AIMMS

Getting Started

Getting Started with AIMMS

When you start using AIMMS for the first time, you may be at a loss where to start best in order to master the system. In this document we will give you guidelines how to get started working with AIMMS to solve your own problems in the fastest possible manner. In addition, we will present a concise overview of the available documentation.

Getting started with AIMMS

Guidelines for beginning users

As a beginning user of AIMMS, the best starting point to learn AIMMS is working through the *Tutorial for Beginners*. In about an hour's time, this tutorial provides you with the basic knowledge needed to build simple models using the AIMMS Model Explorer, to enter data values by hand using data pages, and to build a page with graphical objects to view and modify the data. This may be sufficient to get you started using AIMMS to create AIMMS models for solving simple optimization problems. From within AIMMS, you can open the *Tutorial for Beginners* from the **Help-Additional Documentation** menu.

Tutorial for Beginners

As an alternative to, or in addition to, the tutorial for beginners you can watch AIMMS Videos on our website at www.aimms.com/videos. Our website contains videos of 10 basic steps involved with building a model in AIMMS, as well as several AIMMS Videos on specific AIMMS features.

AIMMS Videos

A different way of learning AIMMS is by playing G-AIMMS. The first G-AIMMS exists of a number of levels, each with its own specific story and problem description. By completing all levels you will learn how to build different models in AIMMS and how to use a wide selection of basic AIMMS functionality. Information about G-AIMMS can be found on our website at www.aimms.com/g-aimms.

G-AIMMS

Depending on your skills, experience, and learning habits you should determine your own individual learning path. You may use the available AIMMS reference material either as a directory to get a global overview of the functionality available in AIMMS, or, if you decide to start using particular AIMMS functionality, to learn about specific subjects in more detail. Alternatively, you may use relevant examples of the AIMMS model library as a completely func-

Gradually extending your knowledge

tional starting point for your own implementation. The book on *Optimization Modeling* may teach you some useful tricks about optimization modeling, and will show you different (mostly non-trivial) examples of optimization models.

Guidelines for advanced users

As a professional in the field of optimization modeling, or having mastered the basic usage of Aimms, it still takes a substantial time investment to get to know several of the advanced features that will subsequently support you in your role as a professional application builder. Along this path you are advised to work through the extensive tutorial especially designed for professionals. This tutorial provides a good start, and should create excitement about the possibilities of Aimms. Individual examples in the library, plus selected portions of the three books, will subsequently offer you additional ideas on how to use Aimms effectively while building your own advanced applications.

Advanced users

The extensive tutorial for professionals is an elaborate tour of Aimms covering a range of advanced language features plus an introduction to all the building tools. Especially of interest will be the modeling of time using the concepts of horizon and calendar, the use of quantities and units, the link to a database, the connection to an external DLL, and advanced reporting facilities. Even then, some topics such as efficiency considerations (execution efficiency, matrix manipulation routines) and the Aimms API will remain untouched.

Professional tutorial

The current extensive tutorial for professionals requires a substantial amount of input. Several days are required to build the entire application from scratch. It is possible, however, to import portions of the model and its interface to adapt the tutorial to your own time restrictions.

Time required

Workshops

In addition to working through the tutorials and reference material on your own, AIMMS also offers workshops on Aimms that take you through the entire development cycle of a complete decision support application by means of a sequence of hands-on sessions. In these workshops you will have the opportunity to discuss with the experienced course leaders about your own requirements, and get useful pointers how to tackle your problems. For more information about the workshops refer to our website at www.aimms.com/workshops.

Workshop

Online support

The AIMMS Google Group is a community driven online forum on which AIMMS users can not only ask questions, but can also help out other AIMMS users with answers. The AIMMS Google Group can be found at the following address: http://groups.google.com/group/aimms.

AIMMS *Google Group*

Overview of documentation

The AIMMS system comes with the following documentation. From within AIMMS, you can access all the available documentation from the **Help** menu.

Overview of documentation

- Two **tutorials** on AIMMS in PDF format provide you with some initial working knowledge of the system and its language. One tutorial is intended for beginning users, while the other is aimed at professional users of AIMMS.
- There are three major **books** on AIMMS (available both in PDF format and in hard copy). They are
  - The AIMMS *User's Guide* globally discusses all features of AIMMS, its development environment, and end-user interface,
  - The AIMMS *Language Reference* discusses all features of, and is the authorative reference to the AIMMS modeling language, and
  - *Optimization Modeling* provides an introduction to optimization modeling, discussing both basic concepts and more advanced modeling techniques.
- An online **Function Reference** (in PDF format) complements the Language Reference, providing detailed information regarding all functions and predeclared identifiers available in the AIMMS language.
- A number of online **reference manuals** in HTML or PDF format provide you with detailed information on specialized functionality available in AIMMS:
  - *The* AIMMS *SDK documentation* discusses the interfaces provided by the AIMMS SDK which allows you to call AIMMS from external programs in an easy, high-level manner,
  - *The Excel Add-In User's Guide* describes the usage of the AIMMS add-in for Excel, and
  - *The Open Solver Interface User's Guide and Reference* discusses the programmatic interface defined by AIMMS to connect solvers to AIMMS.
- An extensive **help system** is available both in compiled HTML and PDF format, and discusses all features and tools of the AIMMS development environment in complete detail, as well as all options available for AIMMS itself as well as for all solvers linked to AIMMS.

- The Aimms *model library* contains a variety of examples to illustrate simple and advanced applications containing particular aspects of both the language and the graphical user interface. You can find the Aimms model library in the *Examples* directory in the Aimms installation directory. The *Examples* directory also contains an *Index* Aimms project, where you can search for examples which illustrate specific aspects of Aimms.

All the available Aimms documentation, even the contents of the help files, is available in PDF format. This allows you to search through all the available documentation regarding a particular subject using the search functionality of Acrobat Reader. Since most of our pdf documentation is also available on our website, you can also use a search engine like *Google* to search our documentation. In case you prefix the search term with *site:aimms.com* the search will be limited with results from our website.

Searching the documentation

Social Media

Aimms is active on the following social media:

Aimms on social media

- Aimms blog. On blog.aimms.com we will regularly post tips & tricks and other useful information about Aimms,
- Facebook. By liking Aimms on the page www.facebook.com/aimms.optimization we will keep you updated on new items on the blog and other Aimms information,
- Twitter. By following Aimms on the page www.twitter.com/aimms we will keep you updated on new items on the blog and other Aimms information,
- Google+. By following Aimms on the page www.aimms.com/googleplus we will keep you updated on new items on the blog and other Aimms information,
- LinkedIn. You can join the Aimms professionals group via the page www.aimms.com/linkedin.