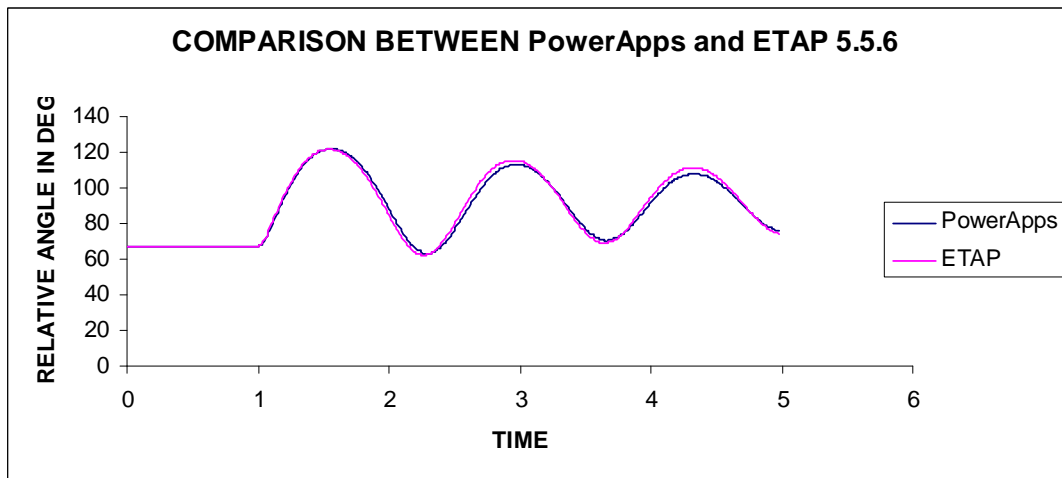


The transient stability simulation results of PowerApps are compared with those of the ETAP 5.5.6 for the reference example chosen from the text book P. Kundur. The details of the system considered are provided in the exhibits.



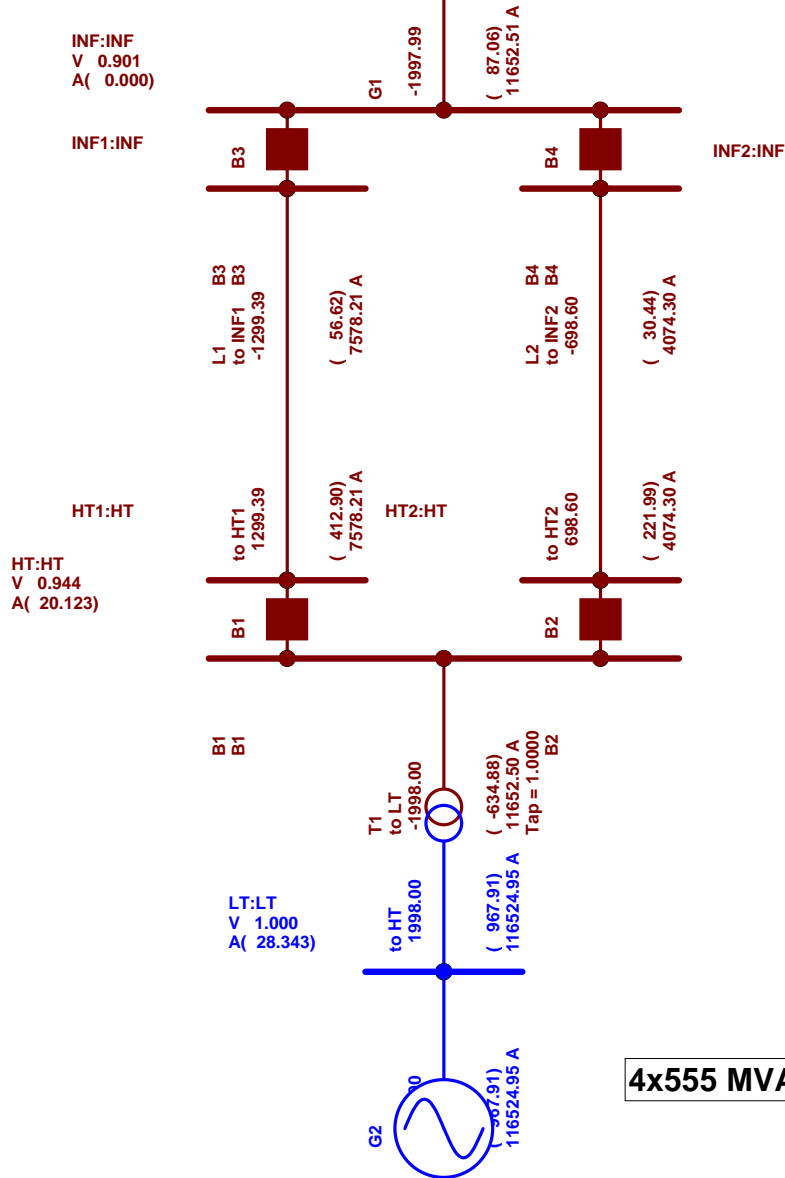
1. The above chart shows the relative angle response for a sample text book example 13.2, Page 864, Power System Stability and Control, Prabha Kundur,
2. The plots compare well with those of Figure E.13.7, on page 867 of the text book, (refer plot of Constant Efd)
3. PowerApps produces plot points for second solution at points of network discontinuities. This results slight shifting of PowerApps curve (G2). ETAP did not produce variable values at points of network discontinuities (second solution values at the same instant of time)
4. PowerApps did not model saturation explicitly. Instead used saturated reactance values approximated to get identical initial conditions as per the text book. In ETAP the effect of saturation was minimized by choosing the parameters appropriately. There is however, minimal difference between the text book response and the program outputs.

# Kundur Text Book Example 13.2; LOADFLOW

Refer Figures E13.6, E13.7  
of the reference Text Book  
Power System Stability  
and Control

P.Kundur

Infinite Bus Represented  
as equivalent Generator



# Kundur Text Book Example 13.2; System Information

Refer Figures E13.6, E13.7  
of the reference Text Book  
Power System Stability  
and Control  
P.Kundur

Infinite Bus Represented  
as equivalent Generator

