1. Introduction

The term labelling is the process of determining the appropriate metadata for a given data object, creating the metadata label and binding the metadata label to the data object. A binding is a relationship between a data object and a metadata label. A binding is realized by applying a binding mechanism. If a metadata label must be bound to a data object, both the metadata label and the data object are input to the binding mechanism. The output of the binding mechanism is the binding of a data object and metadata label (see Figure 1) which says that the data object and the metadata label belong together. The binding can be recorded as a structured data object, known as a Binding Data Object (BDO).
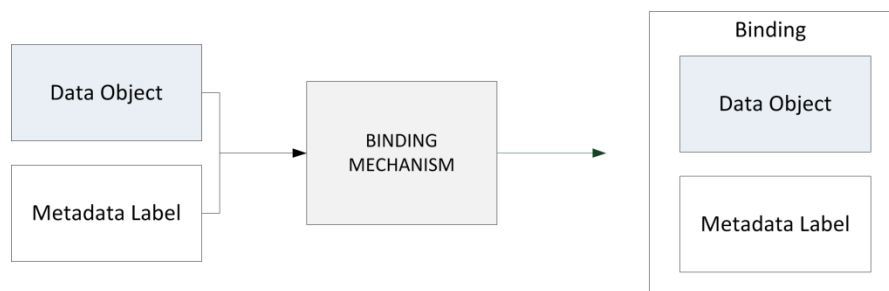

Figure 1 Creation of a binding

STANAG 4778 (Reference [2]) standardizes the binding of a data object and metadata label by specifying a common binding mechanism and a syntax for representing the BDO. However, to support information management and information sharing requirements it is necessary to further profile the application of STANAG 4778 to facilitate locating a BDO and embedding a BDO in data objects.

2. Sidecar Files Introduction

If a file cannot be packaged (for example, if it is a file on a file share which needs to be accessed using the original applications), a simple naming convention to relate the BDO with the data object is proposed.

Sidecar files allow the association of metadata with a data object for which there is no profile.

This approach is well known and understood for associating data (typically metadata) with other data of a different format.

3. Identification

The profile for sidecar files is uniquely identified by the Canonical Identifier shown in Table 1.

Table 1: Profile Identifiers

Type	Identifier
Canonical Identifier	urn:nato:stanag:4778:profile:sidecar
Version Identifier	urn:nato:stanag:4778:profile:sidecar:1:0

It is recognized that this profile may evolve during its review cycle. For example, a review might identify:

- support for specific file types
- improvements to the existing profiles based upon operational feedback

Therefore this version of the profile is uniquely identified by the Version Identifier shown in Table 1.

Subsequent versions of this profile will maintain the same Canonical Identifier, but define a new Version Identifier.

4. Standards

[1] STANAG 4774, Confidentiality Metadata Label Syntax, Brussels, Belgium
[2] STANAG 4778, Metadata Binding Mechanism, Brussels, Belgium

5. Notational Conventions

- The keywords "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [IETF RFC 2119, 1997].
- Words in *italics* indicate terms derived from Reference [2].

6. File Package

A simple naming convention is defined that allows the Binding Data Object to be maintained in a separate, but identifiable, file to the data object file, as shown in **Figure 2**.
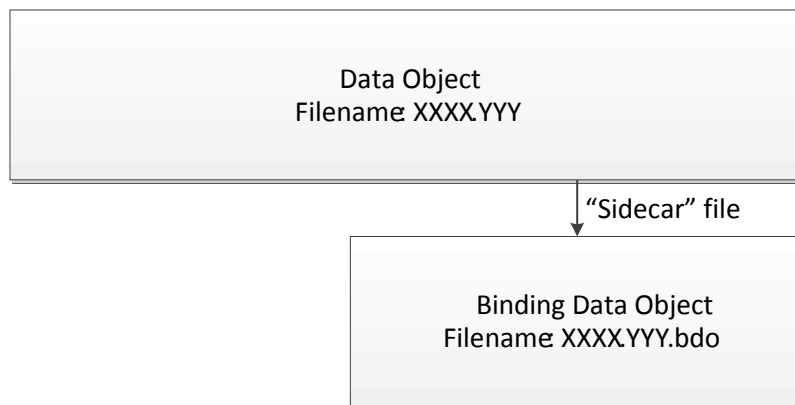
Figure 2: BDO as a Sidecar File

The name of the Binding Data Object file SHALL be the same as the data object file, with a further ".bdo" suffix.

Values used in *DataReference* URI with the BDO SHALL use relative paths and assume that the data object resides at the same location as the BDO.

For example, distinct metadata may be associated with an image file, "image1.jpeg", by creating a *BindingInformation* element and storing it as "image1.jpeg.bdo" in the same folder as the original file.

Figure 3 shows an example sidecar file for "image1.jpeg". This example uses Confidentiality Metadata Labels (Reference [1]) as example metadata.

```
<mb:BindingInformation
  xmlns:mb="urn:nato:stanag:4778:bindinginformation:1:0"
  xmlns:xmime="http://www.w3.org/2005/05/xmlmime">
  <mb:MetadataBindingContainer>
   <mb:MetadataBinding>
    <mb:Metadata>
     <slab:originatorConfidentialityLabel
      xmlns:slab="urn:nato:stanag:4774:confidentialitymetadatalabel:1:0">
      <slab:ConfidentialityInformation>
       <slab:PolicyIdentifier>ACME</slab:PolicyIdentifier>
       <slab:Classification>UNCLASSIFIED</slab:Classification>
      </slab:ConfidentialityInformation>
      <slab:CreationDateTime>
       2016-11-10T12:30:00Z
      </slab:CreationDateTime>
     </slab:originatorConfidentialityLabel>
    </mb:Metadata>
    <mb:DataReference URI="./image1.jpeg" xmime:contentType="image/jpeg" />
   </mb:MetadataBinding>
  </mb:MetadataBindingContainer>
 </mb:BindingInformation>
```

Figure 3: Example Sidecar file