

## NIEM v2.1 Dictionary Pack for CAM v1.8

### Introduction

The collection of CAM-generated dictionaries provided in this download pack is built from the NIEM domain subset schemas obtained from the NIEM SSGT options page (<http://niem.gtri.gatech.edu/niemtools/ssgt/SSGT-Options.iepd>) and using each of the “Add” domain links. Each of these domain subsets is controlled by its wantlist.xml configuration file which in turn determines which components appear in the corresponding dictionary<sup>1</sup>.

In addition, both the Justice and NIEM Core schema have been manually edited to remove recursive object references to provide atomic canonical structure artifacts in the dictionary. Automatic recursion detection also has truncated any locally recursive items to just the element node, without any subsequent children. The components in these dictionaries therefore may differ from the exact components viewed in the original NIEM schema in their level of depth details.

The aim is to provide a collection of components that can be rapidly leveraged with the CAM Toolkit to create basic NIEM-based information exchanges with typical data use patterns. These basic components can then be augmented with custom domain dictionary components harvested using CAM tools from other existing local schema definitions or by importing further tailored subset schema built manually via the online NIEM SSGT tool.

Dictionaries are provided in both XML format and Microsoft Excel™ spreadsheet format. The Excel format permits manual review and discovery of dictionary components, while the XML format is for use with the CAM expander tool.

### Using Dictionaries

The canonical XML dictionary format works with the CAM v1.8 blueprint and expander tools to allow automated generation of exchange schema CAM templates. The expander matches structure node elements found in the blueprint to the same element in the dictionary and then expands the node’s children identified in the dictionary. Matching and referencing is namespace prefix driven.

Notice that multiple dictionaries may be used together with the expander tool to combine components into a resulting exchange structure from more than one domain. Once an exchange template is created by the expander then it should be reviewed for accuracy and completeness in the CAM Toolkit. Further changes can then be made manually in the editor to add rules, additional elements and attributes, or to exclude parts (sub-trees or individual nodes) of the structure. After marking structure items as excluded, use the CAM “Export Compressed Template” function to produce the final exchange template with those items removed. Once the template is complete, the exchange XSD schema can be generated using the “Export Templates as an XSD Schema” function with the mode selection set to “NIEM 2.1”. Next we discuss details of configuring the dictionary expander process.

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<sup>1</sup> Using the Add domain makes a subset that when downloaded via “Generate Documents” link includes the documentation as well.

## Example Control File

The use of dictionaries by the expander tool is directed via a XML control file that associates namespace prefix details with a physical XML dictionary file. Shown here is an example of a XML control file referencing two dictionary files. Control files should be manually edited in a XML editor tool to make configuration changes as needed (e.g. green bold text areas).

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- CAM dictionary extension (version 1.00) -->
<as:Extension xmlns:as="http://www.oasis-open.org/committees/cam"
  xmlns:camed="http://jcam.org.uk/editor"
  name="uk.org.jcam.camed.extensions.dictionaryRepository">
  <camed:dictionary shortname="NIEM-j-v2.1"
    location="NIEM-justice-dictionary.xml"
    namespaces="j, im, nc">
    <camed:annotation item="//camed:dictionary[@shortname='EDXL-v1']">
      <camed:documentation type="Description">
        NIEM Justice v2.1 set of common components.
      </camed:documentation></camed:annotation>
    </camed:dictionary>
    <camed:dictionary shortname="EDXL-v1"
      location="EDXL-hospital-template-dictionary.xml"
      namespaces="gml, xpil, ">
      <camed:annotation item="//camed:dictionary[@shortname='EDXL-v1']">
        <camed:documentation type="Description">
          OASIS EDXL v1.0 set of common components.
        </camed:documentation></camed:annotation>
      </camed:dictionary>
    </as:Extension>
```

## Running a Sample Blueprint

From the CAM editor File menu select Open Template and select a blueprint from the samples folder; then from the Tools menu select Expand Template. On that dialogue use the Control File entry Browse button to view the adjacent NIEM-dictionaries folder and pick the matching dictionary control file for the example blueprint type. Run the expand process and the results will display. Use the Open Template file dialogue again to load the expanded template into the CAM editor and review the details.

A quick overview of the blueprint process is provided in the presentation available here: [www.oasis-open.org/committees/document.php?document\\_id=36146](http://www.oasis-open.org/committees/document.php?document_id=36146)

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