Initial task of India's first hybrid computer will be for flight training simulation, followed by jobs in space technology, power plants, bio-medicine, missile analysis, and manufacturing processes. During dedication ceremonies, Professor M.G.K. Menon, Scientific Advisor to India's Defense Minister, heralded the EAI PACER® 600 installation by saying that "highly sophisticated (hybrid) computers...are bound to play a significant role in the country's development."

ECSSL — pronounce it "excel" — is the name of a new language processor system available from Electronic Associates, Inc. for the automatic generation of continuous system simulation programs for modern hybrid computers. The user enters a model as a set of differential equations and a complete, error-free program is generated for setup, checkout, and interactive operation of the hybrid computer. Fully described in literature that's available upon request, ECSSL can significantly reduce programming costs and increase productivity in modern hybrid computing centers. The FORTRAN-like language of ECSSL extends hybrid simulation benefits to system analysts who may not be familiar with parallel analog processing.

Thanks to "RAH", our Remote Access Hybrid terminal, real-world interactive demonstrations of hybrid computation are being routinely conducted throughout the world. Communications to the PACER® 600 laboratory in West Long Branch, N.J. are over voice-grade telephone lines and, where necessary, via satellite. Simulations currently available on the RAH hook-up include homing missile/target interception, six DOF flight, lubricated bearing dynamics, fractional distillation, nuclear power plant operations, jet engine control, compressor surge control, and mining shovel dynamics. EAI field sales offices can provide detailed information on these and other "in-your-office" demonstrations.

Heat transfer characteristics of a natural UO₂ nuclear fuel rod under full blowdown conditions are being simulated on a hybrid computer to design electrically-heated pins emulating nuclear fuel rods to be used in special Loss of Coolant research. Study proved hybrid computer flexibility and versatility in solving the partial differential equations describing heat flow from the UO₂ across a gap and through a Zircaloy clad in the nuclear rod, in comparison with the equations for the heat flux through ceramic, across a gap, and through an Inconel clad in the heater rod. Aerojet Nuclear is using a RAH terminal at Idaho Falls to run the simulation on a PACER® 600 at EAI's Scientific Computation Laboratory.

For further information on these and other developments of interest in hybrid computation and simulation, contact...