

Options for PBCore Metadata Element Encoding Schemes and/or Lists of Recommended Values

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What this document represents...

As the Public Broadcasting Metadata Dictionary Review Team has wrestled with the core metadata elements, the need has become clear to utilize pre-established encoding schemes and/or lists of recommended values that are referenced during the markup of assets for their content, intellectual property rights and instantiations.

This information is included in preliminary form in the FileMaker Pro document (PBCore_Commented_Nov02.fp5) that emerged from the BeanTown SmackDown, October 16-18, 2002. Nevertheless, the Team expressed a desire to extract from the larger document a subset of the metadata attributes that presents only the metadata elements and their possible encoding schemes and/or value lists.

This Microsoft Word document contains a table that outlines this information. The following is included for the 59 SmackDown metadata elements:

1. PBCore Element Number
1. PBCore Element Name
1. Element's Registration Authority
1. Element's Description
1. Identification of Recommended Encoding Schemes and/or References to Lists of Recommended Values (43 elements: some are encoding schemes, others are value lists).

In many cases, more than one encoding scheme is identified for an element. Up for discussion are the following issues:

1. Should a PBCore metadata element have assigned to it only one encoding scheme?
1. If more than one encoding scheme is possible, how is the encoding scheme that is employed during asset markup identified and conveyed to other parties and communities?
1. Which encoding schemes should be blessed for an element by the Dictionary Team?
1. Where no encoding schemes or value lists are presented, it is assumed they are not needed.
1. Some elements require a specific "structure" to their markup descriptions. These are not included for discussion in this document.
1. Where a formal encoding scheme is not identified or needed, then Lists of Recommended Values should be generated as appropriate. In this document, such Value Lists have been linked to an entity named:

"PBCore Value List Recommendations
<<http://www.utah.edu/cpbmetadata>>

These value lists have been partially generated by the Dictionary Team and are included in preliminary form in the FileMaker Pro document, PBCore_Commented_Nov02.fp5. They need work. Also, the website link that is indicated as a resource obviously exists, but the values are not posted for others to view at this time. The link is intended as a future website feature if needed.

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
01.00 Title	DCMI: A name given to a resource, as well as any other title(s) that would be useful in uniquely identifying a resource and that would facilitate discovery and retrieval.
01.01 Title.Alternate	DCMI: An Alternative Title is used in order to identify an asset or resource that has a title similar to the proper title, but which further assists in discovery and retrieval.
01.02 Title.Series	[PBCore]: A Series Title is one specifically identified by the video or audio production agency and is named as such in order to facilitate discovery and retrieval, as well as to more accurately reflect how a resource's title fits into a hierarchy of proper titles that are used to describe it.
01.03 Title.Episode	[PBCore]: An Episode Title is one specifically identified by the video or audio production agency and is named as such in order to facilitate discovery and retrieval, as well as to more accurately reflect how a resource's title fits into a hierarchy of proper titles that are used to describe it.
01.04 Title.Program	[PBCore]: A Program Title is one specifically identified by the video or audio production agency and is named as such in order to facilitate discovery and retrieval, as well as to more accurately reflect how a resource's title fits into a hierarchy of proper titles that are used to describe it.
02.00 Creator	DCMI: An entity primarily responsible for making the content of the resource or asset. May be a person, business, organization, group, initiative or service.
<i>Encoding Scheme Options</i>	<ul style="list-style-type: none"> (1) <http://www.imc.org/pdi> (2) Follow AACR2 (Anglo-American Cataloging Rules, 2nd edition) (3) Library of Congress Name and Title Authority File <http://www.loc.gov/marc/sourcecode/authorityfile/authorityfile.html> (4) PBCore Value List Recommendations <http://www.utah.edu/cpbmetadata>
02.01 Creator.Role	[PBCore]: Unlike print resources, there is no single role, such as author, that is commonly understood to have primary responsibility for the intellectual content of many resources, such as audio, video or film assets. In such cases, creators can include many different roles deemed to have primary responsibility for the creation of the essence, such as the instructor for a video course, the interviewee from a video history program, or the director of a feature film.
<i>Encoding Scheme Options</i>	<ul style="list-style-type: none"> (1) MARC relator code list <http://lcweb.loc.gov/marc/relators/> (2) AAT (Art & Architecture Thesaurus) <http://www.getty.edu/research/tools/vocabulary/aat> (3) PBCore Value List Recommendations <http://www.utah.edu/cpbmetadata>
03.00 Subject	DCMI: The topic(s) of the intellectual content of a resource or asset. Contains controlled values and uncontrolled values (keywords). Use the Description element for more free-form text descriptions of a resource.

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
<i>Encoding Scheme Options</i>	<p>(1) LCSH: Library of Congress Subject Headings <http://www.loc.gov/catdir/cpso/lcco/lcco.html> <http://www.loc.gov/cds/lcsh.html></p> <p>(2) DDC: Dewey Decimal Classification <http://www.oclc.org/dewey/index.htm></p> <p>(3) LCC: Library of Congress Classification <http://lcweb.loc.gov/catdir/cpso/lcco/lcco.htm></p> <p>(4) UDC: Universal Decimal Classification <http://www.udcc.org></p> <p>(5) MeSH: Medical Subject Headings <http://www.nlm.nih.gov/mesh/meshhome.html></p>
04.00 Description	DCMI: An account of the intellectual content of the resource. Descriptions are more free-form text entries when compared to the controlled vocabularies associated with the Subject element.
04.01 Description.Abstract	DCMI: As an account of the content of the resource, the qualifier Abstract is a short narrative summary of the topic of the resource. Provides additional supplied text by experts that adds color or insight to the description of the resource or asset not otherwise identified in the more specific content related fields. Anecdotal comments welcomed.
04.02 Description.Table of Contents	DCMI: As an account of the content of the resource, the qualifier Table of Contents is used for partial or full listings of subunits of the resource. Use the Table of Contents to identify other descriptive information such as: Composers and Works contained in a program; Cue Sheets; Play Lists; Rundowns; EDLs (unformatted); Content Flags; Index of Sections or Segments; Formal Table of Contents.
04.03 Description.ProgramRelatedText	[PBCore]: As an account of the content of the resource, the qualifier ProgramRelatedText identifies other audio and textual representations of the main audio or language presentation mode for a resource or asset.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
05.00 Publisher	DCMI: An entity responsible for distributing or making a resource available to other end-users and communities. May be a person, business, organization, group, initiative or service. Some resources may not have a publisher or distributor, and thus will not have an entry under Publisher.
<i>Encoding Scheme Options</i>	<p>(1) <http://www.imc.org/pdi></p> <p>(2) <i>Follow AACR2 (Anglo-American Cataloging Rules, 2nd edition)</i></p> <p>(3) <i>Library of Congress Name and Title Authority File</i> <http://www.loc.gov/marc/sourcecode/authorityfile/authorityfile.html></p>
05.01 Publisher.Role	[PBCore]: The Role that is played by a specific Publisher or Publishing entity is identified.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
06.00 Contributor	DCMI: An entity responsible for making contributions to the content of the Resource, but whose contribution is secondary to any entity specified in the Creator element (for example, film editor, screenwriter, narrator). Examples of Contributor include a person, an organization, or a service. Typically, the name of a Contributor should be used to indicate the entity.
<i>Encoding Scheme Options</i>	(1) http://www.imc.org/pdi (2) <i>Follow AACR2 (Anglo-American Cataloging Rules, 2nd edition)</i> (3) <i>Library of Congress Name and Title Authority File</i> < http://www.loc.gov/marc/sourcecode/authorityfile/authorityfile.html >
06.01 Contributor.Role	[PBCore]: The Role which a Contributor plays is identified here. Use this element and qualifier to identify important production credits for a resource, e.g., producer, director, writer, special thanks, funding agencies, programmers, designers, graphics, instructional design, etc.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
07.01 Date.Created	DCMI: The creation date for a resource or program.
<i>Encoding Scheme Options</i>	(1) <i>W3C-DTF: W3C Encoding rules for dates and times, a profile based on ISO 8601</i> http://www.w3.org/TR/NOTE-datetime (2) <i>Definitions and explanation of date qualifiers</i> < http://www.mailbase.ac.uk/lists/dc-date/files/prop-19991214.html >
07.02 Date.Issued	DCMI: Date of formal issuance (e.g. publication) of a resource for general public consumption.
<i>Encoding Scheme Options</i>	(1) <i>W3C-DTF: W3C Encoding rules for dates and times, a profile based on ISO 8601</i> http://www.w3.org/TR/NOTE-datetime (2) <i>Definitions and explanation of date qualifiers</i> < http://www.mailbase.ac.uk/lists/dc-date/files/prop-19991214.html >
07.03 Date.AvailableStart	DCMI: A specific start date for a resource's availability. May refer to start dates for the availability of a program that is broadcast locally, regionally, nationally or internationally.
<i>Encoding Scheme Options</i>	(1) <i>W3C-DTF: W3C Encoding rules for dates and times, a profile based on ISO 8601</i> < http://www.w3.org/TR/NOTE-datetime > (2) <i>Definitions and explanation of date qualifiers</i> < http://www.mailbase.ac.uk/lists/dc-date/files/prop-19991214.html >
07.04 Date.AvailableEnd	DCMI: A specific date that a resource's availability has come or will come to an end. May refer to end dates for the availability of a program that is broadcast locally, regionally, nationally or internationally.
<i>Encoding Scheme Options</i>	(1) <i>W3C-DTF: W3C Encoding rules for dates and times, a profile based on ISO 8601</i> < http://www.w3.org/TR/NOTE-datetime > (2) <i>Definitions and explanation of date qualifiers</i> < http://www.mailbase.ac.uk/lists/dc-date/files/prop-19991214.html >

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
08.00 Type	DCMI: The nature or genre of the content of the resource, or the purpose for which the asset was created and made available.
<i>Encoding Scheme Options</i>	(1) <i>DCMI Type Vocabulary</i> < http://www.mailbase.ac.uk/lists/dc-type/files/type-final.html > (2) <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
08.01 Type.Form	[PBCore]: A format or program category for a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
08.02 Type.Genre	[PBCore]: The nature or genre of the content of a resource.
<i>Encoding Scheme Options</i>	(1) http://lcweb.loc.gov/rr/mopic/miqintro.html (2) <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.01 Format.Physical	[PBCore]: A physical manifestation of a resource as it may exist as a format or carrier that occupies physical space dimensions.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.02 Format.Digital	DCMI: A digital instantiation of a resource that may or may not have existed originally in an analog, physical form. Digital media formats may be expressed as formal Internet MIME types or as other means of expressing the format of a digital resource.
<i>Encoding Scheme Options</i>	(1) < http://www.utoronto.ca/webdocs/HTMLdocs/Book/Book-3ed/appb/mimetype.html > (2) <i>IMT: Internet Media Type of the resource</i> < http://www.isi.edu/in-notes/iana/assignments/media-types/media-types > (3) <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.03 [MPR].Format.Identifier	[MPR]: Identifying information about the format of a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.04 Format.FileSize	ViDe: Measures the storage requirements or file size of a digital resource in Bytes, Kilobytes, Megabytes or Gigabytes to provide the most meaning to the end user.
09.05 Format.AudioBitDepth	[PBCore]: For a program or resource, this qualified element measures an audio signal in a number of bits and answers the question, 'How Much' data is allocated to a digital sampling of an audio signal. Provides information important for identifying retrieval and playback/display requirements for a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
09.06 Format.AudioChannelConfiguration	[PBCore]: Indicates the number of audio channels configured for the playback of a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.07 Format.AudioDataRate	[PBCore]: Expressed as amount of data per second and indicates how much data is delivered through a particular delivery pipeline for every second.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.08 Format.AudioSamplingRate	[PBCore]: Measured in kiloHertz for a program or resource, this qualified element quantifies 'How Much' data is allocated to a digital sampling of an audio signal. Provides information important for identifying retrieval and playback/display requirements for a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.09 Format.ImageAspectRatio	[PBCore]: Indicates the ratio of horizontal to vertical proportions in the display of an image or moving image.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.10 Format.ImageBitDepth	[PBCore]: For a program or resource, this qualified element measures a still or moving image in terms of the number of bits in a sample, and answers the question, How Much data is allocated to a digital sampling. Provides information important for identifying retrieval and playback/display requirements for a resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.11 Format.ImageChannelConfiguration	[PBCore]: Indicates the number of image channels available in a resource. May be most appropriate for digital files, like QuickTime in which multiple video tracks can be encoded in a single file.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.12 Format.ImageColorCode	[PBCore]: Indicates the color or lack of color in an asset. Does not measure the specific color metrics of a image or moving image.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.13 Format.ImageDataRate	[PBCore]: Expressed as amount of data per second and indicates how much data is delivered for an image or moving image through a particular delivery pipeline for every second.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.14 Format.ImageFrameRate	[PBCore]: Indicates the frames per second found in a resource's playback or display.

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.15 Format.ImageFrameSize	[PBCore]: Indicates the horizontal and vertical resolution of a format type. May be expressed in pixels, pixels per inch, or in the case of ATSC digital TV, a combination of pixels measured horizontally vs. the number of lines of image data stacked vertically (interlaced and progressive scan).
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.16 Format.TimeStart	[PBCore]: Indicates a time stamp representing the beginning point for the playback of a resource. Use in combination with Format.Duration to identify a sequence or segment of a resource that has a fixed start time and end time.
<i>Encoding Scheme Options</i>	(1) <i>ISO 8601</i> < http://hydracen.com/dx/iso8601.htm >
09.17 Format.Duration	ViDe: Describes the duration in time units for a resource, if that resource has an identifiable, linear start-to-end playback. Format.Duration does not describe the time required to utilize a resource in a setting, but is rather a strict playback time, TimeStart to TimeEnd.
<i>Encoding Scheme Options</i>	(1) <i>ISO 8601</i> < http://hydracen.com/dx/iso8601.htm >
09.18 Format.Standard	[PBCore]: The standard refers to an overarching architecture for underlying media formats.
<i>Encoding Scheme Options</i>	1. < http://kropla.com/tv.htm > 2. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.19 Format.Type	[PBCore]: The Qualifier of Type is hierarchically a subset of the values found under Format.Standard and describes specific kinds of media formats found for each media standard.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
09.20 Format.Encoding	[PBCore]: This proposed element with qualifier is designed to offer a single element with which the various media standards and their collected format types can be identified for a particular resource.
<i>Encoding Scheme Options</i>	1. <i>PBCore Value List Recommendations</i> < http://www.utah.edu/cpbmetadata >
10.00 Identifier	DCMI: An unambiguous reference or identifier for a resource within a given context. Best practice is to identify a resource by means of a string or number corresponding to an established or formal identification system.

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
<i>Encoding Scheme Options</i>	<ol style="list-style-type: none"> 1. URL 2. URN 3. ISBN 4. ISSN 5. Accession No. 6. Call No. 7. Other proprietary identification schemes
11.00 Source	DCMI: A reference to another resource from which the present resource is derived.
12.00 Language	DCMI: The primary language of the intellectual content of the resource, usually expressed by the audio track. If other, alternative audio and textual representations of the main audio or language presentation mode exist for a resource or asset, describe that information in the Language.Usage element.
<i>Encoding Scheme Options</i>	<ol style="list-style-type: none"> 1. ISO 639-1: Codes for the representation of names of languages <http://lcweb.loc.gov/standards/iso639-1/langhome.html> 2. ISO-639-2: Codes for the representation of names of languages as a 3-letter code <http://lcweb.loc.gov/standards/iso639-2/langcodes.html> 3. RFC 1766: Internet RFC 1766 Tags for the identification of Languages; specifies a two letter code taken from ISO 639, followed optionally by a two letter country code taken from ISO 3166 < http://www.ietf.org/rfc/rfc1766.txt>
12.01 Language.Usage	[PBCore]: The qualifier Language.Usage identifies the existence of other audio and textual representations of the main audio or language presentation mode for a resource or asset.
<i>Encoding Scheme Options</i>	<ol style="list-style-type: none"> 1. PBCore Value List Recommendations <http://www.utah.edu/cpbmetadata>
13.01 Relation.Type	[PBCore]: Relation.Type identifies a second resource that is related to the primary resource. It defines the relationship between the second resource and the primary resource. While the primary resource is described by the rest of the asset management's database record, the second resource is described using the Relation field.
<i>Encoding Scheme Options</i>	<ol style="list-style-type: none"> 1. PBCore Value List Recommendations <http://www.utah.edu/cpbmetadata>
13.02 Relation.Identifier	[PBCore]: Identifies a second resource related to the primary resource by using a specific numbering or labeling scheme to call out the related resource. Used in combination with the Relation.Type element to cross reference the type of relation with a unique identifier for that relation.
14.01 Coverage.Spatial	DCMI: Identifies the extent or scope of the resource's content from a spatial or geographical perspective of the intellectual content of a resource. Coverage.Spatial is used for geographic coordinates of maps and map-like images (e.g. aerial maps or map-like images concatenated as a video file) or to associate place names or logical jurisdiction for a resource.

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
Encoding Scheme Options	<ol style="list-style-type: none"> 1. DCMI Point: Identifies a point in space using its geographic coordinates <http://dublincore.org/documents/dcmi-point/> 2. ISO 3166: Codes for the representation of names of countries <http://www.din.de/gremien/nas/nabd/iso3166ma/codlstp1/index.html> 3. DCMI Box: Identifies a region of space using its geographic limits <http://dublincore.org/documents/dcmi-box/> 4. TGN: The Getty Thesaurus of Geographic Names <http://www.getty.edu/research/tools/vocabulary/tgn/>
14.02 Coverage.Temporal	DCMI: Identifies the extent or scope of the resource's content from the perspective of the temporal or time characteristics of the intellectual content of a resource.. CoverageTemporal is used for date and time-based events, designated numerically for precision searching, where the time element is critical for identification and use of the resource.
Encoding Scheme Options	<ol style="list-style-type: none"> 1. DCMI Period: Specification of the limits of a time interval http://dublincore.org/documents/dcmi-period/ 2. W3C-DTF: W3C Encoding rules for dates and times; a profile based on ISO 8601 <http://www.w3.org/TR/NOTE-datetime>
15.00 Rights.Usage	[PBCore]: Information about rights held in and over the resource, particularly in what manner the resource will be used, eg., broadcast, web, PDAs, or education/classroom.
15.01 Rights.Reproduction	ViDe: Statements or references about rights held in and over a resource, specifically regarding the rights to reuse, repurpose or reproduce a resource.
15.02 Rights.Access	ViDe: Access information about rights held in and over a resource. Rights.Access indicates either 'open access' or 'restricted access.' These two options are used as flags to trigger certain actions. For example, metadata records with 'restricted access' will not be exposed for mining by OAI initiatives.
16.01 Audience.Level	DC-Ed: A general statement describing the education or training sector. Alternatively, a more specific statement of the location of the audience in terms of its progression through an education or training sector or level.
Encoding Scheme Options	<ol style="list-style-type: none"> 1. <http://www.ischool.washington.edu/sasutton/dc-ed/Dc-ac/DC-Education_Report.html> 2. <http://dublincore.org/groups/education/Audience-Level-Proposal.shtml> 3. U.S. Department of Education's Level of Education vocabulary <http://www.ed.gov/admin/reference/index.jsp>
16.02 Audience.Rating	[PBCore]: Designates categories of users for whom the resource is intended or judged appropriate. Standard ratings have been crafted by the broadcast television industry which are useful.
Encoding Scheme Options	<ol style="list-style-type: none"> 1. <http://www.fcc.gov/vchip/#guidelines> 2. <http://www.fcc.gov/parents_information/parent_guide.html> 3. <http://www.mpaa.org/tv/index.htm> 4. <http://www.mpaa.org/movieratings.htm>

Element Name	Registration Authority, Element Definition, and Options for Encoding Schemes and/or Value Lists
17.00 Standard	DC-Ed: A reference to an education or training standard with which the resource is associated. These standards may be designated at a national level, state level or local level. Often the standards are represented by topical areas, course of study, learning objectives, or locally significant identification schemas and numbering systems.
<i>Encoding Scheme Options</i>	<ol style="list-style-type: none"> 1. <http://www.achieve.org/> 2. <http://www.aligntoachieve.org/about_a2a.html>
18.00 Annotation	[PBCore]:
19.00 Location	[PBCore]: Identifies the location of a specific format or instantiation of a resource. Usually a text string describing where in the physical world the resource's physical format resides. This is not an ID number, but a location identifier. Used when the actual physical form is being indexed in an asset management system.