

# Using Archival Resource Keys (ARKs) for Persistent Identification

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# ARK

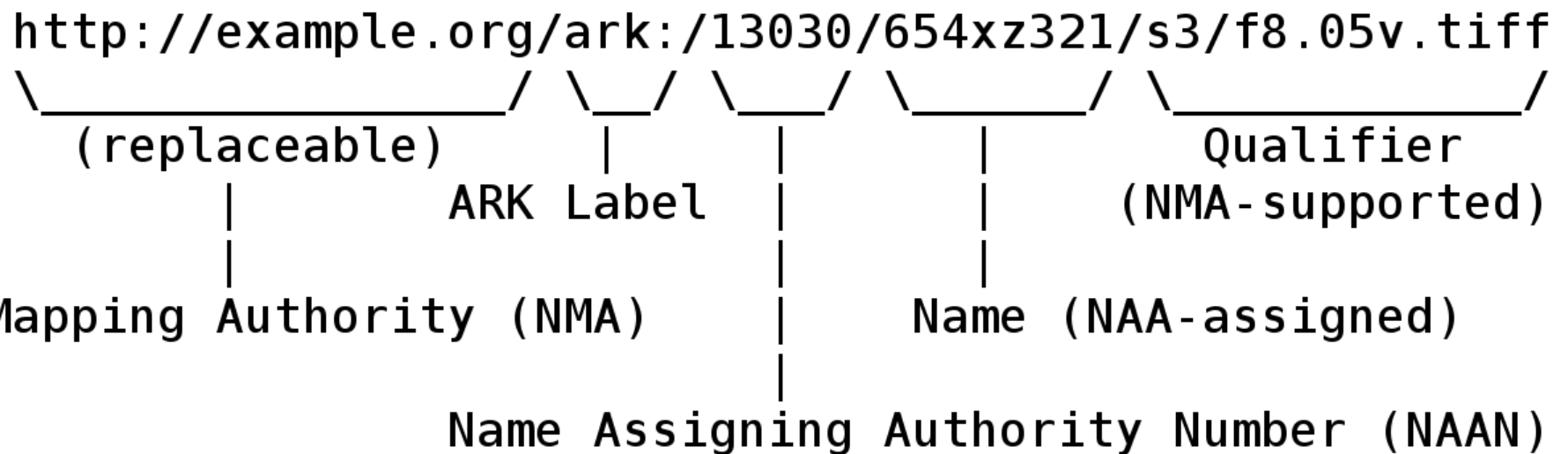
## Archival Resource Key

Is a naming scheme designed to facilitate the high quality and persistent identification of information objects.

A founding principle of the ARK is that persistence is purely a matter of service and is neither inherent in an object nor conferred on it by a particular naming syntax.

# Archival Resource Key (ARK)

An ARK is a URL created to allow persistent, long-term access to information objects.



# Name Mapping Authority (NMA)

<http://example.org/>

The name mapping authority is responsible for launching an ARK into the world as a url, otherwise it is no different from any other identifier scheme.

Name Mapping authorities can change over time, and probably will.

Access to content at multiple locations is possible.

<http://tdl.org/ark:/12025/654xz321>

<http://digital.library.unt.edu/ark:/12025/654xz321>

# ARK Label

ark:/

Simple label that indicates that this is in fact an ARK Identifier. Makes searching for these quite easy in most search engines.

# Name Assigning Authority Number (NAAN)

13030

Unique identifier for institutions creating ARKs.

Helps in the “globally unique” problem.

Will remain the same throughout the life of the identifier.

# Name

654xz321

Minted by institution identified in the NAAN

The more opaque probably the better.

Preferred:

No sequences,

No more than two letters together

# Qualifier

s3/f8.05v.tiff

Optional Qualifier for adding service points to identifiers

Do not have to be supported by other NMA's

Qualifiers don't need to be as opaque.



# What should a persistent URL deliver?

Representation of the digital object?

Human readable display?

Metadata?

Service agreement?

# Beautiful URLs

In many modern web frameworks the concept of “beautiful URLs” is very strong.

We should have this

<http://example.com/news/article/131/>

Instead of this

<http://example.com/news.php?article=131>

# ARK in use

UNT Libraries is redesigning our digital library systems infrastructure and we are using ARKs as a key piece of the infrastructure.

ARKs match up with the concept of “beautiful URLs” which is a common design practice for web applications.

ARKs provide an easy framework for building services.

<http://digital.library.unt.edu/ark:/67531/metadc3211>

Returns a human readable page like most systems

[http://digital.library.unt.edu/ark:/67531/metadc3211?](http://digital.library.unt.edu/ark:/67531/metadc3211?erc)

Returns a machine and human readable metadata record in the ERC format

erc:

who: Ezzell, Frank

what: The Ferris Wheel, Volume 4, No. 39, Saturday, June 12, 1897

when: 1897

where: <http://digital.library.unt.edu/ark:/67531/metadc3211>

<http://digital.library.unt.edu/ark:/67531/metadc3211??>

Returns a service agreement about the ARK letting the user know how this identifier or object might change over time.

erc-support:

who: unt.edu

what: (:tba) Commitment statement pending.

when: 20071219

where: <http://digital.library.unt.edu/ark/>

<http://digital.library.unt.edu/ark:/67531/meta-dc-3211>

Hyphens are ignored so this resolves to the same place.

# Services

<http://digital.library.unt.edu/ark:/67531/metadc3211/thumbnail>

Thumbnail representation of the object, every object has some sort of thumbnail image.

<http://digital.library.unt.edu/ark:/67531/metadc3211/square>

Square representation of the object, every object has some sort of square image

<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata>

Listing of all metadata in our preferred format

# Metadata

<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.dc.xml>  
<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.dc.json>  
<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.mods.xml>  
<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.untl.xml>  
<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.marc.xml>  
<http://digital.library.unt.edu/ark:/67531/metadc3211/metadata.mets.xml>

All objects have quick access to many metadata schemes.

# Objects

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/>

First fileSet in the object (probably a page turner)

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/thumbnail>

Thumbnail for first fileSet

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/square>

Square image for first fileSet

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/ocr>

OCR text for first fileSet

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/highRes>

Access to our high resolution image

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/medRes>

Access to the medium resolution image



# Manifestations

## Texas Reports:

One digital object

PDF version

HTML version

TXT version

<http://digital.library.unt.edu/ark:/67531/metadc3211/m1/>

PDF version

<http://digital.library.unt.edu/ark:/67531/metadc3211/m2/>

TXT version

<http://digital.library.unt.edu/ark:/67531/metadc3211/m3/>

HTML version

# Books, Newspapers, Maps

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/zoom>

Zooming interface for maps and newspapers

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/zoom?q=Texas>

Highlights the word Texas on the page

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/boundingBoxes>

Bounding box file mapping words to locations on a page

<http://digital.library.unt.edu/ark:/67531/metadc3211/1/bboxes?q=Texas>

JSON containing bounding box information for the location of the word Texas

Example: <http://libbrandonbox.library.unt.edu/ark:/67531/metaph18837/1/zoom?q=cleaning>

# Rapid Development

If a designer knows just the ARK they have all of these services at their disposal.

ARK provides a framework to hang additional services as needed.

Questions?