

Title (en)

A METHOD FOR COMPUTER-ASSISTED CONTROL OF AN ELECTRIC POWER GRID

Title (de)

VERFAHREN ZUR COMPUTERGESTÜTZTEN STEUERUNG EINES STROMNETZES

Title (fr)

PROCÉDÉ DE COMMANDE ASSISTÉE PAR ORDINATEUR D'UN RÉSEAU ÉLECTRIQUE

Publication

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Application

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Abstract (en)

[origin: WO2013129958A1] The invention refers to a method for computer-assisted control of an electric power grid comprising a plurality of nodes (N1, N2,, Nn), each node (N1, N2,, Nn) including electric equipment for power control. In this method, decentralized case-based reasoning is implemented in each node where the number of cases (BC) used for the case-based reasoning is specified by a central control unit (CU) communicating with each node. The central control unit estimates the overall state of the power grid and determines the number of cases to be used in each node in dependence from this overall state. During the operation of the power grid, case-based reasoning is performed in each node by comparing current parameters of the electric equipment in the node with the cases in a case base comprising the number of cases specified by the central control unit. In a preferred embodiment, the invention is used for nodes including transformers with an on-load tap changer where the switching of the tap changer is determined by case-based reasoning. The invention provides an easy and reliable control of decentralized power grids and an easy implementation of the method in existing grid structures. Fig.1

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CPC (source: EP US)

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