The Lenya Content Repository

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Note:
This document is a draft. It does not reflect the current implementation, but will evolve alongside the code.

1. The Lenya Repository API

The Lenya repository API comprises the following interfaces:

Repository
The repository object is the entry point to the Lenya repository. It provides access to the document type registry and allows to create sessions.

Session
A session provides access to the publications and methods for transaction handling. Pending changes are not written to the repository until the session is saved.

Publication
A publication consists of an arbitrary set of areas.

Area
An area consists of a set of content nodes with a site structure associated to them.

Content
The content object provides access to the content nodes.

ContentNode
A content node holds several language versions of a content item. Each content node has an ID which is unique in its area. Each content node has a *document type*, which applies to all language versions of the node. When a content node is added, the document type must be specified. Only document types which are registered in the repository's document type registry are supported.

Document
A document is a language version of a content item. Each document has the following properties:

- the language,
- the content length, and
- the last modification date.

The document provides access to its content via the methods `getInputStream()` and `getOutputStream()`.

DocumentType
The document type of a content node denotes the type of contents which may be stored in its documents. A document type is identified by a unique name. It may provide a schema, which can be used to validate XML contents upon saving. Furthermore, the mime type of documents is defined by the document type.

MetaData
...

Site
The site object provides access to the site structure.

SiteNode
The site structure is a tree consisting of site nodes. Each site node has an ID which is unique among its siblings. Thus, a site node can be located using a unique path of the form `/sections/news/message003`.

2. Repository Layout

Lenya ships with a content repository implementation which is based on the Java Content Repository (http://www.jcp.org/aboutJava/communityprocess/final/jsr170/) API. The JCR repository used by Lenya comprises a set of workspaces, each of which represent an area of the document structure. For each area that is declared by a publication, a repository workspace is created.

Publications are orthogonal to workspaces. Each publication can declare its own set of areas. Thus, the set of workspaces in the Lenya repository derives from the union of all areas declared by publications.

The children of the root node of a workspace are called *publication JCR nodes*. Each publication JCR node has two children:

- the *content* JCR node, and
- the *site* JCR node.

The content JCR node can have an arbitrary number of child nodes, which are called *content*