



**OPTIMIZATION  
DIRECT**

Optimization Direct Inc.  
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## **Press release**

A new algorithm  
For Massive MIP Models



### **ODHeuristics for Massive MIP Models**

01 March 2017

With a bigger and more global datasets, customers are presenting increasingly large and complex models to optimize. With these massive models, established optimization technology generally fails in that it can either find no solution at all or solutions that take too long to find or are too poor to have any value.

ODHeuristics is a new algorithm created by Optimisation Direct, designed to run on modern multiprocessor machines. Many cores (24+ ideal) are exploited by the ODHeuristics engine by breaking complex models and difficult MIPs into sub-models and solving them in parallel threads.

Optimization Direct have combined the new algorithm with CPLEX in the *ODH-CPLEX Optimiser* specifically to find solutions massive MIP models of the big data era.

The ODHeuristics engine is run under CPLEX in both deterministic or opportunistic modes; the combination of the two requires more memory and processor resources but ODH accelerates CPLEX and helps CPLEX heuristics and finds good solutions to these massive datasets.





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ODHeuristics is designed for scheduling problems but works for any MIP which has a reasonable number of integer feasible solutions. It has been deployed effectively on packing problems, supply chain and telecoms as well as scheduling applications. On large scale MIPs it provides good solutions and optimality measures that are often beyond the reach of traditional optimization methods.

*Test your massive datasets*

Send your difficult matrices and Optimization Direct's experts will send you the results. Contact ([info@optimizationdirect.com](mailto:info@optimizationdirect.com)) or visit [optimizationdirect.com](http://optimizationdirect.com) for more information.

**--ends--**

Also available – ODH benchmark data and results.

## **Notes for editors**

*Optimisation Direct*

Optimization Direct Inc., is based in the US/UK and co-founded by Dr. Robert Ashford, a pioneer in the field of optimization, and Dr. Alkis Vazacopoulos, a leader in the industry. Optimization Direct has partnered with and entered into a technology licensing and distribution agreement with IBM. By combining the founders' industry and software experience and IBM's CPLEX Optimization Studio product with the arsenal of Optimization modeling and solving tools from IBM provides customers the most powerful capabilities in the industry.

*CPLEX Optimization Studio*

CPLEX Optimization Studio is an analytical decision support toolkit for rapid development and deployment of optimization models using mathematical and constraint programming. It combines an integrated development environment (IDE) with the powerful Optimization Programming Language (OPL) and high-



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performance ILOG CPLEX optimizer solvers. CPLEX Optimization Studio enables clients to

- Optimize business decisions with high-performance optimization engines.
- Develop and deploy optimization models quickly by using flexible interfaces and prebuilt deployment scenarios.
- Create real-world applications that can significantly improve business outcomes.

For more information about ODHeuristics, Optimization Direct, or CPLEX contact:

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ODH and Optimization Direct logos available in CMYK/print formats on request.