# The Challenge of Understanding, Creating and Using Metadata

## Overview

Metadata, or data about data, is the descriptive information about an item, a cluster of items or an application. It is designed to manage content regardless of format. Different items may have different descriptions, or may have multiple descriptions depending on the intended usage.

Metadata can be broken down into some distinct groupings. Descriptive metadata includes title, author and keywords, and serves to understand the actual content. Administrative metadata includes copyright information and technical specifications such as file size and when it was created, and serves to help manage the content. Metadata ranges from simple terms to highly targeted complex information. The level of complexity depends on what the items are and how rapidly you need to access them. It adds value to the content by providing the ability to manage, reuse, locate, retrieve, track and evaluate the item.

While the author of the content needs to describe the material at the point of development, the user for the most part does not need to see the metadata or its structure. As the author develops the criteria for metadata, the knowledge base, search habits and vocabulary of the users play a key role. It helps to keep in mind that you are developing a curriculum map to key concepts. Also keep in mind that content can be removed from context if the appropriate description is created. This empowers users to organize the content in a meaningful way for themselves. This would include other instructors using your content in the context of their course.

## The Challenge

Metadata standardization in healthcare has been difficult. Medical records use International Statistical Classification of Diseases and Related Health Problems (ICD-10), Current Procedural Terminology (CPT) and the Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT). Medical publishing uses Medical Subject Headings (MeSH) http://www.nlm.nih.gov/mesh, and the list goes on. The Institute of Electrical and Electronic Engineers (IEEE) have developed Learning Object Metadata (LOM) standards and the MedBiquitous Consortium is developing standards for medical education including Healthcare LOM based on the IEEE standards. Collaboration is the key and across the country and the world folks are working together to create logical interoperable standards.

Your challenge is to systematically set a standard for your course that fits into the greater world of the curriculum. You want to use appropriate descriptive terms that enable students and faculty to acquire the content. You want to keep it simple for your own workflow yet complex enough to provide the greatest value to your content.

## The Schemes

There are four metadata schemes available in the Content System:

- ∞ General metadata descriptive fields include the name of the content, a description of the content, keywords and learning objectives. (Hint: copy and paste these terms from your syllabus)
- ∞ Custom metadata (UCHC metadata) includes whatever fields the faculty would like to add to provide greater value to the search process. At the moment this includes academic year, author/instructor and course title. We can add more fields as necessary.
- ∞ Dublin Core metadata provides fields for more administrative terms including format, copyright and date created. It was developed to simple and concise. While we will be using this scheme for the Learning Object Catalog, it is optional for you to include this information. http://www.dublincore.org

IMS Global Learning Consortium metadata is based on the IEEE LOM scheme. It is more complex and meant for distance learning modules. In the effort of keeping things simple for

faculty and students, we are initially turning this scheme off. As we evolve in our content development, we will revisit it. http://www.imsglobal.org

## The Why

Metadata empowers the Content System searchers who need to:

- ∞ Access files or folders not displayed in the folder tree. If Read permission has been granted to a user on a file or folder that is not displayed in a users folder tree or shortcut view, search criteria, such as the name of the file or folder or the username of a person who created the file, may be used to find the item.
- ¥ Discover information . Use search to find information stored in the Blackboard Content System related to a particular topic, written by a specific user, or including particular metadata.

Our curriculum is not linear. There is a horizontal and vertical construction to it with each course building on the last with an ending integration of information and process that is unique to medicine.
For example in the basic science courses, students are increasing medical information management by integrating the online course information, their note taking, their study materials gathered from the library's online resources, and information gathered from discussion groups with fellow students. For the clinical courses, students use evidence based medicine, case study problem solving, a virtual electronic medical record and just in time resource gathering.

The course content needs to be available to all students and faculty to allow for interactive relationships that appropriately enhance the learning experience. The bottom line is access, knowledge, and understanding the application. If done correctly, the content system becomes an adjunct textbook.

## The How

To open the Metadata page

- ∞ Add your item to the content system in the appropriate folder for your course
- ∞ Click Modify at the end of the row of the item
- ∞ Click Metadata from the list of processes
- ∞ Select the appropriate scheme and add your data

Remember to use descriptive elements that will allow for discovery, identification and retrieval. Carefully designed metadata will result in intellectual accessibility, good information management and allow for content to be used in multiple contexts.