

SAARC Training Workshop 'Power System Studies for Synchronization of Multiple Systems'

Running Stability Simulations in PSS/E

Day-3-E

Kabul, Afghanistan

20-22 October 2014

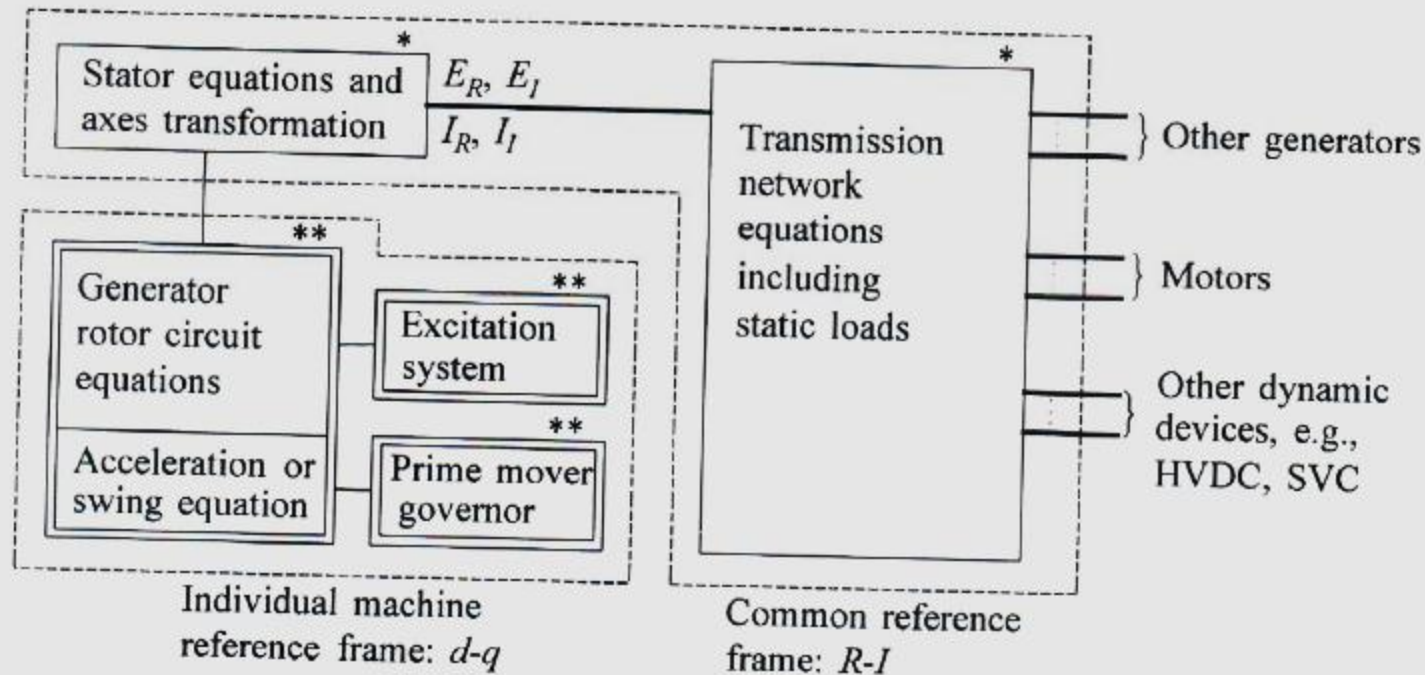


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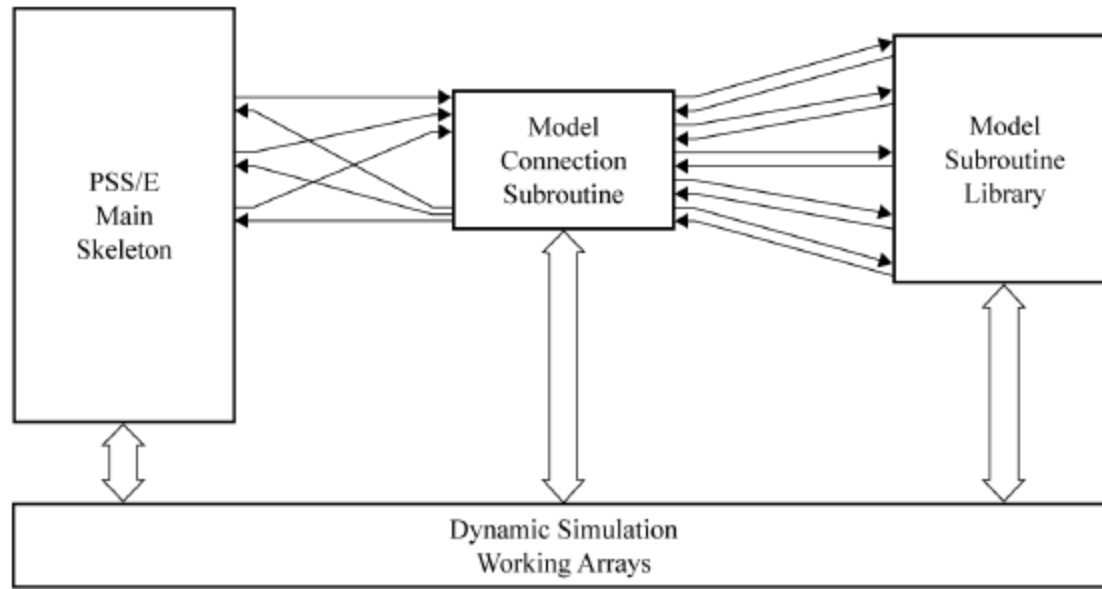
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Structure of stability analysis



- * Algebraic equations
- ** Differential equations

Stability Solution in PSS/E

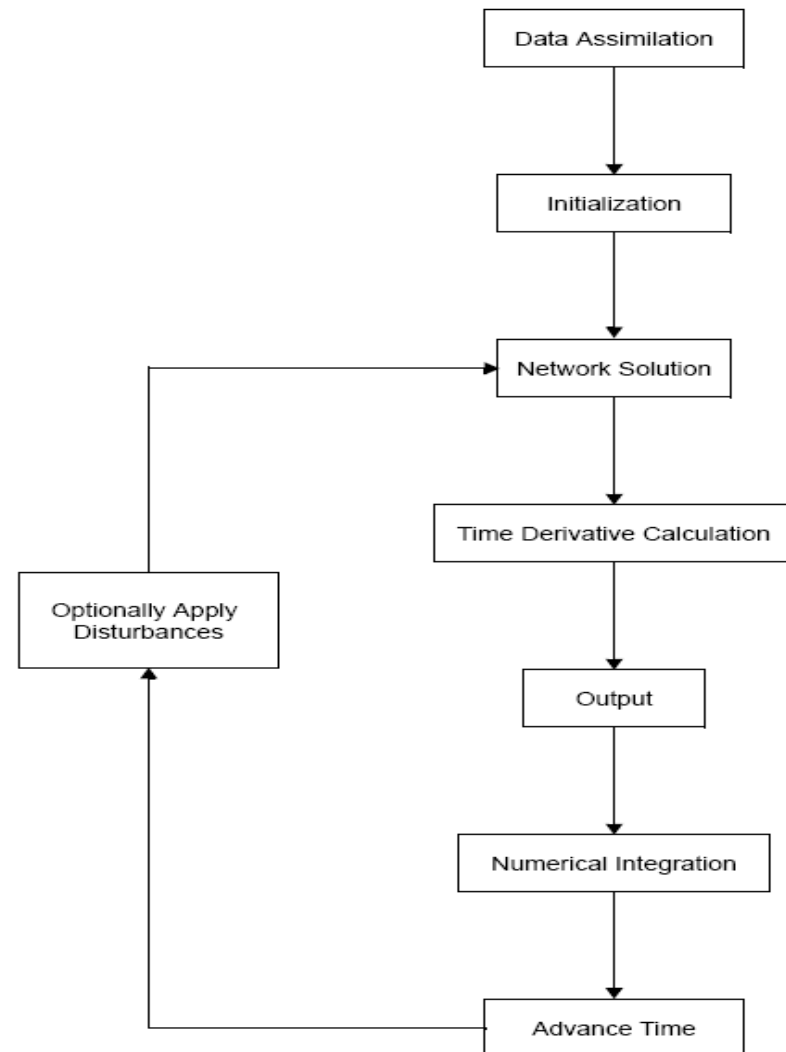


- Constants:** Parameters that do not vary during the period to be simulated.
- State Variables:** Variables for which instantaneous values are determined by differential equations.
- Algebraic Variables:** Variables for which values can be determined if the values of all state variables, constants, and input variables are given.
- Input Variables:** Quantities for which values are specified at any instant by logic outside the dynamic simulation.

Stability Simulation Setup in PSS/E

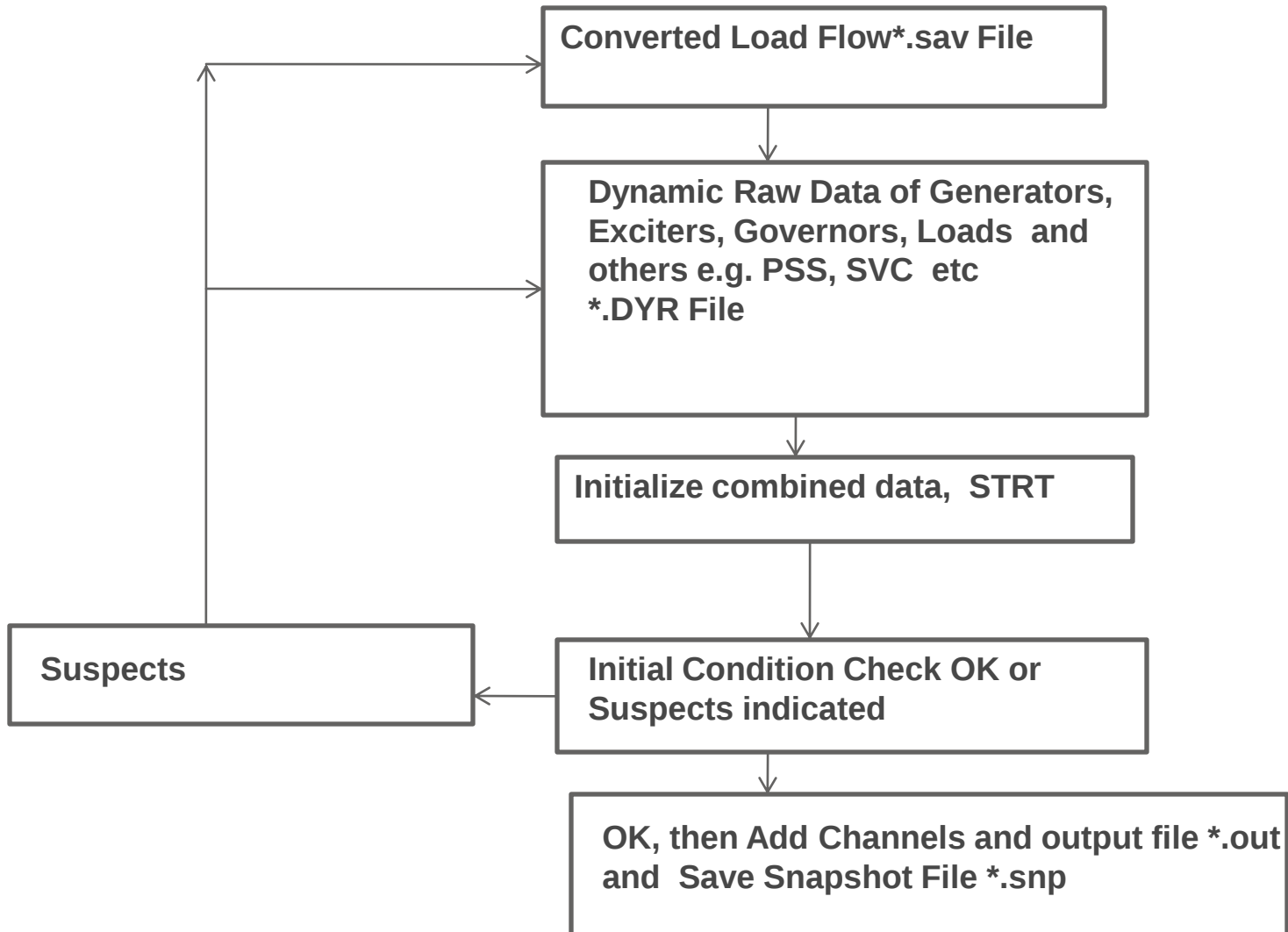
Combining Power Flow Initial Conditions with Dynamic Models

Power Flow Raw Data	SMALL
Solved Initial Condition (IC) Power Flow	SME1
Solved Converted IC Power Flow	SME2
Dynamics Raw Data	SMEDD
Initial Condition Snapshot	SSN1
First Plotting Output File	GOP1
Subroutine CONEC Source	CC1
Subroutine CONET Source	CT1
Response File for Channel Assignment	RC1
Progress Snapshot	SSN2
Progress Power Flow Case	SLF2



Stability Simulation Setup in PSS/E

Setup Flow Chart



Stability Simulation Run in PSS/E

Simulation Flow Chart

