the relay test sector in mind. For most testing and development work, the relay engineer will use the RTDS in a closed loop configuration, where the RTDS solves the network under study. However, there are instances where it is desirable to playback data from the field or other simulation tools. Now, instead of having to disconnect the test object and move it to another test system, the RTDS can be used to perform the desired playback simulation.



COMTRADE Playback Draft Icon

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