# INCIPIT-CRIS: A Research Information System Combining Linked Data Ontologies and Persistent Identifiers

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**Abstract :** At a time when the access to and the sharing of information are crucial in the world of research, the use of technologies such as persistent identifiers (PIDs), Current Research Information Systems (CRIS), and ontologies may create platforms for information sharing if they respond to the need of disambiguation of their data by assuring interoperability inside and between other systems. INCIPIT-CRIS is a continuation of the former INCIPIT project, whose goal was to set up an infrastructure for a low-cost attribution of PIDs with high granularity based on Archival Resource Keys (ARKs). INCIPIT-CRIS can be interpreted as a logical consequence and propose a research information management system developed from scratch. The system has been created on and around the Schema.org ontology with a further articulation of the use of ARKs. It is thus built upon the infrastructure previously implemented (i.e., INCIPIT) in order to enhance the persistence of URIs. As a consequence, INCIPIT-CRIS aims to be the hinge between previously separated aspects such as CRIS, ontologies and PIDs in order to produce a powerful system allowing the resolution of disambiguation problems using a combination of an ontology such as Schema.org and unique persistent identifiers such as ARK, allowing the sharing of information through a dedicated platform, but also the interoperability of the system by representing the entirety of the data as RDF triplets. This paper aims to present the implemented solution as well as its simulation in real life. We will describe the underlying ideas and inspirations while going through the logic and the different functionalities implemented and their links with ARKs and Schema.org. Finally, we will discuss the tests performed with our project partner, the Swiss Institute of Bioinformatics (SIB), by the use of large and real-world data sets.

**Keywords :** current research information systems, linked data, ontologies, persistent identifier, schema.org, semantic web
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