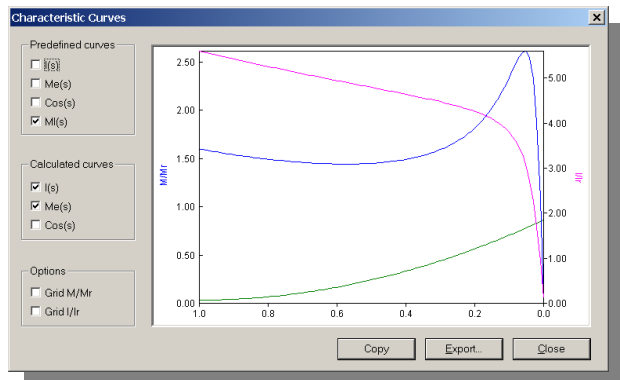
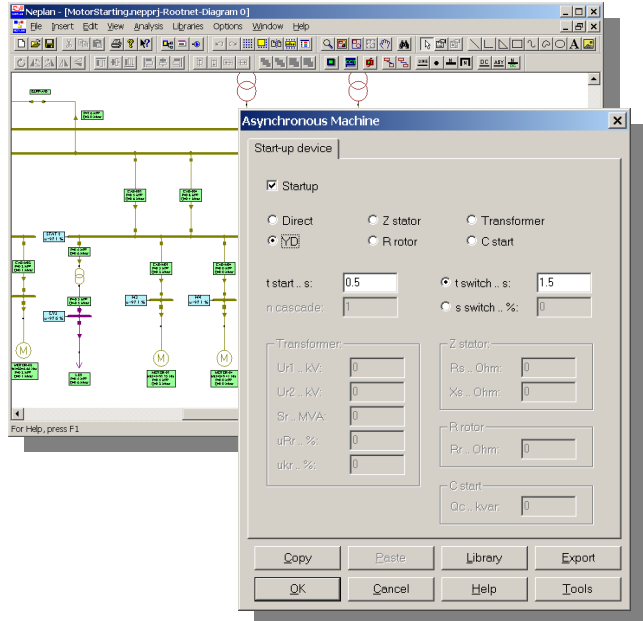


Motor Starting Computation

- Simulation of motor start-up in unlimited networks.
- Simultaneous or time-delayed start-up for any desired number of motors.
- Identification of motor parameters using the least square method from input values for torque, current and $\cos(\phi)$ in function of the slip.
- Different motor models, depending on the motor data entered.
- Saturation and eddy-current losses in the motor allowed for (linear or point-by-point).
- Libraries for standard motor data, plus additional libraries for $M_e(s)$, $I(s)$ and $\cos(j(s))$ are available (can be extended by the user).
- Operating point computation for all non-starting motors in accordance with their load characteristics (Newton-Raphson).
- Automatic tap changing transformers are allowed for after a user-defined time-delay.
- Load torque entered as a characteristic or as a linear or quadratic load torque curve.
- Libraries for load torques are available (can be extended by the user).
- Start-up devices are allowed for, such as star-delta starter, series resistor, transformer, soft starter, etc.



Voltage Drop

- Computation of voltage drop to the moment $t = 0$.
- Reduced data entry for motors and computation parameters.
- Non-starting motors can be simulated by a user-defined load PQ (constant power) or shunt.
- Overloaded elements, measuring instruments and protective devices or nodes with voltages outside a defined range are highlighted.
- Results of the voltage drop computation are displayed in the single line diagram.
- The motor data entered and the motor parameters computed can be accessed by clicking on the motor concerned in the single line diagram.

Results

- Computation of voltage $U(t)$ at predefined nodes.
- Computation $I(t)$, $P(t)$, $Q(t)$ for each predefined element.
- Computation of motor current I , load torque M , electromagnetic torque M_e , active power P and reactive power Q as functions of time, or of the slip for starting-up and non-starting-up motors.
- Graphical output of the characteristic curves and time characteristics, with automatic scaling of the axes.
- Dimensioning and colors can be altered.
- Result lists can be saved in text files.
- Results can be saved in result files for evaluation by means of spreadsheet programs (such as MS-Excel).

