



Information Management:

Standard Generalized Markup Language, SGML

What is SGML?

SGML is a document description language, defined under ISO 8879. The basic concept of SGML is the ability to store not only textual information but also information about the layout of the document and the function of individual text elements, e.g. titles.

Commonly employed word processing or DTP systems add format information (such as boldface or line spacing), to describe the appearance of a document. There is little option to recognize a text e.g. as <Title> and transfer this charac-

teristic to another system. However, this feature is of prime importance in the automated processing of technical documentation.

SGML doesn't just describe the appearance but also the "function" of the text elements. Even graphics are included in this.

SGML and Database Management

When SGML is employed, not only single documents but also complete publications can be created according to a specified layout, unique and in hierarchical position to one another. The document modules which are created are stored in a database. Complete "books" are put together from the stored document modules, and the modules can easily be linked into a wide variety of publications (e.g. also CD-ROM or Internet). Changes or revisions are carried out solely on the document modu-



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les. These changes automatically flow into all publications into which the modules are linked.

The Fields of Application of SGML

Initially, the strict requirements of the airlines industry and the military for technical documentation led to the development of SGML standards. Subsequently, it became increasingly accepted by everyone who valued consistent information and an optimally efficient creation process and editorial service for technical documentation. As a result, the automobile industry has recently introduced SGML-based technical documentation.

SGML displays its advantages particularly in

- short product development and production cycles,
- greater diversity of variations
- the demand for providing the customer as well as the plants with high quality and continuously current documentation.

In machine and systems construction too, the advantages of SGML-based technical documentation are increasingly utilized.

Advantages of SGML

SGML has enormous advantages in areas which work with structured multi-use text information:

- Once the document modules have been created and stored in a database, they can be retrieved and reused any number of times.
- The document modules can be added and can be used as often as needed, in any positions within a document.
- Even in the preparation of technical documentation, the document modules can be created and stored in a database. This saves time while creating documentation, which helps to avoid postponement of deadlines. Under certain circumstances, there can still be an influence on design and development.
- In the SGML database, document modules are stored in ASCII format. This format offers the security of software- and hardware-independent documentation.
- SGML documents can be processed with any SGML-capable software and the appropriate DTDs, independent of the platform.
- The Internet formats, HTML and XML are sub-categories of SGML. Thus, HTML and XML documents can easily be generated from SGML documents.

SGML from the company's point of view

- Based on SGML documents, files can be easily created for printing as well as for publishing in electronic format.
- The automated production of documents is possible, e.g. as "Printing on Demand". That is, special documentation (e.g. operating manual) is created for a manufactured product, and a print-out is enclosed.
- Existing document modules are available at any time for authorized users, e.g. sales, marketing, construction.
- The production time for technical documentation is reduced. It is more quickly available.
- Costs are reduced through the option of using already existing document modules.
- Costs are reduced by consistent modifications. Changes in an original component flow into all publications in which it appears.
- Improved and easier quality control is possible, since only the original components have to be managed.
- Any authorized user can access the necessary information from an SGML database.
- Increase in the accuracy of hits in computer-assisted searches.

