

Epiwork's Epidemic Marketplace Metadata Application Profile

Document Scope: This document is a Dublin Core based application profile, describing a metadata model to be used in Epiwork's Epidemic Marketplace.

First working draft

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1. Introduction

This document is a Dublin Core based application profile. It defines a schema using elements from different namespace to be used specifically for the description and administration of epidemiological and related data. This application profile is defined according to Dublin Core Metadata Initiative (DCMI) guidelines (Coyle & Baker, 2009), based in the DC (Dublin Core) standard (DCMI, 2008), which will be adapted and specialized using elements defined locally or from other namespaces.

The objective of this document is to propose and describe a metadata model to be used in the Epidemic Marketplace. The Epidemic Marketplace is being developed as a part of Epiwork, an European project (<http://epimarketplace.net/>). It is an information platform, for epidemiological data integration, management and sharing.

The Epidemic Marketplace has the primary purpose of providing a platform for the research community and health professionals to access and share epidemiological data. The repository manages not only datasets physically stored in the system, but also metadata containing information about datasets that for some reason cannot be stored in the Epidemic Marketplace. Data will be managed and made available to users through the digital repository, according to well defined access rules.

It will also support the operation of the Epidemic Modeling Platform that will provide data analysis and epidemiological modeling tools. Automated access to data will be done through the Mediator that will provide access to data. The Mediator will also be able to automatically collect information from other applications, processing the data, if necessary transforming its metadata to conform to Epidemic Marketplace's metadata schema, and storing it in the repository.

This schema is being developed with the objective of:

- Serving as an integrating and exchange format between various systems using different metadata standards/formats. In order to do that it is necessary to have a general schema that is able to integrate and describe extremely variable data from heterogeneous sources.
- To manage and organize data contained in the EM repository.
- To expose the metadata to other communities, enhancing data sharing and information finding.

According to the DCMI-Libraries Working Group (2004), an application profile should define the: a) required metadata elements; b) allowed Dublin Core elements; c) allowed Dublin Core qualifiers; d) schemes and values (e.g. a specific controlled vocabulary or encoding scheme); e) domain elements from another namespace; f) additional elements/qualifiers from other application profiles that may be used; g) refinement of standard definitions.

This document proposes a possible epidemic application profile, based on the DC standard and altered in order to be used in the management and exchange of epidemic data. This is a first working draft.

1.2- Objective and purpose

The purpose of this metadata model is the management of the content of the digital repository, providing better search capacities. It will also promote technical interoperability among the different components of the Epidemic Marketplace.

2. Organization of the document

The Epiwork repository Application Profile uses terms from two namespaces:

- DCMI Metadata Terms [<http://dublincore.org/documents/dcmi-terms/>]
- Epidemic Marketplace Terms [<http://epimarketplace.net/em-terms/>]

In DC metadata descriptions, all references to terms (properties, classes, data types) are made using URIs. The Qualified Names are used as abbreviation terms for URIs and are formed by a concatenation of <prefix> + ":" + <local-part>. The prefix is defined in Table 1, where their associations with URIs are defined.

Table 1- Table defining the Vocabulary Title, the Namespace Name and the Prefix used to abbreviate the Namespace name.

Vocabulary Title	Namespace Name	Prefix
The Dublin Core Metadata Element Set, v1.1	http://purl.org/dc/elements/1.1/	dc
Dublin Core Terms	http://purl.org/dc/terms/	dcterms
Dublin Core Type Vocabulary	http://purl.org/dc/dcmitype/	dcmitype
EpiWork Project Terms	http://epimarketplace.net/dc-epi-terms/	epi

This document defines the specific characteristics of each metadata term, according to what is defined in Table 2.

Table 2- The description of each metadata element used in this schema will be done according with the guidelines in this table.

Name of Term	A unique token assigned to the term
EM Term URI	The Qualified Name used in the EM schema.
EM qualified name	A Uniform Resource Identifier used to identify the term in the EM schema.
DC Term URI	The Qualified Name used in the DC schema.
DC qualified name	A Uniform Resource Identifier used to identify the term in the DC schema.
Label	A human-readable label assigned to the term.
Defined By	An identifier of a namespace, pointer to a schema, or bibliographic reference for a document within which the term is defined.
DC Definition	The definition of the term in the DC namespace.
EM Definition	The definition of the term in the EM namespace.
DC Comments	Comments on the term in the DC namespace.
EM Comments	Comments on the term in the EM namespace.
Refines	The described term semantically refines the referenced term. A refinement makes the meaning of the element narrower or more specific. It will share

	the meaning of the unrefined element but with a more restricted scope.
Refined By	The described term is semantically refined by the referenced term.
Has Encoding Scheme	The described term is qualified by the referenced encoding scheme. Using an encoding scheme will aid in the interpretation of an element value. These schemes include controlled vocabularies and formal notations or parsing rules. A value expressed using an encoding scheme will thus be a token selected from a controlled vocabulary (e.g., a term from a classification system or set of subject headings) or a string formatted in accordance with a formal notation (e.g., "2000-01-01" as the standard expression of a date).
Obligation	Indicates whether the element is required to always or sometimes be present. In this application profile the obligation can be: mandatory (M), mandatory if applicable (MA), strongly recommended (R), strongly recommended when applicable (RA) or optional (O).
Occurrence	Indicates any limit to the repeatability of the element.
Name of Term	A unique token assigned to the term
Qualified name	The Qualified Name which is typically used as an abbreviation for the term URI
Term URI	A Uniform Resource Identifier used to identify the term.
Label	A human-readable label assigned to the term.
Defined By	An identifier of a namespace, pointer to a schema, or bibliographic reference for a document within which the term is defined.
Source Definition	The definition of the term in the namespace in which the term was originated.
DC-Lib	Definition The DC-Lib definition of the term.
Source Comments	Comments on the term from the namespace in which the term originated.
DC-Lib Comments	DC-Lib comments about the term.
Type of term	The grammatical category of the term (e.g. "Element", "Element Refinement", or "Encoding Scheme").
Refines	The described term semantically refines the referenced term. A refinement makes the meaning of the element narrower or more specific. It will share the meaning of the unrefined element but with a more restricted scope.
Refined By	The described term is semantically refined by the referenced term.
Encoding Scheme For	The described term, an encoding scheme, qualifies the referenced term. Using an encoding scheme will aid in the interpretation of an element value. These schemes include controlled vocabularies and formal notations or parsing rules. A value expressed using an encoding scheme will thus be a token selected from a controlled vocabulary (e.g., a term from a classification system or set of subject headings) or a string formatted in accordance with a formal notation (e.g., "2000-01-01" as the standard expression of a date). If an encoding scheme is not understood by a client or agent, the value may still be useful to a human reader.

	In some cases, encoding schemes not yet registered are indicated. These will be registered and/or approved by the DCMI Usage Board as DC Encoding Schemes in the future.
Has Encoding Scheme	The described term is qualified by the referenced encoding scheme.
Obligation	Indicates whether the element is required to always or sometimes be present. In this application profile the obligation can be: mandatory (M), mandatory if applicable (MA), strongly recommended (R), strongly recommended when applicable (RA) or optional (O). Mandatory ensures that some of the elements are always supported and mandatory if applicable means that this element must be supported if the information is available. An element with a mandatory obligation must have a value. The strongly recommended and the optional elements should be filled with a value if the information is appropriate to the given resource but if not, they may be omitted.
Occurrence	Indicates any limit to the repeatability of the element.

Table 3 is a index of terms used in this application profile

Table 3- Index of Terms

Properties in the DC-TERMS namespace	abstract, bibliographicCitation, contributor, coverage, creator, date, dateSubmitted, description, format, identifier, isReplacedBy, issued, language, publisher, replaces, rights, rightsHolder, source, spatial, subject, tableOfContents, temporal, title, type
Properties in the EM-TERMS namespace	author, authName, authOrg, authURL, citation, copyright, country, city, demographic, diagnosticMethod, disclaimer, disease, DOI, drug, environmental, epidemiological, generalDescription, geographic, hostGroup, hostSp, ISBN, ISSN, organisation, orgName, orgURL, pathoSp, pathoGroup, pathoStrain, pubName, pubmedID, pubOrg, pubURL, refCitation, refDOI, refPubmedID, region, socioEconomic, srcDescription, srcName, srcURL, tempFrom, tempTo, typeOfDoc, typeOfWR, URL, version, vaccine, vector,
Vocabulary Encoding Schemes	DCMIType, IMT, Geonames, MESH, NLM, TGN, UDC, UMLS
Syntax Encoding Schemes	Box, ISO3166, ISO639-2, ISO639-3, Period, Point, RFC3066, RFC4646, URI, W3CDTF

3. Metadata creation support

The creation of metadata content may be time consuming and complex, which hampers their acceptance by the community. It is necessary to make metadata creation as simple and straightforward as possible.

A well defined metadata model, supported on the use of automatic tools to facilitate this process is essential to avoid this problem. Here we propose some automatism to support metadata creation, such as assisted filling of metadata fields, auto-filling and metadata re-use. In the assisted filling the user will have tools to facilitate the insertion of data whereas the auto-fill process will be automatically done by the system, not being disclosed to the end user.

3.1- Assisted filling

To assist the metadata creation some tools may be implemented, such as the use of controlled lists in dropdown menus. This will facilitate the process to the user since he will not be required to write but simply click to select an option. Also this will make clearer to the user what information is expected in that field. When controlled lists are not available a help button should be available to explain what content should be placed there. Other tools could be very useful, such as a graphic calendar to select a specific date.

The use of ontologies and other controlled vocabularies will also be essential to make metadata creation easier, since less information needs to be inserted. This is because when using ontologies much more information can be recovered from the ontology itself and thus doesn't need to be inserted by the user.

3.1.1- Autofill

This process can be used for several metadata elements that should be filled automatically by the system without even being presented to the user. This will make the process simpler to the user but will also, in some cases, maintain the system more consistent.

For example, the identifier should be given by the system, which will standardize this process. The submission date is another example of data that should automatically be recorded by the system.

3.1.2- Metadata re-use

Some of the metadata inserted for a specific dataset may be applicable to other datasets. So it is important to have a feature that can memorize or just save entire metadata contents. This way when someone needs to annotate more than one very similar datasets, that person may recover the metadata contents inserted earlier and just make the necessary changes to annotate the new dataset.

4. Discussion

This document is a first working draft of the metadata model to be implemented in the Epidemic Marketplace. It will surely need to be adjusted and improved until a first final version is made public.

To improve this metadata model it will first be analyzed and discussed among the LaSIGE Epiwork collaborators. This discussion will hopefully bring some improvements and ideas on how to best implement the metadata schema in the repository at first and in all the system later.

The implementation of this system will be a fundamental step for the refinement of the metadata model, since it will allow its use and evaluation. When implemented in the repository users will be able to annotate their datasets and other resources using this schema. This process will surely uncover flaws of the model and will point what should be improved.

It is possible that some metadata elements might need to be added, while others may be deemed unnecessary. An important feature of this will be the easiness of metadata filling. So that the process of annotating data with metadata is easy and fast it is necessary to have a light schema supported by tools to facilitate metadata filling.

The schema presented here is not very light, in the sense that it contains a large number of metadata elements. However, most of the fields will probably not be necessary in many cases. Meaning each dataset will probably make use of a specific set of metadata elements, not all of them. This is due to the heterogeneity of data that is expected to be deposited in the repository. It should be expected that a geographic dataset will use a different set of metadata elements than a epidemiological datasets. The heterogeneity of data makes the complexity necessary. To avoid passing this complexity to the user it is necessary to use tools to facilitate data annotation, as discussed in section 3 (Metadata creation support).

To access the easiness and fastness of the filling, important features to have a successful metadata model, it is necessary to thoroughly test and evaluate it. The metadata model will be presented to Epiwork discussion lists and the creation of a alpha test group among the Epiwork partners will be suggested. Further on, when the Epidemic Marketplace is available to the general public, users will be asked to fill a questionnaire to assess their satisfaction with the system.

Bibliography

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DCMI-Libraries Working Group. (2004). *Library Application Profile*. Retrieved 12 18, 2009, from The Dublin Core Metadata Initiative: <http://dublincore.org/documents/library-application-profile/>

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Appendix

```
<?xml version="1.0" encoding="UTF-8"?>
<em:em xmlns:em="http://epimarketplace.net/metadata/">
  <em:title/>
  <em:subject/>
  <em:generalDescription>
    <em:abstract/>
    <em:citation/>
    <em:description/>
    <em:DOI/>
    <em:format/>
    <em:ISBN/>
    <em:ISSN/>
    <em:language/>
    <em:pubmedID/>
    <em:type/>
    <em:typeOfWR/>
    <em:typeOfDoc/>
    <em:URL/>
    <em:venue/>
    <em:version/>
  </em:generalDescription>
  <em:date/>
  <em:dateSubmitted/>
  <em:author>
    <em:authName/>
    <em:authOrg/>
    <em:authURL/>
  </em:author>
  <em:organisation>
    <em:orgName/>
    <em:orgURL/>
  </em:organisation>
  <em:publisher>
    <em:pubName/>
    <em:pubOrg/>
    <em:pubURL/>
  </em:publisher>
  <em:spatial>
    <em:country/>
    <em:city/>
    <em:region/>
  </em:spatial>
  <em:temporal>
    <em:tempFrom/>
    <em:tempTo/>
  </em:temporal>
  <em:source>
    <em:srcName/>
    <em:srcURL/>
    <em:srcDescription/>
  </em:source>
  <em:epidemiological>
    <em:diagnosticMethod/>
    <em:disease/>
    <em:drug/>
    <em:hostSp/>
    <em:hostGroup/>
    <em:pathoSp/>
    <em:pathoGroup/>
    <em:pathoStrain/>
    <em:vaccine/>
    <em:vector/>
  </em:epidemiological>
</em:em>
```

```

<em:demographic/>
<em:environmental/>
<em:geographic/>
<em:socioEconomic/>
<em:bibliographicCitation>
  <em:refCitation/>
  <em:refDOI/>
  <em:refPubmedID/>
</em:bibliographicCitation>
<em:rights>
  <em:rightsHolder/>
  <em:copyright/>
  <em:disclaimer/>
</em:rights>
</em:em>

```

A.1- EM Property elements based on DCTERMS

From the properties made available by the DCMI, defined in DC-TERMS, a batch that better served the purposes of the Epidemic Marketplace was selected. These terms are individually described in this section.

abstract

Name of Term	Abstract
EM Term URI	http://epimarketplace.net/em-terms/abstract
EM qualified name	em:abstract
DC Term URI	http://purl.org/dc/terms/abstract
DC qualified name	dc:abstract
Label	Abstract
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A summary of the resource
EM Definition	
DC Comments	
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	
Obligation	0
Occurence	0 or 1

bibliographicCitation

Name of Term	BibliographicCitation
EM Term URI	http://epimarketplace.net/em-terms/bibliographicCitation
EM qualified name	em:bibliographicCitation
DC Term URI	http://purl.org/dc/terms/bibliographicCitation
DC qualified name	dc:bibliographicCitation
Label	Bibliographic Citation
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A bibliographic reference for the resource.

EM Definition	
DC Comments	Recommended practice is to include sufficient bibliographic detail to identify the resource as unambiguously as possible, whether or not the citation is in a standard form. A draft version of "Guidelines for encoding bibliographic citations in DC metadata" can be found at http://epub.mimas.ac.uk/DC/dc-citation-guidelines/ .
EM Comments	In the future consider a method for the automatic formatting of the citation according to a specific format.
Refines	
Refined By	http://epimarketplace.net/em-terms/refCitation http://epimarketplace.net/em-terms/refDOI http://epimarketplace.net/em-terms/refPubMedID
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

date

Name of Term	Date
EM Term URI	http://epimarketplace.net/em-terms/date
EM qualified name	em:date
DC Term URI	http://purl.org/dc/terms/date
DC Qualified name	dc:date
Label	Date
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A date associated with an event in the life cycle of the resource.
EM Definition	Should be the date that the dataset was created or last modified to assume the configuration in which it is submitted to the repository.
DC Comments	Typically, date will be associated with the creation or availability of the resource. Recommended best practice for encoding the date value is defined in a profile of ISO 8601 [W3CDTF] and follows the YYYY-MM-DD format.
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	
Obligation	R
Occurrence	1

dateSubmitted

Name of Term	DateSubmitted
EM Term URI	http://epimarketplace.net/em-terms/dateSubmitted
EM qualified name	em:dateSubmitted
DC Term URI	http://purl.org/dc/terms/dateSubmitted
DC Qualified name	dc:dateSubmitted
Label	Date Submitted

Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	Date of submission of the resource (e.g. thesis, articles, etc.).
EM Definition	
DC Comments	
EM Comments	Should be stored automatically by the program when the file is submitted and annotated, without need from user input.
Refines	
Refined By	
Has Encoding Scheme	ISO 8601 - http://purl.org/dc/terms/ISO8601 W3C-DTF - http://purl.org/dc/terms/W3CDTF
Obligation	M
Occurrence	0 or 1

description

Name of Term	Description
EM Term URI	http://epimarketplace.net/em-terms/description
EM qualified name	em:description
DC Term URI	http://purl.org/dc/terms/description
DC qualified name	dc:description
Label	Description
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	An account of the content of the resource.
EM Definition	
DC Comments	Description may include but is not limited to: an abstract, table of contents, reference to a graphical representation of content or a free-text account of the content.
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	0 or 1

format

Name of Term	Format
EM Term URI	http://epimarketplace.net/em-terms/format
EM qualified name	em:format
DC Term URI	http://purl.org/dc/terms/format
DC Qualified name	dc: format
Label	Format
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	The physical or digital manifestation of the resource.
EM Definition	
DC Comments	Typically, Format may include the media-type or dimensions of the resource. Format may be used to determine the software, hardware or

	other equipment needed to display or operate the resource. Examples of dimensions include size and duration. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of Internet Media Types [MIME] defining computer media formats).
EM Comments	Should be filled automatically
Refines	
Refined By	
Has Encoding Scheme	IMT - http://purl.org/dc/terms/IMT The Internet media type of the resource: http://www.isi.edu/in-notes/iana/assignments/media-types/media-types
Obligation	M
Occurrence	0 or 1

identifier

Name of Term	Identifier
EM Term URI	http://epimarketplace.net/em-terms/identifier
EM qualified name	em:identifier
DC Term URI	http://purl.org/dc/terms/identifier
DC Qualified name	dc:identifier
Label	Identifier
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	
EM Definition	
DC Comments	
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	0 or 1

language

Name of Term	Language
EM Term URI	http://epimarketplace.net/em-terms/language
EM qualified name	em:language
DC Term URI	http://purl.org/dc/terms/language
DC Qualified name	dc:language
Label	Language
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A language of the intellectual content of the resource.
EM Definition	
DC Comments	Recommended best practice is to use RFC 3066 [RFC3066], which, in conjunction with ISO 639 [ISO639], defines two- and three-letter primary language tags with optional subtags. Example: en for English, pt for Portuguese
EM Comments	Use the most recent version of the encoding scheme for tags: BCP47.

	The language name is also included while a system to decode the tag for human users is not implemented.
Refines	
Refined By	
Has Encoding Scheme	BCP47
Obligation	R
Occurrence	0 or more

publisher

Name of Term	Publisher
EM Term URI	http://epimarketplace.net/em-terms/publisher
EM qualified name	em:publisher
DC Term URI	http://purl.org/dc/terms/publisher
DC Qualified name	dc:publisher
Label	Publisher
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	An entity responsible for making the resource available.
EM Definition	In the Epidemic marketplace it is user that submits the resource to the repository.
DC Comments	Examples of a Publisher include a person, an organization, or a service. Typically, the name of a Publisher should be used to indicate the entity.
EM Comments	The user may be a person or an organization. Should be filled automatically.
Refines	
Refined By	http://epimarketplace.net/em-terms/pubname http://epimarketplace.net/em-terms/puborg http://epimarketplace.net/em-terms/puburl
Has Encoding Scheme	
Obligation	R
Occurrence	0 or 1

rights

Name of Term	Rights
EM Term URI	http://epimarketplace.net/em-terms/rights
EM qualified name	em:rights
DC Term URI	http://purl.org/dc/terms/rights
DC Qualified name	dc:rights
Label	Rights
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	Information about rights held in and over the resource.
EM Definition	
DC Comments	Typically, a Rights element will contain a rights management statement for the resource, or reference a service providing such information. Rights information often encompasses Intellectual Property Rights (IPR), Copyright, and various Property Rights. If the Rights element is absent, no assumptions can be made about the status of these and other rights

	with respect to the resource.
EM Comments	
Refines	
Refined By	http://epimarketplace.net/em-terms/rightsHolder http://epimarketplace.net/em-terms/copyright http://epimarketplace.net/em-terms/disclaimer
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or 1

rightsHolder

Name of Term	RightsHolder
EM Term URI	http://epimarketplace.net/em-terms/rightsHolder
EM qualified name	em:rightsHolder
DC Term URI	http://purl.org/dc/terms/rightsHolder
DC Qualified name	dc:rightsHolder
Label	Rights Holder
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A person or organization owning or managing rights over the resource.
EM Definition	
DC Comments	
EM Comments	
Refines	http://epimarketplace.net/em-terms/rights
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

source

Name of Term	Source
EM Term URI	http://epimarketplace.net/em-terms/source
EM qualified name	em:source
DC Term URI	http://purl.org/dc/terms/source
DC Qualified name	dc:source
Label	Source
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A Reference to a resource from which the present resource is derived.
EM Definition	
DC Comments	
EM Comments	Description of the source structured in the sub-elements source name, description and URL
Refines	
Refined By	http://epimarketplace.net/em-terms/srcName http://epimarketplace.net/em-terms/srcDescription http://epimarketplace.net/em-terms/srcURL
Has Encoding	

Scheme	
Obligation	RA
Occurrence	0 or more

spatial

Name of Term	Spatial
EM Term URI	http://epimarketplace.net/em-terms/spatial
EM qualified name	em:spatial
DC Term URI	http://purl.org/dc/terms/spatial
DC Qualified name	dc:spatial
Label	Spatial
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	Spatial coverage of the resource.
EM Definition	
DC Comments	
EM Comments	
Refines	
Refined By	http://epimarketplace.net/em-terms/city http://epimarketplace.net/em-terms/country http://epimarketplace.net/em-terms/region
Has Encoding Scheme	Yahoo! GeoPlanet DCMI Point - http://purl.org/dc/terms/Point ISO 3166 - http://purl.org/dc/terms/ISO3166 DCMI Box - http://purl.org/dc/terms/Box TGN - http://purl.org/dc/terms/TGN Geonames
Obligation	RA
Occurrence	0 or more

subject

Name of Term	Subject
EM Term URI	http://epimarketplace.net/em-terms/subject
EM qualified name	em: subject
DC Term URI	http://purl.org/dc/terms/subject
DC Qualified name	dc:subject
Label	Subject
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	The topic of the content of the resource.
EM Definition	Use keywords
DC Comments	Typically, a Subject will be expressed as keywords, key phrases or classification codes that describe a topic of the resource. Recommended best practice is to select a value from a controlled vocabulary or formal classification scheme.
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	

Obligation	R
Occurrence	0 or more

temporal

Name of Term	Temporal
EM Term URI	http://epimarketplace.net/em-terms/temporal
EM qualified name	em:temporal
DC Term URI	http://purl.org/dc/terms/temporal
DC Qualified name	dc:temporal
Label	Temporal
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	Temporal characteristics of the resource.
EM Definition	
DC Comments	
EM Comments	
Refines	
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

title

Name of Term	Title
EM Term URI	http://epimarketplace.net/em-terms/title
EM qualified name	em:title
DC Term URI	http://purl.org/dc/terms/title
DC Qualified name	dc:title
Label	Title
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	A name given to the resource
EM Definition	-
DC Comments	Typically, a title will be a name by which the resource is formally known.
EM Comments	If no title is given a name should be assigned automatically.
Refines	
Refined By	
Has Encoding Scheme	
Obligation	M
Occurrence	1

type

Name of Term	Type
EM Term URI	http://epimarketplace.net/em-terms/type
EM qualified name	em:type
DC Term URI	http://purl.org/dc/terms/type
DC Qualified name	dc:type

Label	Type
Defined By	http://dublincore.org/documents/dcmi-terms
DC Definition	The nature or genre of the content of the resource.
EM Definition	
DC Comments	Type includes terms describing general categories, functions, genres, or aggregation levels for content. Recommended best practice is to select a value from a controlled vocabulary (for example, the list of DCMI Types). To describe the physical or digital manifestation of the resource, use the Format element.
EM Comments	Use a controlled list
Refines	
Refined By	
Has Encoding Scheme	EM-Type
Obligation	M
Occurrence	1

A.2- EM metadata elements defined locally

In this section several metadata property elements are proposed to be used specifically in the Epidemic Marketplace (EM). These terms should describe epidemiological and related data.

author

Name of Term	Author
Term URI	http://epimarketplace.net/em-terms/author
Qualified name	em:author
Label	Author
Defined By	http://epimarketplace.net/em-terms
EM Definition	Set of metadata elements to describe the author(s).
EM Comments	
Refines	
Refined By	http://epimarketplace.net/em-terms/authname http://epimarketplace.net/em-terms/authorg http://epimarketplace.net/em-terms/authorurl
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

authName

Name of Term	AuthName
Term URI	http://epimarketplace.net/em-terms/authName
Qualified name	em:authName
Label	Author Name.
Defined By	http://epimarketplace.net/em-terms
EM Definition	The name of the author.
EM Comments	
Refines	http://epimarketplace.net/em-terms/author
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or 1

authOrg

Name of Term	AuthOrg
Term URI	http://epimarketplace.net/em-terms/authOrg
Qualified name	em:authOrg
Label	Author Affiliation.
Defined By	http://epimarketplace.net/em-terms
EM Definition	The organization for which the author works for.
EM Comments	

Refines	http://epimarketplace.net/em-terms/author
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or 1

authorURL

Name of Term	AuthorURL
Term URI	http://epimarketplace.net/em-terms/authorURL
Qualified name	em:authorURL
Label	Author Homepage
Defined By	http://epimarketplace.net/em-terms
EM Definition	Author homepage
EM Comments	Use URL
Refines	http://epimarketplace.net/em-terms/author
Refined By	
Has Encoding Scheme	RFC 3986 URI - http://purl.org/dc/terms/URI
Obligation	RA
Occurence	0 or 1

citation

Name of Term	Citation
Term URI	http://epimarketplace.net/em-terms/citation
Qualified name	em:citation
Label	Citation
Defined By	http://epimarketplace.net/em-terms
EM Definition	Bibliographic reference of the resource. This applies for published resources, such as books, journals and technical reports. Unlike bibliographicCitation, this is resource citation
EM Comments	The use of a specific format, such as bibTEX, or other widely used is recommended.
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

city

Name of Term	City
Term URI	http://epimarketplace.net/em-terms/city
Qualified name	em:city
Label	City
Defined By	http://epimarketplace.net/em-terms
EM Definition	A city.

EM Comments	
Refines	http://epimarketplace.net/em-terms/spatial
Refined By	
Has Encoding Scheme	Yahoo! GeoPlanets
Obligation	RA
Occurrence	0 or more

copyright

Name of Term	Copyright
Term URI	http://epimarketplace.net/em-terms/copyright
Qualified name	em:copyright
Label	Copyright
Defined By	http://epimarketplace.net/em-terms
EM Definition	The copyright of the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/rights
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or 1

country

Name of Term	Country
Term URI	http://epimarketplace.net/em-terms/country
Qualified name	em:country
Label	Country
Defined By	http://epimarketplace.net/em-terms
EM Definition	A country.
EM Comments	
Refines	http://epimarketplace.net/em-terms/spatial
Refined By	
Has Encoding Scheme	Yahoo! GeoPlanets
Obligation	RA
Occurrence	0 or more

demographic

Name of Term	Demographic
Term URI	http://epimarketplace.net/em-terms/demographic
Qualified name	em:demographic
Label	Demographic
Defined By	http://epimarketplace.net/em-terms
EM Definition	Describes the type of demographic elements contained in the resource. For example, population size, distribution, birth rates, etc.
EM Comments	A controlled list of demographic elements should be defined.

Refines	
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

disclaimer

Name of Term	Disclaimer
Term URI	http://epimarketplace.net/em-terms/disclaimer
Qualified name	em:disclaimer
Label	Disclaimer
Defined By	http://epimarketplace.net/em-terms
EM Definition	A disclaimer for the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/rights
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or 1

discussionURL

Name of Term	DiscussionURL
Term URI	http://epimarketplace.net/em-terms/discussionURL
Qualified name	em:disussionURL
Label	Discussion URL
Defined By	http://epimarketplace.net/em-terms
EM Definition	A URL to a web page where the resource is under discussion.
EM Comments	Example. A forum, a blog, etc.
Refines	http://epimarketplace.net/em-terms/bibliographicCitation
Refined By	
Has Encoding Scheme	
Obligation	O
Occurence	0 or more

diagnosticMethod

Name of Term	DiagnosticMethod
Term URI	http://epimarketplace.net/em-terms/diagnosticMethod
Qualified name	em:diagnosticMethod
Label	Diagnostic Method
Defined By	http://epimarketplace.net/em-terms
EM Definition	A diagnostic test used to obtain data in the resource or which protocol is defined in the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/epidemiological

Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

disease

Name of Term	Disease
Term URI	http://epimarketplace.net/em-terms/disease
Qualified name	em:disease
Label	Disease
Defined By	http://epimarketplace.net/em-terms
EM Definition	A unequivocal name for a disease (or more) about which data is contained in the resource
EM Comments	The ICD-10 disease coding or the UMLS (which includes ICD) should be used for the standardization the disease names used.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	ICD-10 UMLS http://www.infectiousdiseaseontology.org/IDO.html http://code.google.com/p/infectious-disease-ontology/ http://www.obofoundry.org/cgi-bin/detail.cgi?id=disease_ontology
Obligation	RA
Occurence	0 or more

DOI

Name of Term	DOI
Term URI	http://epimarketplace.net/em-terms/DOI
Qualified name	em:DOI
Label	DOI
Defined By	http://epimarketplace.net/em-terms
EM Definition	The DOI of the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or 1

drug

Name of Term	Drug
Term URI	http://epimarketplace.net/em-terms/drug
Qualified name	em:drug
Label	Drug
Defined By	http://epimarketplace.net/em-terms

EM Definition	Describe chemical compounds used in disease treatment.
EM Comments	A controlled vocabulary should be used. While not found should be user defined.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	National drug Code Directory (FDA) http://www.accessdata.fda.gov/scripts/cder/ndc/default.cfm ChEBI
Obligation	RA
Occurence	0 or more

environmental

Name of Term	Environmental
Term URI	http://epimarketplace.net/em-terms/environmental
Qualified name	em:environmental
Label	Environmental
Defined By	http://epimarketplace.net/em-terms
EM Definition	Describe environmental data contained in the resource.
EM Comments	A list of environmental topics should be provided.
Refines	
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

epidemiological

Name of Term	Epidemiological
Term URI	http://epimarketplace.net/em-terms/epidemiological
Qualified name	em:epidemiological
Label	Epidemiological
Defined By	http://epimarketplace.net/em-terms
EM Definition	A group of metadata elements for the description of epidemiological data contained in the resource.
EM Comments	
Refines	
Refined By	http://epimarketplace.net/em-terms/diagnosticMethod http://epimarketplace.net/em-terms/disease http://epimarketplace.net/em-terms/drug http://epimarketplace.net/em-terms/hostSp http://epimarketplace.net/em-terms/hostgroup http://epimarketplace.net/em-terms/pathSp http://epimarketplace.net/em-terms/pathoGroup http://epimarketplace.net/em-terms/strain http://epimarketplace.net/em-terms/vaccine http://epimarketplace.net/em-terms/vector
Has Encoding Scheme	

Obligation	RA
Occurrence	0 or more

hostSp

Name of Term	HostSp
Term URI	http://epimarketplace.net/em-terms/hostSp
Qualified name	em:hostSp
Label	Host Species
Defined By	http://epimarketplace.net/em-terms
EM Definition	The species of the organism that is the disease host.
EM Comments	Define controlled vocabulary. Taxonomy. A scientific classification should be used- species name. Ex.: Homo sapiens sapiens
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	http://www.treebase.org/treebase-web/home.html;jsessionid=9F231B51776C8038FC805F71BA3E1D23
Obligation	RA
Occurrence	0 or more

hostGroup

Name of Term	HostGroup
Term URI	http://epimarketplace.net/em-terms/hostGroup
Qualified name	em:hostGroup
Label	Host Group
Defined By	http://epimarketplace.net/em-terms
EM Definition	A dataset may contain data not about a specific species but rather a larger group comprising different species. When the larger group is the target this element should be used. For example, when referring to groups such as rodents or household animals.
EM Comments	When possible a scientific classification should be used.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

generalDescription

Name of Term	GeneralDescription
Term URI	http://epimarketplace.net/em-terms/generalDescription
Qualified name	em:generalDescription
Label	General Description
Defined By	http://epimarketplace.net/em-terms
EM Definition	Group of metadata elements to provide a general description of the resource.
EM Comments	A controlled list needs to be defined
Refines	

Refined By	http://epimarketplace.net/em-terms/abstract http://epimarketplace.net/em-terms/description http://epimarketplace.net/em-terms/citation http://epimarketplace.net/em-terms/DOI http://epimarketplace.net/em-terms/format http://epimarketplace.net/em-terms/ISBN http://epimarketplace.net/em-terms/ISSN http://epimarketplace.net/em-terms/language http://epimarketplace.net/em-terms/pubmedID http://epimarketplace.net/em-terms/type http://epimarketplace.net/em-terms/URL http://epimarketplace.net/em-terms/venue http://epimarketplace.net/em-terms/version
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

geographic

Name of Term	Geographic
Term URI	http://epimarketplace.net/em-terms/geographic
Qualified name	em:geographic
Label	Geographic
Defined By	http://epimarketplace.net/em-terms
EM Definition	Describe geographic data contained in the resource.
EM Comments	A list of environmental topics should be provided.
Refines	
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

ISBN

Name of Term	ISBN
Term URI	http://epimarketplace.net/em-terms/ISBN
Qualified name	em:ISBN
Label	ISBN
Defined By	http://epimarketplace.net/em-terms
EM Definition	The ISBN number of the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

ISSN

Name of Term	ISSN
Term URI	http://epimarketplace.net/em-terms/ISSN
Qualified name	em:ISSN
Label	ISSN
Defined By	http://epimarketplace.net/em-terms
EM Definition	The ISSN number of the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

organization

Name of Term	Organization
Term URI	http://epimarketplace.net/em-terms/organization
Qualified name	em:organization
Label	Organization
Defined By	http://epimarketplace.net/em-terms
EM Definition	Set of element to describe the organization responsible for the creation of a resource.
EM Comments	To be used instead of author, when the author is presented as an organization instead of a person or group of people.
Refines	
Refined By	http://epimarketplace.net/em-terms/orgname http://epimarketplace.net/em-terms/orgURL
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

orgName

Name of Term	OrgName
Term URI	http://epimarketplace.net/em-terms/orgname
Qualified name	em:orgName
Label	Organization Name
Defined By	http://epimarketplace.net/em-terms
EM Definition	The name of the organization responsible for the creation of the dataset.
EM Comments	
Refines	http://epimarketplace.net/em-terms/organization
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

orgURL

Name of Term	OrgURL
Term URI	http://epimarketplace.net/em-terms/orgURL
Qualified name	em:orgURL
Label	Organization web address
Defined By	http://epimarketplace.net/em-terms
EM Definition	The web address of organization responsible for the creation of the dataset.
EM Comments	
Refines	http://epimarketplace.net/em-terms/organization
Refined By	
Has Encoding Scheme	RFC 3986
Obligation	URI - http://purl.org/dc/terms/URI
Occurrence	RA
	0 or more

pathoGroup

Name of Term	pathoGroup
Term URI	http://epimarketplace.net/em-terms/pathoGroup
Qualified name	em:pathoGroup
Label	Pathogen Group
Defined By	http://epimarketplace.net/em-terms
EM Definition	A dataset may contain data not about a specific species but rather a larger group comprising different species. When the larger group is the target this element should be used. For example when referring to parasites of the Apicomplexa Phylum.
EM Comments	When possible a scientific classification should be used.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

pathoSp

Name of Term	PathoSp
Term URI	http://epimarketplace.net/em-terms/pathoSp
Qualified name	em:pathoSp
Label	Pathogen species
Defined By	http://epimarketplace.net/em-terms
EM Definition	Identifies a pathogenic organism. Ex.: <i>Staphylococcus aureus</i> , <i>Haemophilus influenza</i> , <i>Mycobacterium tuberculosis</i> , <i>Plasmodium falciparum</i>
EM Comments	A scientific classification should be used- species name.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	http://www.viprbrc.org/brc/home.do?decorator=vipr http://eupathdb.org/eupathdb/ http://www.issg.org/database/species/ecology.asp?fr=1&si=326&sts

	http://www.dsmz.de/microorganisms/main.php?contentleft%20id=14 http://www.species2000.org/ http://www.itis.gov/ http://doi.namesforlife.com/ http://bac.hs.med.kyoto-u.ac.jp/alphabet-e.html
Obligation	RA
Occurrence	0 or more

pathoStrain

Name of Term	PathoStrain
Term URI	http://epimarketplace.net/em-terms/pathoStrain
Qualified name	em:pathoStrain
Label	Pathogen Strain
Defined By	http://epimarketplace.net/em-terms
EM Definition	Identifies a pathogenic organism. Ex.: <i>Staphylococcus aureus</i> , <i>Haemophilus influenza</i> , <i>Mycobacterium tuberculosis</i> , <i>Plasmodium falciparum</i>
EM Comments	A scientific classification should be used- species name.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

pubmedID

Name of Term	PubmedID
Term URI	http://epimarketplace.net/em-terms/pubmedID
Qualified name	em:pubmedID
Label	Pubmed ID
Defined By	http://epimarketplace.net/em-terms
EM Definition	The ID in the Pubmed repository
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	0 or 1

pubName

Name of Term	PubName
Term URI	http://epimarketplace.net/em-terms/pubName
Qualified name	em:pubName
Label	Publisher Name
Defined By	http://epimarketplace.net/em-terms
EM Definition	Name of the user that submits the resource to the EM.
EM Comments	

Refines	http://epimarketplace.net/em-terms/publisher
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

puOrg

Name of Term	PubOrg
Term URI	http://epimarketplace.net/em-terms/pubOrg
Qualified name	em:pubOrg
Label	Publisher Affiliation
Defined By	http://epimarketplace.net/em-terms
EM Definition	Organization for which the publisher works for or if the user who submits is an organization.
EM Comments	
Refines	http://epimarketplace.net/em-terms/publisher
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

pubURL

Name of Term	PubURL
Term URI	http://epimarketplace.net/em-terms/pubURL
Qualified name	em:pubURL
Label	Publisher Homepage
Defined By	http://epimarketplace.net/em-terms
EM Definition	Homepage of the publisher.
EM Comments	
Refines	http://epimarketplace.net/em-terms/publisher
Refined By	
Has Encoding Scheme	RFC 3986 URI - http://purl.org/dc/terms/URI
Obligation	RA
Occurrence	0 or more

region

Name of Term	Region
Term URI	http://epimarketplace.net/em-terms/region
Qualified name	em:region
Label	Region
Defined By	http://epimarketplace.net/em-terms
EM Definition	A region.
EM Comments	
Refines	http://epimarketplace.net/em-terms/spatial

Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

refCitation

Name of Term	RefCitation
Term URI	http://epimarketplace.net/em-terms/refCitation
Qualified name	em: refCitation
Label	Reference Citation
Defined By	http://epimarketplace.net/em-terms
EM Definition	The citation of a reference for the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/bibliographicCitation
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	0 or 1

refDOI

Name of Term	RefDOI
Term URI	http://epimarketplace.net/em-terms/refDOI
Qualified name	em: refDOI
Label	Reference DOI
Defined By	http://epimarketplace.net/em-terms
EM Definition	The DOI of a reference for the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/bibliographicCitation
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or 1

refPubmedID

Name of Term	RefPubmedID
Term URI	http://epimarketplace.net/em-terms/refPubmedID
Qualified name	em:refPubmedID
Label	Reference Pubmed ID
Defined By	http://epimarketplace.net/em-terms
EM Definition	The citation of a reference for the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/bibliographicCitation
Refined By	
Has Encoding	

Scheme	
Obligation	O
Occurrence	0 or 1

socioEconomic

Name of Term	SocioEconomic
Term URI	http://epimarketplace.net/em-terms/socioEconomic
Qualified name	em:socioEconomic
Label	Socio-Economic
Defined By	http://epimarketplace.net/em-terms
EM Definition	Describe social or/and economical data contained in the resource.
EM Comments	A list of topics should be provided.
Refines	
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

srcDescription

Name of Term	SrcDescription
Term URI	http://epimarketplace.net/em-terms/srcDescription
Qualified name	em:srcDescription
Label	Source Description
Defined By	http://epimarketplace.net/em-terms
EM Definition	A description of the source of the resource
EM Comments	
Refines	http://epimarketplace.net/em-terms/source
Refined By	
Has Encoding Scheme	
Obligation	O
Occurrence	0 or 1

srcName

Name of Term	srcName
Term URI	http://epimarketplace.net/em-terms/srcName
Qualified name	em:srcName
Label	Source Name
Defined By	http://epimarketplace.net/em-terms
EM Definition	The name of the source
EM Comments	
Refines	http://epimarketplace.net/em-terms/source
Refined By	
Has Encoding Scheme	
Obligation	RA

Occurrence	0 or 1
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srcURL

Name of Term	SrcURL
Term URI	http://epimarketplace.net/em-terms/srcURL
Qualified name	em:srcURL
Label	Source URL
Defined By	http://epimarketplace.net/em-terms
EM Definition	The URL of the source
EM Comments	
Refines	http://epimarketplace.net/em-terms/source
Refined By	
Has Encoding Scheme	RFC 3986
URI -	http://purl.org/dc/terms/URI
Obligation	RA
Occurrence	0 or 1

tempFrom

Name of Term	TempFrom
Term URI	http://epimarketplace.net/em-terms/tempFom
Qualified name	em: tempFrom
Label	From (date)
Defined By	http://epimarketplace.net/em-terms
EM Definition	A date relative to the start of a period of time.
EM Comments	Used for the description of time periods related to the temporal coverage. Requires the filling of tempTo.
Refines	http://epimarketplace.net/em-terms/temporal
Refined By	
Has Encoding Scheme	W3C-DTF - http://purl.org/dc/terms/W3CDTF
Obligation	RA
Occurrence	0 or more

tempTo

Name of Term	TempTo
Term URI	http://epimarketplace.net/em-terms/tempTo
Qualified name	em: tempTo
Label	To (date)
Defined By	http://epimarketplace.net/em-terms
EM Definition	A date relative to the end of a period of time.
EM Comments	Used for the description of time periods related to the temporal coverage. Requires the filling of tempFrom.
Refines	http://epimarketplace.net/em-terms/temporal
Refined By	
Has Encoding Scheme	W3C-DTF - http://purl.org/dc/terms/W3CDTF
Obligation	RA

Occurrence	0 or more
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typeOfDoc

Name of Term	TypeOfDoc
Term URI	http://epimarketplace.net/em-terms/typeofdoc
Qualified name	em: typeOfDoc
Label	Type of Document
Defined By	http://epimarketplace.net/em-terms
EM Definition	Type of document.
EM Comments	A list of types of documents should be provided.
Refines	
Refined By	
Has Encoding Scheme	EM-Doc-Type
Obligation	RA
Occurrence	0 or more

typeOfWR

Name of Term	TypeOfWR
Term URI	http://epimarketplace.net/em-terms/typeofwr
Qualified name	em: typeOfWR
Label	Type of Web Resource
Defined By	http://epimarketplace.net/em-terms
EM Definition	Type of Web Resource
EM Comments	A list of types of web resources should be provided.
Refines	
Refined By	
Has Encoding Scheme	EM-WR-Type
Obligation	RA
Occurrence	0 or more

URL

Name of Term	URL
Term URI	http://epimarketplace.net/em-terms/URL
Qualified name	em:URL
Label	URL
Defined By	http://epimarketplace.net/em-terms
EM Definition	URL of the resource.
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	RFC 3986 URI - http://purl.org/dc/terms/URI
Obligation	RA
Occurrence	0 or more

vaccine

Name of Term	Vaccine
Term URI	http://epimarketplace.net/em-terms/vaccine
Qualified name	em:vaccine
Label	Vaccine
Defined By	http://epimarketplace.net/em-terms
EM Definition	Describe a vaccine used in the study about which the dataset refers. Ex.: data about vaccination tests
EM Comments	Vaccine compound or name by which it is known.
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	Vaccine ontology http://www.violinet.org/vaccineontology/
Obligation	RA
Occurence	0 or more

vector

Name of Term	Vector
Term URI	http://epimarketplace.net/em-terms/vector
Qualified name	em:vector
Label	Vector
Defined By	http://epimarketplace.net/em-terms
EM Definition	Identifies the organism that is the vector of a specific disease covered in the dataset.
EM Comments	A scientific classification should be used when possible. Ex.: a species name (ex.: <i>Anopheles gambiae</i>) or a group (anopheline mosquitoes)
Refines	http://epimarketplace.net/em-terms/epidemiological
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

venue

Name of Term	Venue
Term URI	http://epimarketplace.net/em-terms/venue
Qualified name	em:venue
Label	Venue
Defined By	http://epimarketplace.net/em-terms
EM Definition	Specific location of an event, such as an address
EM Comments	
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurence	0 or more

version

Name of Term	Version
Term URI	http://epimarketplace.net/em-terms/version
Qualified name	em:version
Label	Version
Defined By	http://epimarketplace.net/em-terms
EM Definition	Defines the resource version.
EM Comments	The syntax to be used should conform to the versioning system used by the author.
Refines	http://epimarketplace.net/em-terms/generalDescription
Refined By	
Has Encoding Scheme	
Obligation	RA
Occurrence	0 or more

A.3- Encoding schemes

Vocabulary encoding schemes to be used in the Epidemic Marketplace.

BCP47

Name of Term	BCP47
Term URI	
Label	BCP47
Defined By	http://tools.ietf.org/rfc/bcp/bcp47.txt
Definition	<p>Each language tag is composed of one or more "subtags" separated by hyphens (-). Each subtag is made with basic Latin letters or digits only. With the exception of private-use language tags (defined with the "x-" prefix) and grandfathered language tags (including those starting with the "i-" prefix and that were registered in the IANA database for language tags), the subtags occur in the following order:</p> <ul style="list-style-type: none">• a single <i>language subtag</i> composed of 2 or 3 letters (potentially followed by up to three <i>extended language subtags</i> separated by hyphens: each one composed of 3 letters, those existing language tags that collided with the syntax of <i>extended language subtags</i> having been <i>grandfathered</i> in RFC 5646, so that there is currently no <i>extended language subtag</i> registered in the IANA database without an equivalent and preferred (primary) <i>language subtag</i> : all others are reserved for future parts of ISO 639),• an optional <i>script subtag</i>, composed of 4 letters only;• an optional <i>region subtag</i>, composed of 2 letters or 3 digits only;• optional <i>variant subtags</i>, each one composed of either:<ul style="list-style-type: none">○ 5 to 8 letters, or○ one digit followed by 3 letters or digits;• optional <i>extension subtags</i>, each one composed of:<ul style="list-style-type: none">○ a single digit or a single letter with the exception of letter <i>x</i>, used as a <i>singleton</i>,○ a single hyphen, and○ 2 to 8 letters or digits;• an optional <i>private use subtag</i>, composed of a single letter <i>x</i>, followed by one or more of:<ul style="list-style-type: none">○ a single hyphen, followed by○ 1 to 8 letters or digits; <p>Subtags are not case sensitive, but the specification recommends using the same case as in the Language Subtag Registry, where region subtags are uppercase, script subtags are titlecase and all other subtags are lowercase. This capitalization follows the recommendations of the underlying ISO standards. The use, interpretation (and matching) of language tags is currently defined in RFC 4647 (in combination with RFC 5646).</p>
Comments	
See Also	
Type of term	http://purl.org/dc/dcam/VocabularyEncodingScheme
Encoding	Language

Scheme For

EMType

Name of Term	EMType
Term URI	http://epimarketplace.net/em-terms/EMType
Label	EM Type Vocabulary
Defined By	http://epimarketplace.net/em-terms
Definition	The set of classes specified by the EM Type Vocabulary, used to categorize the nature or genre of the resource.
Comments	
See Also	
Encoding Scheme For	Type
Version	v.1

IMT

Name of Term	IMT
Term URI	http://purl.org/dc/terms/imt
Label	IMT
Defined By	http://purl.org/dc/terms
Definition	The set of media types specified by the Internet Assigned Numbers Authority.
Comments	
See Also	http://www.iana.org/assignments/media-types
Encoding Scheme For	Format

MESH

Name of Term	MESH
Term URI	http://purl.org/dc/terms/MESH
Label	MESH
Defined By	http://purl.org/dc/terms
Definition	The set of labeled concepts specified by the Medical Subject Headings
Comments	
See Also	http://nlm.nih.gov/mesh/meshhome.html
Encoding Scheme For	Subject

ISO8601

Name of Term	ISO8601
Term URI	http://purl.org/dc/terms/ISO8601
Label	ISO 8601

Defined By	http://purl.org/dc/terms/
Definition	
Comments	
See Also	
Type of term	http://purl.org/dc/dcam/VocabularyEncodingScheme
Encoding Scheme For	Date, DateSubmitted, TempFrom, TempTo

W3CDTF

Name of Term	W3CDTF
Term URI	http://purl.org/dc/terms/W3CDTF
Label	W3C-DTF
Defined By	http://purl.org/dc/terms/
Definition	W3C encoding rules for dates and times - a profile based on ISO 8601.
Comments	
See Also	http://www.w3c.org/TR/NOTE-datetime
Type of term	http://purl.org/dc/dcam/VocabularyEncodingScheme
Encoding Scheme For	Date, DateSubmitted, TempFrom, TempTo

Yahoo! GeoPlanet

Name of Term	Yahoo! GeoPlanet
Term URI	http://epimarketplace.net/em-terms/YGP
Label	YGP
Defined By	http://epimarketplace.net/em-terms
Definition	Yahoo! GeoPlanet
Comments	
See Also	
Encoding Scheme For	City, Country

URI

Name of Term	URI
Term URI	http://purl.org/dc/terms/URI
Label	URI
Defined By	http://purl.org/dc/terms
Definition	A URI uniform resource identifier.
Comments	
See Also	http://www.ietf.org/rfc/rfc2396.txt
Type of term	http://purl.org/dc/dcam/VocabularyEncodingScheme
Encoding Scheme For	srcURL, authorURI, orgURL, pubURL, URL

UMLS

Name of Term	UMLS (Unified Medical Language System)
Term URI	http://epimarketplace.net/em-terms/UMLS
Label	UMLS
Defined By	http://epimarketplace.net/em-terms
Definition	The UMLS integrates and distributes Biomedical key terminology, classification and coding standards, and associated resources.
Comments	
See Also	
Type of term	http://purl.org/dc/dcam/VocabularyEncodingScheme
Encoding Scheme For	Disease