LogMIP

Contents

1 Introduction

LogMIP 2.0 is a program for solving linear and nonlinear disjunctive programming problems involving binary variables and disjunction definitions for modeling discrete choices. While the modeling and solution of these disjunctive optimization problems has not yet reached the stage of maturity and reliability as LP, MIP and NLP modeling, these problems have a rich area of applications.

LogMIP 2.0 has been developed by Dr. Aldo Vecchietti from INGAR (Santa Fe, Argentina) and Professor Ignacio E. Grossmann from Carnegie Mellon University (Pittsburgh, USA), and supersedes itsprevious version, LogMIP 1.0.

- LogMIP 1.0 works GAMS releases 22.6 (December 2007) to 23.6 (December 2010)
- Starting with GAMS release 23.7 LogMIP 2.0 is an integrated part of a GAMS distribution.
- Changes in version 2.0 are at the level of language, where LogMIP now uses the EMP syntax and modeltype, and at the level of solvers, where LMBigm and LMCHull are combined in the new solver LogMIP.
- Big-M and convex-hull relaxations algorithms for non-linear models are part of LogMIP 2.0

LogMIP comes free of charge with any licensed GAMS system but needs a subsolver to solve the generated MIP/MINLP models.

For more information see

- Website: `http://www.logmip.ceride.gov.ar/`
- Documentation: `http://www.logmip.ceride.gov.ar/files/pdfs/newUserManual.pdf`