



**Grant agreement Number ECP-2005-CULT-038074**

**Project acronym: EDL**

**Deliverable name: Multilingual achievements in EDL and remaining challenges**

**Deliverable number** *D2.1*

**Dissemination level** *Public*

**Delivery date** *28 February 2008*

**Status** *Final*

**Author(s)** *Name(s): Genevieve Clavel – Swiss National Library, Jan Pisanski – National and University Library, Slovenia, Maja Žumer – National and University Library, Slovenia*



*eContentplus*

# Table of Contents

- Table of Contents .....2
- Summary .....3
- 1. Context .....3
- 2. Findings and recommendations for improving interoperability .....5
  - 2.1 UNICODE .....5
  - 2.2 Subject access .....5
  - 2.3 Cross-language subject access .....9
  - 2.4 Cross-language access to full text .....14
  - 2.5 Name authority control .....16
  - 2.6 The feasibility of FRBR .....18
- 3. Conclusions .....20

## Summary

Following a series of studies and reports on Unicode and cross-language access to data, this report draws together the results of the previous analyses to propose scenarios and recommendations to further improve cross-language and multi-script access in The European Library. Additionally, it is recommended that they should be analysed for incorporation into any projects being prepared for The European Library or the European Digital Library.

### 1. Context

EDLproject extends access to metadata, services and digital objects to users from countries using several different languages and character sets. To lower the barrier for all those users speaking different languages who wish to make use of the service, it needs to offer help at different levels: for the user interface, translating user input and displaying it correctly.

Workpackage 2 of the project was designed to investigate the problems and possible solutions in all these areas and to advise on future multilingual support requirements for improved access to the collections of Europe's national libraries, particularly for the research community. As such, it is also a major foundation stone for the Commission's plans for i2010 which recognize the importance of development in this field.

The different tasks of WP2 analysed different aspects of the topic. In task 1 the UNICODE capabilities of new partners were analysed to identify issues brought up by portalling databases with different scripts, character sets or individual character processing.

In task 2 the national libraries of the 9 new partners (the national libraries of Belgium, Greece, Iceland, Ireland, Liechtenstein, Luxembourg, Norway, Spain and Sweden) as well as those of Switzerland and Germany responded to a questionnaire to enable EDLproject to establish an overview of subject access tools and practice in their institutions, using a modified questionnaire originally developed for the TEL-ME-MOR project. Responses from both projects were compared, an analysis was provided and a wide spectrum of practices was identified. Areas for further study were identified, in particular in the field of cross language access. The compilers recommended that the questionnaire be filled in by all European library partners with the goal to develop and maintain an overview of subject access across The European Library.

Task 3 followed the recommendations outlined in the TEL-ME-MOR report on cross-language subject access ([TEL-ME-MOR report 3.4.](#)) and investigated the feasibility of using linked headings such as those from MACS (Multilingual access to subject) and MSAC (Multilingual subject access) to bibliographic data in the European Library.

Following on, task 4 investigated cross language access to full text. A questionnaire was developed and a number of relevant individuals, groups, tools and sources were identified.

Task 5 gave an overview of name authority control in the nine new partner libraries, again using a modified TEL-ME-MOR questionnaire. Issues common to both EDLproject and TEL-ME-MOR participants were identified.

Task 6 provided first concrete examples of *frbrisation* of the Slovenian national bibliography and a comparison to previous results from Norway. It also provided recommendations for further investigation into conceptual models of the bibliographic universe, including FRBR and FRBRoo, the latter representing strong commitment to interoperability between different cultural heritage sectors.

## **2. Findings and recommendations for improving interoperability**

### **2.1 UNICODE**

Task 1 ([Clavel 2007](#)) analysed the UNICODE capabilities of the nine new partner national libraries to identify issues brought up by portalling databases with different scripts, character sets or individual character processing building on a questionnaire developed for the TEL-ME-MOR project. The aim of this analysis was to help the European Library office and The European Library's users make searches more accurately and lessen the incidence of failure to retrieve relevant information due to misunderstandings of how characters are used. The results of the survey were then compared to the results of a similar study conducted within TEL-ME-MOR project targeting the 10 then New Member States.

The compilers found no major problems for the languages of the EDLproject partners, and recommended that the questionnaire be filled by all The European Library partners with the goal to develop and maintain an overview of the Unicode compliance across The European Library. In this context it is worth noting that The European Library office has set up a character sets working group to ensure on-going compatibility. Work at this 'low level' of data is one of the keystones to any interoperability work to be carried out in searching or mapping authority or free text material.

### **2.2 Subject access**

As work related to The European Library in TEL-ME-MOR project clearly showed, subject access can be of importance to multilingual options in The European Library. TEL-ME-MOR [Deliverable 3.3](#) hinted at vast resources in terms of subject access tools, while [Deliverable 3.4](#) identified various projects that try to put these resources to use in terms of multilingual access to collections.

Furthermore, [research](#)<sup>1</sup> indicates that subject access, i.e. searching on a topic, is a very important type of end-user searching. It was therefore considered of utmost importance for the EDLProject to assess the situation regarding subject access in partner libraries and then look at various possibilities on how to handle the problem of multilingualism. In order to achieve this, in task 2 the national libraries of the 9 new partners as well as those of Switzerland and Germany responded to a questionnaire to enable EDLproject to establish an overview of subject access tools and practice in their institutions, using a modified TEL-ME-MOR questionnaire. Responses from both projects were compared, and analysis identified a wide spectrum of practice. The conclusions of the report ([Pisanski, Žumer 2007A](#)) are presented here for ease of reference:

»Results show that all the respondent libraries are aware of the importance of subject access to their collections and are actively involved in developing and maintaining the necessary tools. In light of their collections being included in The European Library, the partners also exhibited a sense of awareness of importance of offering these collections to a wider audience and providing all of the interested parties with access to these collections, regardless of languages used. All of the libraries either have a version of an internationally recognized subject access tool in use or are involved in some kind of mapping, which suggests that the present group of libraries is not completely unprepared for any future undertakings in this area. Of course, the extent of coverage and mapping/linking and use of subject access tools varies from library to library and even from collection to collection, therefore it is difficult to assess the implications, even without possible technical considerations beyond the scope of this report.

»From partners' responses it is clear that the two most used subject access mechanisms are subject heading languages and classification systems, although, in most cases, their application began only recently, especially relative to the existence of libraries' catalogues. In general, pick lists and keywords were used earlier. Several partners reported on subject heading languages evolving from thesauri or vice versa, signalling a close connection and sometimes blurred

---

<sup>1</sup> See Clavel, Žumer, Landry (2006)

boundaries between these subject access tool types. It must be noted that most of the libraries do not provide classification system text caption searching (or display), presenting an apparent obstacle to cross-language search. Also, subject access mechanisms other than subject heading languages and classification systems are not widely used and are usually applied to minor collections, while some older records in larger collections may also contain data pertaining to their use in the past. To put things in perspective, of all the collections to be added to The European Library one was reported to have full text access.

»This survey, coupled with the one in TEL-ME-MOR, provides us with a basic overview of the subject access tools used by The European Library members. It is only with this survey that a more well-rounded view of the matter at hand was established, as libraries involved in either of the projects come from backgrounds that are geographically, economically, culturally and linguistically representative of the whole Europe. Even though the TEL-ME-MOR Report on subject access tools (Deliverable 3.3) acknowledged “a wide variety of access points across the 10 partner libraries” and proclaimed that “there is undoubtedly an equally wide range of practice across TEL partners”, present analysis shows the range of practice is, if anything, even wider. This diversity in subject access tools discovered is only natural, but not insurmountable. Therefore, it is important that such access is made available but also that - where possible - cross-searching is offered in order to extend beyond national or lingual borders. »

The compilers recommended that the questionnaire be filled in by all European library partners with the goal to develop and maintain an overview of subject access across The European Library. During the summer of 2007, the European Library Office hosted an intern, Christoph Schmidt-Supprian who followed up on this recommendation and extended the questionnaire, with some alterations, to all members and compiled a database which demonstrates the extraordinarily wide range of subject access options within the partners of the European Library. The full report (Schmidt-Supprian) was submitted in partial fulfilment of the requirements for the degree of Master of Library and

Information Studies from the National University of Ireland University College Dublin School of Information and Library Studies in November 2007. The main conclusions are presented below:

- Controlled vocabularies are widely used in Europe's national libraries, but within an institution there may be more than one (Schmidt-Supprian identified an average of three)
- UDC, DDC, LCSH and tools that may be considered derivatives of these are widely used (UDC in 24 libraries, DDC in 12, LCSH and 'relations' in 19 )
- However there remain
  - » a plethora of idiosyncratic controlled vocabularies: up to 118 of them, representing 63 “base” tools. These bases ranged over 15 different classifications, roughly divided between a general and a specialist scope, 17 different pick lists, most for special collections, 16 subject heading languages, usually generalist subject access tools of national importance, and 15 thesauri, again both of generalist and of specialist scope.« (Schmidt-Supprian p.58)
- Name authority control was also well represented for bibliographic records but rarely for digitised material or online texts
- In nearly two thirds of cases, full text or manually assigned keywords are used in combination with controlled vocabulary, highlighting the fact that the approaches are complementary, in particular for digitised material and online publications
- 40% of the sample reported using both classifications and subject headings
- Different schemes are used at different times during the lifetime of an institution, complicating mapping
- Some bi- or multi-lingual lists exist but they are still the minority (estimated at 20%). Where they do exist, English is the most frequent 'other' language: an useful element to take into consideration for extending mapping

The findings feed into task 3, the investigation of cross-language subject access feasibility.

### **2.3 Cross-language subject access**

Task 3 followed the recommendations outlined in the TEL-ME-MOR report on cross-language subject access ([TEL-ME-MOR report D3.4](#)) and investigated the feasibility of using linked headings such as those from MACS (Multilingual access to subject) and MSAC (Multilingual subject access) to bibliographic data in the European Library.

In cooperation with the European Library Office, 127000 linked subject-headings (English-French-German) were loaded into a prototype and used to access bibliographic data from the national libraries of France, Germany, Switzerland and Great Britain. This interface is also designed to accommodate other mappings, names, subjects and classifications, so that once the structure and layout has been agreed it should be quicker to import other schemes. The screen shots below show an example of using the prototype to access material, It should be noted that the interface design is still under testing and discussion, emphasis in the first instance being placed on the technical feasibility of the searching.

## Search Results

Results 1 – 3 of 3 for *absolutismus*. (0 seconds).

MACS - *Select this item to query in TEL*

English: Despotism  
French: Monarchie absolue  
German: *Absolutismus*

MACS - *Select this item to query in TEL*

English: Despotism  
French: Despotisme  
German: *Absolutismus*

MACS - *Select this item to query in TEL*

French: Despotisme éclairé  
German: Aufklärer *Absolutismus*

## Selected items to search in TEL

clear

search in TEL

## Search Results

Results 1 - 3 of 3 for *absolutismus*. (0 seconds)

MACS - Select this item to query in TEL

English:	Despotism
French:	Monarchie absolue
German:	Absolutismus

MACS - Select this item to query in TEL

English:	Despotism
French:	Despotisme
German:	Absolutismus

MACS - Select this item to query in TEL

French:	Despotisme éclairé
German:	Aufgeklärter Absolutismus

Search SRU urls for TEL

[Hide]

Library: SNL

[query=\(subject all "Absolutismus"\)](#)

Library: BNF

[query=\(subject all "Monarchie absolue"\)](#)

Library: BL

[query=\(subject all "Despotism"\)](#)

Library: DNB

[query=\(subject all "Absolutismus"\)](#)

## Selected items to search in TEL

clear

search in TEL

MACS - Remove this item from the selection

English:	Despotism
French:	Monarchie absolue
German:	Absolutismus

The European Library Det europeiska biblioteket Avrupa Kütüphanesi Europska knjižnica Eiropas bibliotēka Evropska knjižnica Az Európai Könyvtár Die Europäische Bibliothek Euroopan kirjasto Euroopa raamatukogu Language: English (eng) Register | Login

HOME COLLECTIONS LIBRARIES ORGANISATION

Search Results History Favourites help?

SEARCH

Options

search within results

exclude from results

[Advanced search \(more options\)](#)

[Change the collections selection](#)

DIAGNOSTIC DISPLAY

MATCHES FOR:

(subject all "monarchie absolue")

YOU ARE SEARCHING IN:

FR BN-OPALE PLUS, the catalogue of the Bibliothèque nationale de France 62

### BN-OPALE PLUS, le catalogue de la Bibliothèque nationale de France - FR -

62 objects with (subject all "monarchie absolue") have been found in BN-OPALE PLUS, le catalogue de la Bibliothèque nationale de France.

Print | jump to  page  previous | [next](#)

- 1 [Politique tirée des propres paroles de l'écriture sainte à Mgr le dauphin](#)  
Document type: Texte imprimé, text | Language: fre

---

- 2 [La raison du prince l'Europe absolutiste, 1649-1775](#)  
Document type: Texte imprimé, text | Language: fre

---

- 3 [La Monarchie absolue en Europe du V- siècle à nos jours](#)  
Document type: Texte imprimé, text | Language: fre

---

- 4 [L'Europe absolutiste raison et raison d'État, 1649-1775](#)  
Document type: Texte imprimé, text | Language: fre

---

- 5 [Le Despotisme éclairé](#)  
Document type: Texte imprimé, text | Language: fre

---

- 6 [The Making of Russian absolutism, 1613-1801](#)  
Document type: Texte imprimé, text | Language: XXX

---

- 7 [Stato e società nell' Ancien régime](#)  
Document type: Texte imprimé, text | Language: XXX

The results from the prototype are encouraging and the work package leaders recommend that tests be continued and mapping extended. However it is recognised that while mapping such as that carried out for the above headings gives good results, it is labour intensive. Within TEL-ME-MOR some estimates of mapping costs were made (Clavel, Žumer, Landry 2006):

»mapping [...] depends on numbers of headings to be mapped and staff costs in individual institutions. Based on experience from DNB and SNL, an average of 8 links per hour may be created For the CrissCross project an estimated 4 person years are required to link German SWD headings to 50000 LCSH headings, with

an additional 3 person years to link 70500 DDC notations. Planning and coordination: 1 person year. Based on data from some of the TEL-ME-MOR partner libraries the following mapping times can be estimated, taking an average of 8 links per hour and a working year of 1560 hours:

- o Hungary, 35650 headings: ca. 3 person years
- o Estonia, 26000 headings: ca. 2 person years
- o Lithuania, 54153 headings: ca. 4.5 person years
- o Cyprus, 1042 headings: ca. 1 month
- o Czech Republic, 38257: ca. 3 person years«

Since the report was issued, tests have been carried out on incorporating Italian language subject headings into the MACS system with promising results technically, but the mapping times remain similar. Schmidt-Supprian identified other initiatives that could be taken into account, notably Sweden and Russia (St. Petersburg) who plan to establish equivalence links from their national subject headings to LCSH thus opening the way to integration in MACS. He also commented that his study:

»revealed an incredibly wide net of linkages between at least 79 controlled vocabularies and classifications. While it is true that many of these linkages were not yet fully realised and might take years to complete, they demonstrate the huge potential that lies in the controlled vocabularies.«<sup>2</sup>

and that:

»once a certain “critical mass” of mapped equivalences between controlled vocabularies has been achieved, a snowball effect might be achieved both in terms of automatic mappings and in terms of the number of vocabularies that can join the big web of equivalences«.<sup>3</sup>

However the question of scaling-up remains open: the work package leaders recommend that studies of clustering groups of subject heading languages be carried out rather than attempt to group all the different schemes.

---

<sup>2</sup> Schmidt-Supprian p. 69

<sup>3</sup> Schmidt-Supprian p.67

Additionally, tests on automatic mappings planned in the [TELPlus](#) project will use the extensive amount of manually mapped data as a 'gold-standard' and may lead to the development of tools to assist linking.

## **2.4 Cross-language access to full text**

As indicated above, cross-language access to controlled vocabularies and to free text should be considered complementary and not in competition, though clearly results of tests may lead to preferring one or the other in terms of investment and resources. Currently though this is not yet possible, but within the work package elements were investigated to identify the tools offering cross-language access to full-text so that later projects such as TELPlus might build on these in their testbeds. In task 4 a questionnaire was developed and a number of relevant individuals, groups, tools and sources in this field were identified for partner countries. The importance of this was underlined by Pisanski and Žumer (2008A), [M2.2](#):

»The Multilingual Information Access (MLIA) tools are of great importance to any European digital library project. While many translation tools exist and have been identified for the most widely spoken languages, smaller languages often tend to be forgotten. However, if The European Library is to be truly European and if it is intended to be used by anyone world-wide, at least all of the national languages of participating national libraries have to be taken into consideration. That is not say that initial MLIA experimentation in The European Library should not take place on only a select few languages, but other languages should be considered from the start, as well.«

Among the most important MLIA tools the authors identified are:

- »Multilingual and monolingual corpora - Compilations of texts in a certain language or languages, can be used as basis for translation.
- Multilingual thesauri - Multilingual compilations of groups of words, consisting of the links between words used in documents and words used as descriptors,

prepared for the consultation in information retrieval. Equivalence, homographic, hierarchical, and associative relationships are displayed clearly and according to standards.

- Terminology portals – Online portals that offer basic translation of words between two or more languages. Some use different sources (vocabularies, thesauri...) to get better recall.
- Stemmers / Lemmatisers - Algorithms that return only the stem or lemma (base form) of a word. Unlike lemmatisers, stemmers operate on single words without context and are therefore usually less complex.
- Parsers – Algorithms that determine the structure of a text (break texts into parts)
- Automatic translation tools - Any tools that allow for machine translation of a text, including online translation services
- Language identification tools - Tools which identify the language in which a text is written.
- Multilingual search engines – Search engines that work with queries and documents in various languages«

One of the most important outcomes of the investigation is the inventory of organisations and people working in the MLIA field as these will provide valuable contacts. It is recommended that all European Library partners respond to this questionnaire so that an extended overview may be developed: efforts to do this in the area of subject headings have shown how useful such a task can be.

## **2.5 Name authority control**

To complement and extend the work carried out in tasks 3 and 4, task 5 gave an overview of name authority control in the new partner libraries, again using modified a TEL-ME-MOR questionnaire. Issues common to both EDLproject and TEL-ME-MOR participants were identified. The results are summarised below (Pisanski, Žumer 2007B):

»All of the TEL-ME-MOR and EDLproject participant countries reported having personal name authority control, while only Slovenia did not have corporate name authority control implemented.

»Both authority control surveys found MARC 21 to be the most popular authority data format. It is used by 5 TEL-ME MOR participants (Czech Republic, Estonia, Latvia, Poland and Slovakia) and 4 EDLproject participants (Iceland, Ireland, Sweden and Switzerland). In addition, variations / adaptations of MARC 21 or MARC 21 compatible formats are used by 4 more EDLproject participants (Liechtenstein, Luxembourg, Norway, Spain), as well as a single TEL-ME-MOR participant (Hungary). UNIMARC is used in Cyprus, Lithuania (TEL-ME-MOR) and Greece (EDLproject), while a UNIMARC-based format is used in EDLproject participant Belgium and TEL-ME MOR participant Slovenia's COMARC format is a derivative of UNIMARC. UKMARC is the format used in Malta (TEL-ME-MOR). In some countries the use of authority files is restricted to selected persons / corporations, based on various criteria.

»Surveys show that most participant national libraries follow AACR2 or its variations (5 in TEL-ME-MOR and 8 in EDLproject), while some also report observing GARR (Guidelines for Authority Records and References) and other local or international rules / guidelines / standards.

»While all participants reported having adopted authority control, there are differences regarding the scope, as well as mode, of implementation. Unfortunately, quite a few of respondent libraries, especially in the EDLproject, were unable to provide exact numbers as to the sizes of personal name and corporate name authority files. However, judging from data received, there are no great differences in range of authority file sized between TEL-ME-MOR and EDLproject participants, perhaps reflecting the similar size structure of countries and libraries involved in both projects. In both cases the reported number of personal name authority records ranges from several thousand (especially if we consider Liechtenstein data for all authority data in conjunction with personal name / corporate name ratio reported by other respondents) to several hundred thousand and the number of corporate records from a few hundred to more than 50 000.

»Libraries in both surveys exhibited a wide range of treatment of persons and corporations as subjects. Some use the same authority records, some use a separate authority file, while others still do not have an authority file for these cases. It was also noted that many libraries are very selective as to the use of authority control for such purposes.«

The conclusion of the report was positive in terms of the existence of building blocks for interoperability:

»As the TEL-ME-MOR report on authority control showed, there have been quite a number of initiatives in the field of interoperability of personal or corporate name authority data. However, most of these were projects with limited scope of application. In the short time between the two reports, no additional initiatives were discovered. The results of EDLproject authority control survey clearly show that there is a relatively high level of standardisation of authority data, providing a crucial stepping stone towards increased interoperability«.

What remains to be tested within the European Library prototype is the practical application of using mapped data such as that from VIAF: unavailability of data during the project lifetime impeded these tests but as the screen shots above show, it is planned to incorporate this and the work package leaders recommend that the European Library Office schedules this as soon as the VIAF data may be made available. A further outstanding question is that of mapping: there are no plans to manually map name authority headings. It is recommended that following the results of the VIAF testing investigations be carried out into extending VIAF mapping to other name authorities. As revealed in the questionnaire replies, structures and formats are close enough to facilitate this. The recent announcement that the Bibliothèque nationale de France is to provide data for testing mapping in VIAF is an encouraging sign.

## **2.6 The feasibility of FRBR**

National (and other) libraries are increasingly conscious of the problems posed by the fact that the number of editions of the same title often in a variety of adaptations in different media or translations makes it difficult for the user to have a coherent overview of a particular title. This is a common phenomenon in large individual library catalogues and is multiplied when data from 43 national libraries needs to be taken into account, especially as these institutions are frequently mandated to collect every re-edition, variation or translation of a title if it is deposited or published in their respective countries. Improving interoperability in this area is a key interest for The European Library. In this context, task 6 provided examples of *frbrisation* of Slovenian national bibliography and a chance for comparison to previous results from Norway. It also offered further investigation into conceptual models of the bibliographic universe, including FRBR and FRBRoo, the latter representing strong international commitment to interoperability between different cultural heritage sectors. Such work is of particular relevance as work proceeds on initiatives such as Europeana ([www.europeana.eu](http://www.europeana.eu)). The following extract from the report summarises the work and its results:

»Functional Requirements for Bibliographic Records (FRBR) is a conceptual model of the bibliographic universe, which should provide long-term benefits in terms of organisation of user displays particularly for bibliographies, union catalogues and portals, such as The European Library. The present experiment deals with mechanisms for extracting FRBR structure from existing bibliographic records in connection with The European Library. While it is local in nature, it is comparable to other similar existing and potentially forthcoming experiments. Unlike others, this experiment was relatively successful in identifying expressions, owing to relatively strict rules for entering such data in the Slovenian Bibliography. Also, interoperability with other cultural heritage sectors was explored through the object oriented version of FRBR (FRBRoo).«

As the authors conclude:

»This experiment revealed the positive and negative sides of *frbrisation*. However, as one of the shortcomings of The European Library portal is the need to organise displays better and this issue is only going to be more noticeable with larger data sets, FRBR application should be tested for other collections included in The European Library. This would not only be beneficial to The European Library, but to the individual partner libraries involved, as well.«

It must be stressed that a single *frbrisation* algorithm will generally not yield good results for a multitude of collections, such as those in The European Library. As the Slovenian Bibliography experiment clearly showed, *frbrisation* algorithms work best when they are tweaked to accommodate the nature of individual collections, cataloguing rules and cataloguing practices. Therefore, the next step should be the development of various algorithms for further *frbrisation* of individual collections. Only then can clustering algorithms can be developed at the portal level.

### 3. Conclusions

A workshop in Stockholm on November 22-23 2007, brought together specialists from the fields of subjects, name authorities and full-text access to discuss the results of the reports; the prototype integration of MACS into the European Library was demonstrated. This workshop was a very valuable networking opportunity for colleagues from the EDLproject and those from TELplus and EDLnet who are continuing work in these fields. Its conclusions, presented by Paula Gossens (Gossens 2007) reinforce the results from this work package and its recommendations.

- There is a large amount of potential data – controlled vocabularies, mappings
- There has been much emphasis on manual intervention: now we need to use it as control data
- The more bibliographic data is brought together, the better indirect linking and clustering may work cf Worldcat (critical mass)
- Therefore, the mass of bibliographic data we have in the European Library but also worldwide offers new opportunities

So our goals can be reached using different approaches based on the power of the critical mass of data and the following tools at our disposal, since libraries have

- Powerful controlled and semi-controlled authority files
- Powerful standards to build, maintain and exchange authority data
- Algorithms for merging and harmonising name authority files of different origin and language
- Techniques for linking subject headings of different origin and language
- Techniques for merging bibliographic records

The results and recommendations of EDLproject workpackage 2 represent another stepping stone towards a common goal of multilingual Europe and more precisely a common European digital library. They give strong support to the current initiatives, such as EDLnet and TELplus, as well as any new initiative in the area. At the Stockholm

workshop and then EDLproject final conference (One more step towards the European digital library International Conference Deutsche Nationalbibliothek, Frankfurt am Main 31 January - 1 February 2008) colleagues from these new projects and from EDLproject shared experiences and plans to use the wealth of data in follow-up work to move closer to the goal of true interoperability.

## Reports and presentations

Clavel (2007) M 2.1 Report on Unicode Version 2 April 30, 2007 / Genevieve Clavel – Swiss National Library

Clavel, Žumer, Landry (2006) Scenarios for multilingual access Deliverable 3.6 / Genevieve Clavel-Merrin – Swiss National Library Maja Žumer - National and University Library, Slovenia Patrice Landry – Swiss National Library 2006

Goossens (2007) Authority Control: trends and challenges / Paula Goossens, Royal Library Belgium, November 2007

Pisanski, Žumer (2007A) M 2.2 Report on subject access tools March 19, 2007 / Jan Pisanski – National and University Library, Slovenia; Maja Žumer – National and University Library, Slovenia

Pisanski, Žumer (2007B) Report on name authority control June 13, 2007 Jan Pisanski – National and University Library, Slovenia ; Maja Žumer – National and University Library, Slovenia

Pisanski, Žumer (2008A) Report on multilingual information access (MLIA) tools February 27, 2008 Jan Pisanski – National and University Library, Slovenia; Maja Žumer – National and University Library, Slovenia

Pisanski, Žumer (2008B) Report on Task 6 of WP2 February 7, 2008 Jan Pisanski – National and University Library, Slovenia; Maja Žumer – National and University Library, Slovenia

Schmidt-Supprian (2007) Controlled Vocabularies in a Multilingual Federated Search Environment: The Example of The European Library / Christoph Schmidt-Supprian. Submitted in partial fulfilment of the requirements for the degree of Master of Library and Information Studies National University of Ireland University College Dublin School of Information and Library Studies, November 2007