

Regional Research Portal UnityFVG: an OpenScience portal

Extended Abstract

Friuli-Venezia Giulia (FVG) "Regional Scientific System" includes three Public Research Institutions, three Universities, four International Institutions, four Technological Parks in FVG region in North-East Italy.

Nowadays in Friuli Venezia Giulia there are more than 8 researchers for every 1.000 inhabitants, the double of the national average 4/1.000. Moreover, every year more than 7.500 researchers from all over the world come to study and carry out research activities in one of the scientific and academic institutions located in the Region.

In 2020 the regional capital Trieste will become the European City of Science: The EuroScience Open Forum (ESOF) 2020 will be hosted from 4 to 10 July 2020 in Trieste. The Science and Innovation System of the Region Friuli Venezia Giulia (SIS FVG), connecting the most relevant scientific institutions of the region, is collaborating with FIT (Fondazione Internazionale Trieste) to build up the scientific program of the 2020 event. The ESOF event will be a great opportunity for the FVG Research System to present itself.

In this context the three Universities decided to provide a single point of access under a new Regional Research Portal called: "UnityFVG - Ricerca Friuli Venezia Giulia". The Portal will be a web gateway for searching and spreading the research data created by the SISSA, University of Trieste and University of Udine. The portal is also an open access repository that allows access without restrictions to the results of the activities financed by public funds. The UnityFVG Research Portal is based on DSpace-CRIS solution and use the CERIF-XML over OAI-PMH format for harvesting the main entities (People, Organizations, Publications) from the Institutional Repositories (IRIS based) of the member Institutions. Technical support was provided for the first pilot installation by Cineca, the Consortium of Italian Universities where DSpace-CRIS was adopted after the merge with Cilea. After the first year of test and pilot installation, the Regional Research Portal went definitively in production and registered online in the open Access Week 2017 as <http://research.unityfvg.it/>. With the technical support of 4Science is now harvesting the data on weekly basis.

The project offers a great opportunity to improve the interoperability of DSpace and DSpace-CRIS based solutions. CERIF, the Common European Research Information Format developed and maintained by euroCRIS, has been chosen as the best option to send rich information to the regional portal in a standard and reusable way. A plugin/patch for DSpace was developed in the first prototype of the project in 2016. The plugin enables data export using CERIF-XML over OAI-PMH. When the ORCID integration is enabled, all the information related to authors present in the DSpace repository are also exposed thanks to the use of Federated Identifier for the cfPers entity.

The CERIF-XML Data Exchange Format is nowadays available and configured out-of-box in DSpace-CRIS for the main entities under the proposed sample configuration (People, Organizations, Publications).

Nowaday the Researchers has to interact and input their data with many IT systems that collects their activities and research outputs. One of the main Researcher tasks are concerned within the requirements of the Ministry of Education, Universities and Research (MIUR) evaluation procedures. The goal of the Portal system is to maximize the interoperability with MIUR systems so that the Researchers would have to input their data only in the local IRIS-CRIS system. The IRIS system than would “interoperate” with the MIUR systems on the back-end side. On the front-end side instead the FVG Portal will expose all this data publicly. The IRIS systems will be integrated with a “stand-alone” DSpaceCRIS/GLAM repository that will collect all the entities not registered in the IRIS systems: the Public Engagement Events, DataSets, Projects, Journals, Conferences. All this entities will be described using the CERIF standard. The ORCID or eduGAIN single sign-on will help the Researchers to insert their data in the CRIS systems in a transparent way using similar input forms.

The new goal for 2018 is expanding the chance of harvesting other entities (Projects, Journals, Conferences, Dataset, Research Groups, Public Engagement Events). Another goal is the enrichment of the Portal with the entities (Patents, Projects) and informations from other sources like EPO (European Patent Office), EU Commission Projects Portal and also from OpenAire using their Broker Service.

The project would like to grow in an OpenScience HUB where all the main Research Entities: People, Projects, Organizations, Journals, Conferences, Publications and also Open Data and Research Data will be collected and linked together using persistent identifiers like DOI, Handle, ORCID. The use of persistent identifiers will provide an efficient response to another big challenge of the Project: collecting so many informations from different sources and match them in unique entities/items without replicas. A sophisticated workflow and data management will be required to allow manual disambiguation where such identifiers are not available.

The project also aims to give support to the Researchers with appropriate Open Access and Open Research Data Management policies and tools. Therefore, an infrastructure of Services has to be organized. Last but not least, the Portal is looking forward to the new OpenAire Guidelines, both for CRIS and for Data Archives to understand how to implement them.

The UnityFVG Portal is a component for the Open Science strategy of the regional research institutions of Friuli-Venezia Giulia in Italy. Based on state-of-art CRIS technologies and open standards, it implements a FAIR approach to enhance visibility, public utility and reuse of research contributions.

• References

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- 2) CERIF format <http://eurocris.org/cerif/main-features-cerif>
- 3) Houssos, Nikos et al. (2015). OpenAIRE Guidelines for CRIS Managers 1.0. Zenodo, doi:[10.5281/zenodo.17065](https://doi.org/10.5281/zenodo.17065)
- 4) OpenAIRE Guidelines for Data Archives, <https://guidelines.openaire.eu/en/latest/data/index.html>
- 5) DSpace project: <http://www.dspace.org/>
- 6) DSpace-CRIS project: <https://wiki.duraspace.org/display/DSPACECRIS/DSpace-CRIS+Home>
- 7) XOAI Library: <https://wiki.duraspace.org/display/DSDOC5x/OAI+2.0+Server>
- 8) OAI-PMH protocol: <https://www.openarchives.org/OAI/openarchivesprotocol.html>
- 9) ETK CERIF-Tools library: <https://github.com/EKT/CERIF-Tools>
- 10) Research UnityFVG: <http://research.unityfvg.it/>
- 11) Coordination of FVG research institutions (CER): <http://cer.areasciencepark.it/en/>
- 12) Universities involved and their repositories:
 - University of Trieste <http://www.units.it/>
 - OpenstarTs Repository <http://www.openstarts.units.it/>
 - ArTS CRIS <https://arts.units.it/>
 - University of Udine <http://www.uniud.it/>
 - AIR CRIS <http://air.uniud.it/>
 - SISSA <http://www.sissa.it/>
 - SISSA DigitalLibrary <https://iris.sissa.it/>
- 13) IRIS: <http://www.cineca.it/en/content/iris-institutional-research-information-system>