

Addresses, Names, and Keywords: finding the right label for the job

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Presentation Overview

- Introduction to 3 basic Internet standards technologies for application-level
- Current illustrations
- Scenarios for discussion

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Definitions and familiarization

- Address, name, identifier, keyword
- Commonly-encountered identifiers
 - e-mail, telephone, other services
 - Network
 - Web pages

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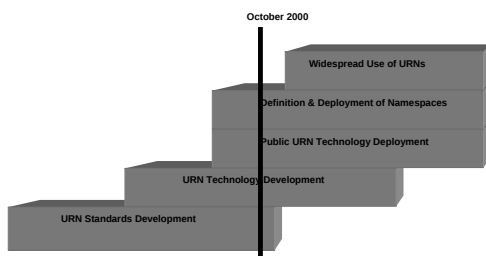
URLs

- pretty familiar... :-)
- Issues:
 - what do they identify?
 - Internationalization
- Structure:
`http://www.thinkingcat.com/somedir/text.html`

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URN Evolution



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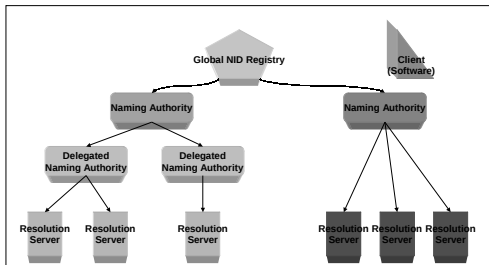
The URN Framework (Syntax)

- Looks like:
`URN:<NID>:<Namespace-SpecificString>`
- For example
`URN:ietf:rfc:2141`
 - NID is “ietf”
 - NSS is “rfc:2141”

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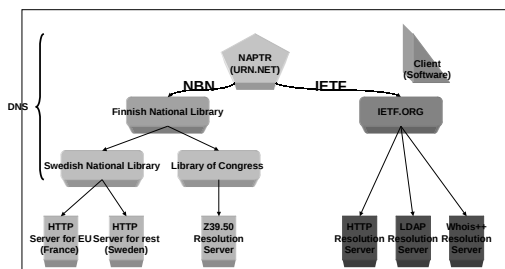
URN Architecture



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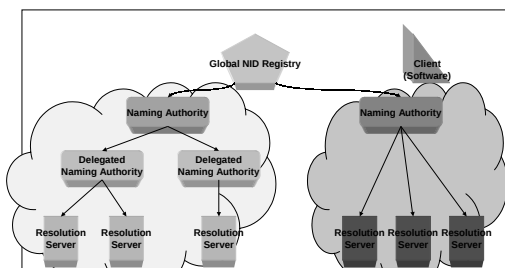
URN Example



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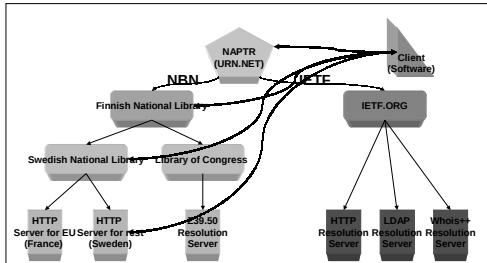
URN Delegation



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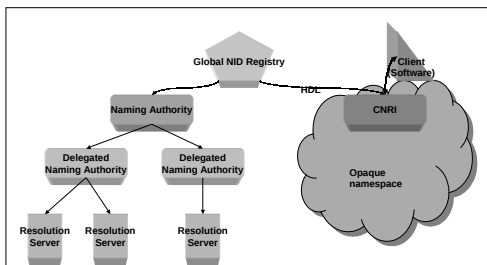
URN Resolution (1)



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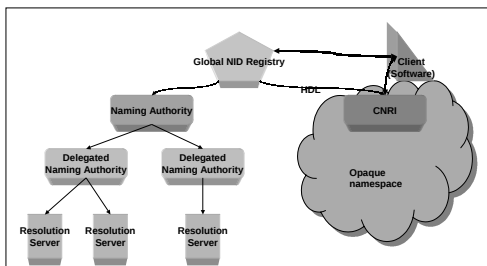
URN (Not) Resolution (2)



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URN Resolution (3)



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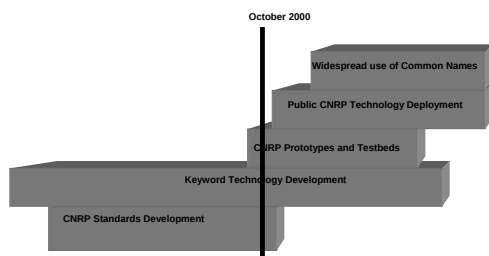
IETF URN Status

- Standards documents – iterating through final phases
- Software deployment – experiments, prototypes, and components in DNS
- Namespace registration – has begun

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Keywords – Evolution



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Common Name Resolution Protocol (CNRP) WG

- Standard for keyword -> URL + info
- *Not* unique – “space” of names is not globally managed
- XML-based query language
 - common name (or fragment)
 - description of other “hint” information
- Server is responsible for defining “match”
- Fully “internationalized” (UTF-8)

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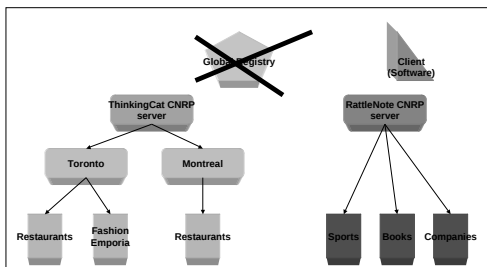
What's in a name?

- Core properties are
 - Common name
 - ID
 - resourceURI
 - Description
- Base properties include
 - language
 - geography
 - category
- Locally-defined, registered properties

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Common Name Servers



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Searching for Buffalo

- ThinkingCat Toronto Restaurants
 - Buffalo Bill's (several locations)
 - World Wide BBQ (buffalo specialists)
- ThinkingCat Toronto Fashion Emporia:
 - Les jeans Buffalo
- ThinkingCat Montreal Restaurants
 - <empty>

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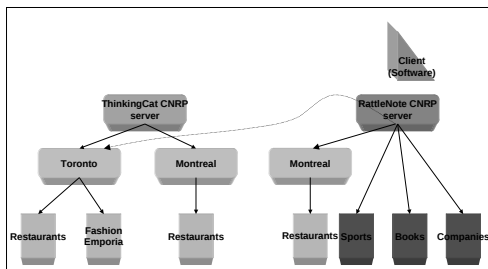
Searching for Buffalo (still)

- RattleNote Sports
 - Buffalo Bills
- Rattlenote Books
 - Buffalo Care for Dummies
- Rattlenote Companies
 - Les jeans Buffalo (corporate HQ) (French)
 - Les jeans Buffalo (corporate HQ) (English)

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Sharing Common Name Data



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Common Names in URL form

Two forms:

- go://[<host>]?[<common-name>]*[<attribute>=<value>]
- go:<common-name>*[<attribute>=<value>]

For example:

- go://rattlenote.com?buffalo;language=rfc1766,fr-CA

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Current Illustrations – URNs

National Book Numbers

<http://www.lib.helsinki.fi/meta/>

ISSNs

<http://www.issn.org/>

Various technical standards elements

Non-publishing examples

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Current Illustrations – CNRP

GIDS project in Sweden

<http://gids.catalogix.se/gids.html>

Network Solutions Testbed

<http://cnrp.research.netso1.com/>

RealNames localization

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Thought Provoking

- “Ericsson”
- Unified naming/messaging
- Identifying *you*
- Content Delivery
- Domain names

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Resources

- URL – definitive syntax
<http://www.ietf.org/rfc/rfc2396.txt>
- URN – WG, syntax, and how to get a namespace
<http://www.ietf.org/html.charters/urn-charter.html>
<http://www.ietf.org/rfc/rfc2141.txt>
<http://www.ietf.org/rfc/rfc2611.txt>
- CNRP – WG and related info
<http://www.ietf.org/html.charters/cnrp-charter.html>
<http://www.cnrp.net>

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