

icoyaDrive

WebDAV Client&Server for icoya XML CMS

Server Interface Specification

PRELIMINARY

Author: Niels Mache
Version: 0.3.3
Datum: May, 8th, 2002

(c) 2001, 2002, 2003 struktur AG, Junghansstraße 5, D-70565 Stuttgart, GERMANY

www.struktur.de

www.strukturag.com

www.icoya.com

www.icoya.de

www.icoya.org

www.icoya.jp

This document is subject to change

Inhalt

- 1 HISTORY4**
- 1.1 KNOWN PROBLEMS..... 5
- 2 TODO'S.....5**
- 3 INTRODUCTION5**
- 4 OVERVIEW5**
- 5 ICOYADRIIVE INTERFACE SPECIFICATION.....6**
- 5.1 CREATE AN ICOYA COLLECTION (A "WEB-FOLDER")..... 6
- 5.2 CREATE ICOYAFIILE CONTAINER USING DEFAULT SETTINGS 6
- 5.3 CREATE NEW CONTENT CONTAINER..... 7
- 5.4 CREATE A NEW LANGUAGE 8
- 5.5 SAVE CONTENT WITH ICOYADRIIVE..... 8
- 5.6 GET A LIST OF ALL RESOURCES OF AN ICOYA COLLECTION 9
- 5.7 SHOW VERSION LIST 10
- 5.8 RETRIEVE A DOCUMENT..... 10
- 6 EXAMPLES11**
- 6.1 CREATE A DOCUMENT CONTAINER..... 11
- 6.2 CREATE A ICOYA COLLECTION (A WEB-FOLDER)..... 13
- 6.3 GET A DIRECTORY LIST 14
- 6.4 CREATE A LANGUAGE 18
- 6.5 STORE CONTENT IN THE ICOYA CMS SERVER..... 19
- 6.6 GET A LIST OF ALL VERSIONS OF A DOCUMENT STORED IN ICOYA..... 20
- 6.7 CONTENT RETRIEVAL..... 21

1 History

The history documents changes of this document.

Date	Who ?	Comment
21FEB2002	nm	<ul style="list-style-type: none">• initial release of this document.
27FEB2002	nm	<ul style="list-style-type: none">• version strings added.
12MAR2002	nm	<ul style="list-style-type: none">• added create collection• new dir command• added comment and release options of doContent in the documentation
28MAR2002	jb	<ul style="list-style-type: none">• new “Create new content container” section• added uploadfile to doContent
8MAY2002	jb	<ul style="list-style-type: none">• create new document with given id• switch source / rendered

1.1 Known Problems

None.

2 TODO's

None.

3 Introduction

icoya2 XML CMS supports a number of interfaces for data exchange. icoyaDrive is a simple HTTP interface for document query and document creation. The icoyaDrive interface supports language specific documents and versioning. Other methods not described here enable full text indexing capabilities with stemmer support for multiple languages, similarity search, NEAR search, query parser, stop words, and more.

4 Overview

The icoyaDrive server provides basic functionality for the creation and retrieval of documents. A document can be a arbitrary text document like XML or HTML or a binary document, e.g. a graphic file or a MS-Word document.

The features of icoyaDrive cover but are not limited to the following basic content management features:

1. creation of a document container. The document container manages the versions, languages and variants of the documents. The document container stores also the meta information of the document. Meta information can be extended or modified by the user. Usually, meta information is not versioned.
2. creation of a new language.
3. creation of content, i.e. creation of a new version of a document with the given language.
4. display version and language lists.
5. query a document by version and language.

5 icoyaDrive Interface specification

This specification of the icoyaDrive interface is incomplete. It will be completed soon.

5.1 Create an icoya Collection (a "Web-folder")

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/  
icoyaDrive?method=action&cmd=defaultCreate&  
type=icoyaCollection&title=<title>  
[__ac_name=<username>][__ac_password=<password>]
```

We create a new icoya collection using the *defaultCreate* method with type *icoyaCollection*. An icoya collection is similar to a folder on a file system. With the WebDAV interface of icoya, icoya Collections are visible as folders. Please note that multiple icoya Collections with the same title may exist concurrently. The icoya Collections are identified by their unique ID.

where:

- <URL> is the URL of the server, e.g. <https://www.struktur.de>
- <icoyaProject> denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- <icoyaResourceContainerPath> is the path where the content is located. The path must exist and the access rights must be sufficient.
- <title> is the name of the collection given as UTF-8 or ISO string
- <username> is the optional username.
- <password> is the optional password.

5.2 Create icoyaFile container using default settings

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/  
icoyaDrive?method=action&cmd=defaultCreate&type=icoyaFile  
[&title=<title>][__ac_name=<username>]  
[__ac_password=<password>][&uploadfile=<content>][&id=<id>]
```

where:

- `<URL>` is the URL of the server, e.g. `https://www.struktur.de`
- `<icoyaProject>` denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- `<icoyaResourceContainerPath>` is the path where the content is located. The path must exist and the access rights must be sufficient.
- `<title>` is an optional title given as UTF-8 or ISO string
- `<username>` is the optional username.
- `<password>` is the optional password.
- `<content>` is the optional content
- `<id>` is the optional id for this file. If no id is given, a unique is generated by icoya.

5.3 Create new content container

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/  
icoyaDrive?method=action&cmd=defaultCreate&type=<type> [&XMLtype=<xml  
type>][&title=<title>][__ac_name=<username>]  
[__ac_password=<password>][&id=<id>]
```

where:

- `<URL>` is the URL of the server, e.g. `https://www.struktur.de`
- `<icoyaProject>` denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- `<icoyaResourceContainerPath>` is the path where the content is located. The path must exist and the access rights must be sufficient.
- `<type>` is the content container to create. Supported are `icoyaFile`, `icoyaHtml`, `icoyaXMLObject`, `icoyaPageTemplate` and `icoyaRPScript`. When creating an `icoyaXMLObject`, the `XMLtype` parameter must also be sent.
- `<xmltype>` is the xml type to create. This depends on the project settings on the server.
- `<title>` is an optional title given as UTF-8 or ISO string
- `<username>` is the optional username.
- `<password>` is the optional password.
- `<id>` is the optional id for this file. If no id is given, a unique is generated by icoya.

5.4 Create a new language

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/<objectID>/  
icoyaDrive?method=action&cmd=addLanguage&language=<language>  
[__ac_name=<username>][__ac_password=<password>]
```

where:

- <URL> is the URL of the server, e.g. <https://www.struktur.de>
- <icoyaProject> denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- <icoyaResourceContainerPath> is the path where the content is located. The path must exist and the access rights must be sufficient.
- <objectID> the ID of the object.
- <username> is the optional username.
- <password> is the optional password.
- <language> denotes the ISO639 language codes for language definitions. Please note that the available languages may be limited in the project. The available languages can be set in the icoya system configuration.

5.5 Save content with icoyaDrive

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/<objectID>/  
icoyaDrive?method=action&cmd=doContent  
[&language=<language>][&comment=<comment>][&release=release]  
[__ac_name=<username>]  
[__ac_password=<password>][&file=<content>][&uploadfile=<uploadfile>]
```

where:

- <URL> is the URL of the server, e.g. <https://www.struktur.de>
- <icoyaProject> denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.

- `<icoyaResourceContainerPath>` is the path where the content is located. The path must exist and the access rights must be sufficient.
- `<objectID>` the ID of the object.
- `<username>` is the optional username.
- `<password>` is the optional password.
- `<language>` denotes the ISO639 language codes for language definitions. Please note that the available languages may be limited in the project. The available languages can be set in the icoya system configuration.
- `<comment>` is an optional comment string (UTF-8 encoding)
- `release=release` creates a release version number. The release version number is a version number with minor number set to 0 and incremented major number, i.e. "3.0" or "24.0". This means that the released version of, e.g. version "3.38" will be version "4.0".
- `<content>` is the content. If not given, the document is created with content of length zero.
- `<uploadfile>` set this to "1" when uploading content in a file mime part. (e.g. from a html file input field)

5.6 Get a list of all resources of an icoya Collection

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/  
icoyaDrive?method=main&cmd=dir  
[__ac_name=<username>][__ac_password=<password>]
```

where:

- `<URL>` is the URL of the server, e.g. <https://www.struktur.de>
- `<icoyaProject>` denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- `<icoyaResourceContainerPath>` is the path where the content is located. The path must exist and the access rights must be sufficient.
- `<username>` is the optional username.
- `<password>` is the optional password.
- `<language>` denotes the ISO639 language codes for language definitions. Please note that the available languages may be limited in the project. The available languages can be set in the icoya system configuration.

5.7 Show version list

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/<objectID>/  
icoyaDrive?method=main&cmd=getVersionList  
[&language=<language>][__ac_name=<username>]  
[__ac_password=<password>]
```

where:

- <URL> is the URL of the server, e.g. <https://www.struktur.de>
- <icoyaProject> denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.
- <icoyaResourceContainerPath> is the path where the content is located. The path must exist and the access rights must be sufficient.
- <objectID> the ID of the object.
- <username> is the optional username.
- <password> is the optional password.
- <language> denotes the ISO639 language codes for language definitions. Please note that the available languages may be limited in the project. The available languages can be set in the icoya system configuration.

5.8 Retrieve a document

```
<URL>/<icoyaProject>/<icoyaResourceContainerPath>/<objectID>  
[/get_src/][?][version=<version>][&language=<language>]  
[__ac_name=<username>][__ac_password=<password>]
```

where:

- <URL> is the URL of the server, e.g. <https://www.struktur.de>
- <icoyaProject> denotes the name of the icoya CMS on the server. A server may have multiple CMS. icoya is CMS provider aware.

- <icoyaResourceContainerPath> is the path where the content is located. The path must exist and the access rights must be sufficient.
- <version> is the version string, e.g. “0.1”, “0.2”, “1.0”.
The following version strings are reserved and have a special meaning:
 - “released” denotes the released version, i.e. a version that has been released by an editor,
 - “latest” denotes the very last version of the document (the version with the highest version string),
 - “first” denotes the very first version of the document (the version with the lowest version string).

If no version string is given, the released version will be returned if existing. Otherwise the latest version of the document is returned.
- <objectID> the ID of the object.
- <username> is the optional username.
- <password> is the optional password.
- <language> denotes the ISO639 language codes for language definitions. Please note that the available languages may be limited in the project. The available languages can be set in the icoya system configuration.

If “/get_src/” is given in the URL after the object id, the source of the object will be returned from the server.

6 Examples

We provide some easy-to-use examples here. icoya 2 has is a complex system. It supports much more features as described here. Documentation of the complete system is in preparation. The icoya system can be easily accessed via HTTP/S from any programs written in JAVA, PHP, Python, Ruby or Perl programming language.

6.1 Create a document container

We create a simple *icoya* document container of type *icoyaFile*. The easiest way to create a document container is using the *defaultCreate* method and the content type *icoyaFile*. The document container *icoyaFile* is capable to store any type of content. The content stored in a

container of type *icoyaFile* is not post processed. *icoya* supports many other container types: *icoyaXMLObject*, *icoyaHTML*, *icoyaPageTemplate*, *icoyaScript*, *icoyaMenuFolder*, *icoyaRelayObject* and more. The create methods return an `<f_id>` element. The `f_id` element is the ID of the container created. The ID is required to create and access the content. The ID is unique for all icoya servers. This is especially important in a distributed icoya system environment. The number of ID's and it's length are unlimited. By default 64-bit ID's are generated. Depending on the icoya system configuration, icoya ID's are encrypted using 64-bit blowfish encryption or 265-bit Advanced Encryption Standard (Rijndael).

In general, access to icoya resources are controlled by access control lists (ACL).

The user name to access the resources on the server `www.struktur.de /icoyaProject/` is `'admin'` the password is `'icoya'`.

The ACL user name is set in the `__ac_name` argument, the password is given in the `__ac_password` argument. Once set, the authorization is stored in a cookie/Request. Thus using HTTP authentication the `__acl_` parameters are not required. Using a Web browser the authorization is required only once.

URL:

https://www.struktur.de/icoyaProject/resources/content/icoyaDrive?method=action&cmd=defaultCreate&type=icoyaFile&title=This%20is%20the%20title%20of%20this%20document&__ac_password=icoya&__ac_name=admin

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
<icoyaDriveResponse>
  <f_content>None</f_content>
  <f_id>i8PHFSIIR59HIG</f_id>
  <f_name>None</f_name>
  <f_title>This is the title of this document</f_title>
  <f_type>icoyaFile</f_type>
  <msgstr>created your object</msgstr>
  <method>action</method>
  <cmd>defaultCreate</cmd>
  <support>None</support>
  <mode>None</mode>
  <link>None</link>
```

```

<callerurl>https://www.struktur.de/icoyaProject/resources/content</callerurl>
</icoyaDriveResponse>

```

6.2 Create a icoya Collection (a Web-folder)

We create a new icoya collection using the *defaultCreate* method with type *icoyaCollection*. An icoya collection is similar to a folder of a file system. With the WebDAV interface of icoya, icoya Collections are visible as folders. Please note that multiple icoya Collections with the same title may exist concurrently. The icoya Collections are identified by their unique ID.

URL:

```

https://www.struktur.de/icoyaProject/resources/content/icoyaDrive?method=action&cmd=defaultCreate&type=icoyaCollection&title=MyNewFolder&\_ac\_password=icoya&\_ac\_name=admin

```

Response:

```

<?xml version="1.0" encoding="UTF-8" ?>
<icoyaDriveResponse>
  <f_content>None</f_content>
  <f_id>i8PV8D0V6L7LD9</f_id>
  <f_name>None</f_name>
  <f_title>MyNewFolder</f_title>
  <f_type>icoyaCollection</f_type>
  <msgstr>created your object</msgstr>
  <method>action</method>
  <cmd>defaultCreate</cmd>
  <support>None</support>
  <mode>None</mode>
  <link>None</link>
  <callerurl>https://www.struktur.de/icoyaProject/resources/content</callerurl>
</icoyaDriveResponse>

```

6.3 Get a directory list

The dir of icoyaDrive returns a complete list of all resources in an icoya Collection.

URL:

https://www.struktur.de/icoyaProject/resources/content/icoyaDrive?method=main&cmd=dir&_ac_password=icoya&_ac_name=admin

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
<icoyadir cid="1H4LT" id="content"
url="https://www.struktur.de/icoyaProject/resources/content">
<object>
<id>i8PHFSIIR59HIG</id>
<title>This is the title of this document</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG</url>
<cid>1H4NE</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/octet-stream</content_type>
<modification_time>2002/03/08 20:03:52.7898 GMT+1</modification_time>
<size>41</size>
</object>
<object>
<id>i8PHFUOEKVM85K</id>
<title>This is the title of this document</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PHFUOEKVM85K</url>
<cid>1H4NN</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/empty</content_type>
<modification_time>2002/02/22 13:03:05.37173 GMT+1</modification_time>
<size>0</size>
</object>
<object>
```

```
<id>i8PHGQJ9KQNSNO</id>
<title>This is the title of this document</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PHGQJ9KQNSNO</url>
<cid>1H4OM</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/empty</content_type>
<modification_time>2002/02/22 13:54:06.43809 GMT+1</modification_time>
<size>0</size>
</object>
<object>
<id>i8PHGVCUSBQ7PL</id>
<title>This is the title of this document</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PHGVCUSBQ7PL</url>
<cid>1H4OV</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/empty</content_type>
<modification_time>2002/02/22 14:02:54.1893 GMT+1</modification_time>
<size>0</size>
</object>
<object>
<id>i8PJQEA8K7K7ET</id>
<title>This is a test</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PJQEA8K7K7ET</url>
<cid>1H4P9</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/empty</content_type>
<modification_time>2002/02/25 13:51:00.340468 GMT+1</modification_time>
<size>0</size>
</object>
<object>
<id>i8PS8LHCBFF1SJ</id>
<title>Test</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PS8LHCBFF1SJ</url>
```

```
<cid>1H4PJ</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/08 14:03:24.9493 GMT+1</modification_time>
<size />
</object>
<object>
<id>i8PSE96PQ42896</id>
<title>This is the title of this document</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PSE96PQ42896</url>
<cid>1H4PT</cid>
<meta_type>icoyaFile</meta_type>
<content_type>application/empty</content_type>
<modification_time>2002/03/08 19:26:27.8997 GMT+1</modification_time>
<size>0</size>
</object>
<object>
<id>i8PV8AGSRMRR9V</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8AGSRMRR9V</url>
<cid>1H4Q7</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/12 11:26:31.5047 GMT+1</modification_time>
<size />
</object>
<object>
<id>i8PV8D0V6L7LD9</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8D0V6L7LD9</url>
<cid>1H4QH</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
```

```
<modification_time>2002/03/12 11:31:06.11979 GMT+1</modification_time>
<size />
</object>
<object>
<id>i8PV8J80BSEVNF</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8J80BSEVNF</url>
<cid>1H4QR</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/12 11:42:30.1753 GMT+1</modification_time>
<size />
</object>
<object>
<id>i8PV8J8ATVHNNS</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8J8ATVHNNS</url>
<cid>1H4QS</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/12 11:42:31.1642 GMT+1</modification_time>
<size />
</object>
<object>
<id>i8PV8JFREVK0KH</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8JFREVK0KH</url>
<cid>1H4QT</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/12 11:42:57.7948 GMT+1</modification_time>
<size />
</object>
```

```
<object>
<id>i8PV8MKT1GT45D</id>
<title>MyNewFolder</title>
<url>https://www.struktur.de/icoyaProject/resources/content/i8PV8MKT1GT45D</url>
<cid>1H4R5</cid>
<meta_type>icoyaCollection</meta_type>
<content_type />
<modification_time>2002/03/12 11:48:44.5016 GMT+1</modification_time>
<size />
</object>
</icoyadir>
```

6.4 Create a language

Using the *addLanguage* method a new language ‘*english*’ is added. *icoya* uses ISO639 Language Codes for language definitions. Please note that the available languages can be separately defined for each *icoya* Project.

We add the Language ‘*en*’ (*english*) here. Ensure to create a language before language dependent content is created. The initial language of the content is the empty language (the empty language string ‘’). It means that the default content (no language is created or given) is language independent.

URL:

https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG/icoyaDrive?method=action&cmd=addLanguage&language=en&_ac_password=icoya&_ac_name=admin

Response:

```
= <icoyaDriveResponse>
  <method>action</method>
  <cmd>addLanguage</cmd>
  <support>None</support>
  <mode>None</mode>
  <link>None</link>
```

```
<callerurl>https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG</callerurl>
```

```
</icoyaDriveResponse>
```

6.5 Store content in the icoya CMS server

Using *icoyaDrive* the content is transferred from the client to the icoya server using HTTP POST. The content is stored in icoya using the *doContent* method.

Please note that the icoya CMS server also supports data creation and exchange utilizing WebDAV, FTP, SOAP and XML-RPC protocols. Thus, icoyaDrive is only one of many possible interfaces.

Content can be also created using a Web browser. The content follows the *&file* parameter. With a browser you may type in the content on the browser URL with the *&file* parameter as the last parameter, e.g. *&file=This is my first content stored in icoya.*

URL:

```
https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG/icoyaDrive?method=action&cmd=doContent&language=en&\_ac\_password=icoya&\_ac\_name=admin&file=This%20is%20your%20content%20that%20is%20stored%20in%20icoya.
```

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
```

```
= <icoyaDriveResponse>
```

```
  <msgstr>Saved the content</msgstr>
```

```
  <method>action</method>
```

```
  <cmd>doContent</cmd>
```

```
  <support>None</support>
```

```
  <mode>None</mode>
```

```
  <link>None</link>
```

```
  <callerurl>https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG</callerurl>
```

```
</icoyaDriveResponse>
```

6.6 Get a list of all versions of a document stored in icoya

The *getVersionList* command in icoya returns a list of all versions of a document and a given language.

URL:

```
https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG/icoyaDrive?method=main&cmd=getVersionList&\_ac\_password=icoya&\_ac\_name=admin
```

Response:

```
<?xml version="1.0" encoding="UTF-8" ?>
<icoyaversions cid="1H4NE" id="i8PHFSIIR59HIG"
  url="https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG">
  <language lang="en">
    <latest>0.5</latest>
    <released />
  <version ver="0.1">
    <author>admin</author>
    <comment />
    <object>1H401</object>
    <changed>2002/02/22 13:15:23.3086 GMT+1</changed>
    <size>4</size>
  </version>
  <version ver="0.2">
    <author>admin</author>
    <comment />
    <object>1H402</object>
    <changed>2002/02/22 13:16:43.5449 GMT+1</changed>
    <size>44</size>
  </version>
  <version ver="0.3">
    <author>admin</author>
    <comment />
```

```

    <object>1H4O3</object>
    <changed>2002/02/22 13:18:42.9703 GMT+1</changed>
    <size>45</size>
  </version>
  = <version ver="0.4">
    <author>admin</author>
    <comment />
    <object>1H4OB</object>
    <changed>2002/02/22 13:34:46.747 GMT+1</changed>
    <size>28325</size>
  </version>
  = <version ver="0.5">
    <author>admin</author>
    <comment />
    <object>1H4OL</object>
    <changed>2002/02/22 13:47:42.0433 GMT+1</changed>
    <size>45</size>
  </version>
</language>
= <language lang="">
  <latest />
  <released />
</language>
</icoyaversions>

```

6.7 Content retrieval

The content is accessed simply by its URL. Additional parameters can be given to retrieve a specific version or language of the content or to retrieve the released or latest version.

We retrieve the version 0.3 of the content created above:

URL:

https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG?language=en&version=0.3&_ac_password=icoya&_ac_name=admin

Response:

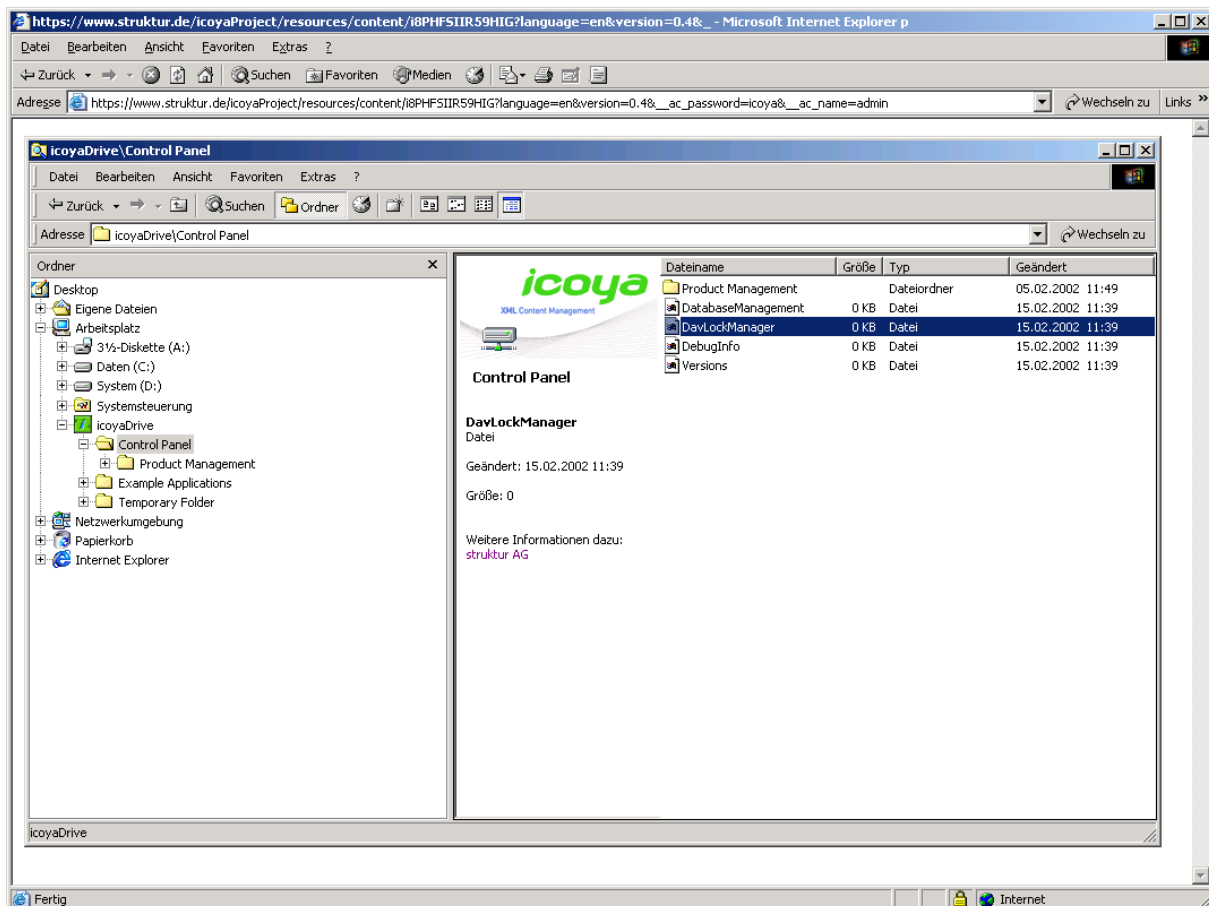
This is your content that is stored in icoya.

Now we retrieve version 0.4 of the content. The returned content is not a text document but a GIF-File. It is possible to store and retrieve any content type because we created a content container of type icoyaFile. Even huge files of several 100MB size can be stored - even in the Tamino database. The icoya CMS has a 3-level data cache and a timeless asynchronous message queue to speed up content storage and retrieval.

URL:

https://www.struktur.de/icoyaProject/resources/content/i8PHFSIIR59HIG?language=en&version=0.4&_ac_password=icoya&_ac_name=admin

Response:



BTW: This is a screen dump of the icoyaDrive network drive for MS-Windows NT/2000/XP.