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networks across Europe

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*The digitisation process in the KMKG:  
Export and Publication of Metadata*

Brussels  
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## *The digitisation process in the KMG: Export and Publication of Metadata*



### Why digitise collections?

In the case of the KMG and probably many other museums, digitisation can be seen as relatively new phenomenon, at least when you make the difference between:

- The inventories of collections as was done in the old (and still by some present) days: in non-standardised spreadsheets (Excel) and databases (Access)

AND

- The present day use of specialised network collection management systems such as Adlib and MuseumPlus (Zetcom), where the digital object photograph and the descriptive and administrative object metadata are kept in a standardised way



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### Why digitise collections?

The purpose of digitisation goes beyond keeping a collection inventory

It is also meant to provide access to collections and object information for both scientific research purposes and for the general public

A growing number of institutions provide access to their digital heritage collections in an online environment:

- Through their own online catalogue
- Through national partnership portals (e.g.: ErfgoedPlus, Vlaamse Kunstcollectie)
- Through the European digital library: EUROPEANA



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Providing online access...

**But providing online access to digital collections isn't an easy job!**

**It means:**

- Standardisation of data input processes
- The use of controlled vocabularies (bilingual in our case)
- Working together with software providers for creation of the data export systems and online catalogues
- Interoperability of data by using a standard XML export format

...and so much more to be able to export and publish the object information in a proper way

**In our case this process has not been easy...**



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The KMKG case

This presentation focuses on:

1. The creation of the KMKG online museum catalogue CARMENTIS
2. The creation of the KMKG export system: LIDO XML export, OAI-PMH repository,...

The inventory process will not be discussed as such, although we will see that export of metadata has a direct effect on the input process and visa versa



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### Background

#### The KMKG collection management system

In 2005 MuseumPlus (M+) was chosen as the new KMKG collection management system:

- Before 2005 a system called MuseumView was used. It was insufficient to cope with present day requirements and eventually had to be replaced when development by the software provider stopped completely
- MuseumPlus is a complete museum collection management system from Swiss software provider Zetcom (not be confused with MuseumPlus by Adlib)



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### Background

#### Zetcom

- Had a good reputation
- Active in 20 countries (Alte and Neue Nationalgalerie in Berlin, Louvre in Paris, etc...)
- Sold as SPECTRUM compliant
- Experience with export standard MuseumDat
- Experience with multilingual collection management software

**Being a bilingual federal institution this last point, together with the stability of the company, was an important requirement for the KMKG**



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### Background

#### MuseumPlus today

- Installed on the museum network
- Accessible from every location with an Internet connection
- Metadata and digital object photograph are managed in a uniform
- Growing number of users (accepted on project base)

#### **Some disadvantages of the system:**

- No generic XML export of data standard available
- It's not really a bilingual system
- Need of extensive training and support for the users by Digit team
- Many bugs



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MuseumPlus 5.0.02 012 - [Collection]

Fichier Modifier Collection Adresse Exposition Photothèque Autres modules Exploitation Administration Contrôle Aide Window

id. obj. 94828 Saskia (mm) - 181122L ...

Collection instruments de musique

N° d'inventaire 3222 NIG

Type notice Objets Instrument africain

Nom de l'objet Sanza (Nom de l'objet->Instruments de musique->Idiophones->Idiophone pincé ou lamellophone)


Titre Madaku, Modeku

Auteur / Intervenant Zande, Population Avungura, Population, AH

Depuis À 1913 Période 1913ante

Code/Définition Modeku

Classification Lamellophones sur planche hétéroglottes avec résonateur



Données de base | Données historiques | Descriptions / Traductions | Données supplémentaires

Dimensions 16,5 x 11,2 x 26,5 cm Dimensions H x L x P

Matériaux / Techniques Matière: Carapace de tortue Matière: Fibres (Mahillon 1922: "raphia vinifera" (geciteerd uit Hutere)

Réf. géographiques Lieu de production: Doruma (Référence Géographique->Afrique->Afr Lieu de production (historique): Belgisch Congo (MAH1922: "Congc

Inscriptions

Musée propr. Musées Royaux d'Art et d'Histoire / Koninklijke Musea voor Kunst en G

Musée dépos. Musée des Instruments de Musique / Muziekinstrumentenmuseum

Notes

Fonction locale MAH1922: "Voir la note qui suit le n° 3009, c'est surtout en marche, le long des sentiers,

Usage local

Empl. actuel OER+106.08

Empl. perm. OER+106.

Empl. détail 08D12

Descr. ens.

Nbre. pièces Langue nl

Record: 1 of 1

Numéro d'inventaire

start Carmentis - ... Microsoft Po... 3 Windows... Export en pu... Windows Me... MuseumPlus ... NL 11:16

M+ data input screen



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From import to export...

### The road to digital export and publication of metadata

The digitisation of the museum collections is one of the priority tasks as defined by the Belgian Science Policy government (Federal)

Budget (on project base) has been made available in the last years for:

1. Internal digitisation projects
2. Making the digital museum collections accessible for the public via
  - KMG online museum catalogue CARMENIS
  - EUROPEANA (participation in European projects ATHENA, MIMO and soon Linked Heritage)



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From import to export...

During 2009 preparations were started for the creation of an online museum catalogue and the export of our data in a standard XML format

Although the preparations for the online catalogue and the XML export of our data developed rather simultaneously, the catalogue was the first step towards standardisation of our data and will therefore be the first to be discussed

→ MuseumPlus to CARMENTIS



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### The online museum catalogue: MuseumPlus to CARMENTIS

MuseumPlus had no standard possibility to export data in a generic XML  
We depended on Zetcom for the development of the online catalogue

#### Zetcoms' online catalogus software

- eM+ software developed by Zetcom
- Custom made to address clients needs
- Metadata comes directly out of the KMKG M+ database
- Synchroniser extracts the data of M+ and exports to the eM+ server
- Synchroniser makes an update of the data each night



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**MuseumPlus to CARMENTIS**

**Phase 1 CARMENTIS**

**Carmentis Phase 1 is now finished. More than 15.000 object descriptions can be visited online**

**Its official release is the 20th of January 2011**

You can have a look at CARMENTIS on:

<http://carmentis.kmkg-mrah.be>

**What will you see...?**



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**MuseumPlus to CARMENTIS**

**Phase 1 CARMENTIS**

- **Multilingual user interface:**
  - French version: Field names and metadata
  - Dutch version: Field names and metadata
  - English version: Only field names in English, metadata in French



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### Multilingual user interface



	<b>Carmentis</b> - Catalogue en ligne du musée des MRAH
	<b>Carmentis</b> - Online museumcatalogus van de KMG
	<b>Carmentis</b> - Online museum catalogue of the RMAH



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**MuseumPlus to CARMENTIS**

- **Limited number of collections published**
- **Limited search functionalities:**
  - Full text search
  - Full text search on collection
  - Refine search on date: Year: From - to



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Full text search

ENG | FR



KONINKLIJKE MUSEA VOOR KUNST EN GESCHIEDENIS

Home

Zoek

CARMENTIS

Eenvoudig zoeken

OK

Zoek

Resultaat

Portfolio

Zoekhulp Zoektips

Full text zoeken

Collectie

Jaar

sinds

tot

RESET

ZOEKEN

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MuseumPlus to CARMENTIS

- **Sorting of the search results on:**
  - Collection
  - Object name
  - Geography
  - Material
  - Date
  
- **List view, picture gallery**



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Search results

ENG | FR

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Home

## Resultaat

CARMENTIS

Eenvoudig zoeken

OK

Zoek

Resultaat

Portfolio

Sorteren: Collectie Beeld: Fotogalerij 3x4

1 - 12 van 201

- Collectie
- Objectnaam
- Geografie
- Materiaal
- Datering



Aambeeld (?) voor het stampen van tapa (bombast)  
ET.35.5.356

Toevoegen aan Portfolio



Afgehakt hoofd met tatoeages  
ET.960

Toevoegen aan Portfolio



Antropomorfe cilinder  
ET.50.60

Toevoegen aan Portfolio



Antropomorfe cilinder  
ET.35.5.44

Toevoegen aan Portfolio



Antropomorfe cilinder  
ET.37.22.8

Toevoegen aan Portfolio



Armband  
ET.38.15.6

Toevoegen aan Portfolio



Beeld  
ET.35.5.88A

Toevoegen aan Portfolio



Beeld  
ET.35.5.49

Toevoegen aan Portfolio





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**MuseumPlus to CARMENTIS**

- **Detail view - metadata published:**
  - Collection name
  - Inventory number
  - Object name
  - Title
  - Date (event production)
  - Material (event production)
  - Technique ( event production)
  - Geography (event production)
  - Measurements



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Detail view

ENG | FR



KONINKLIJKE MUSEA VOOR KUNST EN GESCHIEDENIS

Home

Resultaat

CARMENTIS

Eenvoudig zoeken

3222

OK

Zoek

Resultaat

Portfolio

Beeld: Detail ▾

1 van 1



Collectie	Collectie Muziekinstrumenten
Inventarisnummer	3222
Objectnaam	Sanza
Titel	Madaku, Modeku
Materiaal	Dierlijk > Hoorn > Schildpad Plantaardig > Vezel
Datering	voor 1913
Geografie	Productieplaats: Afrika > Midden-Afrika > Congo, Democratische Republiek van > Haut-Uele (provincie) > Doruma
Afmetingen	Hoogte: 16,5 cm, Breedte: 11,2 cm, Diepte: 26,5 cm
Permalink	<a href="http://carmentis.kmkg-mrah.be/eMuseumPlus?servic">http://carmentis.kmkg-mrah.be/eMuseumPlus?servic</a>

Toevoegen aan Portfolio

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**MuseumPlus to CARMENTIS**

**This first version might seem uncomplicated, but it wasn't easy to achieve**

The limited number of collections, metadata fields and search functionalities had much to do with the obligation as a federal institute to publish data in 2 languages

To achieve this bilingual publication of metadata a lot of fields and their use had to be restructured in MuseumPlus



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### MuseumPlus to CARMENTIS

#### The language problem

After a 1st analysis of the M+ database at the start of the project, it soon became apparent that the system wasn't fully supporting bilingualism of data:

- The M+ database main language is French
- Translation of M+ fields that had a thesaurus was relatively easy, but the number of fields with possibility to attach a thesaurus limited
- Free text fields had no suitable place for providing translations



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M+ Multilingual thesauri

MuseumPlus 5.0.02 012 - [Collection]

Fichier Modifier Collection Adresse Exposition Photothèque Autres modules Exploitation Administration Contrôle Aide Window

id. obj. 94828 Saskia (MIM) - 18/12/20...  
Collection instruments de musique: ... Roxanne - Ecrire ...

Collection Collection instruments de musique

N° d'inventaire 3222 ... NIG ...

Type notice Objets Instrument africain

Nom de l'objet **Sanza (Nom de l'objet->Instruments de musique->Idiophones->Idiophone pincé ou lamellophone)**

Titre Madaku, Modeku

Auteur / Intervenant Zande, Population  
Avungura, Population, AH

Depuis À 1913 Période 1913ante

Code/Définition Modeku

Classification Lamellophones sur planche hétéroglottes avec résonateur

Données de base Données historiques Descriptions / Traductions Données supplémentaires

Dimensions 16,5 x 11,2 x 26,5 cm Dimensions H x L x P

Matériaux / Techniques Matière: Carapace de tortue  
Matière: Fibres (Mahillon 1922: "raphia vinifera" (geciteerd uit Hutere

Réf. géographiques Lieu de production: Doruma (Référence Géographique->Afrique->Afr  
Lieu de production (historique): Belgisch Congo (MAHI1922: "Congo

Inscriptions

Musée propr. Musées Royaux d'Art et d'Histoire / Koninklijke Musea voor Kunst en Ge

Musée déposé. Musée des Instruments de Musique / Muziekinstrumentenmuseum

Empl. perm. OER+106.  
Empl. détail 08D12  
Descr. ens.  
Nbre. pièces Langue nl

Record: 1 of 1  
Form View

start Mozilla Firefox... Microsoft Pow... D:\r\_wyns\Pri... Export en pub... Windows Medi... MuseumPlus 5... NL 13:39

**Attibutions du thésaurus**

Thésaurus Nom de l'objet

Critère de rech.

Afficher thésaur

Champ: Nom de l'objet  
Nom de l'objet / Sanza

(Pot)scherf  
à bandes de cartons  
à bandes de cartons et manivelle  
**à bandes de métal**  
à bandes de métal et manivelle  
à cylindre en bois  
à cylindre en bois et manivelle  
à cylindre en bois et poids  
à cylindre en bois et ressort  
à cylindre en métal  
à cylindre en métal et manivelle  
à cylindre en métal et ressort  
à dispositif pneumatique  
à disques de cartons  
à disques de métal  
à disques de métal et manivelle  
à disques de métal et ressort  
à planchettes pointées  
à planchettes pointées et manivelle  
à rouleaux de P.V.C. perforés

Instrument de musique  
Aérophone  
Composant d'instrument de music  
Cordophone  
Ensemble musicale  
Idiophone  
Instrument électronique  
Instrument mécanique  
à bandes de cartons  
**à bandes de métal**  
à cylindre en bois  
à disques de cartons  
à disques de métal  
à planchettes pointées  
à rouleaux de P.V.C. per  
Tambour automatique



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## M+ Translation of free text fields

MuseumPlus 5.0.02 012 - [Collection]

Fichier Modifier Collection Adresse Exposition Photothèque Autres modules Exploitation Administration Co...

id. obj.: 94628 Saskia (MIM) - 18/12/2010 ...

Collection instruments de musique

N° d'inventaire 3222 ... NIG

Type notice Objets Instrument africain

Nom de l'objet Sanza (Nom de l'objet->Instruments de musique->Idiophones->Idiophone pincé ou lamellophone)

Titre Madaku, Modeku

Auteur / Intervenant Zande, Population

Avungura, Population, AH

Depuis

Code/Définition Modeku

Classification Lamellophones

Données de base Données hist

Dimensions 16,5 x 11,2

Matériaux / Techniques Matière: Ca

Matière: Fib

Réf. géographiques Lieu de proc

Lieu de proc

Inscriptions

Musée propr. Musées Royaux d'Art et d'Histoire / Koninklijke Musea voor Kunst en Ge...

Musée déposé Musée des Instruments de Musique / Muziekinstrumentenmuseum

Empr. perm. OER+106.

Empl. détail 08D12

Descr. ens.

Nbre. pièces

Langue nl

Record: 1 of 1

Type

start Hotmail Microsoft D:\wyn... Export en... Windows MuseumPl... Documen... NL 14:13

**Description/Titre suppl.: Champs de répétition (collection)**

Type	Contenu	Remarque	Dernière m/Modifié par
Terme NL / Term NL	Madaku, Modeku		18/12/2010 Saskia (MIM)
Terme FR / Term FR	Madaku, Modeku		15/05/2010 Saskia (MIM)
*			



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The screenshot shows the 'Auteurs/Intervenants' section of the MuseumPlus application. The main form displays the following information:

- id d'aut: 13852
- Collection: Voitures Hippomobiles
- Type: Auteur (Production)
- Fonction: Peintre
- Nom: Van der Weyden
- Prénom: Rogier (test)
- Nom cartel: Van der Weyden Rogier

A modal window titled 'Nom auteur: Champs de répétition (auteurs/intervenants)' is open, displaying a table of name variations:

Type de nom	Contenu	Remarque	Dernière m	Modifié par
Terme NL/Term NL Naam	Van der Weyden Rogier (test)		30/06/2010	Florian
Terme FR/Term FR Nom	de la Pasture		23/04/2010	Roxanne
Terme FR/Term FR Prénom	Roger (test)		30/06/2010	Florian

A dropdown menu is visible below the table, listing options: Autre nom, Nom original, Terme FR/Term FR Nom, Terme FR/Term FR Prénom, Terme NL/Term NL Naam, and Terme NL/Term NL Voornaa. A text box labeled 'Type de nom' is also present.

Annotations on the screenshot include:

- A red box highlights the 'Nom' and 'Prénom' fields.
- A blue box highlights the 'Terme FR/Term FR Nom' row in the table.
- A purple box highlights the dropdown menu.
- A white callout box with green text says: 'Even more complex... (Carmentis phase 2)'.



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**MuseumPlus to CARMENTIS**

- Many tricks to provide translations of the free text fields
- Almost all of the data already in M+ had to be adjusted to fit certain criteria for publication:
  - Translation of free text fields became mandatory
  - Thesauri became mandatory to use
  - Certain fields became mandatory to use
  - Numeric dates had to be entered according to structured rules
  - ...

**All of these rules were carefully captured in a specification document for the Zetcom programmer to use**



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**MuseumPlus to CARMENTIS**

During the CARMENTIS project numerous standardisation processes were introduced in the M+ database

We now have a bilingual online museum catalogue, but the workload has also doubled:

- Strict and standard use of the M+ database in order to be able to give data in 2 languages → requires guidelines and training for users
- In-house thesauri because of need of French and Dutch language (e.g. AAT only in Dutch)
- Thesauri aren't exhaustive yet
- Data editing before publication would be useful



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### MuseumPlus to CARMENTIS

Although all of this is very time consuming process, now that results can be seen on a day to day basis, motivation is also there to add and improve data

With the successful delivery of phase 1, work has already started on the next phase of CARMENTIS to improve the user experience:

- New collections are being added
  - New metadata will be published
  - Advanced search
  - ...
- Release CARMENTIS 2 - May 2011

Plans for the future → a complete English version



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European projects

The European projects and EUROPEANA

Next to having our own online catalogue, we also wanted to make our digital content available to a wider public through EUROPEANA

With our participation in the European projects ATHENA and MIMO we engaged ourselves in delivering digital content to EUROPEANA



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European Projects

**ATHENA:** Access to Cultural Heritage Networks across Europe  
Best practice project (<http://www.athenaeurope.org>)

*KMG is co-leader of Work Package 3: Identifying standards and  
developing recommendations*

We deliver 12.000 digital object descriptions of the collection of Egypt  
(Danube release, spring 2011)

**MIMO:** Musical Instrument Museums Online

Thematic digitisation project (<http://www.mimo-project.eu>)

We deliver 7600 digital object descriptions and digital photographs of  
Musical Instruments from the MIM (Danube release, spring 2011)



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### European projects

Some important requirements to participate in European projects and to deliver content to EUROPEANA:

Depends on the project...

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- XML export of metadata is needed (any XML format)  
→ partners XML has to be uploaded and mapped to LIDO in the ATHENA ingestion tool
- URL to the object metadata sheet on the partners site to be provided
- URL to the digital representation of the object on the partners site to be provided



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### European projects

#### MIMO

- Partners have to deliver data in LIDO v1.0. XML
- Partners have to deliver some specific MIMO information in XML export
- Partners have to build OAI-PMH repository to allow automatic data harvesting by MIMO aggregator
- Photographs have to be put on MIMO FTP. MIMO will create URL to photograph

The MIMO aggregator transforms these LIDO XML records into ESE XML and transfers them to EUROPEANA



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**MuseumPlus to LIDO XML**

To deliver content to the European projects and EUROPEANA we needed:

- An online museum catalogue to be able to provide the URLs to the record page and the digital representation of the object  
→ Realised with CARMENTIS
- An XML export of our data, a functionality M+ didn't have

→ MuseumPlus to LIDO XML



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### MuseumPlus to LIDO XML

#### Why did we choose LIDO as our export standard?:

- Chosen standard of the ATHENA and MIMO project
- Rich structure
- Event based → CIDOC-CRM compliant
- Supports multilingual export of data
- New version of the museumdat export standard
- SPECTRUM compliant
- Interests from other European projects to use this standard
- Validated as an official standard by ICOM/CIDOC Data Harvesting and Interchange Working Group

LIDO schema and specification on:

[http://cidoc.icom.museum/WG\\_Data\\_Harvesting%28en%29%28E1%29.xml](http://cidoc.icom.museum/WG_Data_Harvesting%28en%29%28E1%29.xml)



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LIDO – Lightweight Information Describing Objects



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## Structure

### Mandatory elements

### Descriptive metadata / Administrative metadata

<p>- Object Classifications -</p> <p><b>Object / Work Type</b> <i>(mandatory)</i></p> <p>Classification</p> <p>-Object Identifications -</p> <p><b>Title / Name</b> <i>(mandatory)</i></p>	<p>-Events -</p> <p><b>Event Set</b></p> <p>-Relations -</p> <p><b>Subject Set</b></p> <p><b>Related Works</b></p>
<p>Inscriptions</p> <p>Repository / Location</p> <p>State / Edition</p> <p>Object Description</p> <p>Measurements</p>	<p>-Administrative Metadata -</p> <p><b>Rights</b></p> <p><b>Record</b> <i>(mandatory)</i></p> <p><b>Resource</b></p>



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### MuseumPlus to LIDO XML

#### LIDO event based structure:

An object is described according to a series of event that took place in its lifetime

#### LIDO event related elements: WWW

- When: <lido:eventDate>
- Where: <lido:eventPlace>
- Who: <lido:eventActor>
- What: <lido:eventMaterialsTech>

The only mandatory event element = <lido:eventType>

Looks complicated on 1st sight, but logical to structure data this way



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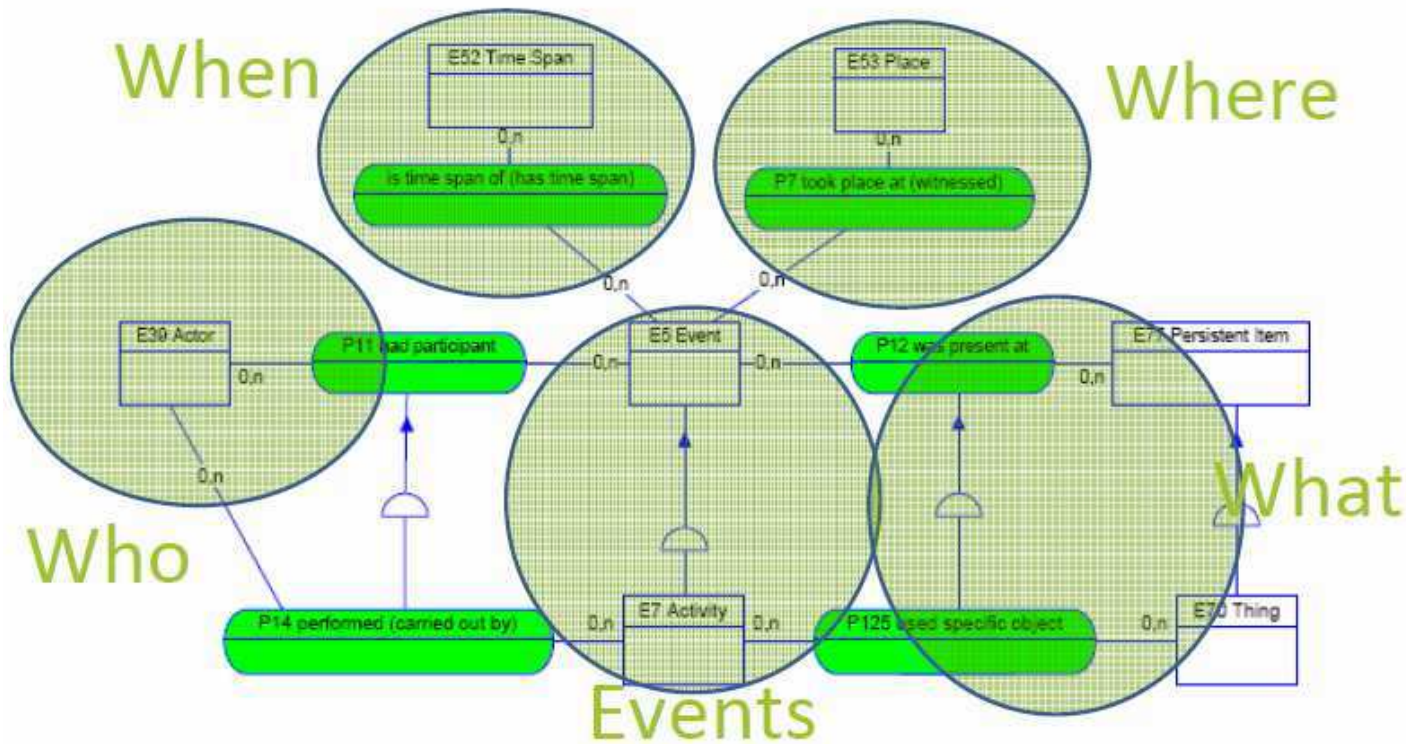


LIDO – Lightweight Information Describing Objects



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CIDOC-CRM





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MuseumPlus to LIDO XML

Possible LIDO event types:

- acquisition
- collecting
- creation
- designing
- destruction
- excavation
- exhibition
- event (non-specified)
- **finding**
- loss
- modification
- move
- ...
- order
- part addition
- part removal
- performance
- planning
- **production**
- provenance
- publication
- restoration
- transformation
- type assignment
- type creation use



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### MuseumPlus to LIDO XML

#### Phase 1: M+ to LIDO XML

##### Step 1: Preparations

#### 1. Understanding LIDO

- Not an easy task → Rich standard
- Good specification documentation describing each element

#### 2. Analysis of M+

- Analysis can only be done by someone that knows the database
- Decision to start with exporting limited number of elements and events
- Export in 2 languages: French and Dutch



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**MuseumPlus to LIDO XML**

**3. Restructuring M+**

- French and Dutch export of all fields → a lot of work already done for CARMENTIS
- LIDO - Events: the use of events had to be introduced and defined in M+

Only events **production** and **finding** for now

**Reason:** event based is a complex principle for the user to understand and a lot has to be taken into account to define the correct event



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# The digitisation process in the KMKG: Export and Publication of Metadata



M+ structuring of events

Event production  
<lido:eventDate>

Event finding  
<lido:eventDate>

Datation (collection)						
Tri	Genre	Depuis	Jusqu'à	Datation	Vérification	Remarque
	Production	7 12 2001	- 12 7 2009	Amama (has to be linked to t		ca.
1	Date de découverte	1 1 2008	- 1 1 2008	1.1.2008 - 1.1.2008		Incertaine



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## *The digitisation process in the KMKG: Export and Publication of Metadata*



### MuseumPlus to LIDO XML

The use of events, combined with the complex ways to provide translation, makes that the M+ user has to keep a lot of things in mind to input data

All of these rules are therefore described in a detailed way in:

- **The “Criteria for publishing”**: document for the M+ administrators to keep track of all the rules for export and publication
- **M+ user manuals**

A record validator checks every record to see if it applies to the criteria  
Failed records and warnings are reported (CSV export)



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**MuseumPlus to LIDO XML**

**4. Mapping of the M+ fields to LIDO**

- Programmer doesn't necessarily know the meaning and use of the database
- Mapping of the fields to the correct LIDO element defined in mapping sheet
- Special rules for export, where to get French and where to get Dutch value, etc, described in detail for the programmer



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Mapping sheet M+ to LIDO

Microsoft Excel - LIDO mapping - RMAH M+v0.9(internal).xls

Bestand Bewerken Beeld invoegen Opmaak Extra Data Venster Help

H24 A bilingual thesaurus (French/Dutch) is attached to this field (thesaurus name = Nom de l'objet). The "lido:titleSet" is the value defined in the M+ thesaurus field: Notion [TrmTermS] > value = "Manche". The French term in this thesaurus (xml:lang="fr"), is defined in the Type critère [TrmTypS] field by "Terme Fr" and by the Langue field [TrmSpracheS] "Fr" > view ps: "Thesaurus, Nom de l'objet - Terme FR".

1

2 **RMAH MuseumPl**

3 !!!Although a thesaurus with multiple levels will be created for the "Nom de l'objet" field, ONLY the term on the last thesaurus level has to be exported in this "lido:titleSet" element that contains the object name. We have to create a basic structure of multiple levels to prevent the slowness of the thesaurus (because of too many terms on 1 level). The terms on other levels will serve as guide terms only. ONLY the last term has to be exported in LIDO.

4 Col Since thesauri are continuously under development because more terms will be added with new collections being digitised, extra levels in these thesauri will possibly be added in the future. Just always export ONLY the last term in the thesaurus branch (narrowest term).

5 Column I: M+ Dutch metadata mapping information for Zetcom (xml:lang="nl")

6 Column E: The elements in RED column are mandatory elements. Without these elements LIDO will not be valid.

7 Column G: For internal discussion

8 ps = print screen

9 [xxx] = Champs graphique unknown

		Internal element name M+	VALUE (M+ data test object ET.07)	Champ Graphique M+	M+ Fre	
20	CLASSIFICATIONS TYPES	<lido:objectClassificationWrap>				
21		<lido:objectWorkTypeWrap>				
22		<lido:objectWorkType>				
23		<lido:term>				
24		type	Nom de l'objet	Manche	[ObjTitelOriginalS] → thesaurus "Notion [TrmTermS]"	Bilingual
25		<lido:term>				
26		<lido:objectWorkType>				
27		<lido:objectWorkType>				
28		<lido:term>				
29		type	The value "Musical instrument" has to be generated automatically in a new <lido:objectWorkType> element for the colle			
30		<lido:term>				
31		<lido:objectWorkType>				
32		<lido:objectWorkTypeWrap>				
34		<lido:classificationWrap>				

M+ to LIDO (main fields) / OVERVIEW M+ to LIDO /

Gereed

start Mozilla Firefox... Export en publi... Document1 - Mi... 2 Windows E... Microsoft Powe... Microsoft Excel... NL 12:58



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## The digitisation process in the KMG: Export and Publication of Metadata



### MuseumPlus to LIDO XML

#### Step 2: Programming

Two roads to “Rome”...

1. LIDO export by Zetcom
2. LIDO export by in-house programmer



One easier than the other!





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MuseumPlus to LIDO XML

1. LIDO export by Zetcom

The original plan was to have Zetcom realise the XML export of M+:

- Had experience with implementation of museumdat export format
- Most sustainable option

**Problems:**

- Didn't want to implement LIDO before official validation of the standard, which only happened in November 2010
- Experiencing problems with long distance communication and busy schedule of Zetcom programmers



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### MuseumPlus to LIDO XML

#### Making a long history short...

- Zetcom decided to go to LIDO v0.9
- Programmer had been hired to work on this project (October 2010)
- Official LIDO v1.0 validation on the 8th of November  
New schema was delivered to Zetcom day after validation → update from v0.9 to v.1.0
- Some mapping changes delivered by us because of requirements MIMO project and some small mistakes in previous version
- December: many promises to deliver test version, January 1st results



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**MuseumPlus to LIDO XML**

**Conclusion on the Zetcom story:**

- Software providers have many customers and even more priorities
- Have to ask and ask again for result → time consuming
- Long distance communication is difficult
- Software provider has too much power → you can't change software every day and they know it
- Without an XML export of your data you are definitely stuck to them

**But we where lucky to have a second option...**



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### MuseumPlus to LIDO XML

## 2. LIDO export by in-house programmer

We were able to hire an in-house programmer on project base (part-time, 8th months) to create LIDO XML export, OAI-PMH repository,...

**Our alternative road to LIDO went a lot smoother!**

### **Benefits of this method:**

- Back-up plan to deliver our data to European projects in time
- Result came a lot quicker
- Communication with an in-house programmer more convenient
- We gained independence from Zetcom!

### **Disadvantages:**

- Maintenance: presence of in-house programmer a temporary luxury



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### KMKG export environment

#### A quick look at the KMKG export environment...

- Extracts data from M+ in generic XML
- Transformation to LIDO XML = KMKG standard schema
- LIDO XML transformation to ESE and DC XML (DC = OAI requirement)
- Dynamic OAI repository and aggregator environment
- Download XML exports
- Record validator: failed records and warnings



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# The digitisation process in the KMKG: Export and Publication of Metadata



## KMKG export environment

### KMKG-MRAH Export Manager

KMKG M+ Export/OAI-PMH v1.0-beta28  
KMKG M+ Web v0.9934

Data directory: /var/oaidata

#### Generate XML export directly from M+ record

Database ID:

#### View XML from synchronized OAI-PMH record

Database ID:

#### Links

- [OAI-Cat interface](#) (query OAI-PMH server)
- [Tomcat manager](#) (update webapplications, login=admin, pw=yankadi)
- [Rebox web interface](#) (login=admin, pw=yankadi)
- [Collection Statistics](#)

#### OAI-PMH

- **Total records currently exported through OAI-PMH: 14289** ([View all](#) or [Redo all transformations](#))
- **Records that validated but produced warning: 11348** ([View all](#) or [Download as CSV](#))
- **Records that failed validation: 135** ([View all](#) or [Download as CSV](#))

#### Synchronize record now

Note: Will immediately synchronize MuseumPlus record with OAI-PMH

Database ID:

#### Exported M+ collections in OAI-PMH

Note: Only collections with more than 20 records are listed  
Note: Effects are not immediate, but will be processed in the nightly synchronization run

- Collection Amérique (361 records)
- Collection Art déco du XXe siècle (724 records)
- Collection Egyptienne (12523 records)
  - Exported: 12265 ([Schedule Rebuild](#) or [View](#))
  - Warnings: 9549 ([View](#) or [Download as CSV](#)) ([Revalidate now!](#))
  - Failed: 12 ([View](#) or [Download as CSV](#)) ([Revalidate now!](#))
  - Last updated: 2011-01-07
- Collection instruments de musique (8368 records)
  - Exported: 1923 ([Schedule Rebuild](#) or [View](#))
  - Warnings: 1781 ([View](#) or [Download as CSV](#)) ([Revalidate now!](#))



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## *The digitisation process in the KMKG: Export and Publication of Metadata*



### Conclusion

**It's not only for big institutions:**

- KMKG has no permanent budget available (all project base)
- Most of the work was done internally
- Small but motivated team
- Extra = programmer and software provider services

**Our participation in the European projects gave us the means and especially the know-how to achieve a lot of these things in the best possible way**

**We keep working on improvements of the M+ database and the export and publication of our metadata**



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Conclusion

**Thank you for your attention!**

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