

Teams: GDD, TALN, DRUID, DUKE, LACODAM

Abstract

PARTAGE is a CominLabs innovation action aiming to provide teachers with integrated tools to **publish, find, access, and remix Open Educational Resources (OER)**. This project is a follow-up of **CLARA**¹ and **Florilège**² projects.

Through Semantic Web technologies and AI-enhanced metadata, **PARTAGE implements FAIR principles** (Findable, Accessible, Interoperable, Reusable) over educational resources. In doing so, **PARTAGE** contributes to the global vision of open education, where knowledge is freely shared and learning opportunities are available to everyone.

1. <https://project.inria.fr/clara/>
2. <https://florilege.ls2n.fr>

Making OER Findable

OERs are often scattered, making it difficult for educators to find relevant resources. **PARTAGE** tackles this challenge by:

- Allowing educators to **ingest new OERs into the platform**, providing and promoting the use of web identifiers such as URIs (Uniform Resource Identifier), or IRIs (International Resource Identifier). This will also allow OERs be indexed by external search engines.
- Enriching OERs with metadata** generated through **AI techniques** or provided by **human annotations**.
- Providing a **dedicated search engine and API** that leverages this metadata for precise OER discovery.

Accessibility and Interoperability

- The **CLARA REST API** enhances access to and interoperability of RELs and their metadata, enabling applications like the **CLARA search engine** and **Pinfig** to interact with it seamlessly.
- Clear licensing linked to each OER clarifies access permissions, making it easy for educators to confidently use, adapt, and share resources.
- Standard metadata schemas (Dublin Core, LRMI, LOM, CCSO, etc.) ensure OERs and their metadata are interoperable, facilitating integration across various platforms and systems.

Supporting legal OER Reuse

Reusing and remixing OERs can be complex due to licensing issues. **PARTAGE** aims to simplify OER reuse:

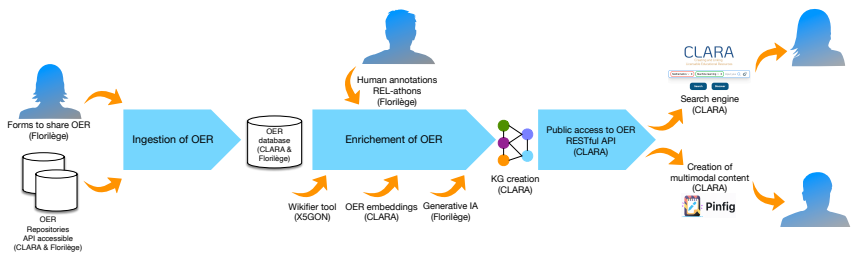
- Educators can bookmark OERs during their search, saving them as a curated playlist or set.
- Providing a **license compatibility graph** for each set, shows which subset of OERs have compatible licenses. This helps educators understand which resources can be legally combined and highlights any conflicts.
- Supporting clear license compatibility, allow users to share OER confidently, promoting responsible reuse.

FAIR Principles*

- Findable:** OERs must be easy to locate by both humans and machines.
- Accessible:** FAIR data does not necessarily mean open data. Access should be done via standard communication protocols under known conditions, supported by transparent licensing.
- Interoperable:** Leverage standard formats and ontologies to ensure OERs can be integrated across different systems.
- Reusable:** OERs should be reusable under clear licensing, allowing for adaptation, remixing, and redistribution.

*Mark Wilkinson, et al. The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data, 2006 Vol 3, no 1.

Proposed platform



PARTAGE pipeline for FAIR OER

- A new OER is ingested and assigned a unique, permanent URI/IRI.
- Content is extracted using tools like speech-to-text, optical character recognition (OCR), and web parsers.
- Automated and human-based annotations are integrated, following ontology rules to enrich the OER.
- The Knowledge Graph (KG) is updated, with the OER accessible via a SPARQL endpoint, API, and search engine.

