dLibra Digital Library Framework

Pawel Gruszczynski, Cezary Mazurek, Stanislaw Osinski, Andrzej Swedrzynski

> **Poznan Supercomputing and Networking Center**



Plan

- dLibra what it is?
- Electronic publication
- Library organization
- Document versioning
- Access management
- Functionality of dLibra
- Next deliverables



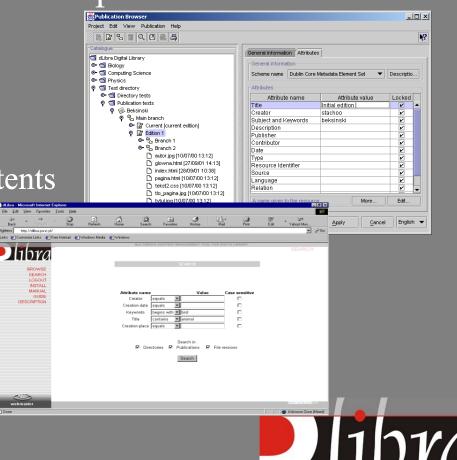
Digital Library Framework: dLibra

- System for multimedia content management and e-publishing
- Developed and funded internally by PSNC
- Facilitates main phases of digital publication process by supporting three basic roles: reader, editor and publisher
- Deployed in PSNC in May 2002 for internal publications



dLibra

- Support for digital publication process
 - Setting up, accessing and maintaining a library of digital documents of various types
 - Manipulating library contents through GUI aplications
 - Providing users with library content
 - Searching
 - Browsing



Electronic publication

- Electronic publication separated and well organized unit of content/information
 Scientific paper, report, book, web site, ...
- Structure of electronic publication
 - Single file (e.g. PDF, MS Word, ...)
 - Set of files (html, jpg, gif,...)

Electronic publication lifecycle

- Developing electronic document
- Uploading document to the library
- Enabling access to the document for library users
- Modifying electronic document
- Uploading modified files
- Enabling new version for library users

•



Electronic publication lifecycle

- Developing electronic document
- Uploading document to the library
- Enabling access to the document for library users
- Modifying electronic document
- Uploading modified files
- Enabling new version for library users

•

Content organization

• Make the library easy to use for the readers

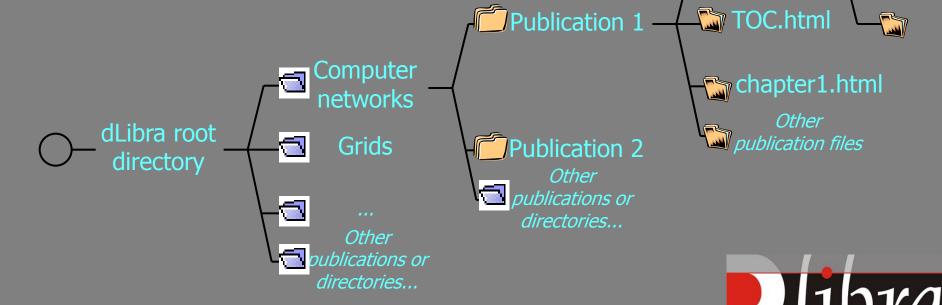
- Hierarchical library content organization
- Metadata



images

dLibra – Content organization

- Hierarchical library content organization
 - Content management
 - Access management



dLibra – Metadata

- Multiple, user-defined attribute schemes for every entity in the library
- Attribute values stored in multiple languages
- Dublin Core metadata scheme



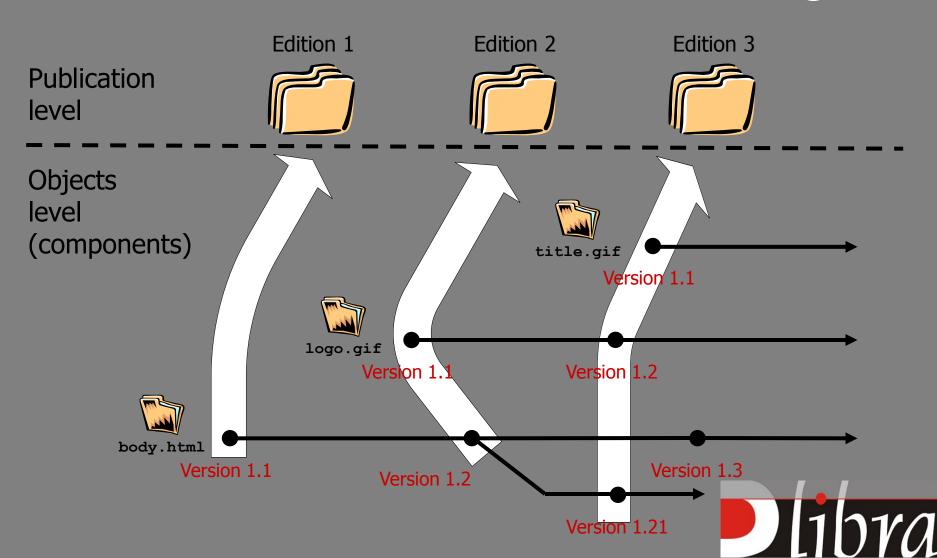
Document versioning

• Let the documents develop freely

- Document-level versioning
- Object-level versioning
- Managing subsequent revisions of publications objects
- Branching



dLibra – Document versioning



Access management

• Make the library easy to manage

- Library-level access management (library administration)
- Directory-level access management
- Document-level access management
- Three user roles in dLibra



Acess management

- Rights Editor enables to alter access rights to library objects
- For a publication
 - "View" permits to read all published editions
 - "Read" permits to read all editions
 - "Manage" permits to manage publication
- For a branch
 - "Edit" permits to update and put new files



dLibra - Functionality

- Readers
 - Web-based viewing of selected publications
 Searching and browsing library

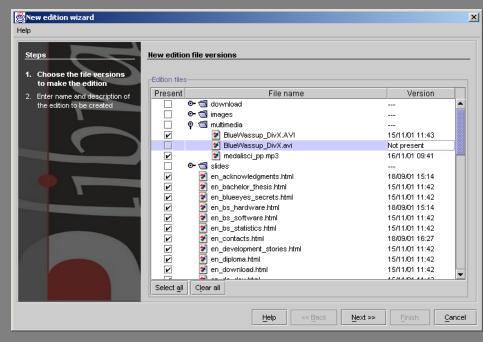
oft Internet	Explore											_ 8 ×
												-
→ Forward			(2) Refresh	ය Home	Q Search	Favorites	3 History	Mail	int (Edit -	''''''' Yahoo! Mes	
dibra.psnc.pl											▼ @Go	Links *
ROWSE EARCH OGOUT NSTALL IANUAL GUIDE		11	dLibra Java Oracle	umentation	MULTIMEDIA	GONTENT MAN		Directory Creator Creation-date Keywords Title	: Docume Sebastiar UNKNOV UNKNOV	n Szuber /N /N		19
	Constant Con	A Favores I ools Ponyed dibra psnc.pl DTZO Current ROWSE BEARCH OGOUT NSTALL GUIDE RIPTION	Stop Glara proc.pl Current directo ROWSE SEARCH GOUT SUIDE GUIDE RIPTION	Provide Look Help Provide Stop Provide Stop Provide Provide OTACI Current directory: Test Doc NSTALL Otacle GUIDE Oracle RIPTION Test	Provide Lools Help Provided Stop Refresh Home dibra porc pl Current directory: Test Documentation ROWSE dLibra SCARCH Java ANUAL Oracle GUIDE Test	Figurete: Look Help Figurete: Stop Refresh Herne Search dibra pone pl Current directory: Test Documentation Current directory: Test Documentation Multimetria GUIDE GUIDE GUIDE GUIDE Test	Figurate I loke Help Figurate Stop Referent Home Search Favorites dibrapping Current directory: Test Documentation Current directory: Test Documentation Current directory: Test Documentation Current directory: Test Test Figurate Te	Figurete: Jools Help Stop Refresh Here Search Forvarie: Help Stop Refresh Here Search Forvarie: Help Current directory: Test Documentation Current directory: Test D	Figurette: Jools Help Stop Refresh Home Search Favorite: History Mail dibra pone pl Current directory: Test Documentation Office dubra GUIDE RIPTION Creation-place Creation-place	Provide Look Help Private Stop Referent Home Search Favorites Histoy Mai Print dibrarpenc pl MULTIMEDIA CONTENT MARAGEMENT TOOL FOR DIGITAL LIBRARY Current directory: Tocurrent OT/O Current directory: Test Directory : Documentation ROWSE dLibra Creation-date UNKNOW MANUAL Oracle UNKNOW Test GUIDE Test Title Poznań	Provide Linds Help Private Stop Refresh Home Search Favorites History Mail Privat Edit Image: Contract Markaddment Tool Fork DidTALIBRARY OT/O Current directory: Test Documentation Directory Documentation Search Glubra Creation-date KinkNoVN Sebastian Stuber UNKNOVN NTALL Oracle UNKNOVN Creation-date NukNNOVN NukNNOVN Sebastian Stuber UNKNOVN Creation-date NukNNOVN NukNNOVN Oracle Test Title Poznań Poznań Poznań	Interview Look Hole Stop Refresh Home Search Favorites History Mail Pink Edit Yahoo Mess. dbra pone pi MultiMetDia Content Manademient Toole For Distra Lienaw Image: Content Search Image: Cont



dLibra - Functionality

• Editors

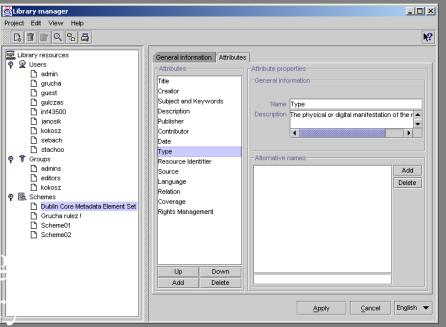
- uploading and retrieving publications or their components
- advanced versioning supports managing of subsequent revisions of publication objects and branching





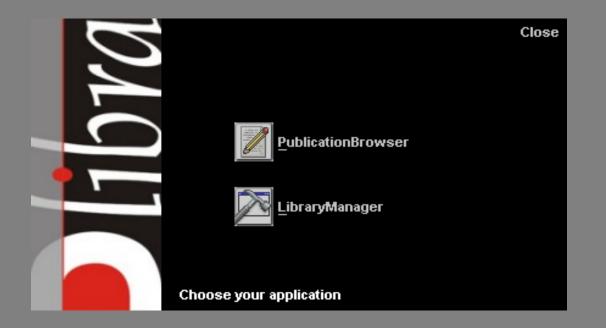
dLibra - Functionality

- Publishers
 - managing library structure
 - publishing and hiding publications, managing access rights and librar resources





dLibra – Startup screen





Login

👸 dLibra log	gin X
Help	
User profile	guest Profiles
User ID	guest
Password	*****
	Login Cancel



Publication browser

Publication Browser									
Project Edit View Publication Help									
Catalogue	ſ	General information Attributes	•						
 Omputing Science Omputing Science Omputing Science 			Aetadata Element Set 🛛 💌	Descriptio					
♥		Attributes	1						
 Image: Image: Organization Control of Con		Attribute name	Attribute value	Locked					
🖗 🎯 Beksinski		Creator	stachoo		888				
💡 🤁 Main branch		Subject and Keywords	beksinski	~					
Current [current edition]		Description		r					
ଡ଼ ଜିଁଟି Edition 1 ଡ− ଅ Branch 1 ଡ− ଅ Branch 2 D autor.jpg (10/07/00 13:12)		Publisher		r					
		Contributor							
		Date							
b glowna.html [27/09/01 14:13]		Type							
index.html (28/09/01 10:38)		Resource Identifier Source							
pagina.html [10/07/00 13:12]		Language			1004				
tekst2.css [10/07/00 13:12]		Relation							
 ☐ tlo_pagina.jpg [10/07/00 13:12] ☐ tytul.jpg [10/07/00 13:12] ☞		A name given to the resource	. More	Edit					
Image: A state at least 1 most 1	-								
			<u>A</u> pply <u>C</u> ancel	Englis	h 🔻				

V A

New publication wizard

Steps	Publicaiton main file									
1. Choose main publication Main file cuments and Settings\stachoo.ZUS\TestPub05\index.I Cho										
. Enter publication name and	Publication directory C: Documents and Settings\stachoo.ZUS\TestPub05									
description	Publication files tree	Publication files tree								
 Upload publication files to the """" "" ""	File name	Туре	Size	Last modified						
dLibra server	autor.jpg	image/jpeg	•	10-Jul-00 12:12						
	🔝 glowna.html 🔝 index.html	text/html		27-Sep-01 13:13						
	index.html	text/html text/html		28-Sep-01 09:38 10-Jul-00 12:12						
	tekst2 css	application/octet-		10-Jul-00 12:12	-					
	Publication consistency									
	Files checked: 7	[] Ignor	ency							
	Files missing: 0									
	Total size: 67 KB									
	Links		aut un	Tipiala C-	naci					
	Help	<< Back	ext >>	EinishCa	Incel					

Download wizard

🛃 Download wizard		×					
Help							
Steps 1. Choose the files you want to have downloaded	Files to download Destination directory c:\Documents and Settings\stachoo.ZUS\DownTest Files to download						
 Download selected files to your computer 	Present File name	Version					
	Image: Second state	10/07/00 13:12 27/09/01 14:13 28/09/01 10:38 10/07/00 13:12 10/07/00 13:12 10/07/00 13:12 10/07/00 13:12					
	Select <u>a</u> ll Clear all						
	Help << Back Next >>	Einish Cancel					



Digital Library Framework: dLibra

• dLibra - next deliverables

- Control mechanisms for document review and acceptance
- Copy protection
- User notifying about changes in particular publication
- Content-based publication searching
- Management of interdisciplinary publications
- Extended metadata model
- Supporting open source databases
- Publication editor based on well-defined structure (XML/DTD)
- DTD and stylesheet editor



dLibra Digital Library Framework

Pawel Gruszczynski, Cezary Mazurek, Stanislaw Osinski, Andrzej Swedrzynski dlibra@man.poznan.pl

> **Poznan Supercomputing and Networking Center**

