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A New Simulator for HVdc/ac Systems-Part II

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Abstract: This paper presents a performance comparison (the focus of numerical simulation) of traditional simulation (TCS,TSE) with an optimal step time simulator (SOST) for large HVdc systems.In SOST, a Detailed simulation of HVdc converter behavior has been modified to include the automatic selection of optimal integration steps, frequency-dependent effects of an ac system, ac system phase and magnitude dynamics of voltage (particularly weak ac systems), control assessment and temporary over-voltage consequences. SOST, via graphical interfaces,provides fast and accurate information of electromechanical and the electromagnetic-transients behavior of a large HVdc/HVac system.

Key Words: HVdc, Hybrid algorithm, Load flow, Dynamic behavior, Time domain analysis

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