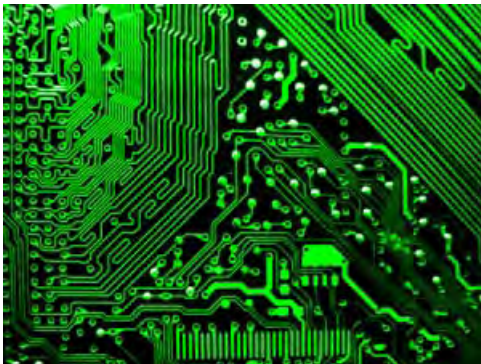

PRESS RELEASE

FOR IMMEDIATE RELEASE

Madrid, April 12th, 2011

Announcement of Patent Filing for energy efficiency of computer networks

Institute IMDEA Networks, a research institute in the area of computer networking backed by the Madrid Regional Government, in collaboration with NEC Laboratories Europe and University Carlos III of Madrid, has announced the filing of a patent application last February 9th. It establishes a novel method for the reduction of the energy consumption of a network by minimizing the number of active nodes involved in any given communication.



The importance of energy saving solutions for networking has steadily increased over the last few years due to environmental and economic reasons. In order to reduce the energy footprint of current and future systems, engineers are now working on enhancements to all networking layers with the objective of optimizing their energy efficiency. While some optimizations focus on energy saving while the network is operative, other approaches consider solutions which aim at minimizing the number of active nodes within the network.

The new proposed mechanism to reduce the energy consumption of the network is elegantly simple, both in design and application. For a given network topology and traffic matrix, it produces optimal routing in terms of energy and throughput, by

providing a routing system which maximizes the number of flows that can be admitted into the network while powering down (fully or partially) nodes that are not required to transport the given traffic.

This mechanism has been shown to produce excellent results in different tests, outperforming other approaches very substantially in terms of throughput as well as energy consumption. The reductions achieved correspond to up to 40% of the amount of energy consumed.

This patent filing is one of the results achieved by the European Project CARMEN, recently concluded with outstanding grades. CARMEN focused on the provision of carrier-grade services over wireless mesh networks. Manufacturers, operators, universities and research institutes worked on the design of next generation multi-hop networks, comprised of heterogeneous radio technologies, meaning more available, easier-to-deploy and more cost-effective services.

ABOUT INSTITUTE IMDEA NETWORKS

Institute IMDEA Networks is an international research institute supported by the Regional Government of Madrid and the European Union. The Institute brings together distinguished and young scientific researchers to develop cutting-edge science and technology in the field of networking. In order to ensure a truly international perspective, the Institute's working language is English. Promoting interdisciplinary collaboration, the Madrid-based Institute works in partnership with leading businesses and scientists from around the globe. By generating new knowledge and understanding through its activities, the Institute supports the continued development of Madrid and Spain as a centre for international scientific and technological research.

www.networks.imdea.org

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