

## DRAFT danZIG specification

23. april 2006  
J.nr.: 330-2  
LEA

### HØRING af specifikation: NCIP Implementation Guidelines: User Lookup & Renewal support

Nærværende udkast til danZIG-specifikation om udlånstransaktioner er udarbejdet af danZIG's arbejdsgruppe om udlånstransaktioner. Arbejdsgruppen består af danZIG-medlemmerne Peter Jensen (Gentofte Bibliotekerne), Leif Andresen (Biblioteksstyrelsen), Henrik Dahl (Dantek) og Flemming Pedersen (Axiell). Den tekniske udformning er sket ved Flemming Pedersen og Henrik Dahl med medvirken af Pawel Polaczyk and Hubert Swierczynski, Dantek.

Formålet med specifikationen er på grundlag af en officiel NISO profil til NISO's Circulation Interchange Protocol<sup>1</sup> at specificere en række udlånsrelevante transaktioner til brug i dansk biblioteksvæsen.

Det kan f.eks. være at en anden brugergrænseflade end de lokale bibliotekssystem håndterer fornyelser og sletning af bestilling i en fælles brugergrænseflade dækkende flere systemer og det kan f.eks. være at give to biblioteker mulighed for et tæt samarbejde incl. udlån fra hinandens samlinger.

Kommentarer til nærværende specifikation bedes indsendt senest fredag den 26. maj 2006 til Biblioteksstyrelsen på email [bs@bs.dk](mailto:bs@bs.dk) mærket med "Høring 330-2".

Med venlig hilsen

Leif Andresen

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<sup>1</sup> <http://www.niso.org/standards/resources/z3983pt1rev1.pdf>

## **Draft danZIG-specification**

# **NCIP Implementation Guidelines: User Lookup & Renewal support**

Foreword to be added after hearing period is ended.

## **Obtaining the current version of the guidelines document**

For purposes of convenience the version of this document which is current is available at this URL:

NCIP Implementation Guidelines DCB-2.doc
Location: Persistent URL to be added for final specification

## **Introduction**

This document describes the responder-side requirements to support NCIP in Denmark, at a sufficient level to allow a gateway application to - on behalf of an end user - request information on requests and loans and to perform renewals and cancellation/updates of requests. If the user is registered in one or more libraries, the gateway application will be able to retrieve request and loan information via NCIP from the libraries and present an overview to the user. The end user interaction is outside the scope of these guidelines.

This document describes responder-side behavior which is compatible with a subset of the application profile "Direct Consortial Borrowing: User Agency Manages Transaction Application profile" (DCB-2):

[http://www.cde.state.co.us/ncip/application\\_profiles\\_approved.htm](http://www.cde.state.co.us/ncip/application_profiles_approved.htm) particularly [http://www.cde.state.co.us/ncip/download/pdf/DBC\\_User\\_Agency\\_Manages\\_Transaction.pdf](http://www.cde.state.co.us/ncip/download/pdf/DBC_User_Agency_Manages_Transaction.pdf).

In other words, an application capable of supporting this profile should also be compliant with these Guidelines. However, it should also be noted that compliance with these guidelines does not in itself *guarantee* full compliance with either NCIP, the Implementation Profile 1 or DCB-2.

## **Terminology**

All special terminology, such as 'User Agency', 'Lookup Service', etc. follow the definitions given in the NCIP standard and in its associated Implementation Profile 1 (IMP1).

## **Conformance**

At present, these Guidelines are concerned only with responder behavior. The responder is both User and Item Agency. In the working scenario, the initiating application is a gateway application, that might present results retrieved via NCIP to the user on the web. The responding applications are local library circulation systems. These Guidelines require support for the following services:

- Lookup Version
- Lookup User
- Lookup Item
- Lookup Request
- Renew Item
- Cancel Request Service
- Update Request Service

The responding application should conform to DCB-2, if not stated otherwise in these guidelines.

## **Implementation Guidelines**

### ***Transport Protocol***

The IMP1 requires that responding applications support all three possible transport protocols: HTTP, HTTPS, and direct transmission over TCP/IP, however the DCB-2 requires HTTPS to be used for transmission. Therefore these guidelines force HTTPS to be used.

### ***NCIP Protocol Version***

All implementations shall support the NCIP version 1.01. For responding applications, this means that they must be able to receive and respond to every required service, listed in *Conformance* section in this Guidelines, according to the messages definitions of NCIP version 1.01. The references to the definitions of NCIP messages are attached in the Appendix A.

The XML root element of the NCIP message shall contain a version attribute identifying the DTD file to which the message belongs. Appendix B, *Sample Messages*, of these Guidelines may be consulted for examples of correct usage of this attribute.

## **Registered Schemes**

Colorado State Library is designated to act as NCIP maintenance agency, and thus will be responsible for registering additional schemes according to Appendix G of the NCIP standard. Danish library identification numbers can be used as ISIL identifiers (International Standard Identifier for Libraries and Related Organisations). It is proposed that the following scheme identifier be used whenever a Danish library or organisation is identified with its library number:

<http://www.bs.dk/isil/scheme/version1.0>

Note that when Danish library numbers are used as ISIL identifiers, they should be prefixed with "DK-". The scheme identifier will be registered with the NCIP maintenance agency.

## ***Configuration***

The initiating application (in this case the gateway application) shall have defined the context in which it is operating, e.g. it should know the URLs of applications that allow communicating through NCIP with local library circulation systems. It is outside the scope of the NCIP standard and of this document, to define how this information should be maintained. However, a method or manual procedures should be developed in order to supply the initiating application with this data.

## ***Security***

In order to ensure faithfulness of NCIP messages, that they are sent from the trusted agency which the receiver cooperates with, there is a need of authenticating the sender application. NCIP provides such a possibility: in the header of the message next to the From Agency Id there is From Agency Authentication field.

Therefore, these Guidelines assume that the responding application must check the From Agency Authentication field in the Initiation Header of the incoming messages. It must also attach the From Agency Authentication to the Response Header of the responding messages sent. The agency authentication string should be different for each two agencies and different for both directions of transmission among them.

There should be defined the way and policy of exchanging and maintaining authentication information among agencies. However it is outside the scope of this document. The security of authentication data stored in agencies is also out of the scope of these Guidelines.

## ***Required Parameters***

### **Parameter name Comment**

The IMP1 requires the following parameters in both request and response.

FromAgencyId, The code of the sending library or department.

ToAgencyId , The code of the receiving library or department

## ***Basic Message Flow***

In the following, the basic message flow is described. It is not an elaborate description, and is not intended to be so, but should give a basic idea of how the messages and elements should be used.

The gateway application (GWA) asks for a users loan and request data from one or more libraries with Lookup User. The Lookup User contains Authentication Input and the empty elements Loaned Items Desired and/or Requested Items Desired. The Lookup User Response contains the user's loans - identified by Unique Item Id - and requests - identified by Unique Request Id. The Lookup User Response contains furthermore Unique User Id.

For each loan returned in Lookup User Reponse, the GWA should ask for further data, with Lookup Item. Each Lookup Item contains the Unique Item Id retrieved in the Lookup User Response. The Lookup Item Response contains Visible Item Id (barcode) and Bibliographic Data.

For each request returned in Lookup User Reponse, the GWA should ask for further data, with Lookup Request. Each Lookup Request contains the Unique Request Id retrieved in the Lookup User Response. The Lookup Request Response contains request specific data, e.g. Earliest Date Needed and Bibliographic Data.

Renewal is performed with the Renewal message, and it contains Unique Item Id and Unique User Id. The Renew Item Reponse contains - if successful - the new due date.

Cancellation of a request is performed with the Cancel Request Service. The Cancel Request contains Unique Request Id and Unique User Id.

Requests are updated with the Update Request Item Service. The Update Request Item contains the data to be changed in Delete Request Fields and Add Request Fields, and contains furthermore the Unique User Id.

## Appendix A. Definitions of NCIP messages.

There are two formats defining the NCIP messages available: DTD and XML Schema. The content of those files is semantically equal. However, the DTD is a part of the Standard, and the XML Schema is non-normative.

In order to permit use of the Lookup Version service in previous and future versions of the NCIP, it is defined in a DTD and XML Schema separate from the rest of the NCIP messages.

The *Sample Messages* attached to these Guidelines may be consulted for the examples of correct usage of the following URIs in the version attribute of the XML root element and the XML Prolog (the <!DOCTYPE> element). Please, notice the difference between the messages of Lookup Version service and the rest of sample messages.

### **NCIP services (except Lookup Version service)**

The DTD is identified by the following URI:

`http://www.niso.org/ncip/v1\_01/impl/dtd/ncip\_v1\_01.dtd`

However, it is not currently available at this location. Its content is available at

`http://www.cde.state.co.us/ncip/DTDversions/version101DTD.htm`

The XML Schema (non-normative) is identified by the following URI:

`http://www.niso.org/ncip/v1\_01/impl/xsd/ncip\_v1\_01.xsd`

However, it is not currently available at this location. Its content is available at

`http://www.cde.state.co.us/ncip/DTDversions/ncip\_v1\_schema.txt`

### **NCIP Lookup Version service**

The DTD is identified by the following URI:

`http://www.niso.org/ncip/v1\_0/impl/dtd/ncip\_version.dtd`

The XML Schema (non-normative) is identified by the following URI:

`http://www.niso.org/ncip/v1\_0/impl/xsd/ncip\_version.xsd`

## Appendix B. Sample Messages

*NOTE: For all examples below, the ISIL identifier DK-715700 is used for the requesting library and DK-720500 is used for the responding (User Agency) library.*

There are a number of sample messages which have been created in order to illustrate the concrete XML documents in action when using NCIP. Each of these files may be obtained using one of the URLs below.

### LookupVersion

LookupVersion.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupVersion.xml">http://www.bs.dk/standards/ncip/examples/LookupVersion.xml</a>

LookupVersionResponse.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupVersionResponse.xml">http://www.bs.dk/standards/ncip/examples/LookupVersionResponse.xml</a>

### CancelRequestItem

CancelRequestItem.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/CancelRequestItem.xml">http://www.bs.dk/standards/ncip/examples/CancelRequestItem.xml</a>

CancelRequestItemResponse.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/CancelRequestItemResponse.xml">http://www.bs.dk/standards/ncip/examples/CancelRequestItemResponse.xml</a>

### LookupItem

LookupItem.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupItem.xml">http://www.bs.dk/standards/ncip/examples/LookupItem.xml</a>

LookupItemResponse.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupItemResponse.xml">http://www.bs.dk/standards/ncip/examples/LookupItemResponse.xml</a>

### LookupRequest

LookupRequest.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupRequest.xml">http://www.bs.dk/standards/ncip/examples/LookupRequest.xml</a>

LookupRequestResponse.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupRequestResponse.xml">http://www.bs.dk/standards/ncip/examples/LookupRequestResponse.xml</a>

### LookupUser

LookupUser.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupUser.xml">http://www.bs.dk/standards/ncip/examples/LookupUser.xml</a>

LookupUserResponse.xml
Location: <a href="http://www.bs.dk/standards/ncip/examples/LookupUserResponse.xml">http://www.bs.dk/standards/ncip/examples/LookupUserResponse.xml</a>

## RenewItem

RenewItem.xml
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Location:	<a href="http://www.bs.dk/standards/ncip/examples/RenewItem.xml">http://www.bs.dk/standards/ncip/examples/RenewItem.xml</a>
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RenewItemResponse.xml
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Location:	<a href="http://www.bs.dk/standards/ncip/examples/RenewItemResponse.xml">http://www.bs.dk/standards/ncip/examples/RenewItemResponse.xml</a>
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## UpdateRequestItem

UpdateRequestItem.xml
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Location:	<a href="http://www.bs.dk/standards/ncip/examples/UpdateRequestItem.xml">http://www.bs.dk/standards/ncip/examples/UpdateRequestItem.xml</a>
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UpdateRequestItemResponse.xml
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Location:	<a href="http://www.bs.dk/standards/ncip/examples/UpdateRequestItemResponse.xml">http://www.bs.dk/standards/ncip/examples/UpdateRequestItemResponse.xml</a>
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