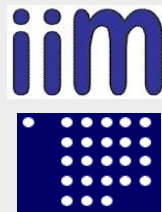# Case Studies:
Terminology and Software Localization

**Terminology Summer School - Cologne
06 - 10 July 2009**

Klaus-Dirk Schmitz

Institute for Information Management
Faculty 03
University of Applied Sciences Cologne
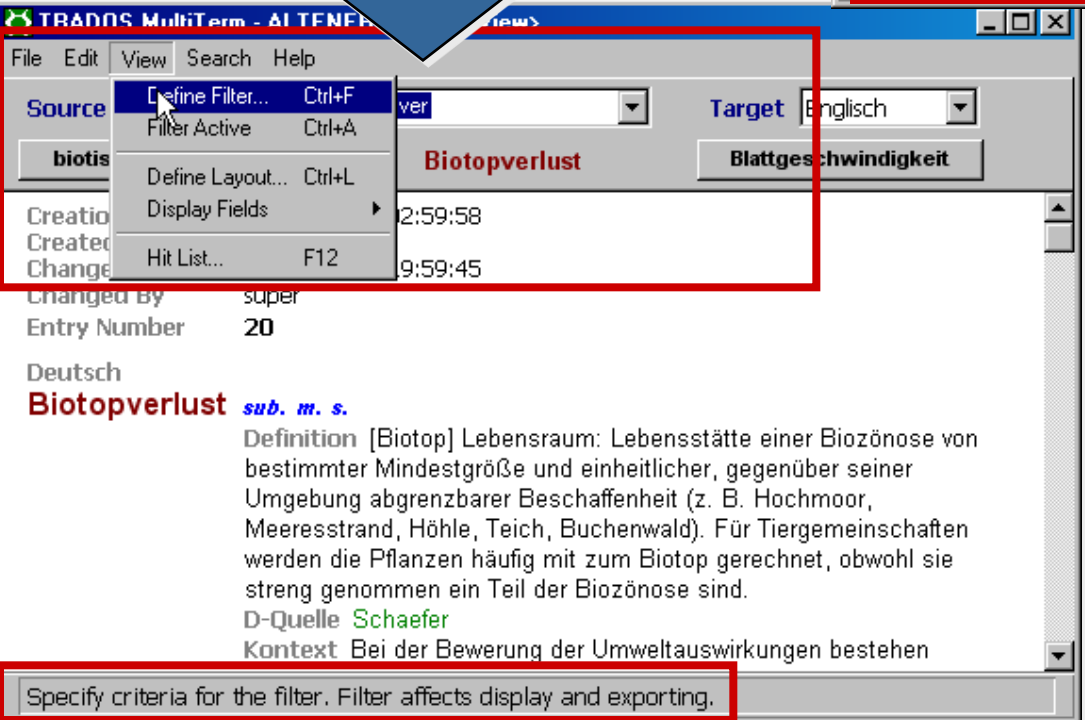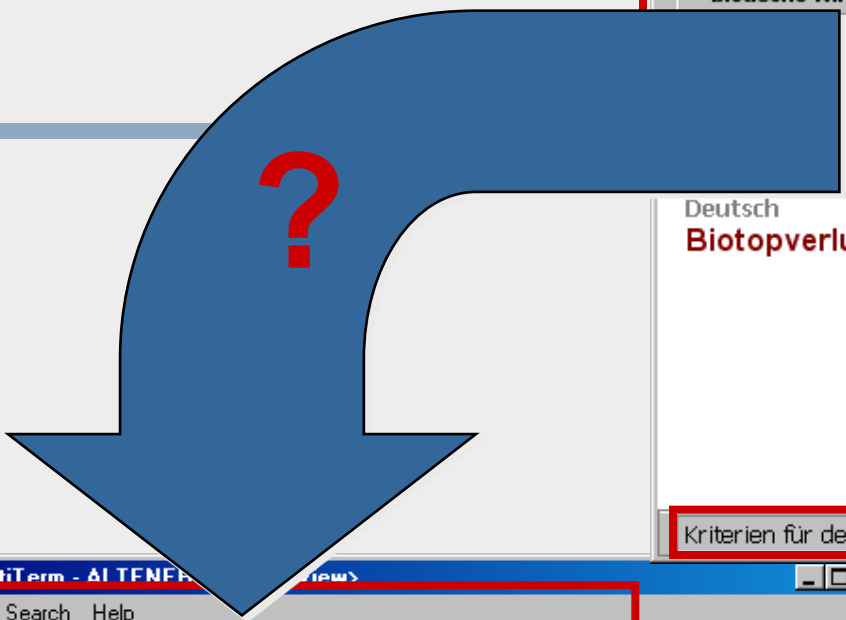**klaus.schmitz@fh-koeln.de**
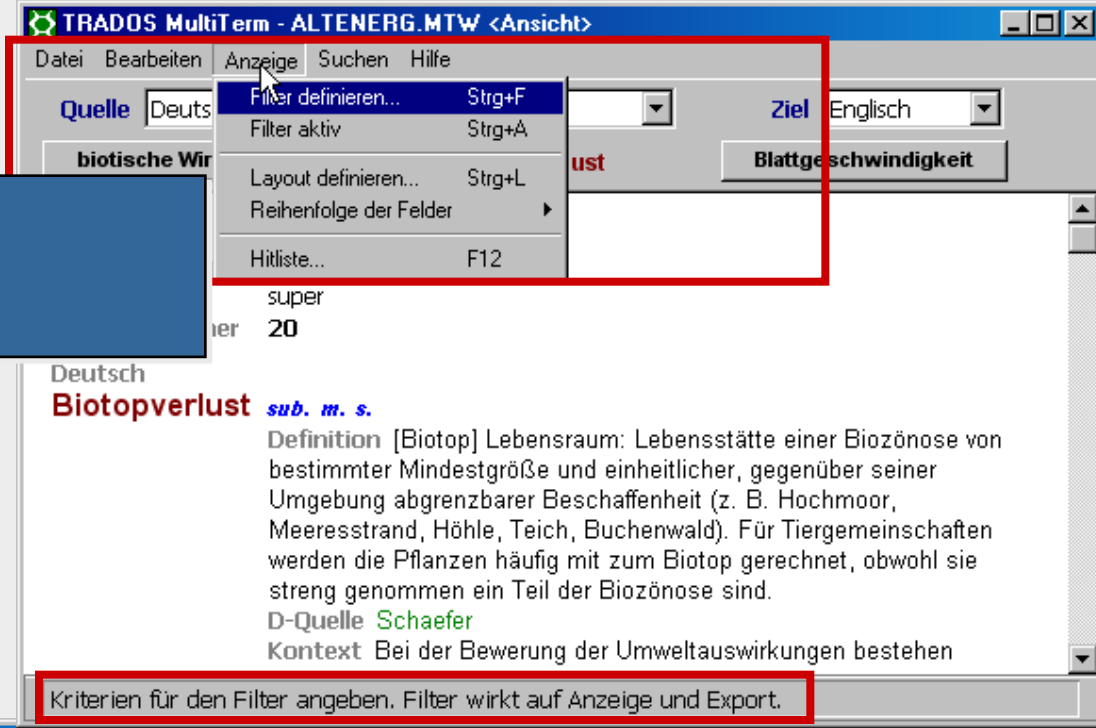
Internationalization (I18N)

Developing a product or service in such a way that it will be easy to adapt it to other markets (languages and cultures)

- Goal: eliminate the need to redevelop, reprogram or recompile the original product / content

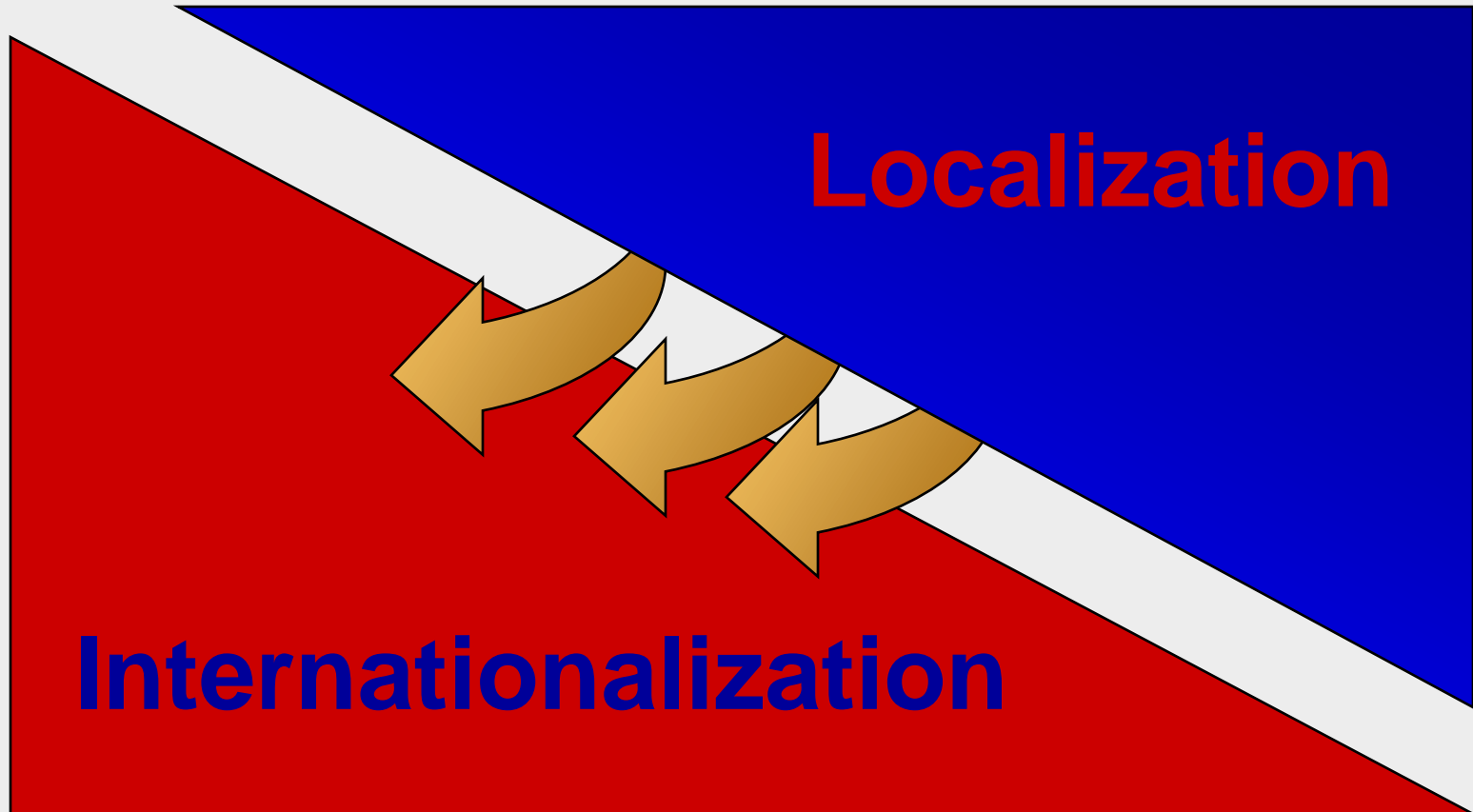- Carried out by the development group in conjunction with the localization people

Localization (LI0N)

Adapting a product or service to a local or regional market

- Goal: Appropriate linguistic and cultural aspects

- Performed by translators, localizers, language engineers

TRADOS MultiTerm - ALTENERG.MTW <Ansicht>

Datei Bearbeiten Anzeige Suchen Hilfe

Filter definieren...	Strg+F
Filter aktiv	Strg+A
Layout definieren...	Strg+L
Reihenfolge der Felder	▶
Hitliste...	F12

Quelle Deuts...   **Ziel** Englisch

biotische Wir...   ...ust   **Blattgeschwindigkeit**

super
...ner **20**

Deutsch
Biotopverlust *sub. m. s.*

Definition [Biotop] Lebensstätte einer Biozönose von bestimmter Mindestgröße und einheitlicher, gegenüber seiner Umgebung abgrenzbarer Beschaffenheit (z. B. Hochmoor, Meeresstrand, Höhle, Teich, Buchenwald). Für Tiergemeinschaften werden die Pflanzen häufig mit zum Biotop gerechnet, obwohl sie streng genommen ein Teil der Biozönose sind.
D-Quelle Schaefer
Kontext Bei der Bewerung der Umweltauswirkungen bestehen

Kriterien für den Filter angeben. Filter wirkt auf Anzeige und Export.

?

TRADOS MultiTerm - ALTENER... ...iew>

File Edit View Search Help

Define Filter...	Ctrl+F
Filter Active	Ctrl+A
Define Layout...	Ctrl+L
Display Fields	▶
Hit List...	F12

Source ...ver   **Target** Englisch

biotis...   **Biotopverlust**   **Blattgeschwindigkeit**

Creatio...   2:59:58
Created...   9:59:45
Change...
Changed By super
Entry Number **20**

Deutsch
Biotopverlust *sub. m. s.*

Definition [Biotop] Lebensstätte einer Biozönose von bestimmter Mindestgröße und einheitlicher, gegenüber seiner Umgebung abgrenzbarer Beschaffenheit (z. B. Hochmoor, Meeresstrand, Höhle, Teich, Buchenwald). Für Tiergemeinschaften werden die Pflanzen häufig mit zum Biotop gerechnet, obwohl sie streng genommen ein Teil der Biozönose sind.
D-Quelle Schaefer
Kontext Bei der Bewerung der Umweltauswirkungen bestehen

Specify criteria for the filter. Filter affects display and exporting.

K.-D. Schmitz, IIM, FH Köln

I18N and L10N

Localization

Internationalization

K.-D. Schmitz, IIM, FH Köln

I18N and L10N: Goal

- I18N and L10N comprise the whole of the effort involved in enabling a product.

- I18N is "stuff" you have to do **once**.

- L10N is "stuff" you have to do **over and over** again.

- The more stuff you push into I18N out of L10N, the less complicated & expensive the process becomes.

Locale

- Geographically a region of a particular market (e.g. the Italian speaking area of Switzerland)

- In IT a set of information and codes associated with a specific region
  - character set, writing system, keyboard layout
  - format for date, time, currency, units of measurement
  - format of addresses
  - etc.

Software localization: what + how
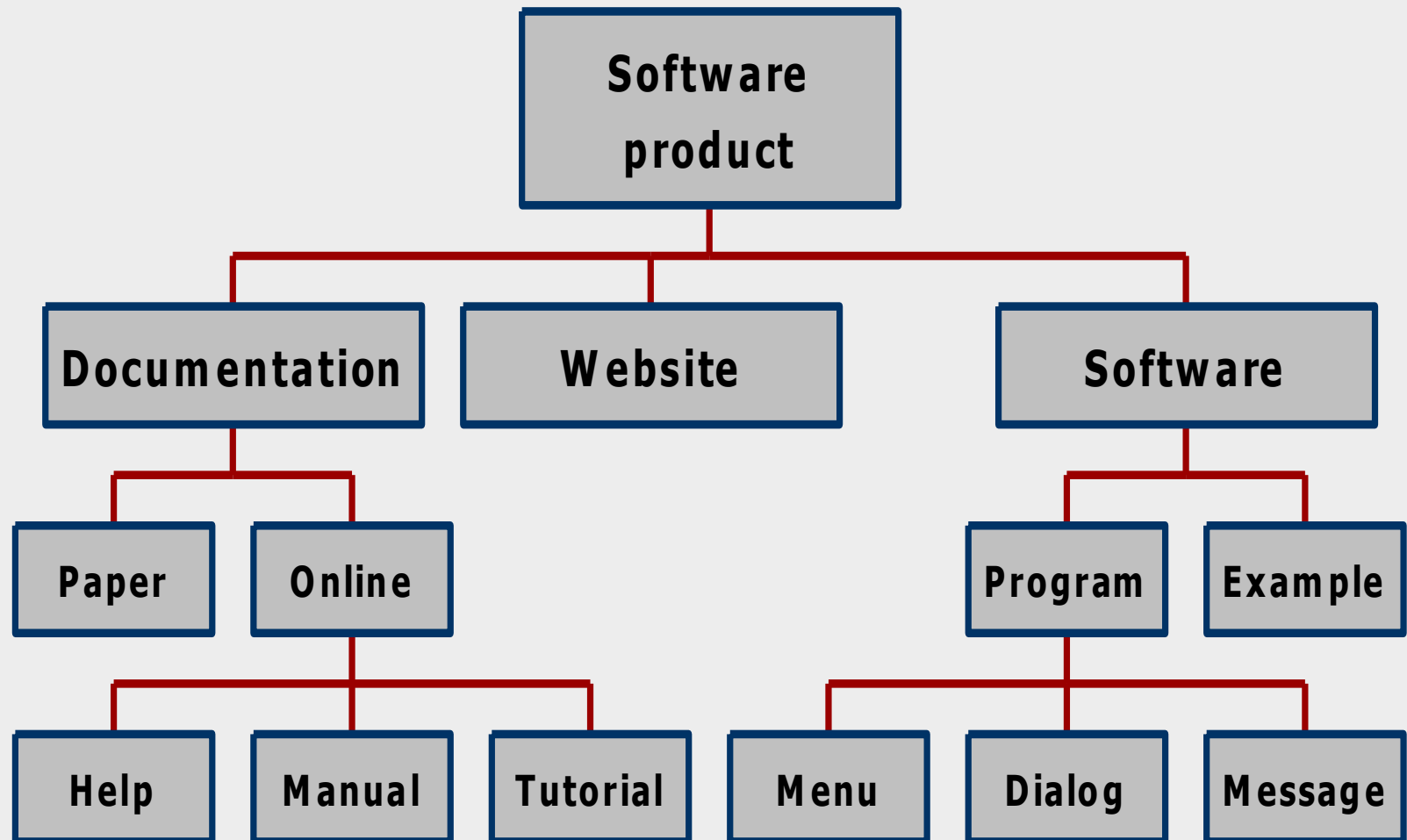
Localizing documentation

- Localizing printed documentation (handbook, manual, installation guide, packaging material etc.) is similar to "traditional" translation of LSP texts.

- Tools:
  - editor
  - word processor
  - DTP software
  - translation memory
  - **terminology system**

Handbuch TermISys

1   Installation und Aufruf

1.1   Systemvoraussetzungen

Zur Verwendung von TermISys benötigen Sie einen Computer, der folgende Kriterien erfüllen sollte:

- IBM-kompatibler 286er oder höher (empfohlen ab 386er)
- MS-Windows 3.0 oder höher. Bei Windows 3.0 ist der Standardmodus oder der erweiterte Modus für 386er PCs notwendig. MS-Windows muß bereits auf Ihrem Rechner installiert sein
- Mindestens 2 MByte Arbeitsspeicher (empfohlen 4 MByte)
- Grafikkarte mit mindestens 640 x 480 Bildpunkten, z.B. VGA
- Eine Festplatte mit mindestens 10 MByte freier Speicherkapazität
- Ein Diskettenlaufwerk
- Eine Microsoft-Maus oder kompatible
- MS-DOS ab Version 3.3 oder kompatibles Betriebssystem.

1.2   Hinweise zur Installation

Das Terminologieverwaltungssystem TermISys erhalten Sie auf einer Diskette im Format 3,5 Zoll oder im Format 5,25 Zoll.

TRADOS Translator's Workbench - deueng

Datei Einstellungen Ansicht Optionen Extras Hilfe

Angelegt am:
Angelegt von:
Geändert am:
Geändert von:

Die folgenden Hotels liegen verkehrsgünstig (wenige Autominuten oder direkte Busverbindung) zur Universität.

liegen
locate

Kein Match!

---

*TRADOS TagEditor - [test3.RTF *]

Datei Bearbeiten Ansicht Workbench Extras Fenster Hilfe

100%

@Z_STYLE70
@titel Hotel-Liste
@Spalte1
Die folgenden Hotels liegen verkehrsgünstig (wenige Autominuten oder direkte Busverbindung) zur Universität.
The following hotels are located only a few minutes from the university.
Von den beiden Hotels in Dudweiler kann man die Universität auch zu Fuß in etwa 15 bis 20 Minuten erreichen.
Geben Sie bei der Zimmerbestellung an, daß Sie an einem Seminar der Universität teilnehmen. Dies verschafft Ihnen bei einigen Hotels Sonderkonditionen. Preisangaben sind ohne Gewähr.
@Spalte1
@Spalte1
@Spalte1 City-Hotel, Richard-Wagner-Str. 67, 66111 Saarbrücken, Tel.: 0681 / 34088
@Unterpunkt (EZ: DM 125,-; DZ: DM 170,-)
@Spalte1
@Spalte1 Domizil Leidinger, Mainzer Str. 10 - 12, 66111 Saarbrücken, Tel.: 0681 / 38011
@Unterpunkt (EZ: DM 145,- - 175,-; DZ: DM 180,- - DM 200,-)
@Spalte1
@Spalte1 Hotel Schloßkrug , Schmollerstr. 14, 66111 Saarbrücken, Tel.: 0681 / 36735
@Unterpunkt (EZ: DM 50,- - DM 65,-; DZ: DM 90,- - 120,-)

Bearbeiten   Ausgangssprache   Zielsprache   Text   Vorschau

Drücken Sie F1, um die Hilfefunktion aufzurufen.   NUM

Start   TRADOS MultiTerm '95 Pl...   TRADOS TagEditor - ...   TRADOS Translator's Wo...   17:01

Localizing online help

- When localizing online help, you have to care about formatting information (HLP, CHM, ...), document structure and links.
- Tools:
  - editor (HTML)
  - word processor (RTF)
  - translation memory
  - **terminology system**
  - localization software
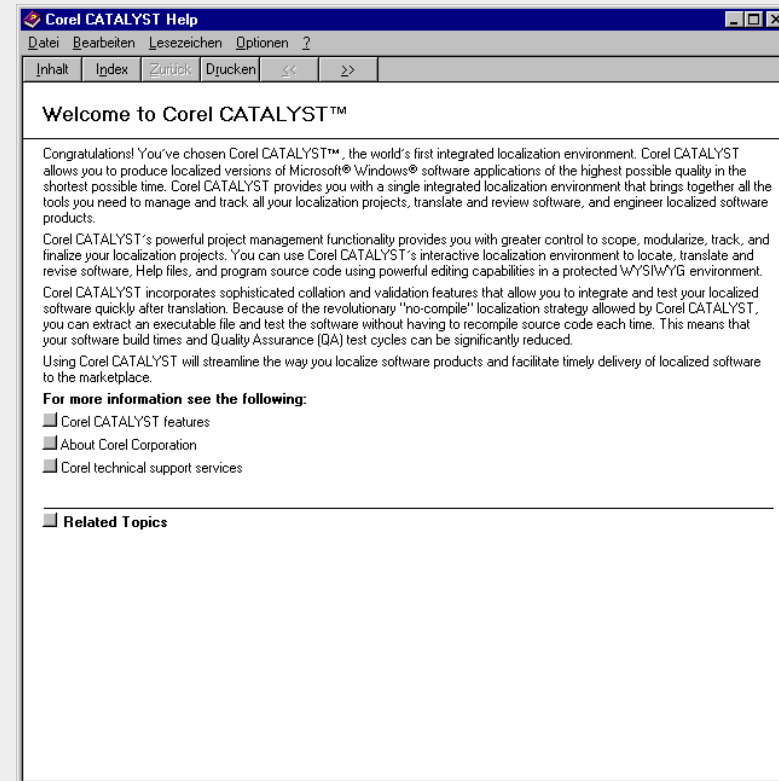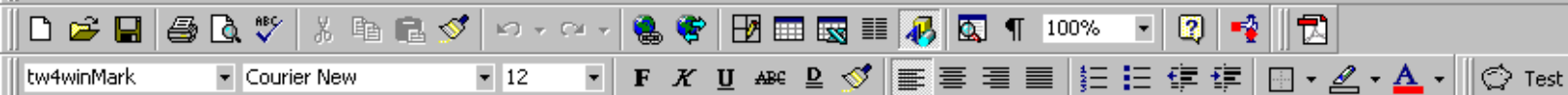
* $ K A Einführung in Corel CATALYST™

Glückwunsch zur Wahl von Corel CATALYST™, der ersten integrierten Lokalisierungsumgebung der Welt. Corel CATALYST gibt Ihnen die Möglichkeit, lokalisierte Versionen höchstmöglicher Qualität von Windows-Software-Anwendungen in der kürzestmöglichen Zeit anzufertigen. Corel CATALYST bietet eine integrierte Lokalisierungsumgebung, die in sich all die Werkzeuge vereint, die Sie zur Verwaltung und Bearbeitung Ihrer Lokalisierungsprojekte benötigen; Sie können mit Corel Catalyst Software übersetzen und überprüfen und lokalisierte Softwareprodukte funktionsfähig machen.

Die leistungsfähige Projektmanagementkomponente von Corel CATALYST bietet Ihnen mehr Kontrolle bei der Festlegung des Umfangs, der Modularisierung, der Bearbeitung und der Fertigstellung Ihrer Lokalisierungsprojekte. Mit der interaktiven Lokalisierungsumgebung von Corel Catalyst können Sie Software unter Verwendung leistungsfähiger Editierfunktionen in einer geschützten WYSIWYG-Umgebung zur Bearbeitung bereitstellen, übersetzen und überprüfen.

Corel CATALYST umfaßt hochentwickelte Funktionen zur raschen Integration und Validierung Ihrer lokalisierten Software nach der Übersetzung. Because of the revolutionary "no-compile" localization strategy allowed by Corel CATALYST, you can extract an executable file and test the software without having to recompile source code each time. This means that your software build times and Quality Assurance (QA) test cycles are significantly reduced.

Using Corel CATALYST will streamline the way you localize software products and facilitate timely delivery of localized software products to the marketplace.

For more information see the following:

{Button ,JumpID(`catalyst.hlp',`Corel CATALYST features')} Corel CATALYST features

{Button ,JumpID(`catalyst.hlp',`About Corel Corporation')} About Corel Corporation

{Button ,JumpID(`catalyst.hlp',`Corel technical support services')} Corel technical support services

---

{Button ,ALink(OVR Welcome to Corel CATALYST;,0,"Defaultoverview",)} Related Topics

---

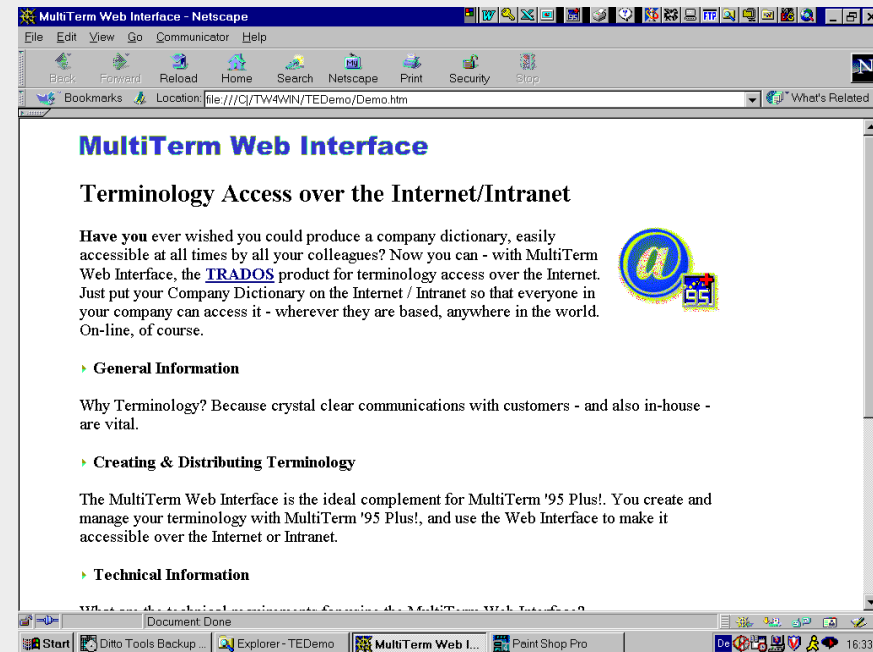Fußnoten | Alle Fußnoten | Schließen

Welcome to Corel CATALYST

* Welcome_to_Corel_CATALYST: 001

ǂ Übersicht: Einführung in Corel CATALYST

Localizing websites

- When localizing websites (and HTML help), you have to care about formatting information (HTMP), document structure, links and multimedia elements.

- <u>Tools:</u>
    - editor (HTML, tag)
    - translation memory
    - **terminology system**

```html
<HTML>

<HEAD><TITLE>MultiTerm Web Interface</TITLE></HEAD>

<BODY bgcolor=white link="navy" vlink="gray" leftmargin=0 topmargin=0><FONT
face="verdana, arial"><TABLE width=85% cellpadding=5 cellspacing=5><TR>

<TD valign=top><IMG SRC="images/muwigray.gif" WIDTH="34" HEIGHT="603"
ALT=""></TD>

<TD valign=top><IMG SRC="images/webint.gif" WIDTH="413" HEIGHT="23" BORDER="0"
ALT="MultiTerm Web Interface">

<P><H2>Terminology A

<P><IMG src="images/w

<B>Have you</B> ever
accessible at all tim
Interface, the <A HRE
terminology access ov
</P>
```

TRADOS TagEditor - [Demo.htm]

Datei Bearbeiten Ansicht Workbench Extras Fenster Hilfe

100

HTML
HEAD TITLE MultiTerm Web Interface TITLE HEAD
BODY FONT TABLE TR
TD IMG TD
TD IMG ...ALT= MultiTerm Web Interface

P H2 Terminology Access over the Internet/Intranet H2 P

P IMG B **Have you** B ever wished you could produce a company dictionary, easily accessible at all times by all your colleagues? Now you can - with MultiTerm Web Interface, the A B **TRADOS** B A product for terminology access over the Internet. Just put your Company Dictionary on the Internet / Intranet so that everyone in your company can access it - wherever they are based, anywhere in the world. On-line, of course. P

IMG B **General Information** B
P Why Terminology? Because crystal clear communications with customers - and also in-house - are vital. P

IMG B **Creating & Distributing Terminology** B
P The MultiTerm Web Interface is the ideal complement for MultiTerm '95 Plus!. You create and manage your terminology with MultiTerm '95 Plus!, and use the Web Interface to make it accessible over the Internet or Intranet. P

IMG B **Technical Information** B
P What are the technical requirements for using the MultiTerm Web Interface? P

IMG B **Sample On-line Databases** B
P Want to see the MultiTerm Web Interface in action? Just visit some sample on-line databases, and see for yourself what the MultiTerm Web Interface can do for you. P

IMG B **Ordering Information** B
P Interested? Here, you find information on how to order the MultiTerm Web Interface and related products. P

FONT TRADOS®, MultiTerm® and WinAlign® are registered trademarks and Translator's Workbench is a trademark of TRADOS GmbH, Stuttgart. The S-Tagger is a trademark of TRADOS Ireland Ltd., Dublin. Unicode SUP ™ SUP and the Unicode logo are trademarks of Unicode Inc. All other programs and names mentioned are trademarks or registered

Bearbeiten Ausgangssprache Zielsprache Text Vorschau

Drücken Sie F1, um die Hilfefunktion aufzurufen.

Default HTML Setting   NUM

Start   Ditto Tools Backup ...   Paint Shop Pro   TRADOS TagEdi...   De   16:06

Localizing software

editor

localizer/
translator

LION
tool

developer   user

TXT

source text

```
Do while I < 100
    I = I + 1
    Print "Zähler =", I
Wend
```

EXE

program

0101 1001 0100
1110 1010 0110
0010 1011

compiler

linker

resource files

binary files

Localizing software

- When localizing software, you have to differentiate between the localization of resource files (RC) and the localization of executable files (EXE, DLL, ...). Different treatment of menus, dialog boxes, tool tips, (error) messages etc.

- Tools:
    - editor (RC, tag)
    - localization software
    - (translation memory)
    - **terminology system**

23:57

File   Edit   Resource   Compile   Window   Help

MENU : TERMISYS

```
{
 POPUP "Wörterbuch"
 {
  MENUITEM "Neu...", 4000
  MENUITEM "Umbenennen...", 4001, GRAYED
  MENUITEM "Löschen...", 4002, GRAYED
  MENUITEM SEPARATOR
  MENUITEM "Drucken...", 4022
  MENUITEM SEPARATOR
  MENUITEM "Import...", 4003
  MENUITEM "Export...", 4004, GRAYED
  MENUITEM SEPARATOR
  MENUITEM "Beenden", 4005
 }

 POPUP "Sachgebiet"
 {
  MENUITEM "Neu...", 4006, GRAYED
  MENUITEM "Umbenennen...", 4007, GR
  MENUITEM "Löschen...", 4008, GRAYE
 }

 POPUP "Sprache"
 {
  MENUITEM "Neu...", 4009
  MENUITEM "Umbenennen...", 4010, GR
  MENUITEM "Löschen...", 4011, GRAYE
 }

 POPUP "Maske"
 {
  MENUITEM "Neu...", 4012, GRAYED
  MENUITEM "Umbenennen...", 4013, GR
  MENUITEM "Löschen...", 4014, GRAYE
  MENUITEM SEPARATOR
  MENUITEM "Öffnen...\tCtrl+F", 4015
  MENUITEM "Schließen", 4016, GRAYED
 }
}
```

Ready

PASSOLO - [Dialog Editor - Dialog 14]

Datei   Bearbeiten   Ansicht   Layout   Übersetzung   Extras   Fenster   Hilfe

Page Setup

Papier

Size: [▼]

Source: [▼]

Orientation
- ( ) Portrait
- ( ) Landscape

Margins

Left: [   ]   Right: [   ]

Top: [   ]   Bottom: [   ]

Preview

Header: [   ]

Footer: [   ]

Aktualisiere Übersetzungsliste - Note
OK - Resourcen: 10 neu / Texte: 1

Übersetzungstext 55 - Groupbox 34 in Dialog 14

[ ] Lesezeichen   [ ] Übersetzt   [ ] Zu prüfen

Preview

Vorschau

Drücken Sie F1, um Hilfe zu erhalten

Start   Paint Shop Pro   PASSOLO - [Dialog E...   08:42

Terminology for software localization

- The selection of appropriate terminology with well defined concepts as well as the correct and consistent usage of terms are pre-conditions for successful software development and software localization:

  - very often innovative domains and topics
  - large projects with many persons involved
  - consistent terminology through all parts of the software product
  - pre-defined terminology (operating system, related software, laws and regulation, corporate language)

Software development and localization workflow

Software development

Localization

workflow „simple", no Δ, but late on the int. market

Software development and localization workflow

workflow complex, huge Δ, very early LION, „simship"

➔ **Terminology needed very early !**

Internationalization and localization aspects in content development

- Content development taking into consideration the process of internationalization and localization has to take care about e.g.:
  - **terminology, symbols**
  - (illustrations, character sets, fonts, colors, typography, style, formats etc.)

- More aspects are discussed in:
  - Schmitz/Wahle (2000): Softwarelokalisierung
  - Reineke/Schmitz (2005): Einführung in die Software-lokalisierung

Terminology for software users

- Selection and creation of terms:
    - **transparency**
    - **consistency**
    - **appropriateness**
    - **linguistic economy**
    - **derivability**
    - **linguistic correctness**
    - **preference for native language**

Transparency

- The concept designated by the term can be inferred without a definition

- The meaning of the term is visible by:

    - **morphological motivation**
    *page setup, error message
    data network identification code*
    network printing device setup**

    - **semantic motivation**
    *mouse, worm, virus, infected file, vulnerability
    firewall**

Transparency: fire wall

Transparency: fire wall

Basic Hamilton Firewall
Network Diagram
January, 2004

K.-D. Schmitz, IIM, FH Köln

Transparency: fire wall

K.-D. Schmitz, IIM, FH Köln

Consistency

- The term is used consistently in all parts of the product (e.g. software products):

  - menues, dialog boxes, error messages

  - online help, tutorial

  - documentation, packaging material, website

  - *return key, input key, enter key, line feed, carrage return, acknowledge key etc.*

  - *update, hotfix, update rollup, security pack, private fix etc.*

Consistency: terms

shortcut key

keyboard shortcut

access key

hotkey
hot key

accelerator key

keyboard accelerator

Page width

Text width

Whole page

Matthias Heyn, SDL,
tekom-Jahrestagung 2005

K.-D. Schmitz, IIM, FH Köln

Appropriateness

- Appropriateness means that terms:
  - have to be familiar to the user (localization!)
  - don't cause confusion or insecurity
  - have no negative connotations (neutral, politically correct)
  - *express installation (only components needed) network installation (all components)*
  - *system error, severe error, fatal error, user error etc.*
  - *master/slave, web designers' bible, knowledge nugget etc.*

Appropriateness

Can you image that both user(goup)s will use and understand the same term for a given concept?

Appropriateness

Other features

- Linguistic economy
  - *Ultrakurzwellenüberreichweitenfernsehrichtfunkverbindung*

- Derivability
  - *medicinal plant vs. herb --> herbal, herbalist, ...*

- Linguistic correctness
  - *aktualisieren vs. updaten, geupdated, upgedatet, ...*

- Preference for native language
  - *Startseite vs. Homepage*

Symbols & icons

- Symbols and icons are very often used to optimize communication with the user as well as to optimize localization efforts

- Although symbols are "language-free", they are very much dependant on the "cultural environment" of the user

- Symbols are very often taken from common sphere of life and use allusions (concrete vs. abstract), homonymy or even homophony

Symbols & icons (e.g. software)

EN: trash
DE: Papierkorb

Papierkorb

EN: clipboard
DE: Zwischenablage

EN: home
DE: Anfang / Startseite

EN: table (spreadsheet)
DE: Tabelle

EN: paws = pause (in a game)
DE: Tatzen $\neq$ Pause

Symbole

Which symbol you would choose for "incoming"?

Tools for software localization

- Consistent terminology needed across all components of a software product, therefore **terminology management systems**

- (internally + externally) repetitive texts allow for translation memory systems

- localization of the program itself requires specific localization software

- complexity and tide schedules require project management tools

Tools for software localization

- Established interaction between terminology management and translation memory software

- Cooperation between terminology management and localization tools still lacking

- Established principles of terminological data modeling are not always adequate for software localization terminology solutions
  ⇨ **Specific solution needed**

Specific terminology solution needed!

- Which additional data categories are needed for software localization terminology management?

  - Is it helpful to know, if the term appears in a menu, in a dialog box, in an error message, in an online help file or in the manual?

  - Is it helpful to know, if e.g. the term within a dialog box refers to a *check button*, *push button* or *radio button*?

  - *Activate Task List = Aktiviert die Aufgabenliste*
    Aufgabenliste aktivieren
    Aktivieren Sie die Aufgabenliste

  (status line / dialog box / user request)

GUI terms

Datei	Bearbeiten	Ansicht	Einfügen	F

Neu...	Strg+N
Öffnen...	Strg+O
Schließen	
Speichern	Strg+S
Speichern unter...	
PPTminimizer 3.x	
Als Webseite speichern...	
Dateisuche...	
Berechtigung	▶
Verpacken für CD...	
Webseitenvorschau	
Seite einrichten...	
Seitenansicht	
Drucken...	Strg+P
Senden an	▶
Eigenschaften	

GUI terms

GUI terms

Klicken Sie, um Notizen hinzuzufügen

Effekt ändern

Starten:

Eigenschaft:

Geschwindigkeit:

Ein Element auf dieser Folie auswählen und "Effekt hinzufügen" anklicken, um die Animation hinzuzufügen.

Research needed!

- What is a terminological unit ?
  What is a concept ?
  - *Format*
  - *Print*
  - *Save as ...*
  - *Copy file*
  - *Date and Time*
  - *Convert into Adobe PDF and send via e-mail*
  - *Unexpected error in application program*
  - *File %f could not be opened*
  - *etc.*

GUI concepts

- Concept orientation:
  one concept = one terminological entry

- The GUI terms shown are managed within the software (and the localization tool) as one unique unit (with an unique ID)
  → one entry → one concept ?!

- When is it necessary to identify different concepts?
  - *Print...* in my and your Word 2007 ?
  - *Print...* in Word 97 and in Word 2007 !?
  - *Print...* in Word and in Excel !

Definition of GUI concepts

- Definition: representation of a concept by a descriptive statement which serves to differentiate it from related concepts (ISO 1087-1)

- Intensional definition: definition which describes the intension of a concept by stating the superordinate concept and the delimiting characteristics ("ideal" def.)

- Is it possible / necessary / desireable to (intensionally) define GUI concepts ?

- Is there a difference between such a definition and a traditional one ? (Datei vs. Datei)

Context of GUI terms

- Context: text which illustrates a concept or the use of a designation (ISO 1087-1)
- In „traditional" terminology management, the context (example) shows the linguistic usage of a term.

- GUI terms don't have a linguistic context !
- But the "situational" or "functional" context is important !

Kontext von Software-Benennungen

Kontext von Software-Benennungen

Data modeling for GUI terminology

- **Dandelion Project**
  Data Modeling and Data Exchange
  for Software Localization (DandDEL10N)
  - Cologne University of Applied Sciences (IIM)
  - June 2005 – May 2007

- Objective:
  - Optimizing the tools used for software localization (mainly terminology management systems)
  - Proposal for LION-specific ISO 12620 data categories
  - Proposal for adjusting TBX (and XLIFF) to LION needs

K.-D. Schmitz, IIM, FH Köln

Data categories for LION

- LION-Type
- Development environment
- Project
- String ID
- LION-Context
- Source
- Term (e.g. Öffnen)
- Full form (e.g. Ö&ffnen… *tab* Strg+O)
- Linguistic type
- Part of speech
- Parameter
- Hotkey
- Shortcut

Datei	Bearbeiten	Ansicht	Einfügen	
Neu…				Strg+N
Öffnen…				Strg+O
Schließen				

Specific datCats for localization

- **LION-type** (for Windows XP)**:**
  - **Menu type:** Menu item (MI)
  - **Dialog box type:** Dialog box (DB), Group box (GB), Text box (TB), Combo box (CB), Combo box element (CBE), Check box (CHB), Tab (T), Push button (PB), Radio button (RB), Spin box (SB), Progress bar (PRB), Slider (SL)
  - **Message type:** Informative message (IM), Interactive message (IAM), ToolTip (TT)
  - **Table:** Table text (TAT)
  - **User defined type** (UDT)

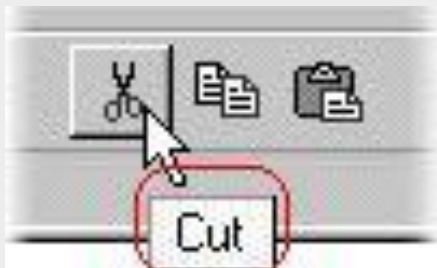# LION-type: example

- **Menu type:** Menu item (MI)

Document — Menu bar

File Edit View Insert Format Help ——————— Menu bar

Channel

Numeric
Text
Date/Time
Ignore

Go to ▶

My Documents

File Edit View Favorites Tools Help

Open
Edit
New
Print
Open With ▶

Send To ▶

New ▶

Create Shortcut
Delete
Rename
Properties

Close

Send To submenu:
- Compressed (zipped) Folder
- Desktop (create shortcut)
- Mail Recipient
- My Documents
- 3½ Floppy (A:)

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LION-type: example

- **Dialog box (DB)**

Bilder speichern

tsSelectFormat | tsSelectRange | tsDateTime | tsMediaChannels | tsM ◀ ▶

Format auswählen für Export

- ○ Backup Datei (GBF)
- ○ MPEG

Zurück

Options   ? ✕

LION-type: example

- **Group box (GB)**

- **Text box (TB)**

LION-type: example

- **Combo box (CB)**
- **Combo box element (CBE)**

Selected Trust Information

DK-DWD-DAN-DC01

From: 192.168.100.2
To: 192.168.100.2

Rule: ① Inbound/Outbound Trust

- **Check box (CHB)**

Delimiter characters

☐ Tabulator   ☐ Space

☐ Semicolon   ☐ Other:

☐ Comma   ☐ Link delimiter characters

Size:
12

10
11
12
14
16
18
20

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LION-type: example

- **Tab (T)**

- **ToolTip (TT)**

LION-type: example

- **Push button(PB) Radio button(RB)   Spin box(SB)**

LION-type: example

- **Informative message (IM)**

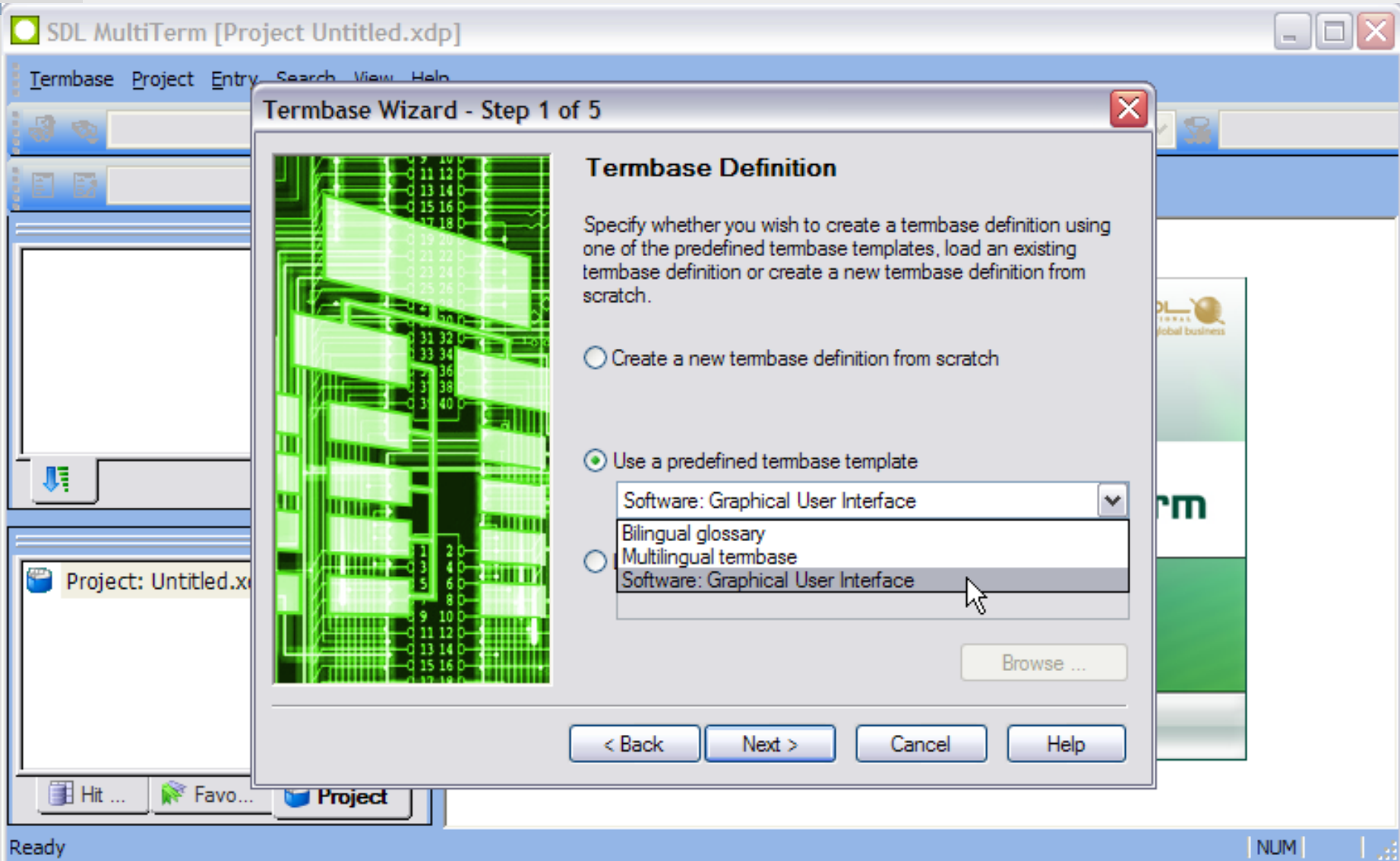- **Interactive message(IAM)**

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Extension of ISO 12620: new datCats for TBX

Name	ISO 12620	Representation	dataType	Manda-tory?	Level	Comment
Localization type	n/a	`<descrip type="lionType">`*picklist* box`</descrip>`	picklist: Menu item Dialog box Group box Text box Combo box Combo box element Check box Tab Push button Radio button Spin box Progress bar Slider Informative Message Interactive message ToolTip Table text User defined type	N	T	This data category needs to be added to TBX. The picklist values are from the Dandelion EU project. (Institute for Information Management, University of Applied Sciences Cologne).

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Predefined termbase template for software localization in MultiTerm 2007

Data modeling for GUI terminology

K.-D. Schmitz, IIM, FH Köln

Predefined termbase template for software localization in MultiTerm 2007

Conclusion I

- The creation of transparent, motivated, appropriate and consistent terminology is a pre-condition for the ease-of-use of software products and the empowerment of end-users

- Therefore, terminology theory, working methods and applications are important for software development and localization

- Diligent terminology (management) does not only help end-users but also documentation and localization experts

Conclusion II

- Only a **proactive** and **multi-disciplinary** terminology approach will really help.

- proactive:
when concepts are created and named

- multi-disciplinary:
programmers, interface designers, technical writers, web designers, marketing experts, hotline people, localizers etc.

Conclusion III

- Specific terminology data modelling (incl. datCats) is required for software localization.

- Interfaces and data interchange features are needed between software development platforms, localization tools and terminology management systems.
(Adaptation of TBX and XLIFF)

- Research in the field of general terminology theory is necessary: what are objects and concepts in software user interfaces?

Thank you
for your attention

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