

## The Toxicological Documentation and Information Network in Germany (TDI)

Two years experience of automatic product  
data exchange between companies, national  
authorities and poisons centres



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## Background

- More than a million different commercial products are marketed in Europe today.
- Access to product data is essential for efficient poisons centre (PC) service.
- European and national laws regulate notification of data on dangerous products and biocides.
- Data notification of other products is regulated by national laws
  - or is performed in a voluntary way.



## Background / Technical

PC use product data.

Practically, product information for Poisons Centres is provided

- in several different data formats
- in different completeness
- in several ways of delivery

Dealing with product information in PCs is laborious

- necessity for advanced information technology for data management of product data was anticipated in Germany in the 1990's.



## The German TDI Research Project (1999 and 2006)

- All 10 PCs of Germany
  - a federal agency (BgVV -> BfR)
  - an industry association (IKW)
  - and a software company (ISTC)
- were actively involved,
- sponsored by the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety



## The German TDI Research Project (1999 and 2006)

Presentation of work and outcomes:

- Several national meetings
- International Workshop Berlin 2002  
  'Toxicological information and data network  
  - a European challenge?'
- Contribution to
  - Symposium 'Harmonisation of Poisons Information Data Sheets in Europe'  
  at EAPCCT Int Congress 2003 in Rome
  - EAPCCT Congresses in Strasbourg 2004 and Athens 2007



## The German TDI Research Project: Final Results

- Three electronic product data formats
  - a well defined data exchange protocol and
  - a database system
- were developed in several continuously improved versions, each.

Local TDI database systems had been installed in German poison centres and tested comprehensively



## TDI Elements: RML Formats

All product data are formatted using product type specific formats described by

- **Rosetta Markup Language (RML)**
  - using XML (*extended markup language*) language rules
  - [www.toxinfo.org/rml](http://www.toxinfo.org/rml)
- 1. format for dangerous consumer products data
- 2. format for biocides data
  - both based on legal sources (Chemicals Act)
- 3. EAPCCT/FIFA/AISE product format (1989/1996)



## TDI Elements: Encryption

- For data exchange, all RML data packages are encrypted by **Chiasmus** tool supplied by the German Federal Office for Information Security (BSI)
- Annually renewed keys are used

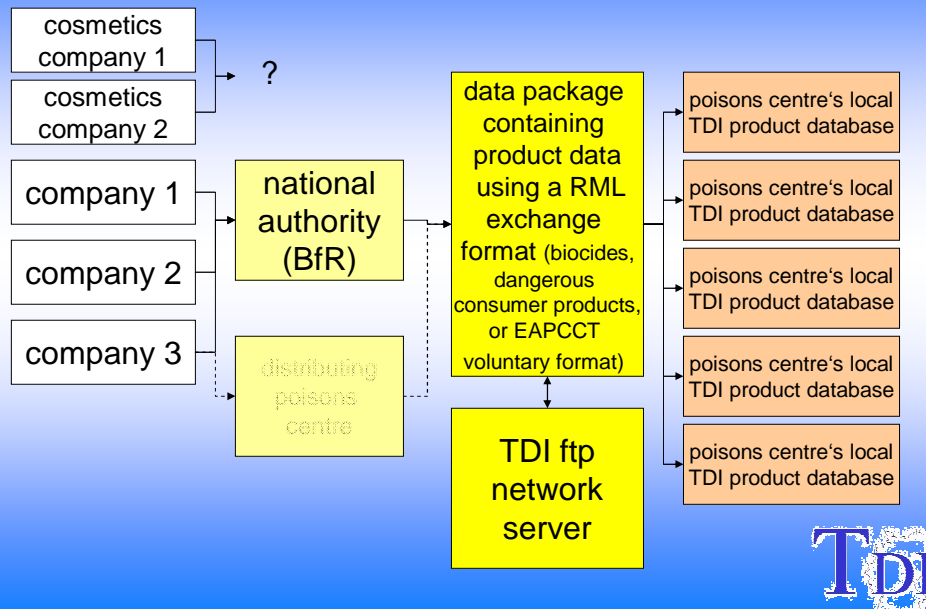


## TDI Elements: Registration / Import Procedure

- each data package has a unique identifier
  - avoiding double import
- each data package can be traced back to the author
- correction and amendment of data **is possible** after primary distribution was carried out
- Download, decryption and import of data is performed as a one-key command within the database frontend software



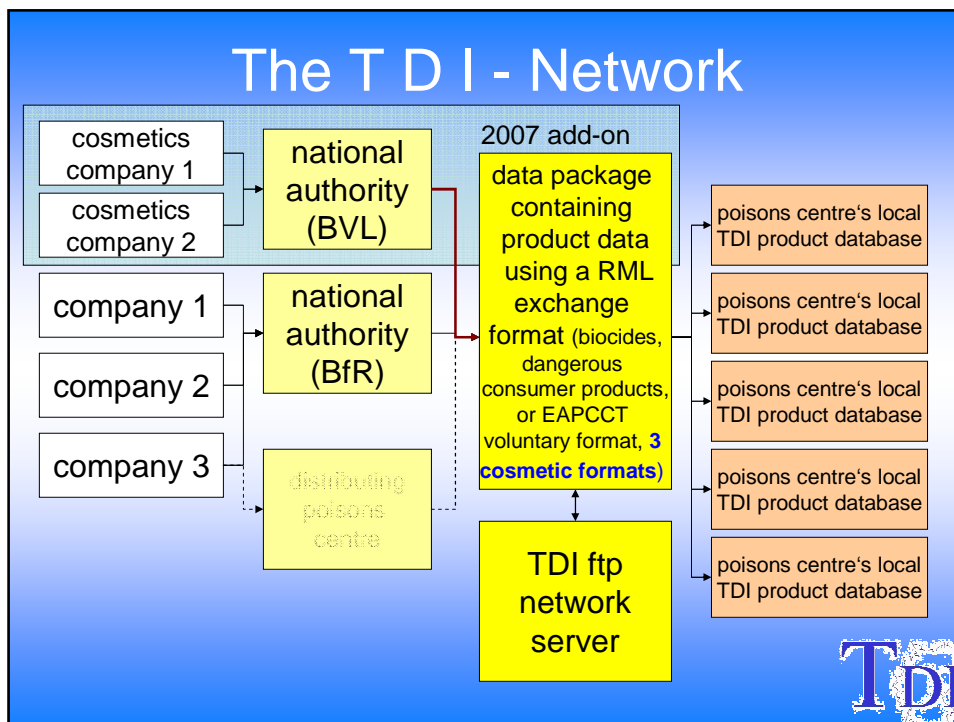
## The T D I - Network



## Cosmetic Product Data

- National regulations have changed in 2006
- a different authority (BVL) became responsible for handling of cosmetics product data
- TDI add-on project: integration of cosmetics data in TDI
  - performed within 6 month





## TDI Working Network

after finalisation of the research project  
and the 2007 add-on project

TDI network is firmly established:

- Two federal agencies supply data on a monthly basis
  - BfR collects data notified by companies on dangerous consumer products, biocides, detergents and
    - a RML data packages containing recently notified products is distributed monthly via CD-ROM
  - BVL collects and distributes data notified by companies on cosmetics (and tattoo inks)
    - a RML data packages containing recently notified products is distributed monthly using the TDI 'file transfer protocol' (ftp) server.
- Product data that are notified voluntarily to a distributing PC is exchanged via ftp server on demand

## Results

- Until November 2008, about 270,000 product data documents were distributed via TDI to 9 PCs and about 10,000 new or altered data sets are exchanged every month.
- Until May 2009 the number of product documents has increased to 310,711
  - plus 138,533 company address data sets



## Status Today

- Flexible database retrieval
- and data display in a product type depended manner
- is performed daily in all German poisons centres using TDI database software tool.
- Furthermore, product data are linked to national toxicological database on constituents



FuE TDI - Giftheratung Version 2.1 - Build 1.26

Quelle:  Produkt  Firmen-Adresse  Gesamtdindex

Art der Suche:  Teilwort  Wortanfang  Phonetisch

Warnung > 20

shampoo

Dokument der TDI-Datenbank, Version 2.1 - Build 1.26 Druckdatum: 11.05.2009

**Produktname** **Abano Pflegeshampoo Anti-Schuppen**

Inverkehrbringer [Berolin\\_Chemie\\_GmbH](#)

Im Markt seit 2005-05-01

vom Sender übermittelter Produkttyp: Shampoo - flüssig und cremeförmig

Die Rezepturinformation zu diesem Kosmetik-Produkt wird **vollständig** durch die

**Rahmenrezeptur 2.1-2000.pdf**

beschrieben

**Formale Rahmendaten**

Autor [Bundesamt für Verbraucherschutz und Lebensmittelsicherheit](#)

Lieferung [80100\\_2008-03-03T08-12-52\\_2007.RML](#)

Rezeptur vom Typ	IDReference:	IDReferenceTimestamp:	IDReferenceVersion:
Rml200802_Bv1	01140/10049/2007-18-10T15-55-20	2008-03-03 08:12:52.0	2007-08-10T15:55:20

Benutzer: TDIADMIN Treiber: Oracle JDBC driver Version: 10.2.0.1.0 Verbindung: thlin@neptun.giz.nord.de:1621:giz2

### Rahmenrezeptur Nr.: 2.1-2000

#### Shampoo — flüssig und cremeförmig

Inhaltsstoffe Höchstwerte (Gewichts-%)

Anionische Tenside (z. B. Natrium-/Ammonium-/Triethanolaminlaurylsulfate und -ethersulfate)	30
Amphotere Tenside (z. B. Betainderivate)	20
Nichtionische Tenside (z. B. Fettalkanolamide)	15
Viskositätsregler (z. B. PROPYLENE GLYCOL, Polyethylenglykol)	10
Kationische Tenside $\geq C_{12}$ (z. B. DISTEARYLDIMONIUM CHLORIDE)	5
Haarkonditioniermittel (z. B. Siliconderivate, Cysteinderivate, Cellulosederivate, Fettsäureester)	jeweils bis zu 5
Weitere Inhaltsstoffe (z. B. UV-Filter, Perlglanzmittel, Trübungsmittel, Parfümöle)	jeweils bis zu 5
Konservierungsstoffe, antimikrobielle Stoffe	1
Chelatbildner (z. B. Dinatrium-EDTA)	0,5
Wasser	bis 100

## Conclusion

- TDI database system has become an important and reliable tool in the daily work of poisons centres in Germany.
- Technical experience may be used for future projects focussed on product data exchange

