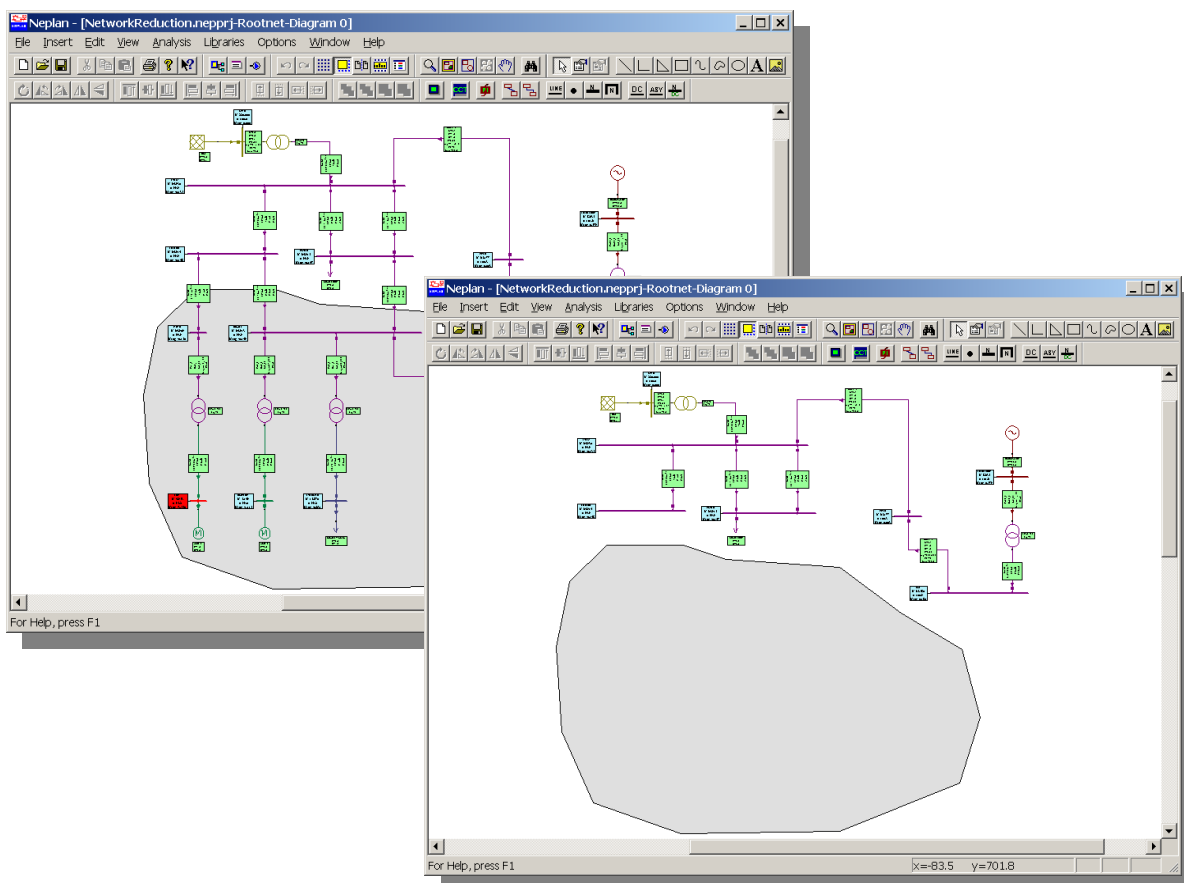


This module is designed to reduce the size of a network model by replacing sets of buses and the network elements (lines, transformers,...) that connect them with a smaller but exact, numerically equivalent network. For a properly chosen set of buses, this equivalent network will have fewer buses and branches than the original, yet still provide the correct response to faults or load flow calculations in the unreduced portion.

The network can be reduced for

- symmetrical or asymmetrical short circuit calculations according to IEC909, IEC60909, ANSI/IEEE or superposition method and
- load flow calculation.

The reduced network gives the same short circuit or load flow results as the original network. Giving the nodes to be reduced, the program determines the boundary nodes automatically.



## Input

- any network as for short circuit or load flow calculation
- nodes to be reduced during network reduction
- functions to select a complete network area to be reduced are available
- boundary nodes are determined automatically by the program

## Output

- shunt and series equivalents, which can be saved in the data base
- the shunt and series equivalents consists of data for the positive, negative and zero system dependent on the type of network reduction (load flow or short circuit)
- for load flow network reduction boundary injections and boundary generators are calculated

