

In May of 2000, Lee Sheldon was working at Enron.

On behalf of Enron Lee resurrected his optimization scheme that didn't get any traction in 1988 after the successful Bull Run Dam Index Test Box demonstration.

Lee's 3-level optimization scheme started with the Index Test Box from Woodward Governor Company. This is the description of it from the pitch:

WOODWARD GOVERNOR COMPANY

The next advance was the development of Woodward Governor Company's Index Test Box (ITB). With assistance from BPA, Woodward developed a completely new automatic method of indexing Kaplan turbines. The blades no longer had to be held at a series of fixed angles, but instead, the unit remained in normal operation under the control of the dispatcher. The ITB is simply plugged into the governor and using sophisticated signal processing technology developed by the US Air Force, recorded selected data points, over a period of time, when conditions met critical steady state criteria. The ITB uses a feature of the governor to hold power constant while it moves the blades very slightly. Power can not be held constant in the manual method of index testing. The result was that the ITB determined the optimum cam curve directly. The data recorded is stored on an EPROM (Electronic Programmable Erasable Memory chip) such that only one ITB is needed in a powerhouse because each turbine may have its own, dedicated EPROM. BPA funded Portland General Electric (PGE) to purchase the first ITB and install it at Portland Hydro #2. There, a manual index test was also done and its results compared with the index test results from the ITB. They were exactly identical. With that verification, BPA offered to purchase an ITB for every Corps' powerhouse and to modify the governors where necessary. However, that offer was not accepted and Woodward failed to pursue further commercial development.