CALL FOR PAPERS -- IEEE GLOBECOM 2011

Selected Areas in Communications Symposium
Green Communication Systems and Networks Track

Symposium Chair

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Scope and Motivation
Energy efficient processes are increasingly key priorities for ICT companies with attention being paid to both ecological and economic drivers. Although in some cases the use of ICT can be beneficial to the environment (for example by reducing journeys and introducing more efficient business processes), countries are becoming increasingly aware of the very large growth in energy consumption of telecommunications companies. In particular, the predicted future growth in the number of connected devices and the Internet bandwidth of an order of magnitude or two is not practical if it leads to a corresponding growth in energy consumption. Regulations may therefore come soon, particularly if Governments mandate moves towards carbon neutrality. Therefore this track is of great importance in seeking to establish the current trends in system and network performance due to known environmental concerns. In particular we believe that substantial advances can be achieved through the innovative use of new architectures, protocols, and algorithms operating on hardware which will itself allows significant reductions in energy consumption. This will represent a significant departure from accepted practices where ICT and networking services are provided to meet the growing demand, without any regard for the energy consequences of relative location of supply and demand.

Main Topics of Interest

1. Power consumption trends in the Internet, (including core, metro, access and home networks) and the green agenda.
2. Network architecture design for low power operation.
3. Routing protocols for energy minimisation in core, metro and access networks.
4. Traffic shaping and policy implementation for energy minimisation in networks.
5. Network monitoring for energy consumption minimisation.
6. Electronic routing versus photonic switching for energy minimisation.
7. Low cost, low energy large photonic switching fabrics.
8. Uncooled switching and routing components.
9. Intelligent low power router circuits.
10. Hardware power consumption models.
11. Transmission energy saving.
12. Possible avenues for standards and intervention.

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