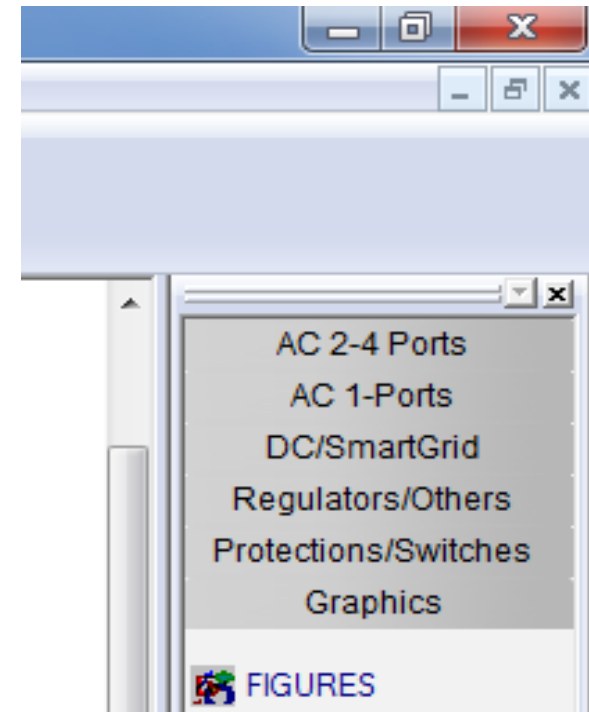
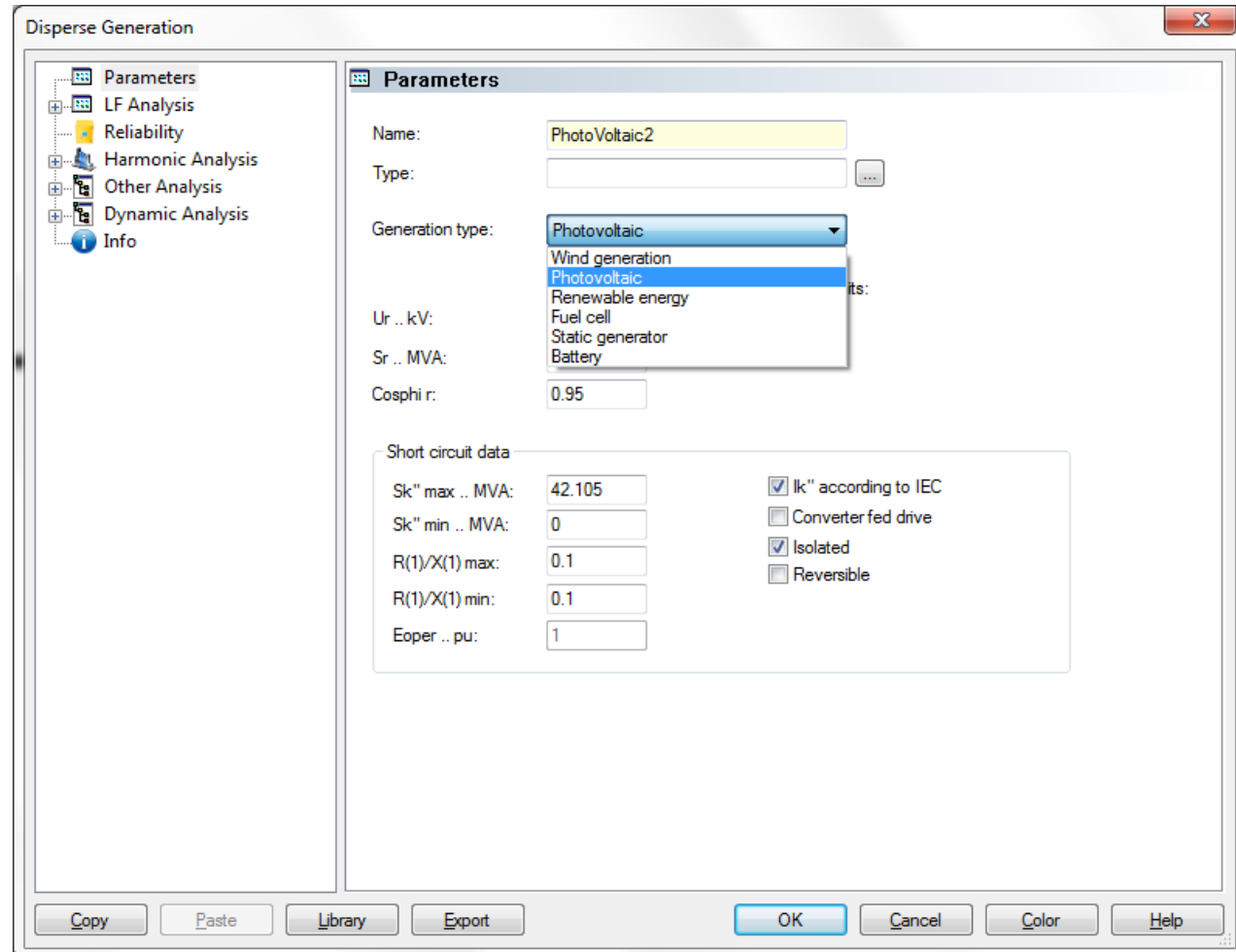
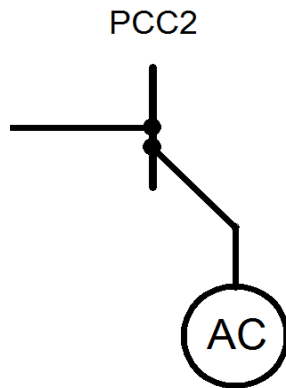


New developments

- Correction of known bugs and required improvements
- Man-Machine Interface
 - Close/Open all logical switches of an element
 - Hungarian and Turkish MMI
 - Symbol window new structured



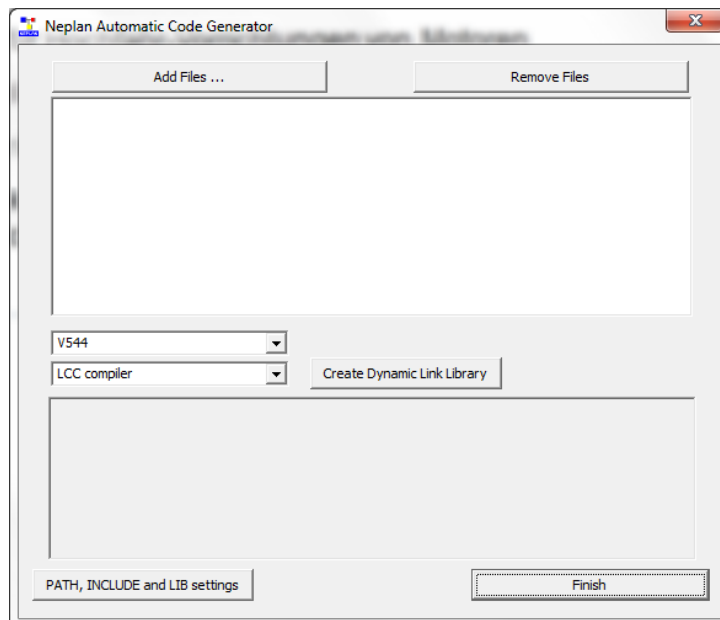
■ New element for Disperse Generation



- Reliability: new index ASIDI (min/Year) for unavailability
- New models for Smart Grid applicationen
 - DC Photo voltaic
 - DC Battery
 - DC Fuel Cell
 - DC Fly Wheel (coupled to DC generator)
 - AC Fly Wheel (coupled to AC generator)
 - Compressed Air Energy Storage
- Calculation of electro-magnetic transients
 - Lines
 - Transformers

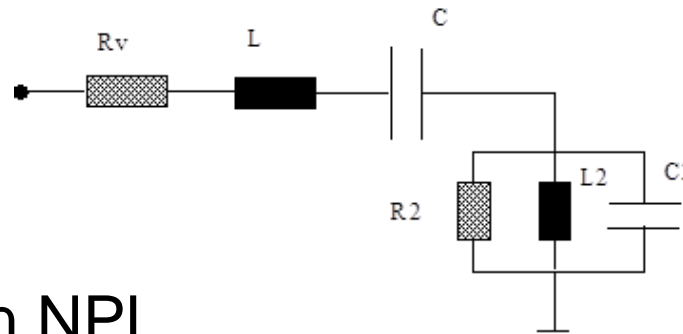
■ NEPLAN Simulator

- Models for motor start-up devices
- Pole-slip relay
- NPL functions for describing events, plot-outputs, controller (essential for performing power system studies efficiently)
- dll-generation (description of controllers) independent of MatLab: NEPWINACG.exe



■ Filter model extended

- Common filter, L-L phase connection

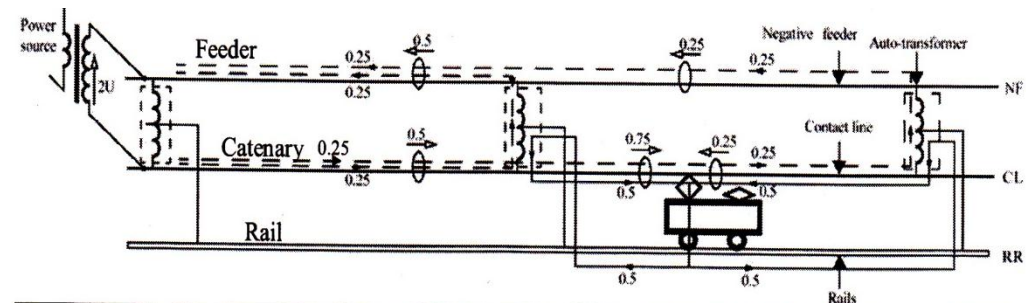


■ Improvements in NPL

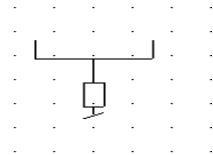
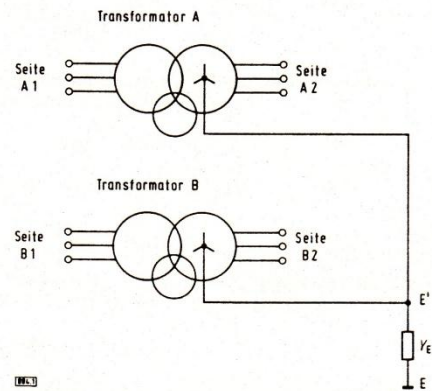
- Calling the GIS interface from command line: „NEPLAN *.nepprj \cde *.cde“

■ Asymmetrical transformer model extended

- Auto-transformer for track systems



■ New element: Earthing system



NEPLAN Symbol

Earthing system

Name:

Type:

	Name	Vector Group	Earthing Impedance	Earthing Side		
System 1:	<input type="text" value="Tr1"/>	<input type="text" value="Yyn0"/>	<input type="text" value="0.0"/>	<input type="radio"/> Prim	<input checked="" type="radio"/> Sec	<input type="radio"/> Tert
System 2:	<input type="text" value="Trb"/>	<input type="text" value="Yyn0"/>	<input type="text" value="0.0"/>	<input type="radio"/> Prim	<input checked="" type="radio"/> Sec	<input type="radio"/> Tert
System 3:	<input type="text"/>	<input type="text"/>	<input type="text" value="0.0"/>	<input checked="" type="radio"/> Prim	<input type="radio"/> Sec	<input type="radio"/> Tert
System 4:	<input type="text"/>	<input type="text"/>	<input type="text" value="0.0"/>	<input checked="" type="radio"/> Prim	<input type="radio"/> Sec	<input type="radio"/> Tert

Common Earthing Impedance

Re1 .. Ohm:

Xe1 .. Ohm:

Active .. %:

- Differential Coil (dialog 3-winding transformer)
- Dialog for line-earth fault settings of distance protection
- Network reduction with Extended Newton Raphson
- ENTSO-E CIM Interface (release Juli 2011)