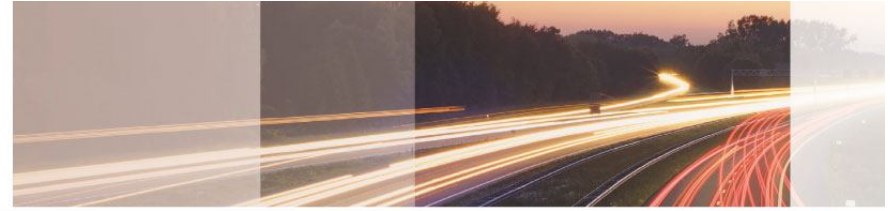


GARR

The Italian Academic & Research Network



www.garr.it

The role of e-infrastructures providers in the collaboration with Cultural Institutions: experiences and challenges ahead

Sabrina Tomassini – sabrina.tomassini@garr.it

GARR – The Italian Research and Academic Network

GARR community

- GARR is the Italian NREN
- GARR users are all the academic and research institutes in Italy
- Shareholders:
 - Italian Universities (Fondazione CRUI)
 - INFN - The National Institute of Nuclear Physics
 - CNR - The National Research Council
 - ENEA - The Italian National Agency for New Technologies, Energy and Sustainable Economic Development.

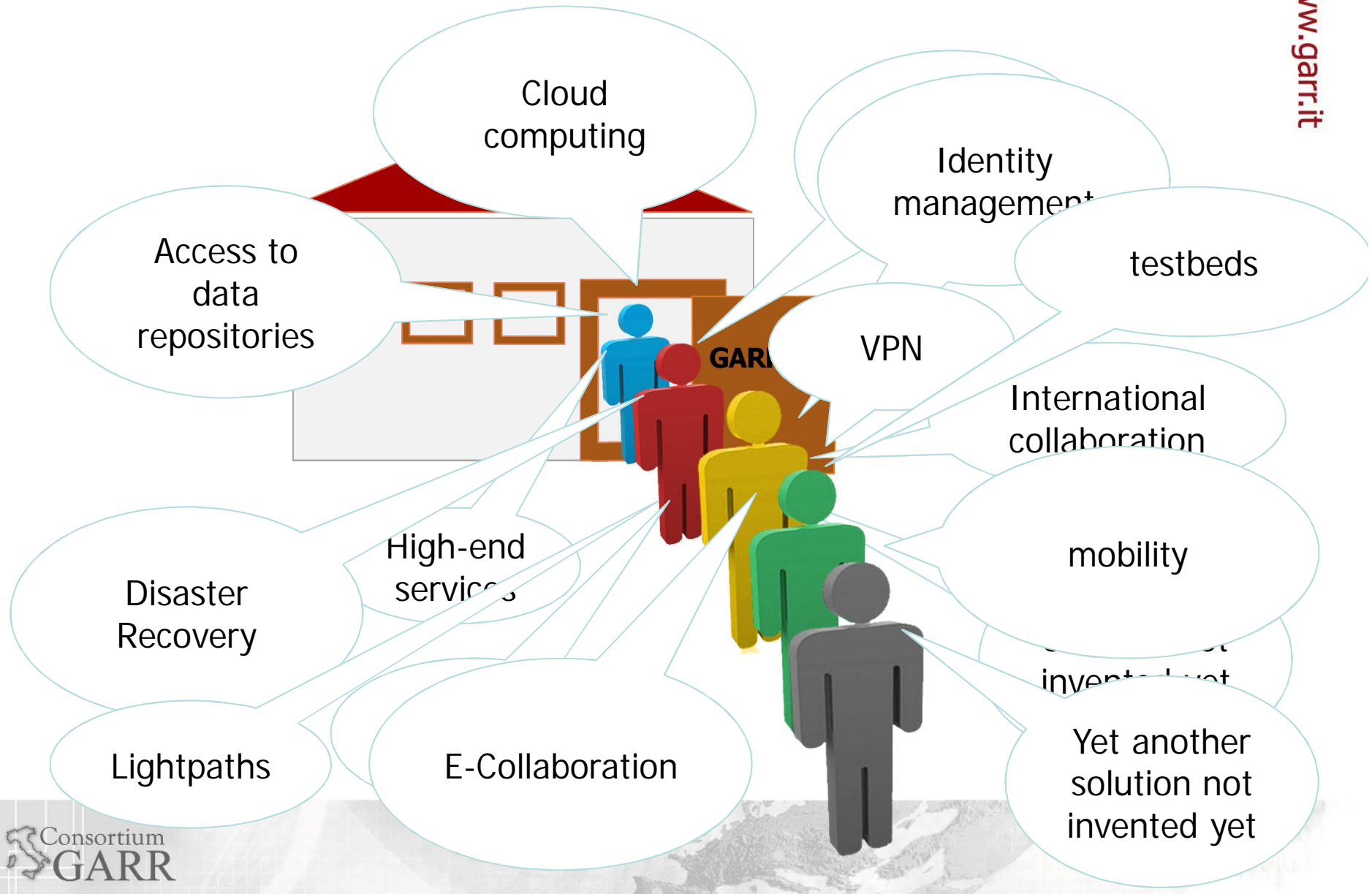
Stakeholders:

- ASI - The Italian Space Agency
- INGV – The National Institute of Geophysics and Volcanology
- INAF – The National Institute of Astrophysics
- Scientific Institutes for Research, Hospitalization and Health care
- Music Conservatories, Academies of Art and Performing Arts institutes
- National libraries, National Archives, public record offices and other documentation centers
- Other cultural and scientific institutes in Italy (national and international operating in Italy)

What is a Research and Education Networks?

- Provide capabilities beyond commercial ISPs
 - A question of purpose
 - Dedicated bandwidth, direct control and low congestion enable exploitation of new/demanding applications
 - High bandwidth both in upstream and downstream allows the users to producing contents and services as well as using them
 - Platform for providing key Research and Education collaboration-supporting infrastructure
 - Identity Management System (IDEM)
 - Shared use of computation and storage facilities
 - Potential to mitigate constraints in non-competitive marketplaces
- Aggregate demand of a key user community
 - Different demand patterns than residential, business users
- Collaboration among the Research and Education Community
 - Where much more can be achieved together than separately

User community is the basis



The role of Research and Education Networks?

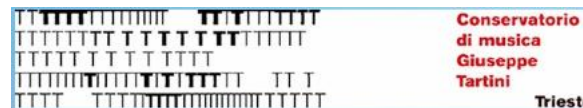
- The role and importance of National Research and Education Networks:
 - non-commercial and dedicated to serve research and education
 - offer large network capacity and various advanced services not available generally
 - research networks and their user communities form important environments that become sources of innovation
 - Networks of networks (NRENs interconnecting): participation in international, world-leading broadband developments with particular applications to leading-edge education and research
 - outreach, technology implementation and support for application development in various ways

The role of NRENs for digital cultural content

- Thanks to their unique position, and indispensable functions, NRENs can play a key role in supporting digital cultural content:
 - **Improving connectivity** relating to access to high-quality digital data (images, documents, video, music, etc) for researchers
 - **Linking to the international community**, also supporting current and new collaborations with partners in other regions
 - Building Bridges between all e-Infrastructure layers, **from Network up to end users**, to develop common solutions

Cultural Institutions are NRENs users

- on European NRENs
 - EU Universities (Departments of Arts, Literature, History) , Music Conservatories and Arts Academies, Theaters, Museums, Libraries, Archives, etc.



ORQUESTRA DE PORTÀTILS DE L'ESMUC

And what do they do?

- Research and promotion
 - Digital libraries
 - Virtual museum application
 - Virtual Exhibition
- Live Performance Events
 - Drama, Dancing
 - Concerts, Art Installations
- Laboratories
 - Explore new challenges and chances
 - Collaborations
- Digital memories
 - Data Sharing and Mining
 - Deploy new concepts in “exhibitions”

Museo Galileo e-infrastructure use

www.garr.it

The screenshot shows the Museo Galileo VirtualMuseum website. At the top left is the logo 'museo galileo' with a stylized 'g' icon. The main title 'VirtualMuseum' is prominently displayed. A search bar with a magnifying glass icon and a small Italian flag is located at the top right. The central part of the page features a 3D cutaway view of a museum building. To the right of this view are several content boxes: 'Objects' with an image of scientific instruments and a description; 'Videos by thematic area' with a description and a video player; 'Rooms' with a description of the virtual tour; 'Biographies' with a portrait of Galileo and a description; 'Glossary' with an image of a compass and a description; and 'Museo Galileo's Catalogue' with an image of a compass and a description. At the bottom left are social media icons for Facebook, Twitter, and Email. At the bottom right is a 'credits' link. The background of the website is a light grey color.

museo galileo

VirtualMuseum

Search

Introduction

Objects



Description of all objects of the Museum alphabetically ordered.

Videos by thematic area

Multimedia reconstructing the context and issues of reference of the objects that allow the exploration of collections by subject.



Videos alphabetically ordered

Rooms

Museum Virtual Tour, including about 1000 instruments.

Biographies



Biographical data of quoted names, in alphabetical order, including those of all object Inventors/Makers.

Glossary



Glossary index (including all "In Depth" entries), presented in alphabetical order.

Museo Galileo's Catalogue



Is now possible to download the complete catalogue in PDF format (download 13,7 Mb)

credits



Museo Galileo e-infrastructure use

www.garr.it

The screenshot shows the website interface for the Museo Galileo VirtualMuseum. At the top left is the Museo Galileo logo, which consists of a stylized 'G' with a small 'm' above it and the text 'museo galileo' below. To the right of the logo is a search bar with the word 'Search' inside. In the center, a large button labeled 'VirtualMuseum' is positioned above the room title 'Room V The Science of Navigation'. Below the title, there are social media icons for Facebook and Twitter, followed by an 'Index' button with a small 'o' icon. A '3D Room / List' link is also visible. Below the navigation elements, there are two tabs: 'Video' and 'Text', with 'Text' being the active tab. The main content area features a large photograph of a museum gallery. The gallery contains several glass display cases. One case in the foreground holds several circular objects, possibly lenses or mirrors, hanging from a frame. Other cases in the background contain various artifacts, including what appears to be a bust of Galileo Galilei. The website's footer is partially visible at the bottom, showing the Consortium GARR logo and a stylized map of Europe.

[Download video](#)

[Download audio](#)

Education: Music and Drama



In collaboration with New World Symphony
A master class and examination
with maestro Luigi Alberto Bianchi
between Rome and Miami

During GARR Conference 2007
An exhibition performed by
three different actors groups located
in different sites



From GARR User community

- LOLA project
 - LOLA (LOW LATency audio visual streaming system) is a project coordinated by Music Conservatory of Trieste.
 - Interactive music performance at the same time among musicians located in two different sites.
 - Critical network set-up and monitoring.
 - Virtual Concert workshop between Trieste and Paris

LoLa Project – Virtual exhibition Trieste-Paris

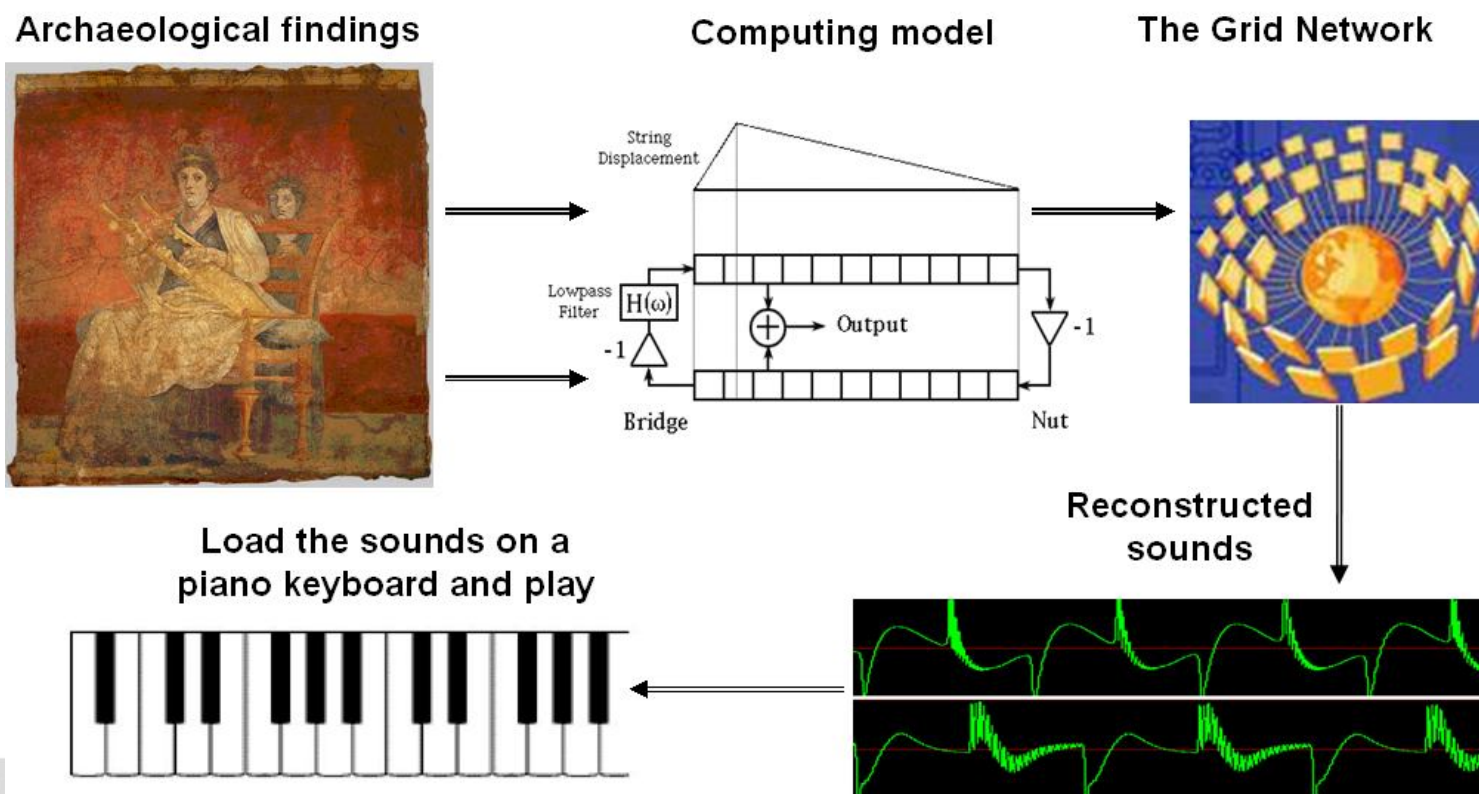


LOLA – LOw LAtency A/V system

- First tests on a 1 GigaEthernet end-to-end circuit
- 92Mbps to 460Mbps, Jitter < 4ms
 - audio 44K 24bit stereo
 - video 60 frames per second b/w or color, 680*480
- 20ms audio/video codec roundtrip latency
- ~1ms GE network latency per 100Km

- Long distance test between Paris and Trieste
- it runs on “routed” networks!

- The ASTRA (*Ancient instrument Sound/Timbre Reconstruction Application*) project aims at reconstructing the sound or timbre of ancient instruments using archaeological data as fragments from excavations, written descriptions, pictures, etc.



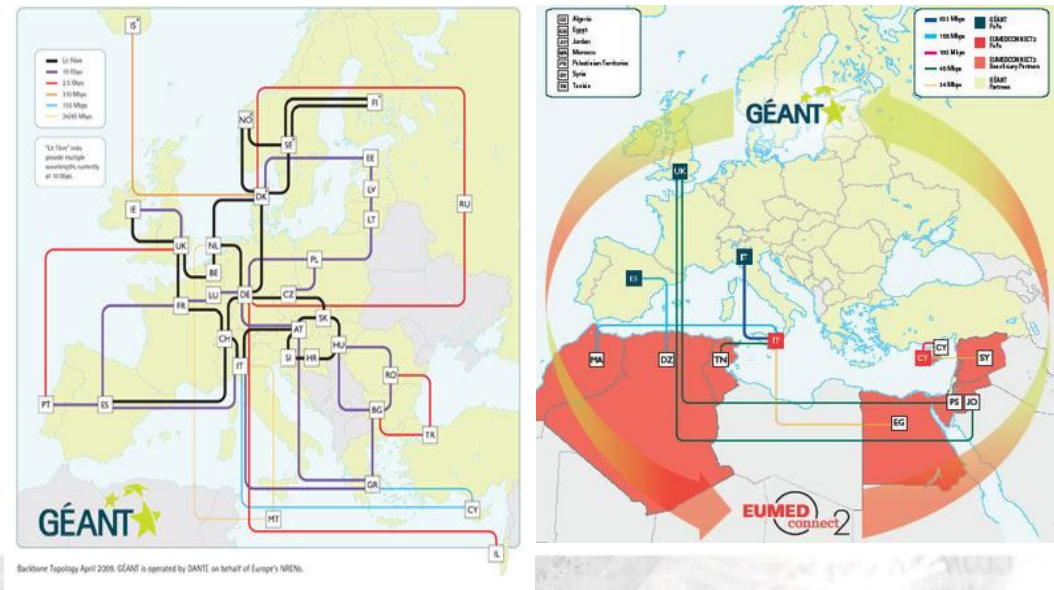
Why does ASTRA need e-Infrastructures ?

- ASTRA project heavily exploits Research Networks and Grid infrastructures:
- Thanks to the Grid and the network, many simulations can be performed in parallel on different computers at different locations.

30 s of reconstructed sound need ~ 90 min on a 3.73 Ghz CPU with 2 GB RAM

GEANT and EUMEDCONNECT2 provide the needed network infrastructures to speed up the overall computation time.

ASTRA can count on more than **500** CPU cores and the support of more than **20** Grid sites both in the GILDA (a part of EGI) and EUMEDGRID infrastructures.



Federation IDEM and IDEM GARR AAI service

www.garr.it

- Simplify
 - user access to protected web data
 - Single sign on concept

protected web data management

- Access users rights are managed by their own institutions

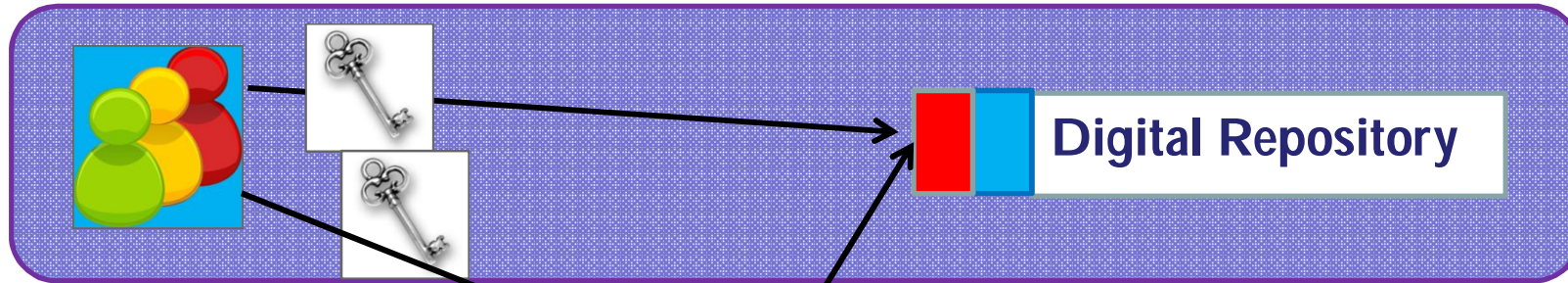
<http://www.idem.garr.it>



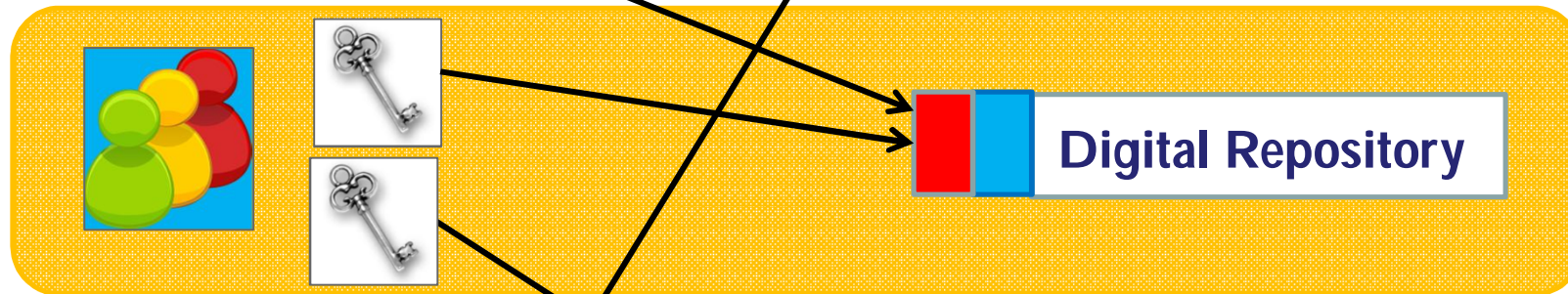
Federation IDEM and IDEM GARR AAI service

www.garr.it

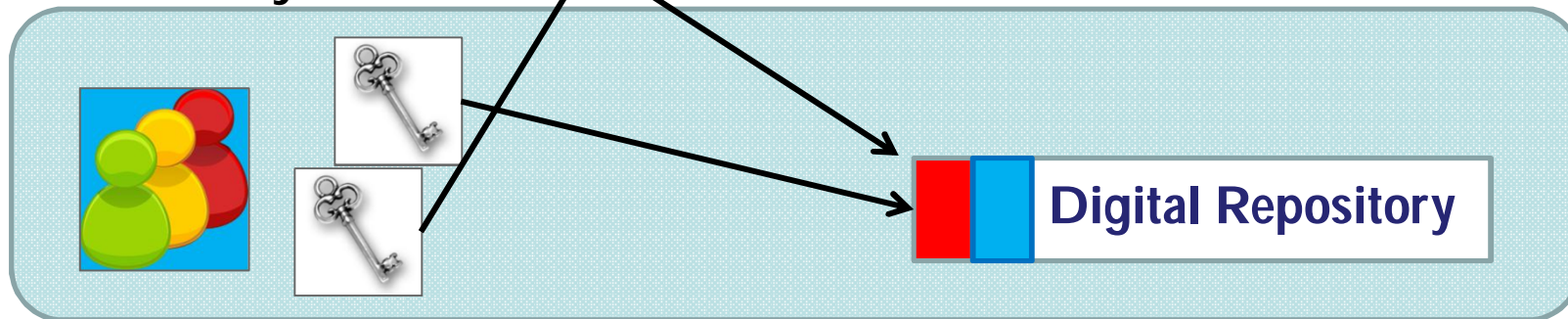
Cultural Institution – National Library



Cultural Institution - National Archive

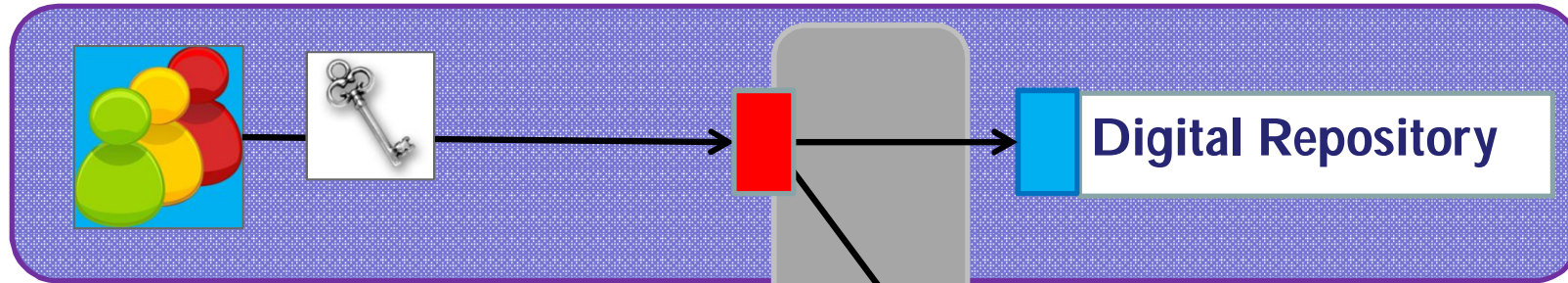


University or Research Institute

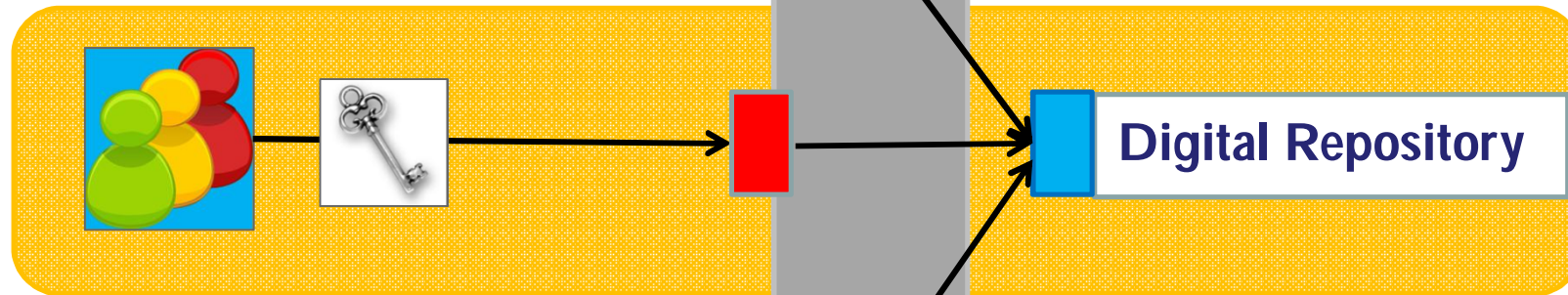


Federation IDEM and IDEM GARR AAI service

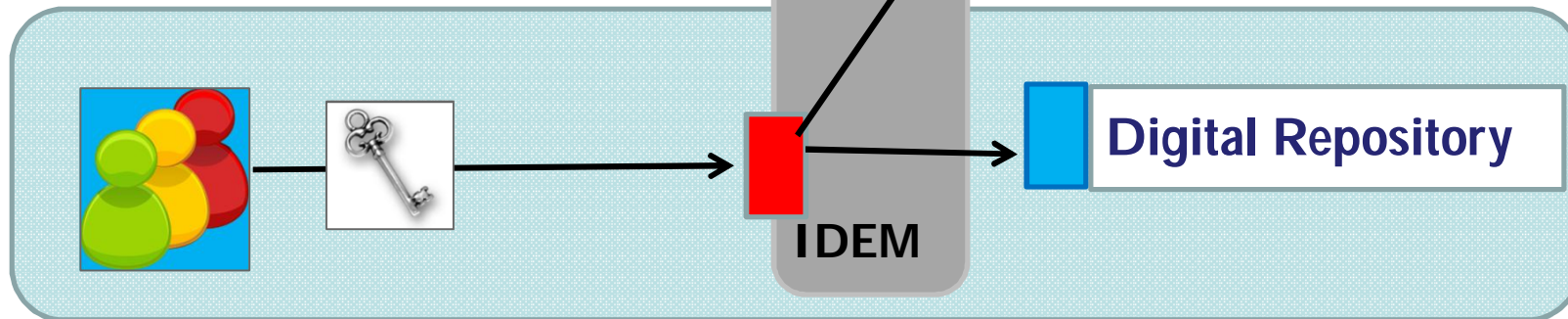
Cultural Institution – National Library



Cultural Institution - National Archive



University or Research Institute



IDEM

www.garr.it

INDICATE e-CSG

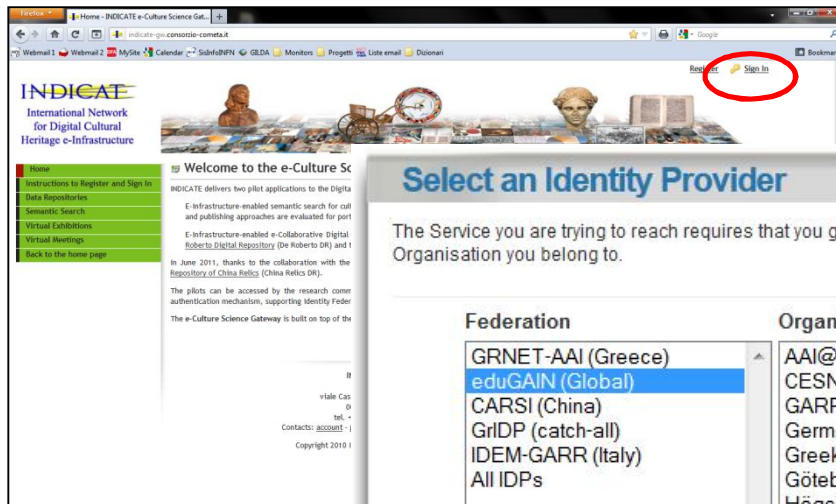
www.garr.it

<http://www.indicate-project.eu>

<http://indicate-gw.consortio-cometa.it>

The image displays three overlapping browser screenshots of the INDICATE website. The top-left screenshot shows the main INDICATE homepage with a red circle around the 'e-Culture Science Gateway' link in the left sidebar. The middle screenshot shows the 'De Roberto DR' page with a red circle around the 'De Roberto DR' link in the sidebar. The bottom-right screenshot shows the 'De Roberto Digital Repository' page with red circles around the 'Register' and 'Member Login' buttons. The bottom-left corner features the Consortium GARR logo.

Integration with identity federations



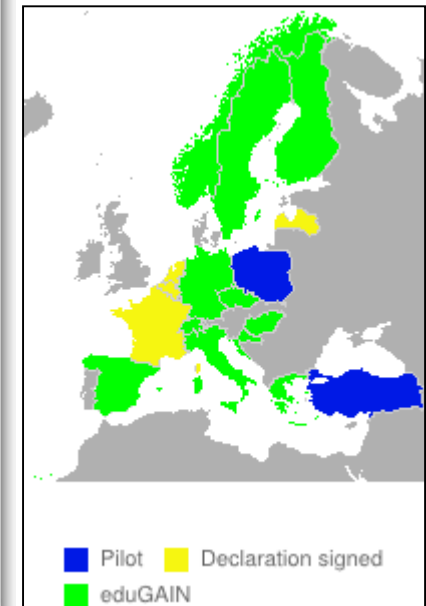
Select an Identity Provider

The Service you are trying to reach requires that you get authenticated. Please, choose from the list below the Federation and the Organisation you belong to.

Federation	Organisation
GRNET-AAI (Greece)	AAI@EduHr - Croatian Research and Education Federation
eduGAIN (Global)	CESNET
CARSI (China)	GARR
GrIDP (catch-all)	German National Research and Education Network, DFN
IDEM-GARR (Italy)	Greek Research and Technology Network
All IDPs	Göteborgs universitet
	Högskolan i Borås
	Karlstad University (SAML2)
	Karolinska Institutet (TEST)
	MTA SZTAKI

Select Remember for session

In case of problems, please send an email to credentials-admin@ct.infn.it with their description.
Do not bookmark this page! After login you will be redirected to the web page containing the service of the portal you wanted to use.



INDICATE e-CSG

www.garr.it



A T T O P R I

Nell'aria
sull' imbrunire.

A destra la capanna dei mietitori, a sinistra una gran l...
ed attrezzi rurali sparsi qua e là. In fondo, l'ampia
carica di messe, già velata dalla sera, e il corso sin
giunchi e le cime palustri. S'odono passare in lontan
canzoni strache, il tintinnio dei campanacci delle ma
abbayerare e di tanto in tanto l'uggiolare dei cani s
sulla quale scorrono delle folate di vento, con un
mature. Negli intervalli di silenzio sembra sorgere e
delle acque e il trillare dei grilli, incessante. La lun
accesa, sbiancandosi man mano, in un alone afoso.

SCENA I.

Bruno, Malerba, Neli, Grazia, contadin
duti sulla paglia e su barili vuoti e d
intorno a Filomena che sta narrando

Save PDF to download

Consortium
GARR

Basta coi pianti!

Mara (con passione, piangendo): Pi... poi vedrete quando un'orfanello
al mondo lascero'!..

Nanni (furioso): Maledetto sia Giuda! E' proprio bella
questa festa ch'io fo!

Mara (amaramente): E' ed io? ed io?

Nanni: Non e' ver!.. Che intendi?

Mara (c. s.): E' negate! negate!

Nanni: Non e' vero!
Che cosa hai visto, di?

INDICATE e-CSG

www.ga

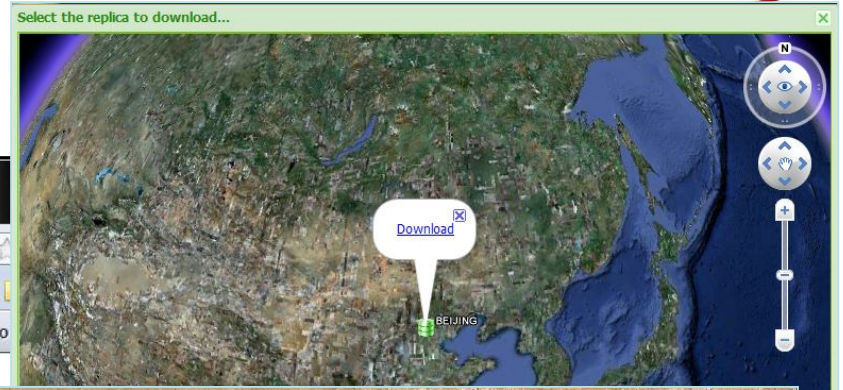
The screenshot shows the MEDRepo Digital Repository interface. The browser address bar displays the URL: <https://indicate-gw.consortio-cometa.it/digital-library-med>. The page header features the INDICATE logo and the text "International Network for Digital Cultural Heritage e-Infrastructure". A navigation menu on the left includes links for Home, Instructions to Register and Sign In, De Roberto DR, MED Repo, China Relics DR, Status classification, and Back to the home page. The main content area is titled "MEDRepo Digital Repository" and shows a tree view of the repository structure: Medrepo > Cultural Heritage > Drawings > Photos. Below this, a table lists digital assets with columns for Thumb, Nation, Area, and Municipality. The table contains several rows, with some showing thumbnail images of buildings.

Thumb	Nation	Area	Municipality
	Italia	Sicilia	Taormina
...
	Italia	Sicilia	Taormina
...
	Italia	Sicilia	Taormina
	Italia	Sicilia	Taormina

At the bottom left, there is a logo for "MedRepo Mediterranean Repository" featuring a blue circular pattern. The background of the entire image is a photograph of a historic building facade with a prominent bell tower and a statue in a niche.

INDICATE e-CSG

Thanks to the collaboration



Firefox

Browse - INDICATE e-Culture Science Ga... +


https://indicate-gw.conorzio-cometa.it/digital-library-chinarelics

Webmail 1 Webmail 2 OVI Ovi.com DFA MySite Calendar SisInfoINFN GILDA Monitors Progetti Liste email





Add Manage Toggle Edit Controls

INDICAT

International Network
for Digital Cultural
Heritage e-Infrastructure



China Relics Digital Repository

Thumb	nu...	name
	1	仕女图
	2	唐安公主
	3	苏思勖墓
	4	马球图



Why NRENs and not somebody else?

- Different country, different model
- Direct expression of the user community
- Liaison with other NRENs
- Participation in international organizations
- Standardization and R&D



Grazie

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Thanks to their contributions

Roberto Barbera (COMETA)

Federica Tanlongo (GARR)