

南方电网超级能量管理系统的混成控制系统构想

张 弥¹, 卢 强²

1. 中国南方电网公司 电力调度通信中心, 广东省 广州市 510623; 2. 电力系统及发电设备控制和仿真国家重点实验室(清华大学电机系), 北京市 海淀区 100084

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摘要

混成控制系统以事件处理为核心, 通过定义事件将经济运行和安全运行目标统一到一个处理框架内, 实现复合目标趋优化控制。文中介绍了实现多重目标趋优的混成控制系统, 提示了其“事件驱动”本质, 同时指出了事件的分类和一些主要事件的形成条件。该系统作为构造南方电网超能量管理系统的核心组件, 可从理论和工程实践上指导“数字南方电网”的建设, 并为南方电网的安全、经济运行提供有力的保障。

关键词 [混成控制系统; 事件驱动; 实时仿真; 超实时仿真; 主动解列控制](#)

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A Speculation on Hybrid Control System of Super-EMS of China Southern Power Grid

ZHANG Mi¹, LU Qiang²

1. CSG Dispatching Center, Guangzhou 510623, Guangdong Province, China;
2. State Key Lab of Control and Simulation of Power Systems and Generation Equipments (Department of Electrical Engineering, Tsinghua University), Haidian District, Beijing 100084, China

Abstract

A hybrid control system (HCS) is such a control system, which takes the “event-drive” as core and by means of the definition of event the objects of both economic operation and secure operation of power system are concentrated into a single framework to implement the optimized control of complex objects. In this paper the authors propose an HCS by which the optimization of multi-objects is realized, and the essence of event-drive is revealed; meanwhile, the classification method of events and the forming condition of principal events are given. As the core component to construct a super-EMS for China Southern Power Grid (CSPG), the proposed HCS can be used to guide the construction of digitized CSPG in theory and in engineering practice, and provides powerful ensure for secure and economical operation of CSPG.

Key words [hybrid control system \(HCS\); event-drive; real time simulation; super real time simulation; controlled system separation](#)

DOI:

通讯作者

作者个人主页 张 弥¹; 卢 强²

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