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**Author(s):** Franc J. Zakrajšek

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## Context

WP 3	Dissemination
WPLleader	CULTNAT
Task	Workshops
Task Leader	AAS
Dependencies	WP5 Research Case Studies
Starting date	Month 8
Release date	April 2012

## HISTORY

Version	Date	Author	Comments
1.0	17.4.2012	Franc J. Zakrajsek	First draft version
1.1	30/4/2012	Antonella Fresa	Revised version submitted to EC

## Table of Contents

1	Executive summary .....	4
2	Aims of the workshop and target users.....	5
3	Program of the workshop .....	6
3.1	Agenda .....	6
3.2	Pictures.....	9
4	Participants .....	10
5	Speakers and presentations.....	12
6	Conclusions .....	15

# 1 Executive summary

This deliverable describes the workshop on Digital Preservation held in Ljubljana Slovenia on 7th February 2012.

Workshop presented best practice examples of the use of GIS technology for access to digital cultural content give insight into resources which e-Infrastructures offer, and how they can be deployed to deal with GIS cultural implementations. This is one of the case studies of the INDICATE project and for this reason this workshop has been planned. The workshop is the follow up of a geo-parsing experiment conducted by the Slovenian partner, which has been presented and discussed at the workshop.

The deliverable in five chapters present the workshop. Chapter 2 introduces the aims of the workshop, chapter 3 provides the programme and pictures of the workshop. Next chapter lists the attendees and the presentation of speakers follows. Final chapter gives conclusions about the results and discussions on the workshop.

## 2 Aims of the workshop and target users

The scope of the workshop geocoded cultural content can be stated as:

- to present best practice examples of the use of GIS technology for access to digital cultural content
- to discuss how e-Infrastructures can be used to enhance GIS cultural applications
- to analyse the resources which e-Infrastructures offer, and how they can be deployed to deal with GIS cultural implementations

The first part of the workshop with Antonela Fresa introduced the INDICATE project after the welcome messages from Slovenian authorities and institutions. Franc J. Zakrajsek introduced the topic geocoded digital cultural content. Afterwards cases from Italy, Ireland, Egypt, France, Slovenia and Jordan were presented.

Second part of the workshop was organized as world café group activity, where partners discussed three topics: Archelological / architectural heritage and GIS, Libraries and GIS and Museums and cloud computing.

The results of the workshop will be analysed and re-elaborated by the INDICATE partners and will constitute the basis of the deliverable D5.3 Case Study Report – Geocoded digital cultural content. The deliverable will describe how cultural institutions can engage in the use of GIS technologies for the access to the digital cultural heritage content and how the e-infrastructures can be beneficial to improve the results of these services. The deliverable D5.3 is expected to be released to the European Commission at month 18 of the project. The deliverable D5.3 is planned to be a public document and it will be accessible through the INDICATE project website at [www.indicate-project.eu](http://www.indicate-project.eu).

## 3 Program of the workshop

### 3.1 Agenda

**7.2.2012, Ljubljana, Slovenia**

Hours: **9:00 – 15:40**

Venue: **National Museum of Slovenia, Maistrova 1, 1000 Ljubljana**

Contact: **Franc J. Zakrajšek, scientific coordinator of the workshop:** [franc.zakrajsek@guest.arnes.si](mailto:franc.zakrajsek@guest.arnes.si)

INDICATE (<http://www.indicate-project.eu>) is a two-years project (September 2010-August 2012), funded in the framework of the Seventh framework programme (e-Infrastructure).

The main issue of the INDICATE project is to develop the research pilots and to prepare case studies as exemplars and demonstrators of the issues and the processes which are relevant to establish cultural initiatives on the e-Infrastructures platform. This workshop is dedicated to the issue of the geographic information systems applied to the cultural heritage which is one of the case studies of the INDICATE project.

- |               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00 – 9:15   | <b>Registration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 9:15 – 9:35   | <b>Welcome messages from Slovenian authorities and institutions</b><br>Damjana Pečnik, Director General, Directorate for Cultural Heritage, Ministry of Culture of the Republic of Slovenia<br>Dr. Jelka Pirkovič, Director General, Institute for the Protection of Cultural Heritage of Slovenia<br>Marko Bonač, Director, Arnes, The Academic and Research Network of Slovenia<br>Dr. Marjeta Mikuž, Head of Office for Movable Cultural Heritage and Museums, National Museum of Slovenia<br>Branko Oman, Director, AAS |
| 9:35 – 9:55   | <b>The goal and content of the INDICATE project</b><br>Antonella FRESA, Technical Coordinator, ICCU, Ministry of Culture, Italy                                                                                                                                                                                                                                                                                                                                                                                             |
| 9:55 – 10:15  | <b>Introduction to geocoded digital cultural content: framework, use cases, geoparsing</b><br>Franc J. Zakrajšek, scientific coordinator of Indicate for Slovenia, Slovenia                                                                                                                                                                                                                                                                                                                                                 |
| 10:15 – 10:50 | <b>Cases from Italy: Novel approach to 3D archeology, 3D semantics, open sources and open standards, experiences of geoparsing CulturalItalia</b><br>Matteo Lorenzini, ICCU, Ministry of Culture, Italy                                                                                                                                                                                                                                                                                                                     |
| 11:25 – 12:00 | <b>Case from Ireland: AskAboutIreland, culture on the interactive map</b><br>Annette Kelly, Library Council of Ireland, Ireland                                                                                                                                                                                                                                                                                                                                                                                             |
| 12:00 – 12:30 | <b>Coffee break</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 12:30 – 12:50 | <b>Case from Egypt: "Cultnat' experience in Geo-coding culture heritage content - The case of El Darb El Ahmer and downtown Cairo"</b><br>Malak Wahba, assistant director of Cultnat and head of Architecture and Urban Heritage section, Egypt                                                                                                                                                                                                                                                                             |
| 12:50 – 13:10 | <b>Case from France: Atlas of heritage and architecture</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Genviève Pinçon, Directorate General for Heritage (Direction générale des patrimoines), Ministry of Culture and Communication, France

13:10 – 13:30	<b>Case from Slovenia: Register of cultural heritage of Slovenia (RCHS)</b> Franc J. Zakrajšek, Developer of RCHS, Slovenia Ksenija Kovacec Naglič, Head of INDOK Centre, Directorate for Cultural Heritage, Ministry of Culture, Slovenia
13:30 – 13:50	<b>Case from Jordan: MEGA-J Middle East Geographical and Archaeological database</b> Ahmad Lash, Tawfiq Hunaiti, Department of Antiquities, Jordan
13:50 – 14:10	<b>Questions &amp; Answers</b>
14:10 – 15:40	<b>Knowledge Café with lunch</b>  <b>1. table: Archeological / architectural heritage and GIS</b> Facilitator: Matteo Lorenzini <b>2. table: Libraries and GIS</b> Facilitator: Annette Kelly <b>3. table: Museums and cloud computing</b> Facilitators: Jernej Porenta, Luka Hribar  <b>Conclusions</b>
15:40	<b>End of Conference</b>

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## GUIDELINESS FOR KNOWLEDGE CAFÉ

### 1. table: Archaeological / architectural heritage and GIS

Facilitator: Matteo Lorenzini

Expected attendee: archaeological and architectural institutions (10+)

Questions:

- identification of additional use cases (regularly operating, research, planed) (additional form) navigation...
- benefits and weakness of open source
- effective browsing of 3D cities
- geographical coordinate systems
- the needs for grid and cloud computing (restoration, 3D rendering, caching, ...)

### 2. table: Libraries and GIS

Facilitator: Annette Kelly

Expected attendee: libraries and other cultural institutions (10)

Questions:

- identification of additional use cases (regularly operating, research, planed) (additional form) navigation...
- benefits expected from GIS in libraries
- geocoding or geotagging geographical coordinates
- geocoding of the historical maps
- GIS in Europeana
- the need for grid and cloud computing

### **3. table: Museums and cloud computing**

Facilitators: Jernej Porenta (Arnes), Luka Hribar

Expected attendee: museums and other cultural institutions (10)

Questions:

- identification of additional use cases (regularly operating, research, planed) (additional form) navigation...
- comparison the costs (in house server ITC vis-a-vis cloud computing)
- persistent Identifiers
- e-infrastructure expected from NRNs



### 3.2 Pictures



## 4 Participants

#	Name Surname	Streamline	Company
2	Vida Bitenc	architectural / archeological sites, GIS	independent
3	Polona Bitenc	architectural / archeological sites, GIS	Narodni muzej Slovenije
4	Marko Bonač	museums, cloud computing	Arnes
5	Sergi Fernandez	museums, cloud computing	i2CAT Foundation
6	Antonella Fresa	museums, cloud computing	INDICATE project
7	Jon Grobovšek	architectural / archeological sites, GIS	ZVKDS OE Kranj
8	Luka Hribar	museums, cloud computing	Narodna galerija
9	Gregor Ilaš	museums, cloud computing	Slovenski etnografski muzej
10	Mateja Kastelic	architectural / archeological sites, GIS	Grangeo d.o.o.
11	Alenka Kavčič Čolič	libraries, GIS	National and University Library
13	Ayman Houry	architectural / archeological sites, GIS	Cultnat
14	Meta Kordiš	museums, cloud computing	Umetnostna galerija Maribor
15	Ksenija Kovačec Naglič	architectural / archeological sites, GIS	Ministrstvo za kulturo Republike Slovenije
16	Claire Loucopoulos	architectural / archeological sites, GIS	Dedale / French Ministry of Culture
17	Dušan Miklavčič	museums, cloud computing	Ministry of Culture
18	Magda Miklavčič Pintarič	architectural / archeological sites, GIS	Ministry of Culture RS
19	Marjeta Mikuž	museums, cloud computing	National Museum of Slovenia
20	Darija Modrijan	architectural / archeological sites, GIS	GZS d.d.
21	Branko Oman	libraries, GIS	AAS Avtorska agencija za Slov.
22	Martina Orehovec	museums, cloud computing	Technical Museum of Slovenia
23	Brigita Petek	architectural / archeological sites, GIS	MK
24	Jelka Pirkovič	architectural / archeological sites, GIS	Institute for the protection of cultural heritage of Slovenia
25	Jernej Porenta	museums, cloud computing	ARNES
26	Irena Potočnik	architectural / archeological sites, GIS	ZVKDS RC
27	Gašper Rutar	architectural / archeological sites, GIS	ZVKDS, CPA
28	Barbara Sosič	museums, cloud computing	Slovenski etnografski muzej
29	Renata Šolar	libraries, GIS	National and University Library
30	Mojmir Štangelj	museums, cloud computing	Prirodoslovni muzej Slovenije
31	Benjamin Štular	architectural / archeological sites, GIS	Institute of Archaeology ZRC SAZU
32	Tomi Trilar	museums, cloud computing	Prirodoslovni muzej Slovenije
33	Gorazd Vodeb	libraries, GIS	National & University Library
36	Franc J. Zakrajšek	architectural / archeological sites, GIS	
37	Annette Kelly	libraries, GIS	Library Council of Ireland
38	Matteo Lorenzini	architectural / archeological sites, GIS	ICCU, Ministry of Culture, Italy
40	Miran Erič		ZVKD
41	Ahmad Lash	architectural / archeological sites, GIS	Department of Antiquities, Jordan
42	Tawfiq Hunaiti	architectural / archeological sites, GIS	Department of Antiquities, Jordan
43	Katja Oven	architectural / archeological sites, GIS	Geodetski inštitut Slovenije
44	Andreja Bahar		ZVKD

	Muršič		
45	Gojko Zupan	museums, cloud computing	ZVKD

## 5 Speakers and presentations

### Antonella FRESA

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Technical Coordinator, ICCU, Ministry of Culture, Italy

#### Biography

ICT expert, working on European cooperation projects since more than 15 years. Since 2002 advisor of the Italian Ministry of Cultural Heritage and Activities and Technical Coordinator of INDICATE, DC-NET ERA-NET, Linked Heritage Best Practice Network to aggregate content to Europeana, MINERVA series (Ministerial network for valorizing digitization activities in Europe) and MICHAEL series (Multilingual inventory of cultural heritage in Europe). Project Officer at the European Commission between 1999 and 2002. General Manager and Administrator of Promoter, consultancy company established in Pisa, Italy since 1996. Previously: policy advisor for the High Technology Network of the Tuscany Region (1994-1998), product manager at Tower Tech engineering company in Pisa (1989-1994), video controller development manager at Olivetti Advanced Technology Center in Cupertino-California (1987-1989), system engineer at the research centres of Olivetti in Pisa and Ivrea (1980-1987)

#### The goal and content of the INDICATE project

Abstract of Presentation

Slides: <http://www.indicate-project.eu/getFile.php?id=345>

### Franc J. Zakrajsek

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scientific coordinator of Indicate for Slovenia, Slovenia

#### Biography

ICT expert working on the areas of geographic information systems, GIS portals, GIS web services, digital cultural content, registering movable and immovable cultural heritage and building the national and cross-national interoperability frameworks for more than 25 years. He acted as member of Member's states expert group on digitalization and digital preservation established by the European Commission. As a national representative for digital cultural content concerns libraries, museums, archives, audiovisual and other cultural institutions he coordinated the preparation of the strategy and action plan for e-culture and digitalization in Slovenia. He is one of the founders of the Register of the Cultural Heritage in Slovenia. He is also a project leader and main developer of several Web2 projects concerning digital cultural content.

#### Introduction to geocoded digital cultural content: framework, use cases, geoparsing

Slides: <http://www.indicate-project.eu/getFile.php?id=356>

### Matteo Lorenzini

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ICCU, Ministry of Culture, Italy

**Cases from Italy: Novel approach to 3D archeology, 3D semantics, open sources and open standards, experiences of geoparsing CulturalItalia**

Slides: <http://www.indicate-project.eu/getFile.php?id=344>

### **Annette Kelly**

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Library Council of Ireland, Ireland

Biography

Annette is Assistant Director of the Library Council in Ireland which has been a partner in a number of EU funded projects, most recently EuropeanaLocal, Linked Heritage and DC-Net. She has managed the national digitisation programme for local libraries, museums and archives in Ireland and manages the national resource for digitised national datasets and local studies material and the Changing Libraries Programme for the provision of electronic services in public libraries in Ireland.

Annette is one of the Irish representatives on the Member States Experts Group on Digitisation and Digital Preservation. She is also a member of the policy steering group on public libraries, the Euro Focus on the Cultural Heritage Committee in Ireland and is the Chair of the public libraries' Cultural Heritage Panel for the digitisation of public library material.

**Case from Ireland: AskAboutIreland, culture on the interactive map**

Slides: <http://www.indicate-project.eu/getFile.php?id=352>

### **Malak Wahba**

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Assistant director of Cultnat and head of Architecture and Urbain Heritage section, Egypt

**Case from Egypt: "Cultnat' experience in Geo-coding culture heritage content - The case of El Darb El Ahmer and downtown Cairo"**

Slides: <http://www.indicate-project.eu/getFile.php?id=357>

### **Genviève Pinçon**

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Directorate General for Heritage  
(Direction générale des patrimoines), Ministry of Culture and Communication, France

Biography

Geneviève Piñçon works for the archeology division of the French Ministry of Culture and communication. She is the head of the office in charge of the national archaeological map, and of the dissemination of knowledge on the urban planning documents.

**Case from France: Atlas of heritage and architecture** Abstract of Presentation

Slides: <http://www.indicate-project.eu/getFile.php?id=355>

**Franc J. Zakrajšek, Ksenija Kovacec Naglič**

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Developer of RCHS, Slovenia

Head of INDOK Centre, Directorate for Cultural Heritage, Ministry of Culture, Slovenia

Biography

Ksenija Kovačec Naglič was first employed at the Urban Planning Institute of the Republic of Slovenia (1989-1994). She has been working at the Directorate for Cultural Heritage within the Ministry of Culture of the Republic of Slovenia (former Cultural Heritage Administration) since 1994 and has been the head of the Information and Documentation Centre since 1998. She is responsible for the management of the cultural heritage information system, including Cultural Heritage Register of the immovable cultural heritage and Geographical Information System. Ksenija is active as a member of the ad hoc expert group for inventory and documentation within the Technical Assistance and Consultancy Programme of the Council of Europe (2000).

**Case from Slovenia: Register of cultural heritage of Slovenia (RCHS)**

Slides: <http://www.indicate-project.eu/getFile.php?id=358>

**Ahmad Lash, Tawfiq Hunaiti**

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Department of Antiquities, Jordan

**Case from Jordan: MEGA-J Middle East Geographical and Archaeological database**

Slides: <http://www.indicate-project.eu/getFile.php?id=353>

## 6 Conclusions

The Workshop on geocoded digital cultural content was interesting for the cultural sector and the Slovenian e-infrastructure providers. Especially were of value international presentations of use cases as they enlighten the use of GIS in culture and deepen the understanding of e-infrastructure.

Beside presentations special results were given at Knowledge cafe where participants discussed on three topics: Archaeological / architectural heritage and GIS, Libraries and GIS and Museums and cloud computing.

Participants at first table discussed Archaeological / architectural heritage and GIS the identification of additional use cases (regularly operating, research, planned) (additional form) navigation..., benefits and weakness of open source, effective browsing of 3D cities, geographical coordinate systems and the needs for grid and cloud computing (restoration, 3D rendering, caching, ...).

The discussion can be summarize in few points. Open source for archeology and architecture in web mapping - MEGA-Jordan project (open source) raised the question on PostGIS and Geoserver as Open layers for front-end and data availability in SHP/AML format. Regarding managing of 3D architectural and archeological data open source/proprietary software has been discussed (Ex AutoCAD / format IMP/EXP and O.S problem)

Second table topics was the Libraries and GIS where discussed on identification of additional use cases (regularly operating, research, planned) (additional form) navigation..., benefits expected from GIS in libraries, geocoding or geotagging geographical coordinates, geocoding of the historical maps, GIS in Europeana and the the need for grid and cloud computing.

Discussion focuses on additional uses of GIS in libraries: location info for users (mobile library itineraries/routes), planning locations of libraries (catchment, populations ), literary map of country (writers from Bled), content map (photographs, songs, music, postcards). Benefits of GIS in libraries has been identified: better information for users, planners, linking content & place benefits users, researchers, tourists, easy searching, improved possibilities of use. The topics on this table were also geocoding geographical coordinates and the importance of geocoding of historical maps and the need for grid and cloud computing. Finally GIS in Europeana has been identified as very useful and with no doubt the added value.

Table Museums and cloud computing raised the questions on identification of additional use cases (regularly operating, research, planned) (additional form) navigation..., comparison the costs (in house server ITC vis-a-vis cloud computing), persistent Identifiers, e-infrastructure expected from NRNs.

Cultural institutions mostly already using cloud computing. Many use cloud based e-mail services, some use cloud based web hosting, but more advanced usage is not yet common. Some pilot services exist. Advantages of using cloud computing were identified: low hardware cost, mostly not even needed, dynamic scalability, paying only for what is needed, accessibility, only requirement is internet connectivity, agility, cloud based application can be quickly developed and deployed.

Further issues with Cloud Computing are trust (Where is my data? Who else can access it? What happens if provider gets in trouble? Not yet addressed properly by providers and legislation), standards (Can I move my applications and data to other public provider? Are there any costs associated?), Solutions are not yet easily transferable, costs to move data can skyrocket!), and legislation limits (many EU countries and EU legislation limits or prohibits data storage on privately owned public clouds like Amazon, Google or Microsoft if data contains private personal information (in culture it mostly does!), there are many unknowns in making proper legal work and agreements).

Cultural institutions should rely more on National Research Networks (NRN) if they provide cloud computing (e-Infrastructure). In this way we know where our data is and there is also less likely to have issues with low regulations. NRN are also less likely to unexpectedly stop their services. Some NRNs provide services for free! Museum workers have different experiences with NRN across EU. Some like Arnes in Slovenia are cooperative, but some are much less willing to address special needs of cultural institutions. NRNs should be encouraged to approach to cultural institutions. NRS should develop compatible interfaces! Most new projects are developed on Amazon, Microsoft or Google public clouds because developers are most familiar with these. Transfer to clouds provided by NRNs is then almost impossible. At least there should be some tools provided to assist with moving solutions form mentioned public clouds to clouds provided by NRN.

In general, the results and fit back of the workshop have been encouraging. Dialogue and discussions on e-infrastructure raised demand on cultural sector side and on the other side many the opportunities for progress when implementing e-infrastructure in cultural sector has been identified.