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DIGITAL CONTENT

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LINKED CONTENT COALITION
FRAMEWORK FOR RIGHTS
MANAGEMENT

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Linked Content Coalition Framework for Rights Management

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Development of a standards-based rights management and exchange infrastructure has been the goal of many organizations for several decades now, particularly in machine-to-machine movement of rights information and related metadata. Unfortunately, the rights metadata is still managed using mostly manual methods. Frequently the rights associated with content are either difficult or impossible forthe end users of the information to determine. To address this problem, news media, publishing, TV, film, music, IT, and internet media businesses joined with existing standards and licensing organizations to form the Linked Content Coalition (LCC) in April 2012 as an umbrella body fostering cross-industry application and methodologies. The initial 12-month project set out to develop a framework for well-structured, machine-interpretable rights data that can flow in an automated way.

LCC Framework

In 2013, the Coalition published the LCC Framework consisting of:

➡ *Rights Reference Model* – the types of things that occupy the network, and their relationships

➡ *Principles of Identification* – how to identify things in the network

➡ *Principles of Messaging* – how the rights data passes through the network

The *Rights Reference Model* (RRM) is an abstract data model with a primary function to describe "accurately, and in a way that is interpretable by computers, what can be done to something, where, when, by whom and under what conditions." The model defines four main entities (Party, Creation, Place, Context), four main context types (Right, RightsAssignment, Assertion, RightsConflict), and the relationships among them. The model was designed to use existing identifiers, to work in a linked data environment, and to be extensible to allow for future types of content and rights. RRM is intended for implementation in whole or in part with message schemas, database schemas, or rights expression languages. An example Common Rights Format

XML schema supporting the model was also produced to aid in development of other implementations.

The *Principles of Identification* lays out the recommendations for using identifiers "to support the highest level of automation, interoperability, trust and accuracy within the network." It asserts that "public, persistent identification of key supply chain entities is essential" and that the identifiers used should be those that were issued under defined registry procedures and policies.

The *Principles of Messaging* includes the description of the rights data supply chain, an analysis of the Information flows that move along it, and the generic message requirements to be used to specify message formats and exchange protocols. It is not intended to replace existing message flows, but to identify and encourage filling of gaps in the existing network.

Implementations and Future Directions

The primary role of the LCC is to promote the implementation of the Framework and principles as fully as possible. To further the work of the project, the organization was formalized as the Linked Content Coalition, Ltd. in March 2014, a not-for-profit company. The LCC is not expected to produce its own standards or interchange formats but will work as an

umbrella organization to foster inter-industry collaboration and coordinate work being done by its members—not as an operational entity. The LCC Forum was established to encourage companies and organizations with an interest in rights data standards development to participate.

In October 2013, the European Commission co-funded a 27-month RDI (Rights Data Integration) project to demonstrate the LCC Framework. RDI is using a "hub and spoke" architecture to allow rights users to discover and access information from rightsholders via a central transformation hub. While work is still underway, a number of successful implementations were demonstrated at the RDI 2014 Conference in November 2014.

The RDI projects are considered test beds, but the UK Copyright Hub is an operational project that has adopted the LCC Framework to provide users with a way to query and get permission to use copyrighted content.

The ISO TC46/SC9 committee on Information and documentation / Identification and description has an ad hoc working group on identifier interoperability that is reviewing the LCC Framework for possible incorporation into a future technical report to guide further identifier and metadata work within that community.

Ten Targets for the Rights Data Network

Following the successful implementations of the Framework, the LCC turned its attention to extending the principles beyond their core participants. In April 2014, the LCC issued its manifesto and ten targets for developments in identifier and metadata interoperability that the organization believes will "best ensure that the digital network operates in future as effectively as possible."

➲ *A global Party ID "hub"* – Rightsholders and "asserters" should be identified with an identifier linked to the ISNI "hub".

➲ *Creation IDs for all* – Creations of all types should be identified to any required level of granularity.

➲ *Right IDs* – Content rights should be identified distinct from, but linked to, the Creations to which they relate.

➲ *Resolvable IDs* – Identifiers should have a URI form so that where they may be persistently and predictably resolved to multiple services within the internet.

➲ *Linked IDs* – "Cross-standard" links between identifiers should use interoperable terms and be authorized by interested Parties at both ends of the link.

➲ *Interoperable metadata* – Standard content and rights metadata schemas and vocabularies should have authorized, public mappings which enable terms and data to be automatically transformed from one standard into another.

➲ *Provenance of Rights data* – The provenance ("asserter") of Rights declarations should be made explicit.

➲ *Digital Rightsholder Statement ("DRS")* – Anyone should be able to make standardized, machine-interpretable public statements about rightsholdings in Creations.

➲ *Conflict management* – Conflicts between public Rights declarations should be automatically identifiable so that their resolution can be managed.

➲ *Linked fingerprints* – Where digital "fingerprints" or embedded "watermarks" exist, they should be mapped to registered Creation identifiers.

Conclusion

Rights seem to be one of the last aspects of digital content distribution to be automated. While there will always be some need for human intervention for certain permissions or licenses, there is an increasing need for automated interoperability between different segments of the stakeholders in the supply chain. Adoption of the LCC Framework and commitment to the ten targets can move our community in the right direction to exchange rights information as easily as we can exchange digital content.
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Linked Content Coalition
http://www.linkedcontentcoalition.org

LCC Framework
http://www.linkedcontentcoalition.org/#!lccframe/c4nz

LCC Manifesto and Ten Targets
http://media.wix.com/ugd/
bff7bca39299633ee74d1e82686c79772c95a6.pdf

Rights Data Integration project
http://www.rdi-project.org/

UK Copyright Hub
http://www.copyrighthub.co.uk/

ISO TC 46/SC 9 - Information and documentation / Identification and description
http://www.iso.org/iso/iso_technical_committee
html%3Fcommid%3D48836

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