

Distributed Power Architectures for Computing Systems

Monday, 3 September 2007 17:15 (45 minutes)

Nowadays computing systems comprise a large number of different processing equipment (servers, routers, etc.) with a total power consumption up to some megawatts. In these applications system-level issues like system and component architectures, modeling, control, power management, overall efficiency are of major concern.

Different distributed power architectures are firstly reviewed, together with the most important converter topologies employed. Then, a particular emphasis is dedicated to the discussion of the Voltage Regulator Modules (VRMs) and their specific aspects. Finally, the future trend and applications of integrated digital controllers in distributed architectures, both at power management level and at the IC controller level, are discussed.

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Session Classification: Plenary session P1