

Trends in Content Management: CMIS and its Value to Business

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Gilbane - May 20, 2010

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Open Source ECM

May 2010 - Circle The Date

CMIS - Vendors Playing Nice

Background

- Original Concept as an AllIM Committee in 2006
 - “Interoperable Enterprise Content Management - iECM”
 - Kick off meeting - vendors, academics, end-users
- Three vendors created own project
 - Microsoft, EMC, IBM
 - Expanded to 7 vendors

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Background

- Draft specification submitted to OASIS in 2008
- Strong participation and collaboration among 19 vendors
- Final public draft in January 2010
- Ratification on May 4, 2010

The screenshot shows the OASIS website with the following elements:

- Header:** OASIS logo, tagline "Advancing open standards for the information society", and a language selector "English/Other languages".
- Navigation Bar:** Links for About, Members, Join, News, Events, Members Only, Cover Pages, XML.org, and a search bar with a "Go" button.
- Left Sidebar:** A menu with sections: CONSORTIUM (OASIS Standards, How to Participate, Policies and Procedures, OASIS Blogs, Site Map), TECHNICAL WORK (Committees by Name, Committees by Category, and a list of technical areas including Adoption Services, Computing Mgmt, Document-Centric, e-Commerce, Law & Government, Localisation, Security, SOA, Standards Adoption, Supply Chain, Web Services, XML Processing, TC Handbook, and Mailing List Directory), and MEMBER SECTIONS.
- Main Content Area:**
 - OASIS News** header with the date "04 May 2010".
 - Article Title:** "OASIS Members Approve Content Management Interoperability Services (CMIS) Standard".
 - Article Text:** "Adobe, Alfresco, ASG, Booz Allen Hamilton, Day Software, dotCMS, EMC, FatWire, fme AG, IBM, ISIS Papyrus, Liferay, Microsoft, Nuxeo, Open Text, Oracle, SAP, Saperion, WeWebU, and Others Agree on Standard to Link Disparate Content Systems".
 - Links:** "ODT" and "PDF".
 - Summary Paragraph:** "Boston, MA, USA; 4 May 2010 — The OASIS international consortium today announced the approval of Content Management Interoperability Services (CMIS) version 1.0, a new open standard that enables information to be shared across Enterprise Content Management (ECM) repositories from different vendors. Advanced via a collaboration of major ECM solution providers worldwide, CMIS is now an official OASIS Standard, a status that signifies the highest level of ratification."
 - Additional Paragraph:** "Using Web services and Web 2.0 interfaces, CMIS dramatically reduces the IT burden around multi-vendor, multi-repository content management environments. Companies no longer need to maintain custom code and one-off integrations in order to share information across their various ECM systems. CMIS also enables independent software vendors (ISVs) to create specialized applications that are capable of running over a variety of content management systems."

CMIS: Why and What?

- Statement of Purpose
 - Define a domain model that can be used by applications to work with one or more Content Management systems
 - Data Model, Abstract Capabilities, Set of Bindings
 - Problem of “islands of incompatible systems” making it difficult for organizations and application developers to integrate content across and among systems

CMIS: Why and What?

Whitepaper - CMIS, by Gilbane Group and OASIS

Gilbane Beacon
Guidance on Content Strategies, Technologies, and Practices

Content Management Interoperability Services (CMIS)

Addressing Contemporary Requirements for Content Integration

By Dale Waldt, Senior Analyst
December 2009

Sponsored by members of the OASIS CMIS Technical Committee including:

OASIS



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Microsoft

CMIS: Why and What?

- Use Cases for CMIS 1.0
 - Collaborative Content Applications
 - Portals Leveraging Content Management Repositories
 - Mashups
 - Content Repository Search
 - <http://www.oasis-open.org/committees/cm1s/charter.php>

CMIS: Why and What?

- Secondary Use Cases
 - Content-centric Workflow and BPM
 - Archival Applications
 - Compound and Virtual Documents
 - Electronic and Legal Discovery
- Not in 1.0 Scope
 - RM and Compliance
 - DAM
 - WCM
 - Subscription and Notification

CMIS 1.0

CMIS client : Portal, Scanning, ECM
app , Business APP

Document

Metadata

CRUD operations

Filing

Folder

Checkin, Checkout

Query : CMISQL

Relations

Versions

ACL

Renditions



REST (AtomPub) or
SOAP



IBM/Filenet

Nuxeo

EMC/
Documen-
tum

Sharepoint

Alfresco

...

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Emergence of Chemistry

- Apache “Chemistry” Emerges as Incubator for CMIS code base
 - Nuxeo a co-founder in early 2009 with Day Software
 - Alfresco contributes to OpenCMIS in 2010
 - Active contributions ongoing by Nuxeo, Alfresco, Day, Open Text and SAP

Emergence of Chemistry



Apache Chemistry > Index

License Site Map

OVERVIEW

- [License](#)
- [Site Map](#)

SEARCH

CMIS FOR JAVA

- [OpenCMIS](#)
- [Overview](#)
- [Client API](#)
- [JavaDoc](#)

CMIS FOR PYTHON

- [cmislib](#)

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- [Thanks](#)
- [Sponsoring Apache](#)

Welcome to Apache Chemistry

Apache Chemistry provides open source implementations of the [Content Management Interoperability Services \(CMIS\)](#) specification.

The project currently consists of the following sub-projects:

- [OpenCMIS](#) - CMIS client and server libraries for Java
- [cmislib](#) - CMIS client library for Python
- [jsclient](#) - CMIS client library for JavaScript

Incubation disclaimer

Apache Chemistry is an effort undergoing [incubation](#) at the [Apache Software Foundation \(ASF\)](#). Incubation is required of all newly accepted projects until a further review indicates that the infrastructure, communications, and decision making process have stabilized in a manner consistent with other successful ASF projects. While incubation status is not necessarily a reflection of the completeness or stability of the code, it does indicate that the project has yet to be fully endorsed by the ASF.

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Removing the Stigma from “Silo”

Harvesting the Silos

- Finding the common ground across Content Management Repositories
 - Technical Use Cases
 - Repository to Repository
 - Application to Repository
 - Federated Repositories
 - <http://www.slideshare.net/pie1120/the-point-of-the-content-interoperability-services-cmis-standard>

Harvesting the Silos

- Repository to Repository
 - Publish a document from one repository to another
 - Example: a document in an ECM system published to a WCM upon approval
 - Manage corporate records from one centralized repository
 - Access business records from multiple document repositories in one records system for consistent retention, disposition

Harvesting the Silos

- Application to Repository
 - Use and consume managed content across other line of business applications
 - ERP, CRM, case management systems, collaboration tools
 - Let content flow across its natural horizontal business lifecycle

Harvesting the Silos

- Federated Repositories
 - Ability to use and consume content across multiple repositories
 - Appears to end user as one cohesive system
 - Ability to build single UI to access content in across multiple repositories - entirely different ECM products


AIIM iECM Demo Server

- 5 Separate ECM repositories in a federated Health Care Scenario
- Built by Laurence Hart (@piewords) and Thomas Pole (Harris Corp.)
- Repositories all hosted by vendors - US, Europe, Cloud




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AIIM iECM Demo Server



AIIM iECM's Demonstration of CMIS



LOINC Code (recommended):
Advance Directive 42348-3

Procedure/SNOMED Code (recommended):
ABG - Arterial blood gas analysis 60170009

Author:
Sarah Testdoc

Patient:
Mike Itest

Confidentiality:
Normal

Encounter Start Date:
≤ May 2010 ≥

Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Encounter End Date:
≤ May 2010 ≥


Sun	Mon	Tue	Wed	Thu	Fri	Sat
25	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Please Select a Piece of Content to Ingest


Choose File no file selected

Upload Alfresco Upload EMC Upload eXo Upload IBM Upload Nuxeo

AIIM iECM Demo Server



AIIM iECM's Demonstration of CMIS



Author:

LOINC Code:

Patient:

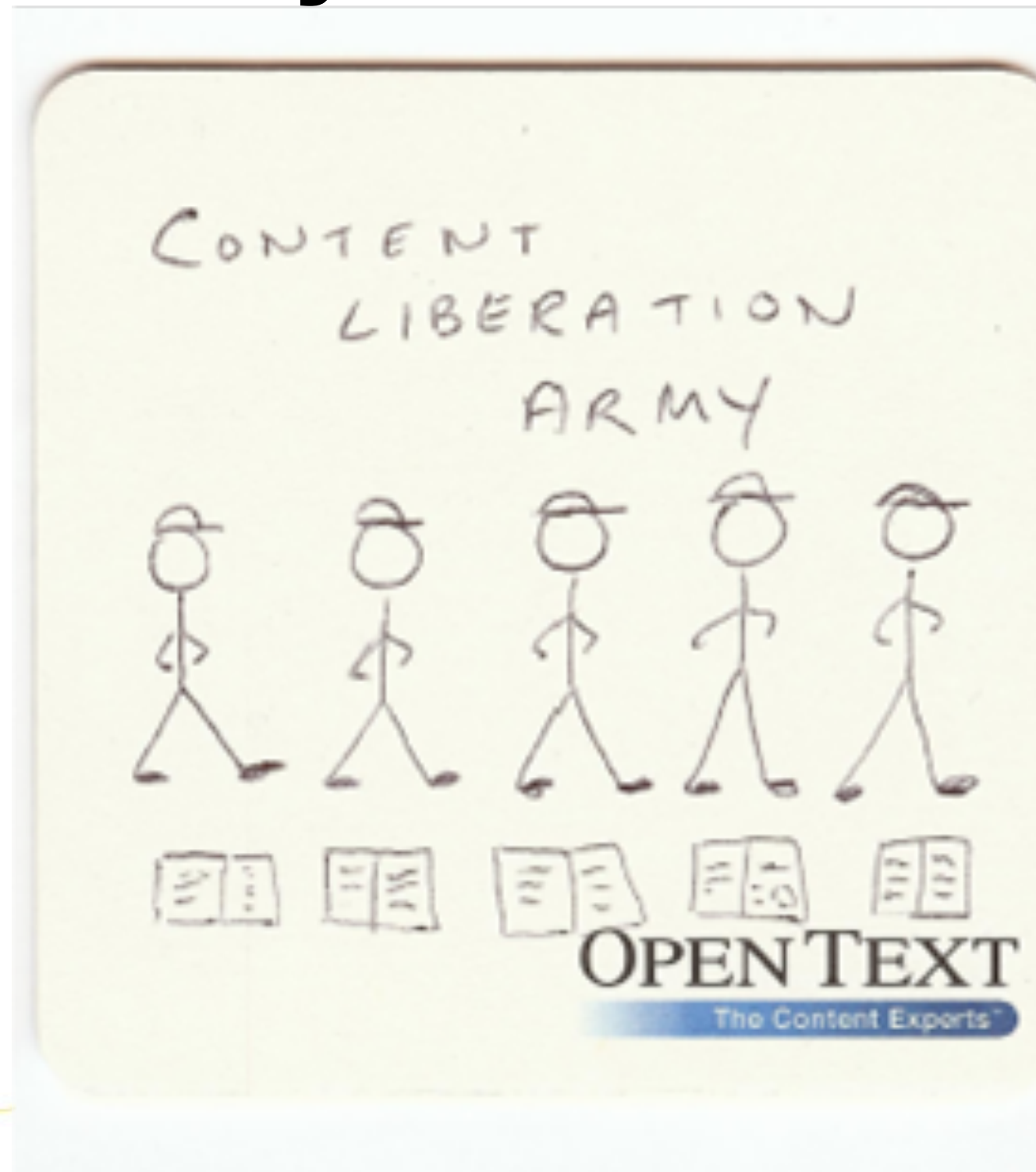
Procedure/SNOMED Code:

Search for Content

Document Name -- Patient	Repository

Problem is Not Vendor Lock-in It's Content Lock-in

The Content Liberation Army: Powered by CMIS?



Lowest Common Denominator or Greatest Common Factor?

- Basics of the Specification
 - Object Types
 - Documents, Folders, Relationships, Policies
 - Each object has an object identity, properties
 - Objects may have an access control list, a content stream or rendition

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2.1.4.3.3 Property Definitions

The Document base Object-Type MUST have the following property definitions, and MAY have additional definitions on base types, the query name MUST be the same as the property ID. The required cardinality is 1.

cmis:name	Name of the object
Inherited:	False
Property Type:	String
Cardinality:	Single

cmis:objectId	Id of the object
Required:	False
Inherited:	False
Property Type:	ID
Cardinality:	Single
Updatability:	Read Only
Choices:	Not Applicable
Open Choice:	Not Applicable
MUST be set on the object	

cmis:baseTypeId	Id of the base object-type for the object
Required:	False
Inherited:	False
Property Type:	ID
Cardinality:	Single
Updatability:	Read Only
Choices:	Not Applicable
Open Choice:	Not Applicable
MUST be set on the object	

Lowest Common Denominator or Greatest Common Factor?

- Versioning of Documents
- CMIS Query and Discovery Services
- Navigation Services
- Multi-Filing Services

Platforms vs. Suites vs. Condominiums

ECM Evolving into a Platform for Content Applications

- CMIS opens the door to meaningful consumption of content across business processes
- Generic deployments of basic document management often don't meet business requirements
- Compliance cudgel often doesn't work
- Productivity is back on the front-burner
- CMIS = Fast integrations

ECM Evolving into a Platform for Content Applications

- Recent AIIM Market Intelligence “State of the ECM Industry” 2010
 - 34% Respondents have a keen interest in CMIS
 - But... only 7% plan to adopt over next year
 - <http://www.aiim.org/Research/ECM-State-of-Industry-2010.aspx>

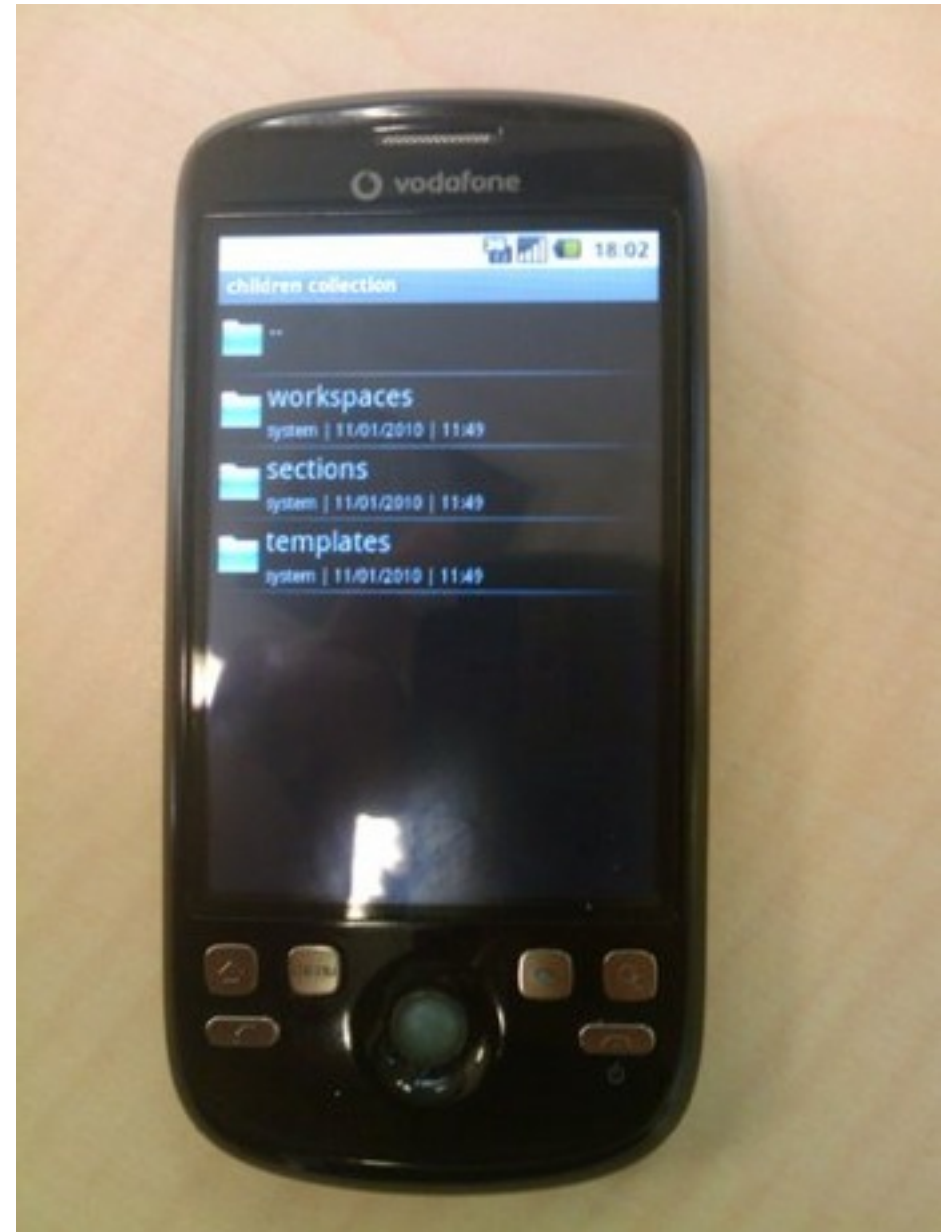
ECM Evolving into a Platform for Content Applications

- Vendors with cohesive platforms may be able to be most creative with CMIS
- ECM vendors will need to differentiate in new ways
- Suite vendors that assembled portfolio via acquisition will take longer to take full advantage of CMIS
 - Inconsistent architectures and integrations

CMIS: It's Real. And It's Spectacular.

Real World CMIS in Action

- Content Management Goes Mobile
 - Android CMIS Browser
 - Browse CMIS repository
 - View Documents
 - Email Documents
 - Search
 - View Document Properties



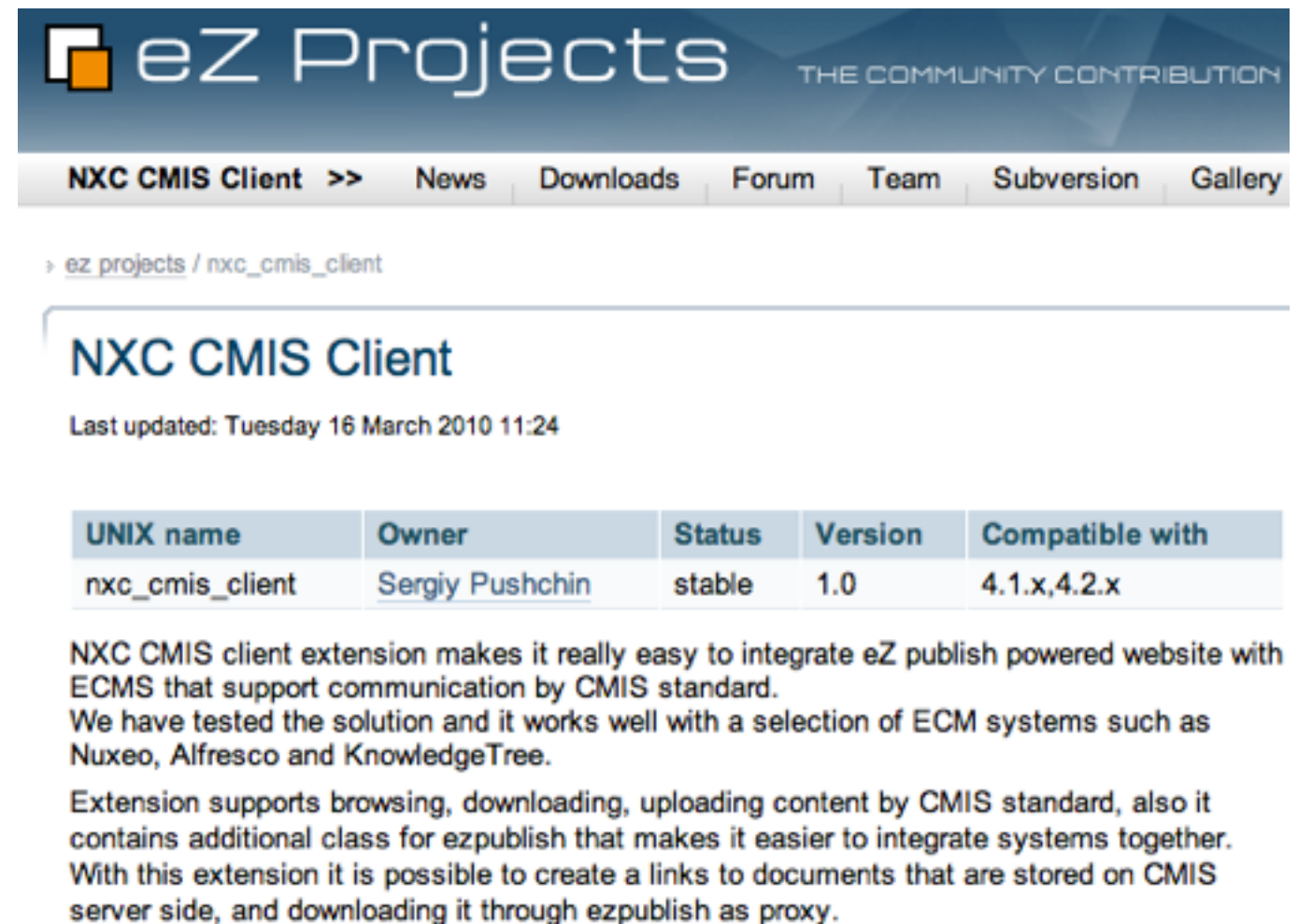
<http://code.google.com/p/android-cmis-browser/>

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Real World CMIS in Action

- Content Engine behind WCM / Portal Systems
 - Drupal
 - EZPublish
 - Nuxeo
 - Alfresco
 - KnowledgeTree



The screenshot shows the eZ Projects website with the following structure:

- Header:** eZ Projects THE COMMUNITY CONTRIBUTION
- Navigation:** NXC CMIS Client >> News Downloads Forum Team Subversion Gallery
- Breadcrumbs:** > ez_projects / nxc_cmis_client
- Section Title:** NXC CMIS Client
- Last updated:** Tuesday 16 March 2010 11:24
- Table:**

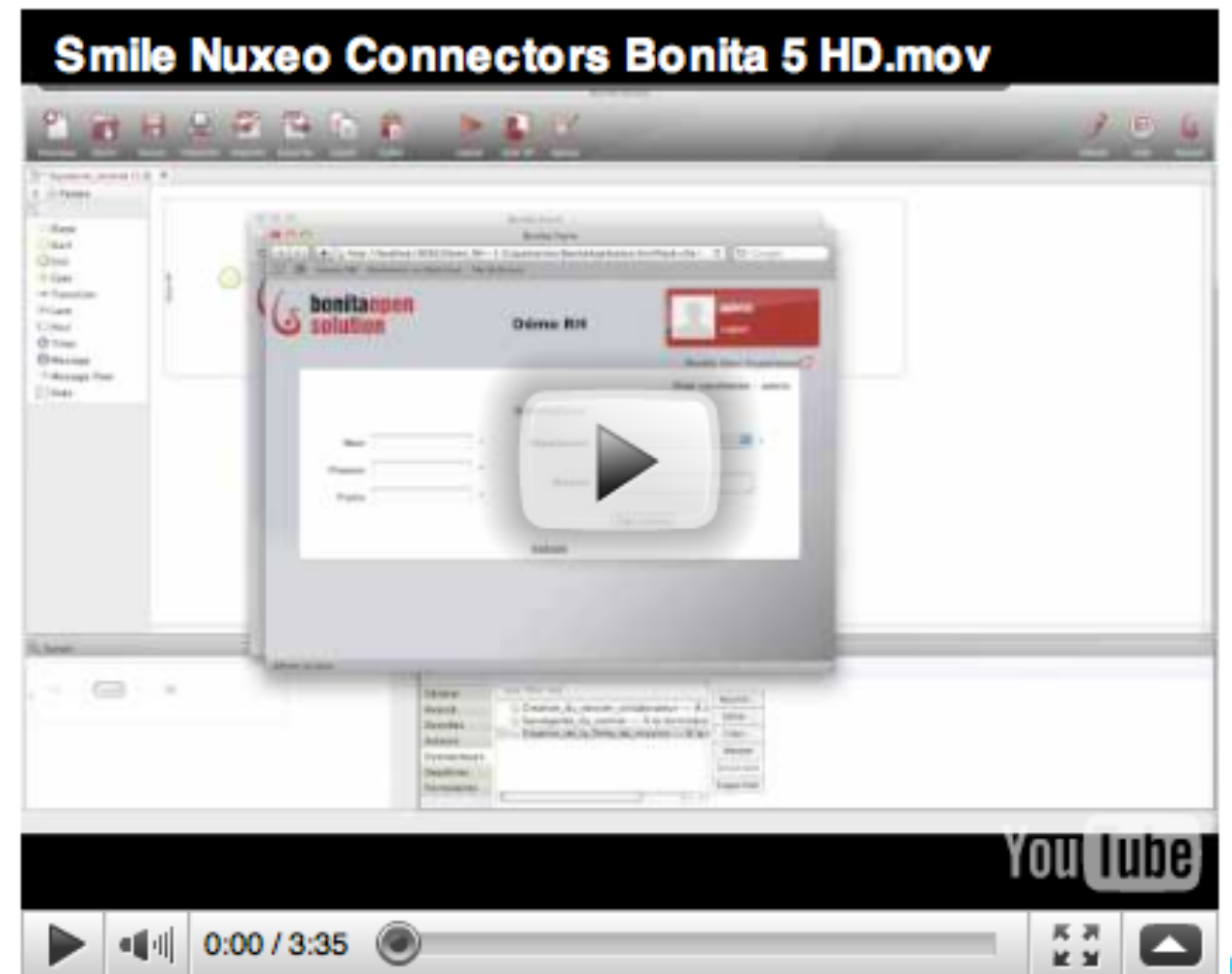
UNIX name	Owner	Status	Version	Compatible with
nxc_cmis_client	Sergiy Pushchin	stable	1.0	4.1.x, 4.2.x

NXC CMIS client extension makes it really easy to integrate eZ publish powered website with ECMS that support communication by CMIS standard. We have tested the solution and it works well with a selection of ECM systems such as Nuxeo, Alfresco and KnowledgeTree.

Extension supports browsing, downloading, uploading content by CMIS standard, also it contains additional class for eZpublish that makes it easier to integrate systems together. With this extension it is possible to create a links to documents that are stored on CMIS server side, and downloading it through eZpublish as proxy.

Real World CMIS in Action

- Business Process Management
- Access content stored in ECM repositories via CMIS



Thanks!

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