

Objectives

OPLINK is a project funded by the European FEDER and the Spanish Ministry of Education and Science. The aim of this project is to explore advanced optimization techniques to solve networking problems for academy, industry, and society. Nowadays, connectivity has become of an utmost importance for many aspects of our lives. Therefore, having the technology to solve and optimize problems in network environments has become an unavoidable necessity.

The main goal of OPLINK is to identify and solve problems in network environments by means of exact, heuristic and modern techniques, so that accurate solutions are obtained efficiently. Some of the network environments to be studied are: design of ad-hoc networks, automatic frequency planning for cellular and satellite networks, computing optimal paths for communication networks (routing), parallel computing, p2p, grid computing, and distributed computing.



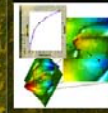
Communication Networks



Technology Transfer



Computer Networks



Optimization

The second main goal of OPLINK is to transfer this technology to industry. This enforces some hard restrictions, including practical requirements from the application domain (multiple goals to be optimized, proprietary systems, etc.). Also, it is important for OPLINK to transfer the developed techniques to other application domains, not related to networks.

A third goal is to create robust methods and techniques with components that can be used in bioinformatics, parallel programming, or engineering problems. Should all these goals be achieved, OPLINK appears as very attractive project, because we will improve the optimization techniques, apply them to network environments, and transfer them to other technological and scientific domains.

Finally, this project intends to transfer the technology developed to industry (several very relevant industrial partners like ASTRA, OPTIMI and Telefonica I+D, are involved in the project). We also plan to make OPLINK an international effort by collaborating with foreign research centers. We expect a high impact in advanced optimization research at several levels, including algorithms, software, distributed environments, and intelligent systems.



Research Groups

OPLINK::UMA

<http://oplink.lcc.uma.es>

Researchers from GISUM group
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(Coordinating group).



OPLINK::UEX

<http://oplink.unex.es>

Researchers from Computer Architecture and Logic Design group
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and from Artificial Evolution group
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OPLINK::ULL

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