

**Insights into  
Electronic Data Interchange  
with  
Waste Management  
in  
Germany**

**The BUDAN interface**

Cologne, 12.04.2002

**Main components of BUDAN interface definition**

**Procedure for designing BUDAN messages**

**Comparison: BUDAN v. UN/EDIFACT**

**The BUDAN messages ABFNTF and ABFVBF**

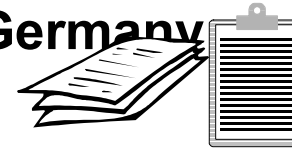
**Use of EDIFIX for BUDAN**

# Main components of BUDAN interface

## definition

**Legal background: Recycling and Waste Act of Germany**

with a set of decrees containing mandatory forms



## Four blocks of data, identified with



basic data of parties (waste generators, waste carriers, waste dispatchers, public authorities)



procedural data (several variants of procedure of notification)



waste flow data (waste way-bills)







catalogue data (e.g. EWC European Waste Catalogue)

# Main components of BUDAN interface

## definition

List of main objects which are very similar to EDIFACT messages covering the four data blocks

one object per category of party	→		4 objects
one object per form	→		13 objects
one object per category of way-bill	→		3 objects
one object per catalogue	→		4 objects

## Lists of object attributes

attributes given by the structure of the forms

attributes necessary for dataset handling and matching (especially for the receiver)

attributes required by the change-over from media paper to EDI

# Procedure for designing BUDAN messages

---

Review of the UN/EDIFACT directories led to the following conclusions:

**UN/EDIFACT does not deal with waste issues yet!**

No UNSM in the EDMD sufficiently match our attribute lists

No segments in the EDSD mention waste

No codes in the UNCL cover waste-related items

**Final conclusion: Design of specialised messages**

# Procedure for designing BUDAN messages

## Design of BUDAN/EDIFACT messages from scratch

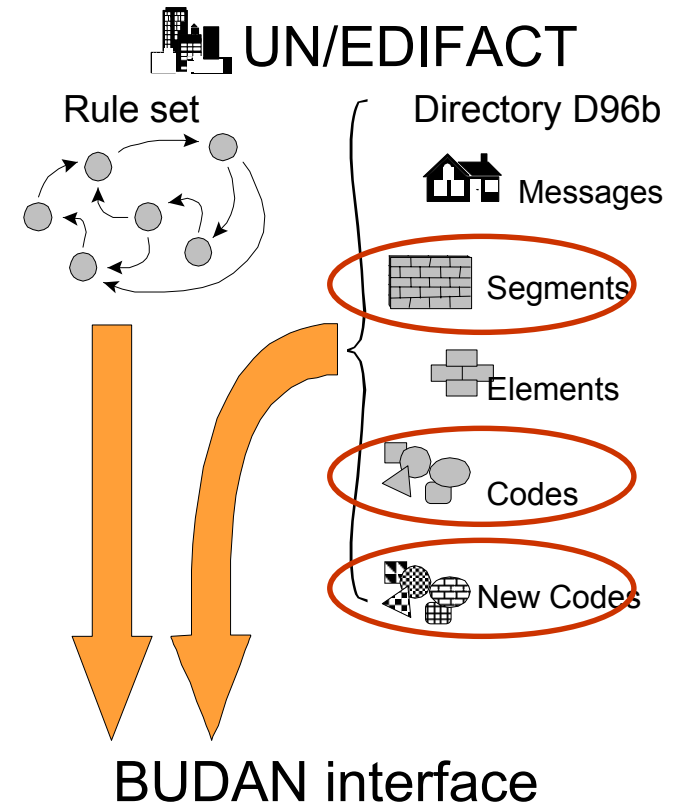
with new sequences of segments and segment groups

using the pre-existing segments of the UNSD (design or redesign of new or pre-existing segments not required)

using codes from UNCL where appropriate, defining new codes as necessary

resulting in

- four messages for the various parties
- eight messages for notification procedure forms
- one way-bill message
- four messages for catalogues



# Comparison: BUDAN v. UN/EDIFACT

---

## BUDAN

**Specialised** messages for special German requirement for waste stream control

**applicable** by implementing the interface definition of the BUDAN workgroup

**applied** to the waste control system ASYS of Germany Länder

**all** message names begin with ABF (from Abfall, i.e. waste)

## UN/EDIFACT

**Generalised** messages independent of the field of business or industry

**applicable** by implementing guidelines defining subsets of the messages

**applied** to several business fields but apparently not to waste-related topics

# Procedure for designing BUDAN messages

---

**In the last 18 months the BUDAN interface has been reviewed and expanded. This includes:**

**changes to the decrees of the German Recycling and Waste Act**

**experiences from German waste control software ASYS (AbfallüberwachungsSYStem), which implements BUDAN**

**the inclusion of the forms provided by German Waste Management Act (Abfallverbringungsgesetz) as the national counterpart of the EU Waste Management Decree based on the Basel agreement**

**resulting in**

**changes to the structure of virtually all existing BUDAN messages**

**new messages for additional parties (e.g. waste brokers)**

**a new message incorporating all specialised party messages in one universal message**

**new messages for certification of waste handling companies**

**and two new messages for the notification and the movement document**

# The BUDAN messages ABFNTF and ABFVBF

---

**These messages** have been designed for the notification of cross-border waste transport

**ABFNTF** (ABFall NoTiFikation) contains the notification form

**ABFVBF** (ABFall Versand- und BegleitFormular) contains the movement document

The lists of attribute for these two messages are based on the forms and been completed by experts from the Federal Environment Agency (Umweltbundesamt UBA)

# The BUDAN messages ABFNTF and ABFVBF

Although there are similarities between the two messages, they have been kept separate

because of structural differences

Item	ABFNTF	ABFVBF
various waste codes	X	X
current number of transport		X
actual weight and number of packages		X
list of chemical constituents and their concentrations	X	
date of first and last transport	X	
reason for border crossing waste removal	X	
name and address, contact etc.)	X	X
list of countries involved, public authorities	X	
list of countries involved including customs dispatch data		X
list of waypoints	X	
list of public authorities giving their consent to the transport	X	

because the messages belong to different blocks of data

# The BUDAN messages ABFNTF and ABFVBF

---

## Both messages

**share sub-structures with all other BUDAN messages, therefore they form a consistent set of messages**

address structures (ADR)  
contact and communication data (CTA/COM)  
location/date/signature (ADR/DTM/ATT)  
boolean attributes (ATT)  
...

**contain structures for the main parts of the messages (body and parties) which allow a ,widening‘ of the existing interface by mutual agreement of communicating parties**

**do not rely solely on transmission of code numbers, but are also enabled to contain data from the other blocks as conditional data**

# The BUDAN messages ABFNTF and ABFVBF

---

**Reasons for redundant transmission of party data and catalogue data within operational data and waste movement data**

**Data** can be transmitted as seen on the respective form (maybe of interest if disparities result in fine or prosecution)

**The** receiver may (or may not) update its own party data and catalogue data; extra message don't have to be sent

**The** messages can be received by communication partners with only rudimentary IT-infrastructure. A message viewer without a supporting database is sufficient

# Use of EDIFIX for BUDAN

---

**Design and Documentation of the reviewed BUDAN interface definition have been made using the software tool EDIFIX**

**This tool makes it possible to:**

**compare messages against EDIFACT rules**

**check guides against message definitions**

**generate documentation**

**generate test messages**

**compare messages to guides**

**generate XML-definitions (DTD or XML scheme document (XSD), XML test message, XSL stylesheet)**

# Thank you for your attention!

## Discussion

# Business Card

---

Diplom-Ingenieur  
**Eckhard Flor**  
Software Development

Fon: +49.40.306 25-123  
Fax: +49.40.306 25-199

E-Mail: [efl@condat.de](mailto:efl@condat.de)  
[www.condat.de](http://www.condat.de)

**Condat AG**  
**Geschäftsstelle**  
**Nord**  
**Alstertwiete 3**  
**20099 Hamburg**  
**Germany**