

### 4.3.1 SML URI Reference Scheme

**Comment:** Started with text in editor's draft

The SML URI Reference Scheme is defined as follows:

**Comment:** I resisted the urge to turn the first level list into a sequence of sub-sections, although I suspect doing so would be clearer.

1. An SML reference is identified as an instance of the SML URI Reference Scheme if and only if exactly one element information item whose [\[local name\]](#) is `uri` and whose [\[namespace name\]](#) is `http://www.w3.org/@@@/@/uri` is present as a child of that reference element.

The content of the `uri` element MUST be of type `xs:anyURI` as defined in the XML schema specification [\[XML Schema Datatypes\]](#). The fragment identifier (if present) MUST follow the `smlxpath1()` scheme as defined in [4.3.1.1 smlxpath1\(\) scheme](#)

2. An SML reference that is an instance of the SML URI Reference Scheme is resolved using the following steps [that summarize the processing specified in other specifications, constrained by SML in places where those specifications allow variability.](#)

[Resolution steps, which non-normatively summarize the applicable specifications:](#)

1. An XML document **D** is obtained [as defined in the applicable RFC](#):
  1. If the URI reference is a same-document reference, then **D** is the document containing the SML reference.
  2. Otherwise, **D** is determined as follows:
    1. If the URI reference is a relative reference, then let **U** be the result of [transforming the reference to an absolute URI](#). Otherwise, **U** is the URI reference itself.
    2. Dereference **U**, ignoring any fragment component, using the appropriate operation defined for the URI scheme in **U**, [to obtain the referenced XML document \*\*D\*\*](#).

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**Deleted:** [\[IETF RFC 3986\]](#)

**Comment:** Base URI stuff moved into "constraints on" text.

**Deleted:** resolving

**Deleted:** using

**Deleted:** the [\[base URI\]](#) property [\[XML Information Set\]](#) of the `<sml:uri>` element as the base URI

**Deleted:** If the document targeted by **U** is in the current SML model, then **D** is that document. Otherwise, if the document is not in the current SML model, then the SML URI Reference Scheme instance is unresolved (and **D** has no value).

**Comment:** Deleted note moved under Constraints on...

[Any fragment component is processed according to \*\*D\*\*'s media type specification, which for XML documents is \[\\[XPointer Framework\\]\]\(#\).](#)

[Constraints on resolving an instance of the SML URI Reference Scheme where the applicable specifications allow variability:](#)

1. [Whenever a base URI is needed to transform a relative URI reference into an absolute URI, the \[\\[base URI\\]\]\(#\) property \[\\[XML Information Set\\]\]\(#\) of the `<sml:uri>` element MUST be used.](#)
2. [SML does not prescribe how the \[\\[base URI\\]\]\(#\) property is calculated, however dependent specifications MAY do so.](#)
3. [If the document targeted by an instance of the SML URI Reference Scheme is not in the current SML model, then the SML URI Reference Scheme instance MUST be considered unresolved. In the resolution steps below, that corresponds to \*\*D\*\* having no value.](#)

**Deleted:** Note:¶  
As a result of the above definition, if the retrieved object is not of XML media type or if it is not well-formed XML then, by definition, that object is not a document as defined by this specification. In this case, the SML reference scheme instance is unresolved. ¶  
<#>If no fragment component is present in the URI reference, the SML URI Reference Scheme instance resolves to the root element of **D**.¶

**Deleted:** <#>If a fragment component is present in the URI reference, the SML URI Reference Scheme instance resolves to the set of elements obtained by applying the fragment component to the root element of **D**.¶

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**Comment:** This gives SML-IF explicit license to say how base URIs are calculated.

**Note:**

As a result of the above definition, if the retrieved object is not of XML media type or if it is not well-formed XML then, by definition, that object is not a document as defined by this specification. In this case, the SML reference scheme instance is unresolved.

**Comment:** Add: so it cannot be in the SML model

4. The fragment component of the URI reference MUST comply with the smlxpath1() XPointer scheme [reference to section].

**Comment:** For 5543, we would add "or the Shorthand production of [XPointer], commonly known as a barename", and we MAY have to cover the null case that right now is handled by item 5.

5. If no fragment component is present in the URI reference, the SML URI Reference Scheme instance resolves to the root element of D.

**Comment:** I believe this SHOULD be covered already by either the RFC or XPointer, but I cannot find that normatively. RFC 3986 just defers all fragment processing to the media type (for XML, that is XPointer) although it notes some common same-doc references as by definition being "within" the document it does not say where (presumably it intends to defer to the media type here too). XPointer's productions do not appear to allow for a null fragment. Shorthand devolves to at least one character, and empty is clearly not scheme-based. If we can figure out where this is already covered, we can nuke this item.

2. Instances of the SML URI Reference Scheme are transformed to [target-complete identifiers](#) through standard URI processing, as described in the applicable URI RFC.

**Comment:** Should be a 3, somehow I confused Word