EXPERTS GROUP ON ARCHIVAL DESCRIPTION: INTERIM REPORT

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Introduction

In 2012, the International Council on Archives (ICA) Programme Commission (PCOM) formed the Experts Group on Archival Description (EGAD) as the partial successor to its Committee on Best Practices and Standards (CBPS). As with its predecessor, ICA charged EGAD with developing standards for the description of records based on archival principles. For the 2012-2016 term, EGAD is specifically charged with developing a comprehensive descriptive standard that reconciles, integrates, and builds on the four existing standards: General International Standard Archival Description (ISAD(G)); International Standard Archival Authority Records—Corporate Bodies, Persons, and Families (ISAAR(CPF)); International Standard Description of Functions (ISDF); and International Standard Description of Institutions with Archival Holdings (ISDIAH). The ICA further mandates that EGAD develop the standard using formal conceptual modelling methods, similar to those employed in allied international cultural heritage communities, in particular those employed by CIDOC, for the museum community, and IFLA, for the library community.

Understanding of archival description has continued to evolve since ICA formally embraced standards development as part of its mission in 1989. To keep current with the changing understanding and the ongoing transformation of communication technologies that provide the foundation for archival description systems, ICA has periodically reviewed the standards. Of the four standards, only the first two, ISAD(G) and ISAAR(CPF) have been reviewed and revised, resulting in second editions of each. Both ISDF and ISDIAH were developed recently and would only now be considered for review. At the beginning of the development of what became four descriptive standards, ICA released the Statement of Principles Regarding Archival Description (ICA, 1992). In section 1.3 of that document, the rationales for descriptive standards are given, including ensuring consistent, relevant, and explicit descriptions; facilitating the retrieval and exchange of information about archival materials; and making it possible to integrate descriptions from different repositories into a unified information system. These objectives endure.

To be effective in realizing the objectives, though, the standards need to be widely embraced and employed by the archival community. Unfortunately, of the four standards, only ISAD(G) has been widely accepted and used in the development of archival descriptive systems. In large part this is because ISAD(G) reflects the long-standing and still predominant descriptive practice of using a single, record-focused, provenance-based description that includes all of the various facets of description. The emergence of three additional standards that focus on components of the description found in ISAD(G) encourages the development of systems in which the components of descriptions are separated and interrelated to form complete archival description as it has traditionally been understood and to enable producing new and potentially powerful perspectives that facilitate the use and understanding of records. The ICA standards, however, do not provide guidance on how the four standards can be applied together in such systems. This has hindered understanding of the standards as well as the economic and functional

benefits of developing systems in which the major components of description are maintained separately.

The objective of EGAD is to develop a conceptual model for archival description that will address the shortcomings of the existing ICA standards and to provide guidance for developing archival description systems that both respect traditional understandings of description and pave the way for creating new paths into and novel perspectives on records. EGAD is building on more than twenty years of ICA standards development, national or project-based modelling work in the archival community, and the modelling work of allied professional communities, in particular CIDOC CRM and IFLA's FRBR. EGAD work at its core is developing a conceptual model that reflects an international professional consensus and positions the archival community to take full advantage of opportunities presented by current and emerging communication technologies, including the opportunities to work cooperatively within and outside of the archival community in a shared quest to provide enhanced access to and understanding of the human record.

EGAD held its first face-to-face meeting immediately before the 1st Annual Conference of ICA in Brussels, Belgium, and hosted by the Archives Générales du Royaume (AGR; National Archives of Belgium), 19-21 November 2013. Fifteen members of EGAD attended the meeting, representing Austria, Australia, Brazil, France, Italy, Ivory Coast, Finland, Romania, Spain, U.K., and the U.S.

The initial discussion focused on the principles of archival description: Provenance, Respect des fonds, and Respect de l'ordre interne (also “respect de l'ordre originel” or “respect de l'ordre primitive”). The members had an intense discussion of the principles, concluding in the end that while there was a broad consensus with respect to what each means, cultural and linguistic differences led to nuanced differences. In the end, the members decided that while the conceptual model would honour the principles, it would do so under a broader term that incorporates the principles: *Records in Context*. Thus archival description fundamentally is about describing records and their contexts. Further, context should address the history of the records, not only the original context.

It was further decided that EGAD would produce three primary products: 1) A statement on principles and a glossary of terms; 2) a conceptual model for archival description as such (expressed in textual description and diagrams); and 3) a formal ontology expressed in OWL (W3C Web Ontology Language). The ontology will address the broader cultural heritage context within which archival description exists, to facilitate a good understanding of the fundamental concepts and provide the foundation for interrelating archival description with allied cultural heritage description.

Four “Work Packages” were formed: Work Package 1, EGAD Secretariat; Work Package 2, Principles and Terminology; Work Package 3, Ontology; and Work Package 4, Conceptual Model. Leaders and members of each work package were assigned.

Since the face-to-face meeting in Brussels, EGAD has held three plenary teleconferences, and Work Package 4 has held one teleconference. In addition, EGAD uses a list to exchange and discuss brief papers focused on specific areas of description. While initial progress has been slow, the members of EGAD are beginning to focus on particularly productive intellectual strategies, and the pace is beginning to pick up.

The next face-to-face meeting of EGAD will take place immediately after this conference (the 2nd Annual Conference of ICA in Girona, Spain). EGAD hopes to begin circulating drafts of the various work products no later than January 2015.

Principles and Terminology

1. Background: the EGAD mandate

ICA appointed the Experts Group on Archival Description (EGAD) in late 2012 and charged the group with developing an archival conceptual model.

The model will:

- Identify and define the essential components of archival description and their interrelations.
- Promote a shared understanding of archival description.
- Position the archival community to take full advantage of opportunities presented by current and emerging communication technologies.
- Facilitate working cooperatively within the archival community as well as with allied cultural heritage communities and academic and non-academic users, in a shared quest to provide enhanced access to and understanding of the human record.
- Respect traditional principles of archival description as well as pave the way for new understandings.

2. Why do we need an archival conceptual model?

For a broad acceptance, the archival conceptual model must satisfy professional needs, reflect the core principles underpinning archival description and answer the challenges currently facing the profession.

The existing four ICA standards for archival description have certain limitations:

- The principles and concepts of archival science are not always well defined and it is therefore difficult to define archival entities and create relationships between them.
- It is difficult (or not too easy) to accommodate national traditions.
- They do not support exploiting the full potential of current and emerging communication technologies.
- This in turn makes it difficult to work cooperatively within the archival community or with allied communities.

The new archival conceptual model will address these needs. It will give a new framework for archival description with clearly defined entities and all significant relationships between them. It will facilitate more economic processing and effective description, and improve the discovery and enhance the understanding of records for users. Further, it will provide a solid foundation for collaboration within the archival community for providing convenient, integrated access to archival records, and for collaboration with allied professionals in providing integrated access to cultural heritage resources.

a) What makes the “archival approach” different?

Archival materials are not created as cultural materials as such. On the contrary, records are the by-products of organisations, families or individuals, generated in the conduct of their current business and serving their current needs. Implicitly, the records and the aggregation of records contain the information used, reflect the business environment that created them and present inner connections generated by the recordkeeping context. Some of those records are preserved by archivists because of the enduring value in the information they contain or as evidence of the functions and responsibilities of their creator. Protecting the organic nature of records, preserving their original context of creation and use as well as their subsequent history

in order that they can be understood are responsibilities that distinguish archivists from other information professionals.

b) Professional legacy

At a theoretical level, the "archival approach" has been underpinned by the core notion of Fonds and by the Principle of Provenance (PoP). Various criteria were initially employed for arranging and describing archival material, but by the 19th century the PoP had tended to prevail, leading to the elaboration and application of consensual methods for professional practice, which were codified through standards and regulations in France, Italy, Prussia, the Netherlands, etc.

At the heart of the PoP is the assertion that records of different provenance should not be intermingled and the original order (established prior to the transfer to the Archives) should be respected or (if missing) re-constructed. "Original order" is to be understood here also as physical order (traditional understanding) and/or intellectual order (more recent understanding). In this regard, one can identify both *archival* provenance (corporate body, person, or family who created or receive the records) and *custodial* provenance (the subsequent history of the records, including transfers in custody).

The PoP was based on both practical needs and theoretical reflections and has been promoted as "the only sound principle for the classification of the archives" (Schellenberg, 1965, p. 45) or even "the only principle of archival theory" (Horsman, 1994, p. 51).

Dealing with an increasing number of records and facing ever-changing trends of historical research topics, archivists endorsed the PoP for its many benefits. Firstly, it was observed that "documents can only be interpreted with knowledge of the administrative, legal and social context, which will be preserved by respecting provenance (internal/external)"; applying the PoP thus preserved "the objectivity of the records and provided insight into the functions, processes, and personal relationships of the records creator" (Schellenberg, 1961). Moreover, the PoP, conceived in physical terms, improved the process of arrangement. Hence, it "obviated the need for contentious rearrangement according to subject" (Gilliland-Swetland, 2000). At the same time, it was a convenient method for retrieval, by gathering and describing records generated and received by the same institution or person.

c) A change of perspective: shifting to a more dynamic and global approach

The evolution of professional practices and thinking led in time to the development and adoption of other points of view concerning archival principles. A records creator is a living organism and it is rare that a single, unchanging order can be reconstructed in a records aggregation. Records "are a complex result of the activities of the creator, political decisions, organizational behaviour, record-keeping methods and many other unexpected events" (Horsman, 1994, p. 57). Therefore, it has been recognised that archival fonds cannot always be identified with a single creator. In practice, archival aggregations created by the same creator can be found in more than one fonds, while a fonds can contain organic archival aggregations created by more than one creator. Hence, the actual fonds has to be seen as a result of historical processes of records creation/accumulation/transmission over time while the description of the fonds can be regarded as an intellectual, abstract construct. Also, it has been recognised that for promoting a full understanding of records, a notion of context, broader and thus more encompassing than provenance and original order, should be adopted by archivists. Therefore the need has emerged for describing in a more dynamic way the content and contexts in which archival materials are created, managed and used.

The parallel and rapid development of records management practices has added new dimensions to the notion of original context as well as promoting a records management specific approach to records. In addition, the expansion of digital records has raised new challenges to the traditional archival approach, calling for a re-interpretation of basic archival concepts. These developments have led to the need for a global, dynamic approach both to enable the effective reconciliation of records specialists and to promote sound principles.

Digital systems and tools for managing and describing records and archives support the adoption of more dynamic visualisations. Similarly, emerging communication technologies provide archivists with the means to express the archival description in a more semantically precise and logically structured network of interrelated data that can be computationally exploited.

ICA standards have been part of this dynamic movement in their attempt to differentiate the components of archival description (archival records, agents and functions). However, the standards are quite limited in their capacity to express the full range and complexity of the archival understanding (i.e. records, their context, the relationships between the records and their context as well as among the records themselves).

The archival conceptual model encompasses the records as such, as well as a description of the context of their origin and enduring existence. *Records in Context* necessarily places records in a vast network of the people (individuals and groups) that created, used, and managed and continue to manage them, of other records related in a host of different ways, of business and work activities documented in them, and of rules that govern these activities. Further, by embodying an accurate articulation of context, *Records in Context* promotes interrelating archival records with other cultural heritage resources, discovering and expressing new connections within and without the records, and making archival descriptive data available to be used in ways not envisioned by the creators of that data.

3. Terminology

Work Package 2 is also responsible for *terminology*. Specifically, it is responsible for the following:

- Check and support the consistency in using professional terminology in the other Work Packages
- Recommend the most precise and least contestable professional terms
- Recommend terms that are broadly familiar to the community
- Recommend terms that are the least problematic to translate into other languages
- Compile the final glossary for the ontology and conceptual model

The overarching task is thus to keep the technical speech as clear and as understandable as possible.

However, though it is easy to state these guidelines, selecting and defining terms is difficult, due to the generally acknowledged differences of the use of the same terms in different linguistic and cultural contexts, in different archival traditions. For instance, the word “record” is well known as problematic for all Latin-based languages. Also, the term “act” may mean in English, among other definitions, “law” or “a specific action.” But in other languages, the term might be understood as a synonym for “document.” Because of the multiple possible understandings, “act” is a problematic word.

On the other hand, terms like “function” or “mandate” have different understandings even in English, and the EGAD has already and will continue to have discussions concerning the best way to define these terms. A perfect example for the diversity of understanding of the same

concepts is “archival fonds.” While in some countries “fonds” refers only to records in custody of a historical archive, in others fonds means the whole of records produced by a creating agency, no matter the custody; that is, what is held as “permanent records” are only remnants of the fonds. One way or another, this kind of conceptual collision should be addressed.

Applying the methods of ontologies and conceptual modelling will present EGAD with challenges in expressing the descriptive standard in a way that will be easily grasped by archivists familiar with the terminology used in the current ICA standards. In order to fulfil its mandate, the EGAD has to analyse and explore many of the assumptions on which current archival descriptive practice is based, and this necessarily leads to new understandings and new concepts. Though there are new understandings and concepts unfolding in the work, EGAD is committed to ensuring that the conceptual model of archival description, and the ontology that situates it in a broader descriptive context, are an organic development from current understandings to new understandings, understandings based soundly on long standing archival principles.

Conceptual Model

1. Introduction

Building on the work of the principles and terminology group, this sub-group will document a conceptual model for archival description. By “conceptual” we simply mean that the model will be a representation of the real world complexity of the records we seek to describe as archives. Following the lead taken by fellow professionals in the information and cultural heritage sectors, the methodology for our work is that of entity relationship modelling. So we will define the key things, or entities, necessary to effectively describe archival records for our purposes and those of our users. We will then define the essential relationships between these entities and their attributes or properties. The result will be a formal document with diagrams and examples to make the scope, purposes and nature of the model clear.

This generalised view of archival description should not be confused with the more detailed logical and physical data models necessary to build archival information systems or a set of detailed cataloguing guidelines for use by archivists on a day-to-day basis. Rather the conceptual model, alongside the formal ontology with which it will be closely aligned, will provide the basis for the future development of such data models and cataloguing guidelines. Conversely, this does not mean that all existing archival cataloguing and information systems will be somehow wrong or instantly out of date when the model is published. Rather as it will suggest what should be described at a high level not how actual descriptive metadata for archives should be captured, stored, formatted and presented, most of what is done today will still conform to the model.

While the model must present the current professional consensus about archival description, our practice will continue to develop and change, so this first version of it will not be set in stone. It should, though, help inform ongoing discussions about what we do when we describe archives and have a useful role in the education and training of new archivists. It will also enable us to better collaborate with the fellow information professionals who have already developed models specific to their particular domains, and position us to ensure that the archives in our care take their proper place in the developing digital sphere.

2. Comparison of existing conceptual models

a) Method

At the initial face-to-face meeting in Brussels it was agreed that the sub-group would begin their work by comparing and contrasting any pre-existing conceptual models for archival description or any that were work in progress. In line with our decision to look broadly at records and their contexts, we also wanted to include a representative model relating to recordkeeping metadata. So the documents included in the comparison were as follows:

- CNEDA, *Modelo conceptual de descripción archivística y requisitos de datos básicos de las descripciones de documentos de archivo, agentes y funciones* (CNEDA, 2012)
- Kilkki, Jaana, Outi Hupaniittu, Pekka Henttonen, *Towards the new era of archival description - the Finnish Approach*, 2012- (Kilkki, 2012) and updates (Arkistolaitos, 2013) as the work has progressed
- National Archives of Australia, Australian Government Recordkeeping Metadata Standard Version 2.0, 2008 (AGRkMS); and Implementation Guidelines, 2011[1] (National Archives of Australia, 2008 and 2011)

While the ICA "framework" for archival description, made up of the four descriptive standards and related documentation, particularly the work of the previous CBPS (ICA, 2012a and 2012b), does not constitute a conceptual model, it does implicitly suggest a model. Given this and that the ICA framework will also be the point of departure for the international community when it comes to assessing and using the model, we included it in the analysis.

In carrying out the comparison we looked at the following criteria for each model and the ICA framework:

- Completeness: is the model completed or a work in progress?
- Context and perspective: what is it modelling and for whom?
- The format and layout of the documentation, including how relationships between entities are expressed
- Structure and parts: entities, properties and relationships

b) Findings

A key finding from the comparison is that none of the models we looked at could serve as the conceptual model that we are looking for. While the AGRkMS is endorsed as a national standard, neither the Spanish nor the Finnish model is yet complete. Also each model has been or is being produced in different contexts from different perspectives. Yet while this means that the models are different in detail in many respects, the second main finding is that there is a great deal of consensus. There is almost complete agreement on the key entities that it is necessary to document when describing archives, although reflecting differences in perspective there are differences in the sub-entities defined. These entities are as follows:

- Records
- Agent
- Function
- Mandate

The Spanish and Finnish models also both recognise the importance of capturing the subjects of the content of the records including concepts, objects, events and places, but model them differently. As these aspects of description are not simply "archival" in character, we will work closely with the ontology group in this area to agree a final model.

Finally, all of the models set out the key relationships between their chosen entities. The AGRkMS models relationship as an entity in itself, which allows the properties of particular relationships to be formally captured. The Spanish and Finnish models, however, simply represent the models diagrammatically. In the end the choice here may relate back to the purposes of the conceptual model as a document when compared to the formal ontology and this may be an example of where we take a different approach between the two.

3. Next Steps:

We have made a good start by leveraging the work done by colleagues internationally. We will now move on to:

- Finalise upper level entities and their parts
- Agree how relationships between entities should be represented and which ones are key for archival description
- Align the model with the developing ontology
- Produce a first draft for feedback to ensure that we have a consensus

Ontology

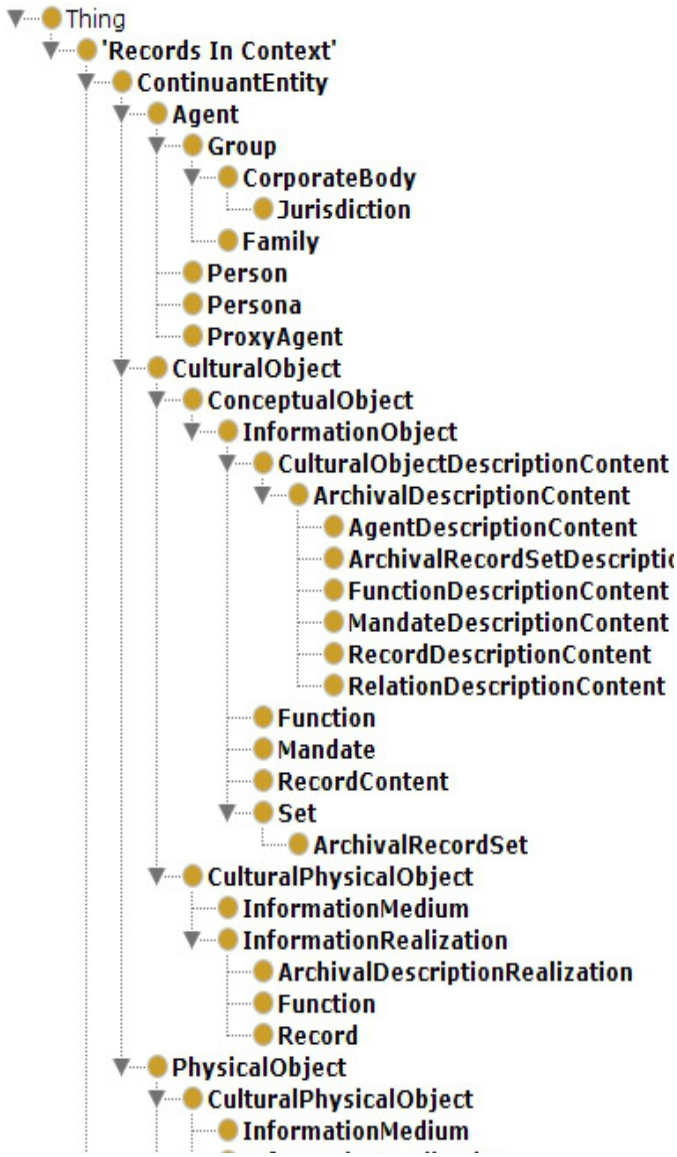
The Work Package 3 activities are closely related to those of Work Package 4 (designing and building the conceptual model). Most often, in such projects, the conceptual model exists (or is made) before the formal ontology which is derived from it. EGAD decided to work simultaneously on these two complex tasks, each group communicating its results to the other and a lot of discussions or small tasks being shared. Indeed the two processes illuminate and improve each other.

Of course the final conceptual model and ontology must be fully aligned. Moreover, the conceptual model should, at the end of the project, represent the archival description core of the ontology, which will situate archival description within the broader context of cultural heritage description. Situating archival description within the broader context of cultural heritage description will provide the foundation for discussions with allied professional communities in the pursuit of integrated access to archive, library, museum and other cultural heritage.

1. Method

In order to work on the ontology, we adopted a pragmatic and iterative process that includes:

- Investigating the existing projects and ontologies on cultural heritage and related domains.
- Investigating the concepts, standards and best practices on formal ontologies. Among them, we paid close attention to upper/top-level ontologies,[2] and the distinction between endurant (entities with persistent identities) and perdurant (activities and events) entities.
- Testing: we made experimental ontologies. The first one was based on “real world” foundational archival concepts, represented, for example, in the existing ICA description standards. This allowed us to investigate the definition of some features and relationships. The second one, beginning from the higher-level concepts, has become our work file.



Protégé screenshot of the test ontology class hierarchy, dated September 9th 2014

2. Current Results

The current draft of the ontology, expressed in **OWL (The W3C Web Ontology Language), defines** the upper level and core concepts of the archival world, as a **multiple inheritance class system**. The data and object properties of these classes and subclasses have not been defined yet.

3. Main choices

As we develop the ontology, we are paying close attention to CIDOC CRM (ICOM/CIDOC, 2011) and the FRBR extension to CRM, FRBRoo (IFLA 2008), as one important objective in the work of the EGAD is to lay the foundation for aligning with these ontologies, at a high level. We also want to take advantage of this allied work, as there are major overlapping areas of description that conceptually align, if not always completely, with archival understanding. Though there are common description entities, the archival mandate to describe *records in context* provides a specific understanding description that is missing in these models.

OWL, developed in support of the Semantic Web, has become the standard for representing ontologies. Among its features, it supports aligning ontologies developed in different domains. It is these formal features of OWL that will facilitate the mapping of the EGAD Records in Context (RIC) ontology. OWL *equivalentClass* or *equivalentProperty* statements are two such features. For example, classes such as RIC *CulturalObject* or RIC *InformationObject* (a superclass for *ArchivalRecordSet*, *Function*, *Mandate*) may be linked to CIDOC-CRM entities, which in turn, lead to museum specific and, through FRBRoo, library specific classes. Some concepts are not specific to the archival perspective (date, place, event, topic, agent, etc.), and these concepts will be aligned as closely as possible with allied ontologies.

Clarity, completeness, and flexibility are guiding principles in the design work.

Within the ontology, we are including and defining the high-level archival description components (Agent, Record, Record Set [fonds, series, and so on], Function, and Mandate), as well as the essential features of each (names, titles, dates, identifiers, and so on). The high-level components, though, *do not alone* comprise full archival description. Full archival description requires interrelating the components to form complete description. Thus Relation is a major area of focus and several options are currently explored in order to allow both simple formal expression of some relations, and precise definition and qualification of them

The ontology class structure is hierarchical, very similar to the structure of thesauri. Broader concepts (or classes) lead to narrower concepts (or subclasses). For example, the class Agent has the immediate subclass Group, which in turn has the subclasses Family and Corporate Body. This approach accommodates ISAARs Corporate Body and Family, but the containing class (Group) enables accommodating social groupings that are not specifically families or corporate bodies. We include a precise definition of the record entity, through its three main facets (content, form, and physical characteristics). Though this will not fully support the detail that researchers in archival science, diplomatics, and corpus-based digital humanities may need or want to employ, it will provide a conceptual framework that can be extended or augmented.

4. Next steps:

- Review the class hierarchy, refine and extend it, aligning it with the conceptual model.
- Add data and object properties, and precisely define them (domains and ranges, functional or not functional ones...); review the class system iteratively.
- Test the ontology through a set of true examples, iteratively reviewing it.
- Annotate the ontology, particularly with prose descriptions coming from the terminology and conceptual model, in several languages if possible.
- Release a beta version, call for comments.
- Build a proof of concept project (data sets and searching and navigating web interface).

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Notes

[1] http://www.naa.gov.au/records-management/agency/create-capture-describe/describe/recordkeeping-metadata.aspx
[2] See Wikipedia contributors, "Upper ontology", http://en.wikipedia.org/w/index.php?title=Upper_ontology&oldid=618786011