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ISTI Technical Reports

Scholexplorer activity report 2022

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ISTI-TR-2022/035

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Scholexplorer is a service that accepts publications-data or data-data links from validated sources, builds a de-duplicated graph and provides access to it. ScholExplorer is an implementation of the Scholix initiative (an RDA and WDS). This document is a report on the Scholexplorer installations operation activity after two years of operation, including a detailed set of indicators.

Keywords: Scholexplorer, Graph, OpenAIRE, KPI.

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ISTI-TR-2022/035

Scholexplorer Activity Report 2022

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Abstract
Scholexplorer is a service that accepts publications-data or data-data links from validated sources, builds a de-duplicated graph and provides access to it. ScholExplorer is an implementation of the Scholix initiative (an RDA and WDS). This document is a report on the Scholexplorer installations operation activity after two years of operation, including a detailed set of indicators.

Keywords
Scholix — Open Access — Interlinking dataset litareture

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1. Introduction

Scholexplorer[1] Scholexplorer is a service that accepts publications - data or data-data links from validated sources, builds a de-duplicated graph and provides access to it. ScholExplorer is an implementation of the Scholix initiative (an RDA and WDS), it populates and provides access to a graph of links between dataset and literature objects and dataset and dataset objects. Links (and objects) are provided by data sources managed by publishers, data centers, or other organizations providing services to store and manage links between data sets and publications such as CrossRef, DataCite, and OpenAIRE. Scholexplorer aggregates link metadata harvested from the data sources and out of these builds and harmonised and de-duplicated graph of scholarly objects. The graph is openly accessible (CC-0) via search REST APIs that return links in Scholix format. ScholeXplorer is reached via REST APIs as these are defined in the Scholix initiative. They are free-to-use (no sign-up needed) by any third-party service. Note that:

- The service limits each query to around 10,000 paged results (pages are by default of length 100 and can be navigated via resumption token);

- Since March 2018 a full JSON dump of the service is made available in Zenodo.org every six months;

This document is a report on the Scholexplorer installations operation activity after two years of operation, including a detailed set of indicators.

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[1] Scholexplorer URL https://scholexplorer.openaire.eu/

2. Scholexplorer Graph Relations

Scholexplorer is a service aggregating all the Scholix compatible data sources, namely EuropePMC, Crossref Event Data, OpenCitations, DataCite Event Data, and institutional and thematic repositories. More specifically, it collects, resolves, and deduplicates scholarly links to offer an open API to resolve any PID and return the list of related linked entities. The Scholexplorer graph consist of **834.726.926** of Relationships. The following tables show how the relations are distributed by their semantic and source/target typologies.

Source Type	Target Type	Total links
Dataset	Publication	87.659.979
Publication	Publication	339.398.721
Dataset	Dataset	313.639.289
Dataset	Other Research Type	2.159.816
Publication	Other Research Type	808.046
Other Research Type	Software	140.097
Other Research Type	Other Research Type	125.018
Software	Software	12.928
Publication	Software	3.866
Dataset	Software	3.681

Table 1. Scholexplorer Graph Relation distribution by source/target type.

3. Scholexplorer API: KPI

The indicators were not tracked since the beginning of the OpenAIRE-Nexus project because the technical solutions for automated acquisition of those indicators were introduced after the project started.

References

Relation Type	Total
IsReferencedBy	350.650.392
References	350.650.392
IsRelatedTo	121.108.764
IsPartOf	2.338.207
HasPart	2.338.207
IsSupplementTo	1.767.983
IsSupplementedBy	1.767.983
HasVersion	927.016
IsVersionOf	927.016
IsNewVersionOf	394.370
IsPreviousVersionOf	394.370
Continues	358.724
IsContinuedBy	358.724
IsIdenticalTo	178.492
IsDocumentedBy	100.825
Documents	100.825
Cites	89.790
IsCitedBy	89.790
IsDerivedFrom	53.415
IsSourceOf	53.415
IsVariantFormOf	12.387
IsOriginalFormOf	12.387
IsReviewedBy	11.879
Reviews	11.879
IsObsoletedBy	11.820
Obsoletes	11.820
Compiles	3.027
IsCompiledBy	3.027

Table 2. Scholexplorer Graph Relation distribution links.

# API Requests	Jan/2020 - Dec/2020	Jan/2020 - Dec/2021
	510,300,371	1,108,075,737

Table 3. Scholexplorer Graph Relation distribution by source/target type.