## ISSUE 241: **Wider practical scope of CRM**

### [A]

**Introduction**

This document is the formal definition of the **CIDOC Conceptual Reference Model (“CRM”)**, a formal ontology intended to facilitate the integration, mediation and interchange of heterogeneous cultural heritage information and similar information from other domains, **as detailed below/**to be specified below. The CRM is the culmination of more than two decades of standards development work by the International Committee for Documentation (CIDOC) of the International Council of Museums (ICOM). Work on the CRM itself began in 1996 under the auspices of the ICOM-CIDOC Documentation Standards Working Group. Since 2000, development of the CRM has been officially delegated by ICOM-CIDOC to the CIDOC CRM Special Interest Group, which has been collaborating soon after with the ISO working group ISO/TC46/SC4/WG9 to bring the CRM to the form and status of an International Standard. This collaboration has resulted in ISO21127:2004 and ISO21127:2014, and will be continued to produce the next update of the standard. This document belongs to the series of evolving versions of the formal definition of the CRM, which serve the ISO working group as community draft for the standard. Eventual minor differences of the ISO standard text from the CIDOC version in semantics and notation that the ISO working group requires and implements are harmonized in the subsequent versions of the CIDOC version.

**Objectives of the CIDOC CRM**

The primary role of the CRM is to enable the exchange and integration of information from heterogeneous sources for the reconstruction and interpretation of the past at a human scale, based on all kinds of material evidence, including texts, audiovisual material and even oral tradition. It starts from, but is not limited to, the needs of museum documentation and research based on museum holdings. It aims at providing the semantic definitions and clarifications needed to transform disparate, localised information sources into a coherent global resource, be it within a larger institution, in intranets or on the Internet, and to make it available for scholarly interpretation and scientific evaluation. [i] These goals determine the constructs and level of detail of the CRM.

More specifically, it defines, in terms of a formal ontology, the **underlying semantics** of database **schemata** and **structured**documents used in the documentation of cultural heritage and scientific activities. In particular it defines the semantics related to the study of the past and current state of our world, as it is characteristic for museums, but also or other institutions and disciplines. It does **not** define any of the **terminology** appearing typically as data in the respective data structures; however it foresees the characteristic relationships for its use. It does **not** aim at proposing what cultural institutions **should** document. Rather it explains the logic of what they actually currently document, and thereby enables **semantic interoperability**

It intends to provide a model of the intellectual structure of the respective kinds of documentation in logical terms. As such, it is not optimised for implementation-specific storage and processing aspects. Implementations may lead to solutions where elements and links between relevant elements of our conceptualizations are no longer explicit in a database or other structured storage system. For instance, the birth event that connects elements such as father, mother, birth date, birth place may not appear in the database, in order to save storage space or response time of the system. The CRM allows us to explain how such apparently disparate entities are intellectually and logically (?) interconnected, and how the ability of the database to answer certain intellectual questions is affected by the omission of such elements and links.

**Scope of the CIDOC CRM**

The overall scope of the CIDOC CRM can be summarised in simple terms as the curated, **factual knowledge** about the past at a human scale.

However, a more detailed and useful definition can be articulated by defining both the **Intended Scope**, a broad and maximally-inclusive definition of general application principles, and the Practical Scope, which is expressed by the overall scope of a growing reference set of specific, identifiable documentation standards and practices that the CRM aims to encompass, however restricted in its details to the limitations of the Intended Scope.

The reasons for this distinctions are twofold. Firstly, the CRM is developed in a **“bottom-up**” manner, starting from well-understood, actually and widely used concepts of domain experts, which are disambiguated and gradually generalized as more forms of encoding are encountered. This allows for avoiding the misadaptations and vagueness often found in introspection-driven attempts to find overarching concepts for such a wide scope, and provides stability to the generalizations found. Secondly, it is a means to identify and keep a focus on the concepts most needed by the communities working in the scope of the CRM and to maintain a well-defined agenda for its evolution.

The **Intended Scope** of the CRM may be defined as all information required for the exchange and integration of heterogeneous scientific and scholarly documentation about the past at a human scale and its evidence that has come upon us. This definition requires further elaboration:

1. The term “scientific and scholarly documentation” is intended to convey the requirement that the depth and quality of descriptive information that can be handled by the CRM should be sufficient for serious academic research. This does not mean that information intended for presentation to members of the general public is excluded, but rather that the CRM is intended to provide the level of detail and precision expected and required by museum professionals and researchers in the field.
2. As “evidence that has come upon us” are regarded all types of material collected and displayed by museums and related institutions, as defined by ICOM[**1**], and other  collections, in-situ objects, sites, monuments and intangible heritage relating to fields such as social history, ethnography, archaeology, fine and applied arts, natural history, history of sciences and technology.
3. The documentation includes the detailed description of individual items, in situ or within collections, groups of items and collections as a whole, as well as practices of intangible heritage. It pertains to their current state as well as to information about their past. The CRM is specifically intended to cover contextual information: the historical, geographical and theoretical background that gives cultural heritage collections much of their cultural significance and value.
4. The exchange of relevant information with libraries and archives, and the harmonisation of the CRM with their models, falls within the Intended Scope of the CRM.
5. Information required solely for the administration and management of cultural institutions, such as information relating to personnel, accounting, and visitor statistics, falls outside the Intended Scope of the CRM.

The Practical Scope[**2**] of the CRM is expressed in terms of the set of reference standards and de facto standards for documenting factual knowledge that have been used to guide and validate the CRM’s development and its further evolution. The CRM covers the same domain of discourse as the union of these reference standards; this means that for data correctly encoded according to these documentation formats there can be a CRM-compatible expression that conveys the same meaning.

[1] The ICOM Statutes provide a definition of the term “museum” at <http://icom.museum/statutes.html#2> [213]

[2] The Practical Scope of the CIDOC CRM, including a list of the relevant museum documentation standards, is discussed in more detail on the CIDOC CRM website at <http://cidoc.ics.forth.gr/scope.html> [214]

Reference to Cidoc Version:

[version 6.2.5](http://www.cidoc-crm.org/Version/version-6.2.5) [1]