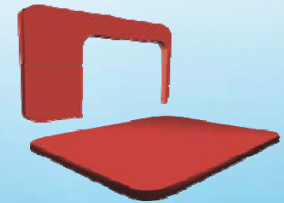




KONICA MINOLTA

acrolinx

TECHNOLOGY FOR INFORMATION QUALITY



Easier, faster communication in international teams
Lower translation costs with controlled language checking

Hubert Pabst

Melanie Siegel

Agenda

Introduction

Project

acrolinx IQ Technology

Setup

Support

Embedding in Existing Process

First Results & Current Developments



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Introduction

■ Hubert Pabst

■ Private:

- two children
- living near Hannover
- 14 years at Konica Minolta

■ Business:

- Computer Technician
- Documentation & Training
- Training Management
- Communication and Documentation
- Localisation Management

■ Special profession:

- Knowledge Management
- Process Management

■ Slogan:

- Living in a harmonized world of Technology and Nature.
- Continuous learning from experiences with people and different cultures.

■ Melanie Siegel

■ Private:

- two children
- living in Saarbrücken
- 3 years at acrolinx

■ Business:

- Computational Linguist
- Dr. and Habil. from Bielefeld University
- 10 years of experience in research projects at DFKI
- Head of German and Japanese linguistics at acrolinx

■ Special profession:

- Grammar and style
- German, Japanese and non-native English

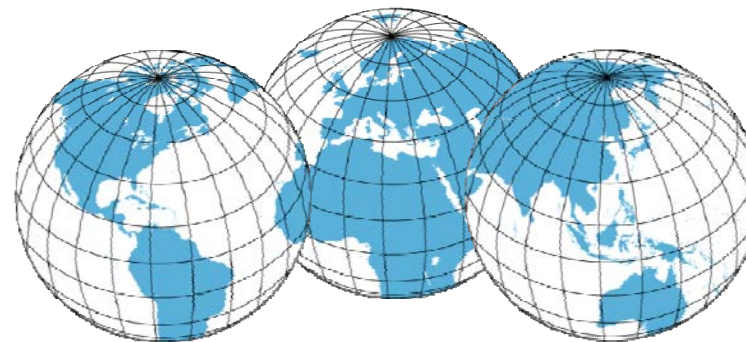


About us - World Wide



KONICA MINOLTA

- **Founded:** 1873 (Konica & Minolta merged in 2003)
- **Employees worldwide:** approx. 36,900 (as of March 2009)
- **Management Vision:** An innovative corporation that continues to create inspiring products and services in the field of imaging. A global corporation that leads the market by advanced technologies and reliability
- **Core Technologies**
 - Materials Technologies
 - Opto Technologies
 - Nano Technologies
 - Medical and Graphic Imaging
- **Regions**



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About us - Europe



KONICA MINOLTA

- **Founded:** 1965
- **Employees Europe:** approx. 6,900 (as of March 2009)
- **Location:** Langenhagen (Hannover), Germany
- **Business area:** Business Solutions
Western and Eastern Europe, Africa and Middle East



Printgroove



bizhub PRO 1051e



bizhub PRO C6501e



bizhub PRO C65hc

 **Enterprise Suite**



bizhub C552



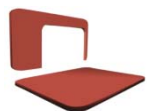
bizhub C203



magicolor 4650EN



pagepro 4650EN



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- **Spin-off from German Research Centre for Artificial Intelligence (DFKI) Saarbrücken**
- **Technology under development since 1997 (since 2002 as acrolinx)**
- **Users in 25 countries, checking millions of words a month**
- **Growing company:**
 - **Project start (2006): 20 employees**
 - **Now (2009): 50 employees**
- **Claim: It's the source that matters**
 - **Manage Quality**
 - **Create content with quality built in**
 - **Information Quality Management consists of three key components:**
 - **Best practice writing standards (spelling, grammar, style)**
 - **Terminology (technology and branding)**
 - **Intelligent Reuse (consistent wording)**



Project Starting Time - Europe



KONICA MINOLTA

■ Starting Point

- SGML -> XML
- Translation Memory 65% -> 75%
- Editor Guideline Europe -> World Wide

■ Editing and quality of source language

- Editor System - not available
- Terminology - only in Europe
- Undefined, or better not communicated rules for editing
- Different English style
- Different English for same meaning

■ The burning factor: Increase Reuse rate to 80-90%

- Increase quality of source language
- Set up world wide company terminology
- Definition of Editor- and Document Management System



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Project Starting Time - Japan



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■ Project: Natural Language Processing

- Summarization
- Search
- Automatic sentence creation (e.g. FAQ)

■ Machine Translation

- definition of measurement
- analysis of applications
- test

■ Result - The burning factor and starting point

■ Additional Base Projects

- Dictionary
- Terminology
- Controlled language (document quality control)

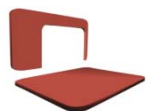
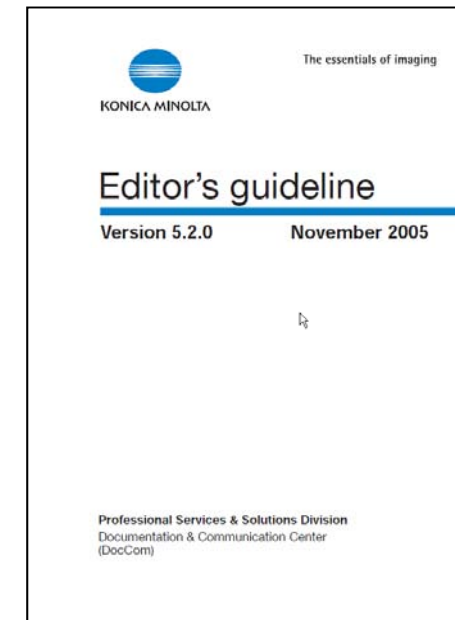


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- **Feasibility study of rules in Editor's guideline**
 - There were no style rules described in the guideline!
 - Thus: Start with acrolinx best practice for style
- **Analysis of functional design used in Konica Minolta documentation**
 - feasibility for context-sensitive rules and assigning to functional contexts
- **Analysis of existing terminology**
 - Terminology was used by translators
- **Analysis of editors in use and workflow at Konica Minolta**
- **Analysis of English documents at Konica Minolta**
 - Support for terminology consistence is needed
 - Support for non-native writing of English is needed (by Japanese and German speakers)





■ Looking for Responsibilities

- Global Project -> Management
- Input -> R&D and Product Planning
- US -> Source language; EU -> Translation

■ Looking for involved Areas

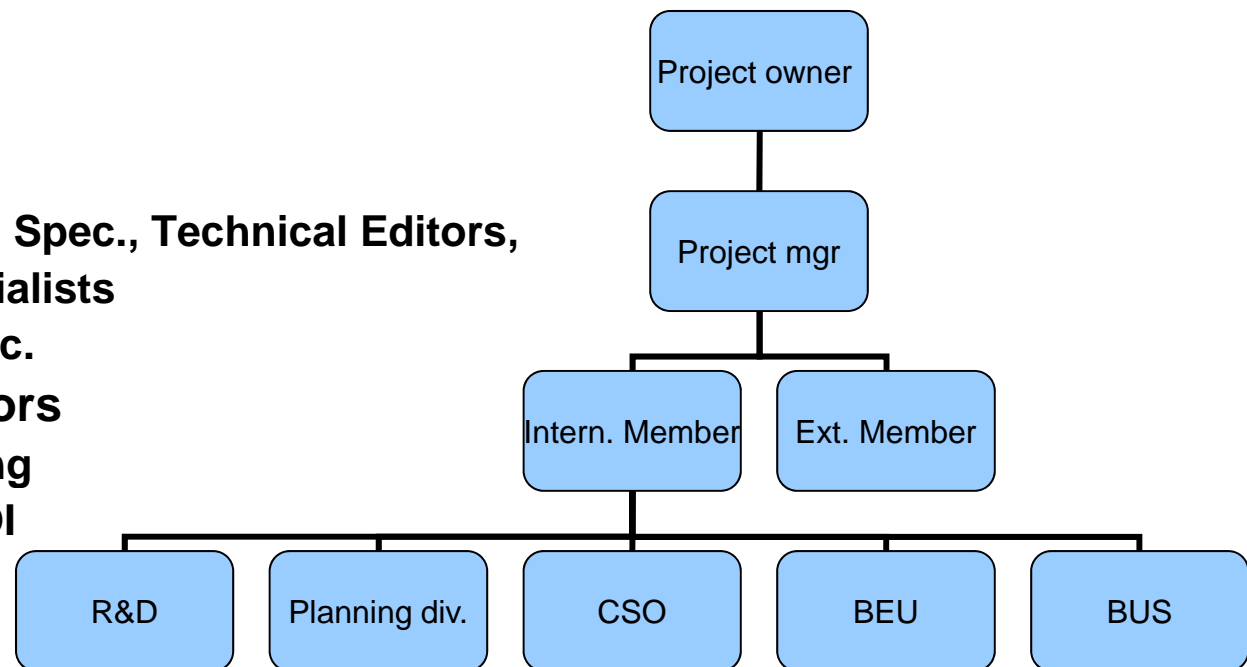
- R&D
- Marketing
- Service

■ Looking for People

- Communication Spec., Technical Editors,
- Linguistic Specialists
- Translation Spec.

■ Looking for Sponsors

- Product Planning
- EU - biggest ROI



Implementation Schedule



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ID	Task	Start	Enf	Period	2006年					2007年								
					08月	09月	10月	11月	12月	01月	02月	03月	04月	05月	06月			
1	Project Planning	2006/07/10	2006/08/15	27d	■													
2	Definition of Requirements	2006/08/15	2006/09/15	24d		■												
3	Proposal to Top mgmt	2006/09/01	2006/09/01	0d			◆											
4	Decision (cost, resources etc.)	2006/09/22	2006/09/22	0d			◆											
5	Research Tools	2006/07/10	2006/09/08	45d	■	■												
6	Rules and terminology definition	2006/09/25	2007/01/26	90d				■	■	■	■							
7	Develop/Customization	2007/01/29	2007/03/09	30d								■						
8	Phase 1 implementation (Rules Dictionaries etc.)	2007/03/12	2007/04/20	30d									■					
9	Trial (standard function of Acrocheck)	2006/08/15	2006/09/01	14d		■												
10	Trial for phase 1	2007/04/23	2007/05/10	14d													■	
11	Error correction	2007/05/11	2007/05/30	14d													■	
12	Murphy Factor	2006/06/08	2006/06/28	20d														
13	Phase 1 Go Live	2007/06/20	2007/06/29	0d														◆

Definition

Setup

Implementation



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Implementation Schedule



project acquisition phase

analysis of situation

data analysis

terminology analysis

feasibility study

pilot project

deliver best-practice rules

training and support

import terminology

term extraction and aggregation

project

more data analysis for clusters, terminology, style and specific words

address feedback

develop style rules

deliver adapted software

maintenance

training and support

regular updates

feedback management



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Checking in Editor

2. Install an **additional IntraBand switch card**

- Remove the blanking panel from the slot.
- Make sure the fan blades can** move freely.
- Slide the **IB switch card** firmly into place.
- Tighten the screws to the **on** the left and right hands of the **IB switch card**.

Rack the Topspin 360

To mount the Topspin 360 in a rack, perform the following steps:

- Open the Topspin box.
- Remove the chassis, rack brackets, CD-ROM, parts bag, and documentation.

CAUTION: Do not lift the 360 chassis by the front (bezel end) and back (service end). Lift the unit by the sides to prevent damage.

- Place the chassis on a secure, clean surface.
- Open the plastic bag that contains the mounting hardware.
- Verify that the rack **will provide sufficient clearance** for the Topspin 360.
- Loosen the nuts on the sides of the rack brackets, then adjust the length of your brackets to fit your rack. Tighten the bracket screws when the brackets fit the rack. Extend the brackets to 29 inches or contract them to 24 inches.
- Attach the side flanges to the sides of the chassis with the screws provided, as shown in Figure 1-1 and Figure 1-2.

Intelligent Reuse™

Active	ID	Representative	Match Frequency	Next Recent Usage	Size
On	5	Operating temperature must not exceed 30° C.	0	Never	5
On	4	Contact your local support representative.	0	Never	3
On	3	The following items are found in the Topspin package:	0	Never	7
On	2	Please refer to your system administrator or local support representative.	0	Never	3
On	1	Contact your system administrator for further assistance.	0	Never	7
On	0	Please enter an End Date that is later than or the same as the Start Date.	0	Never	19

acrolinx IQ Server



Terminology Workflow

Term	Status	Language	Domains	Linked Terms
[Anwendung]	admitted	Deutsch	携帯電話	[application] (admitted, English) アプリケーション (preferred, 日本語)
[application]	admitted	English	携帯電話	[Anwendung] (admitted, Deutsch) アプリケーション (preferred, 日本語)
CDROM	deprecated	日本語	携帯電話	
InstallShield	preferred	日本語	携帯電話	
[Internet]	admitted	Deutsch	携帯電話	[Internet] (admitted, English) インターネット (preferred, 日本語)
[Internet]	admitted	English	携帯電話	[Internet] (admitted, Deutsch) インターネット (preferred, 日本語)
IVM	preferred	日本語	携帯電話	
PATH	deprecated	日本語	携帯電話	
SHM-F	preferred	日本語	携帯電話	
アプリケーション	preferred	日本語	携帯電話	[application] (admitted, English) [Anwendung] (admitted, Deutsch)

Batch Checking

Name	Style	Path	Result
Software user	3.10	F:\Softwareuser\doku...	OK
Software user	4.10	F:\Softwareuser\doku...	OK
Software user	2.83	F:\Softwareuser\doku...	OK
Software user	4.10	F:\Softwareuser\doku...	OK

Reporting

Document	Words	Style	Grammar	Terms	Spelling	Total
Software user	121	5	8.3	0	0	5
Software user	139	2	1.4	0	0	2
Software user	159	0	0	0	0	0
Software user	182	0	0	0	0	0
Software user	139	2	1.4	0	0	2
Software user	319	4	1.3	0	0	4
Software user	292	4	1.4	0	0	4
Software user	154	0	1.3	0	0	0
Software user	215	4	2.8	0	0	4
Software user	328	4	1.3	0	0	4
Software user	218	7	3.2	0	0	7
Software user	136	0	0	0	0	0
Software user	141	3	1.3	0	0	3
Software user	80	1	1.1	0	0	1
Software user	184	1	1.1	0	0	1
Software user	111	1	0.7	0	0	1
Software user	79	1	1.3	0	0	1
Software user	38	0	0	0	0	0
Software user	43	2	4.7	0	0	2
Software user	76	1	1.3	0	0	1
Software user	145	4	2.8	0	0	4
Software user	80	0	0	0	0	0
Software user	14	0	0	0	0	0
Software user	51	0	0	0	0	0



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Best Practice Writing Standards



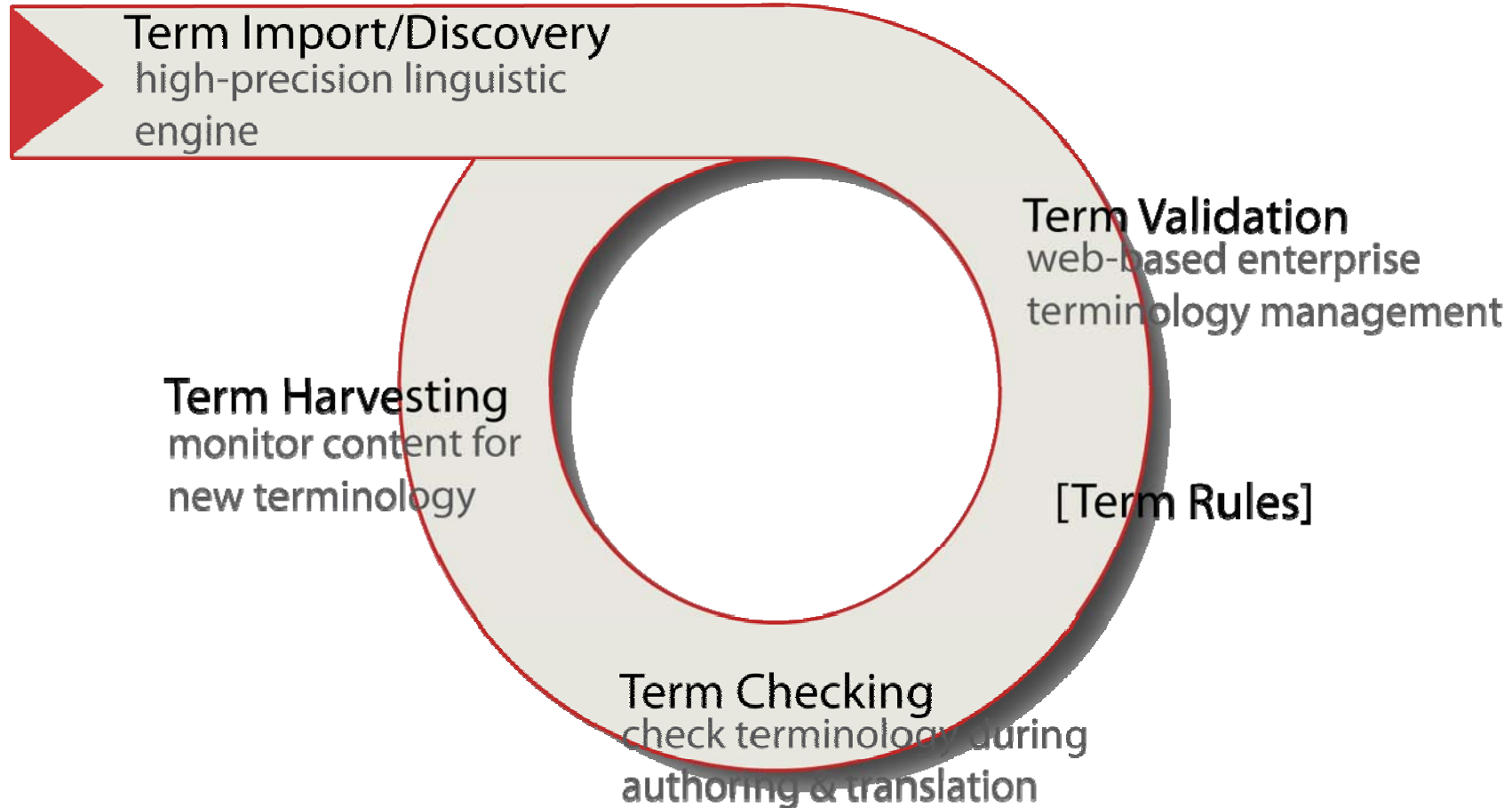
Spelling	Grammar	Style
Server-based for lower maintenance of custom dictionaries	Custom-built component for technical writers.	Off the shelf writing standards
Integrated with terminology management	Support for non-native authors	TÜV Certified ASD STE compliant
Specifically designed for technical information (only shows genuine spelling errors)	Can be easily adapted for specific applications (UI messages)	Different standards can be set for different types of information
Highly customizable	Integrated with other checking components	Easily and quickly customizable to meet customer needs

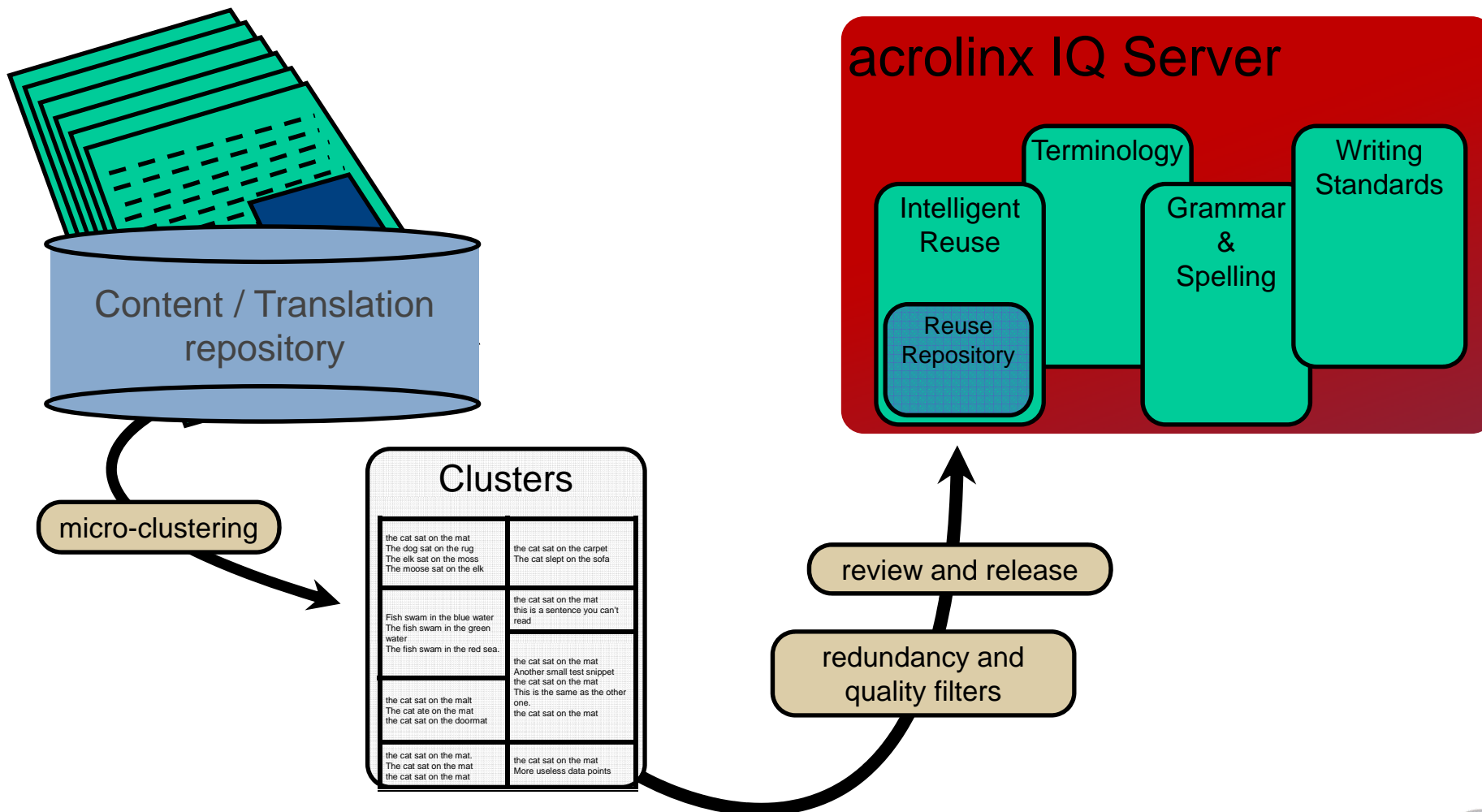


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Setup: Rule Definition and Structure



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■ Base of rule definitions

■ Usage of standard rules and/or rules from “Chicago Manual of Style”

- Rule: “Do not use modal verbs”

Correct sentence: Depending on installed options, the pictures of the product manual may be different from the real machine you have installed

■ Definition of Konica Minolta spec. Rules

- Rule: “Do not use ‘&’ in a sentence, use ‘and’”

Sentence: “Make a proof & print”. But e.g. “ID & Print” is a defined term

■ Usage of rules to support the layout

- Rule: Write Option-names with non-breaking hyphen: FK-502
- Rule: Write Konica Minolta with non-breaking space

■ Usage of rules based on experience

- Do not use “It” at the beginning of sentence
Sentence: “It was opened”: The door, the cover, the job?

■ Biggest discussions about

- Rules to use hyphen
- Rules for Capitalization
- Usage in the definitions of rules regarding “Do not use” or “avoid”



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■ Precise definition of rules

- for example (Konica Minolta): *Address user directly.*
- rule definition is based on explanation and examples
- therefore, rules for this requirement:
 - do_not_use_modal_verbs
 - do_not_use_need_to
 - do_not_use_passive
 - do_not_use_user
 - use_imperative

■ Precise definition of terminology

- term import
- term extraction
- term aggregation
- term validation
- term bank



Acceptance of Multicultural View



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- **Which Knowledge is the base for the source?**
 - **Technical: switch off / please switch off**
 - **User friendly: please switch off**
- **Which language is the base for the source?**
 - **Japanese is the source language**
 - **A lot of cultural relicts are in the source language: English**
- **Which culture is the base for the source language?**
 - **If the source language editor is from the United States and not Australia, the source will be different**
- **Which Knowledge is the base for the source?**
 - **The professional technical editor with knowledge about translation workflow will write technical details differently from the technician or an author writing a poem**
- **Is it a question of „editing“?**
- **Is it a question of „translation“?**
- **Is it a question of „localization“?**

- **It is a question of willingness, acceptance and human weakness factors!**



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Implementing Authoring Support for Japanese Writers



- **1. Support for non-native English by Japanese writers**
 - Non-native English can create different issues for speakers of different native languages.
 - acrolinx identified and supported these issues.
 - For example: the use of articles, agreement issues, indirect addressing
- **2. Support for Japanese documentation**
 - setting up the linguistic machine to process Japanese
 - searching for information about Japanese spelling and grammar errors and style in technical documentation:
 - Tokyo University
 - Nara Institute of Science and Technology
 - JTCA
 - Konica Minolta guidelines
 - Japanese professionals in translation (SunFlare)



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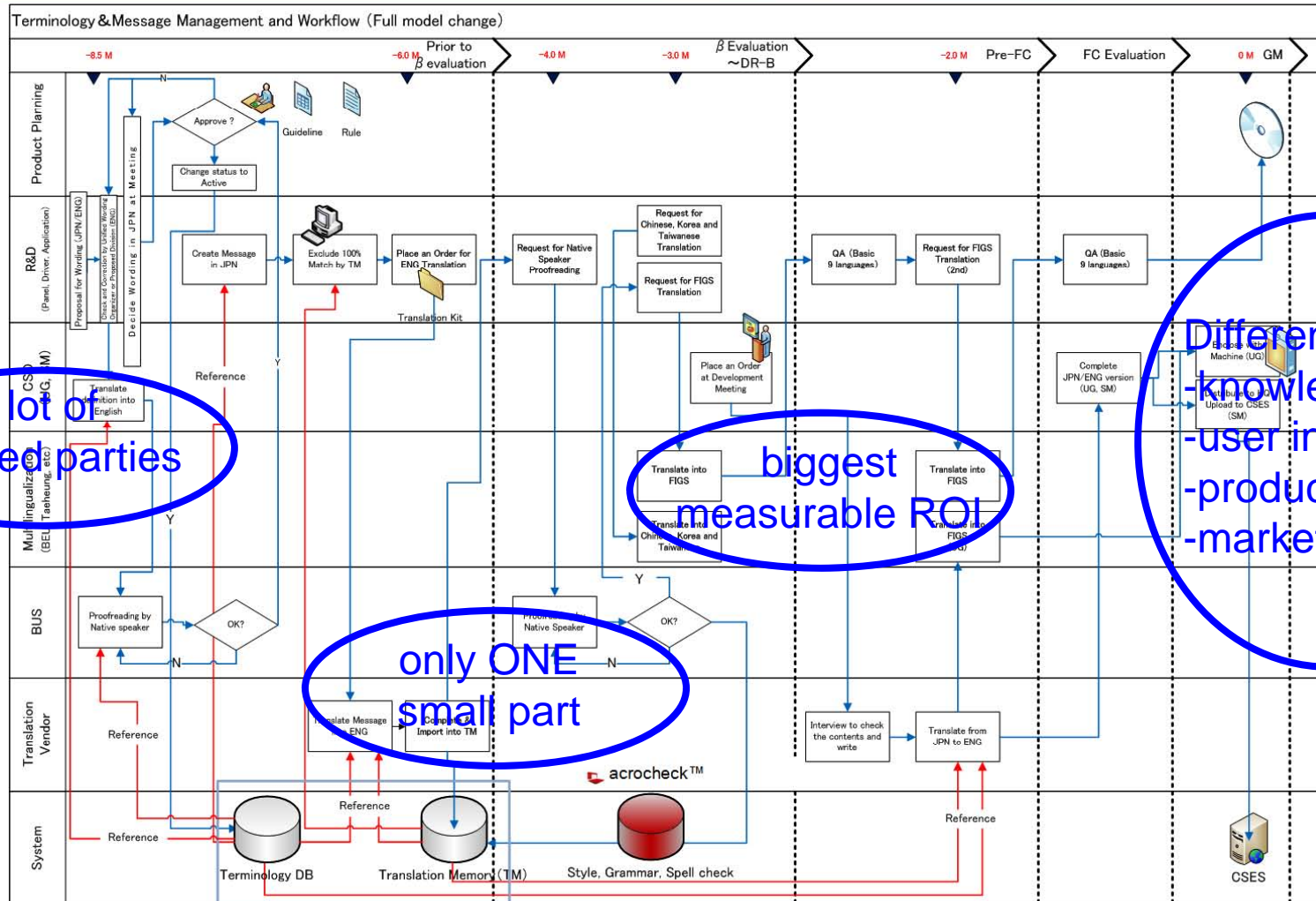
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Embedding in Existing Process



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a lot of involved parties

biggest measurable ROI

only ONE small part

Different usage
 -knowledge sys.
 -user information
 -products
 -marketing



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- **Result of test phase**
 - Technology runs without any problems from starting point onwards
 - Some changes and fine-tuning of rules
 - Definition of main functions at the first step
- **Two different Target Groups at the starting point**
 - **Technicians and Specialists (Knowledge Management System)**
 - Embedded in workflow application without any problem
 - BUT, it is only one button and not a defined step in the workflow
 - **Professional Editors (User Information Editing)**
 - Embedded in Workflow takes a bit more time
 - Every involved party understands the sense
- **Training Sessions**
 - Discussion about rules
 - Learning to use! „Set up the right mindset“
 - Easy to use
 - Work with the result
 - Learning curve



- Annual international user conferences
- Support group in Japan (SunFlare)
- Support groups in Berlin and USA
- Workshops in Hannover, Berlin and Tokyo
- JTCA panel 2008:
 - „Localization for the Japanese Market“
- Information day March 2009 in Tokyo:
 - „Technical Writing Information Day“
- JTCA panel 2009:
 - "Global English"





- **Two pieces of target information at the first step**
 - **Knowledge Support System:**
Need more push! Less understanding of need!
A lot of corrections give a wrong mindset
 - **User Information**
Runs smoothly! Clear editing rules gives a lot of advantage.
Sometimes good linguistic understanding of editors. Asking for next development step!

- **Statistics and first result at User informations**
 - **Project:** 13,000 words; 2,300 sentences
 - **Result:** 9 spelling, 7 grammar, **370 style**, **290 terminology** problems analyzed
 - **Main violation of rules:**
 - Do not use passive
 - Sentence too long
 - Use non-breaking hyphen in proper names

- **Next Steps: Terminology, terminology, terminology**
 - **Definition of Terminology <-> Wordlist**
 - **Definition of terms**
 - **Collecting correct terms**
 - **Collecting negative terms!**

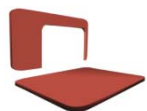


- **Intensive work on Japanese resources for Konica Minolta**
 - context-sensitive rules, such as rules valid only for actions
 - more about spelling errors – intensive data work
- **Non-native support for Japanese speakers of English**
 - work with data and experiment with rules
- **Non-native support for German speakers of English**
- **Intelligent Reuse for Konica Minolta**
 - find out about optimal setup for English and Japanese
 - data tests



Summary

- **Konica Minolta had the need to increase document quality and consistency in their world-wide documentation efforts.**
- **Style guides were written for authors, but not supported by automated checking.**
- **The Project required international teambuilding and a view on multilingual and multicultural aspects.**
- **acrolinx got a great step forward in building resources for Japanese and for non-native support of English.**
- **Crucial: Working with real data, terminology work.**



Thanks for your Attention!




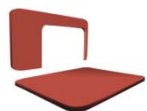
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