Toxicological Information- und Data Network - A European Challenge?

Workshop, Berlin 9th - 10th September, 2002

TDI - A Network of Information And Documentation in German Poison Centres: Concept and Realization

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Overview:

TDI (*Toxikologischer Dokumentations- und Informationsverbund*, Cooperation on Toxicological Case Documentation and Information) is a research & development project, funded, and formally managed by the German Federal Ministry of Environment, Nature Protection and Nuclear Safety (*BMU*) with active participation of the Federal Institute of Protection of Consumers and Veterinary Medicine (*BgVV*), all 10 German poison information centres (PC), and German chemical industry associations (*VCI/IKW*) to improve the quality and handling of product information in PC and to harmonize documentation of cases. The project start in 1999, the basic work phase has been finished in 2002.

History:

There are local developments in the *BgVV* and in German PCs on different aspects of product data storage and data exchange:

- TRIC, an information system of hazardous products and cosmetics, developed, monthly updated, and distributed to all PC by *BgVV*
- TOXINFO: an information system for products, addresses, substance monographs, and selected cases developed by PC Munich and used by several PCs
- SUBSTANZ: an information system for products, addresses, and substance monographs developed and continuously used in PC Mainz.
- GIZiNDEX: an information systems for products, addresses, and substance monographs developed and continuously used in PC Göttingen and PC Freiburg.

Furthermore, there are two ambitious research projects on technical cooperation between German PCs and the *BgVV*

- EVA (1990, funded by the *BMU*) on documentation of PC cases and
- TOXINFO-2 (1996-1999). In TOXINFO-2 an format for exchange of information on products and addresses, a data exchange protocol, and a common database model for storing product information in local databases were developed.

Thus, general agreement on basic concepts and pathways of technical realization, a preliminary version of an data exchange format, experience in productive teamwork of experts and users from several PCs, and - in addition - preliminary experience with harmonized documentation had already been developed on start of the project TDI in 1999.

Project structure:

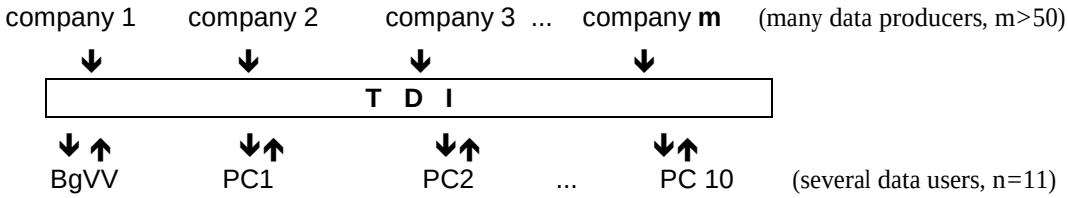
The project's main workload was distributed to 4 workgroups with responsibility in different topics:

- program development (workgroup 1)
- industry - PC relations / data acquisition program (workgroup 2)
- categories & documentation (workgroup 3/4) and
- technical rules for cooperation and data exchange (workgroup 5)

Workgroup 1 has designed and developed the project's custom-made principal database system software, results will be shown in a special presentation by Tillmann Cordes. Workgroup 3/4 results will be presented by Georg Hüller and, in part, by Andreas Stürer.

Main Concept:

The main purpose of the TDI is to establish a confidential and an easy-to-handle technical connection between many producers of product information in industry and several data users in the *BgVV* and PCs.



Product data are entered into the system at locations where products are designed and manufactured (i.e. in the companies). Subsequently, the data are transferred to one selected user of the TDI (called primary user) using a highly structured and well described data format. The recipient tests the data on formal quality and distributes an encrypted version of valid data sets to all other users. This procedure should guarantee that equal information of very high quality is available in all participating centers. The exchange protocol identifies each version of a distributed document and keeps the link to the company which is responsible for the content.

Realization:

- Product data acquisition in companies is performed by the project's custom-made program EMIL (see presentation by Bernd Glassl)
- Transfer of data to the primary user is done by a single export file in the format specification ROSETTA. Each ROSETTA conformant file contains at least 2 data segments. The first segment keeps logistic information while the second segment stores address documents. The optional product segment defines the document structure of three different product types:
  1. the standardised product form defined 1996 by EAPCCT and European industry assiciations (AIS, FIFE and FEA) for cleaning, disinfectant and maintenance products,
  2. the product form for hazardous products according to the German Chemicals Act (*Chemikaliengesetz*, § 16e), and
  3. the product form for biocides according to new EU legislation (in Germany also included in the *Chemikaliengesetz*).

  To support a common identification of companies by all participants each address document must contain a valid company registration number. A transferred registration number is regarded as valid, if a confirmation toward a valid reference data pool is possible. In TDI, the company registration number of the European Article Number system, called International Location Number (ILN), or - if this is not possible - a national registration number for companies, delivered by the *BgVV*, has to be used in all data files.

  It is important to note that the TDI system supports an updating of all documents in the case of an error by the responsible author after data distribution: Each product document and each address document contains a unique reference to the author, an identifier of the document, an identifier of the document version and a timestamp.

- The specification of the import procedure from ROSETTA into the local database of a user is strictly defined by rules written down in a substantial handbook to guarantee equal handling in cases of a technical data conflict. In addition to the static criteria of validity with respect to ROSETTA format specification several dynamic constraints were checked carefully (e.g. whether the file was already imported, whether all registration numbers are valid, whether a document or a corrected version of a document newly delivered already exists in the local database).
- Only if formal evaluation does not fail, data are imported in the local database and subsequently distributed to the other users via encrypted data exchange.