wishes to remain up to date on current developments and future trends.

The series will include three types of books:

- Textbooks or resource books intended for upper-level undergraduate or graduate level courses
- Research monographs, which collect and summarize research results and development experiences over a number of years
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Authors are invited to submit to the series editors book proposals that include a table of contents and sample book chapters. All submissions will be reviewed formally and authors will receive feedback on their proposals.

Data in a data source are useful because they model some part of the real world, its subject matter (or *application*, or *domain of discourse*). The problem of *data semantics* is establishing and maintaining the correspondence between a data source, hereafter a *model*, and its intended subject matter. The model may be a database storing data about employees in a company, a database schema describing parts, projects, and suppliers, a website presenting information about a university, or a plain text file describing the battle of Waterloo. The problem has been with us since the development of the first databases. However, the problem remained under control as long as the operational environment of a database remained closed and relatively stable. In such a setting, the meaning of the data was factored out from the database proper and entrusted to the small group of regular users and application programs.

The advent of the web has changed all that. Databases today are made available, in some form, on the web where users, application programs, and uses are open-ended and ever changing. In such a setting, the semantics of the data has to be made available along with the data. For human users, this is done through an appropriate choice of presentation format. For application programs, however, this semantics has to be