



Purpose

Interplay® Data Management is the central metadata repository for Interplay. Data Management allows you to configure your own multi-genre data model or adopt one of the standard data models available. Result lists as well as metadata displays can be adapted to meet your requirements by configuration. Data Management also supports master data management and content based authorization. Customized Data Manager plug-ins allow you to keep the Interplay database in sync with your organization's existing databases.

Functionality

Interplay Data Management handles access and searches to all databases and information systems that store descriptive metadata.

Features include:

- Multi-valued attributes: attributes that can contain a list of values
- Compound attributes: attributes that consists of several other attributes of different types
- Thesauri: hierarchically structured trees of terms in several languages
- Legal lists: lists of authorized vocabulary
- Master data: support for configurable master data types that can be referenced in objects
- Associations: freely configurable, non-constraint links between media objects, both directional and non-directional, hierarchical and non-hierarchical
- Metadata form layout: handle and display forms using multi-line, multi-column grid layout
- Conditional access: access (read, write, delete) control to objects based on the value of attributes
- Reporting: recording of all accesses and changes of metadata into a database

Metadata is either entered manually using applications or introduced automatically by services. Data Management fully leverages the underlying database management system's query language and physical data storage characteristics. It also receives queries as well as requests for creation, updates, and removal of data objects.

Data Models

Data models can be modified by configuration, and changes to the data model are possible even after deployment. Interplay comes complete with pre-configured data elements for all content types.

Interplay allows building the data model based on objects, links and master data. To ensure data consistency and facilitate metadata entry, predefined terms can be used. Interplay supports:

- Legal lists: controlled list of terms that can only be added/edited by authorized users as well as terms that can be inserted by reference or by value
- Thesauri: configurable and editable trees of terms with synonyms, abbreviations, and links in several languages,
- Master data: information about persons, organisations, or events which is typically referenced in many media objects and maintained by authorized users.

Data Management supports timecoded metadata ("stratification"). Stratification uses time references to point to a specific segment in the audio or video object. Each stratum can be dedicated to specific topical or descriptive themes such as visual content, editorial content, close caption text, or locations. Each of the strata can be segmented individually by assigning timecodes within the strata segments.

A configurable set of attributes from the data model can be indexed. Data Management provides a unified search syntax independent from the underlying database system. This search syntax provides a rich set of search expressions, from Boolean expressions and truncation to range operators and comparison operator, and maps it to the database search capabilities.

Configuration Options

Data Management allows the configuration of the data model, search result lists and GUIs for display and modification of metadata. The individual areas include:

Data Model: Definition of media objects types and attributes based on content types (video, audio, images, documents, and others). For each object type, a virtually unlimited number of attributes and strata (time-coded metadata) can be defined. Attribute types available include basic types (text, numbers, dates) as well as references to legal lists, thesauri or master data. Attributes can be multi-valued, i.e. an attribute can contain a list of values of a basic type or reference. Another attribute type is "compound", where attribute can consist of several other attributes of different types. Links (non-constraint references) can be used to link media objects. All data model elements support multi-lingual labels.

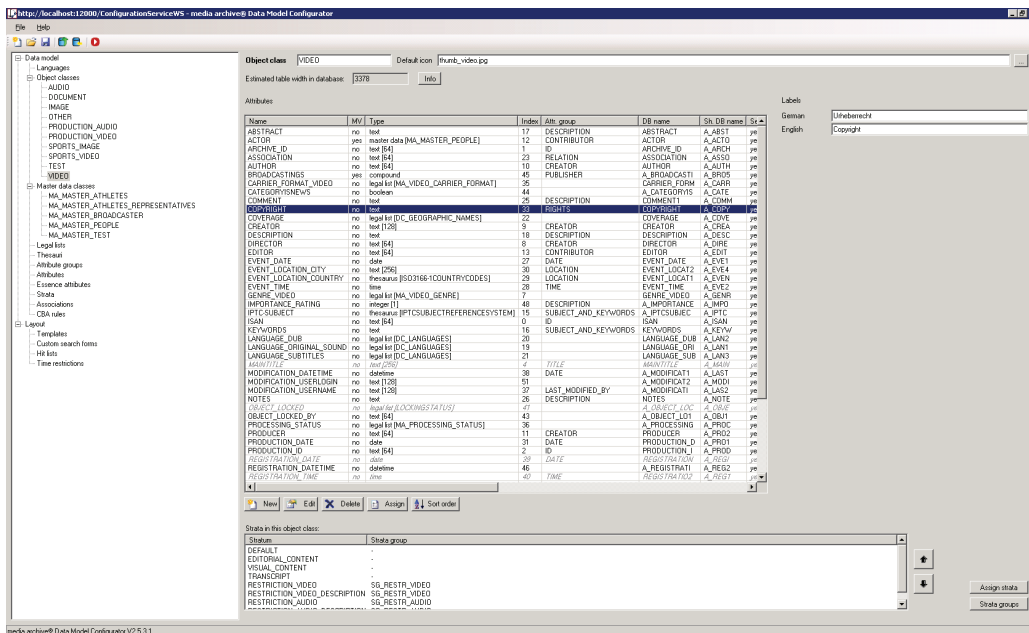
Query Forms: A set of four predefined query forms of different levels of complexity are available. "Quick search" enables search across all indexed attributes. "Advanced search" enables search in selected attributes. "Strata search" enables search in selected strata. "Combined search" is a combination of the above. In the query forms, available attributes and strata to be searched can be selected from drop-down lists. Custom Query Forms can be configured using single query lines, attribute query fields and strata query fields.

Hit List Templates: The configuration includes the set of attributes and if a thumbnail is to be displayed in the hit list. Multi-level sort orders and hit list layout can be specified. Once it is specified which hit list templates should be available for which query form, users can choose the hit list template to be used for display of hits.

Metadata Forms: These are configurable per client application, content type and user group. They contain the data elements to be used, including field sizes and multicolumn grid layout. Form definitions can be used for both metadata display and metadata editing. Each attribute in the metadata form can be defined as mandatory, read-only, or with a default value. Labels are applied automatically according to the language setting of the respective user. Depending on attribute type, fields are presented with suitable edit controls, including drop-down lists or pick tools for the selection of preset values, thesaurus terms or master data. In addition, auto forms which allow for a one column layout of labels and values are supported.

Authorization: A set of rules can be configured to determine which governs the (read, write, delete) access to media object based upon attribute values (see Content Based Authorization).

The Data Model definition changes can be applied to databases before and after deployment. Only authorized users are allowed to apply data model changes. A complete audit trail on data model modifications is maintained in the system.



Data Model Administrator: Attribute definition

Data Model Administrator: Metadata forms

Capacity and Performance

Request handling of Data Management scales to 200 requests per second for data manipulation or single object retrieval operations per instance of Data Management service (reference environment: P4 3 GHz 1GB RAM, Windows 2003 Server).

Building Integrated Solutions

For the integration with external databases, Data Management allows users to address external databases via Data Manager Plug-Ins. These external databases may contain a certain part of the metadata available for a media object. The plug-ins transform incoming query requests (provided in the Interplay internal syntax) into the native query language of the respective information system. Since each of these information systems most likely uses their own proprietary unique IDs to address their data sets, Interplay provides capabilities to map the various proprietary IDs to the Interplay unique ID (the "Data Management Globally Unique Identifier" or "DMGUID").

Supported Platforms

Interplay Data Management runs on Microsoft Windows 2003 and 2008 Server. The preferred Database Management systems is Microsoft SQL Server 2005 or 2008. An active/passive cluster configuration of the central relational database management system is supported.

For more information visit www.avid.com/interplay

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