**8.16 Localization Quality Issue**

[****](http://www.w3.org/TR/its20/#contents)**8.16.1 Definition**

The [Localization Quality Issue](http://www.w3.org/TR/its20/#lqissue) data category is used to express information related to localization quality assessment tasks. Such tasks can be conducted on the translation of some source content (such as a text or an image) into a target language or on the source content itself where its quality may impact on the localization process.

Automated or manual quality assessment is one area of quality management for translational and localization. An example of existing quality assessment is in-country review (e.g., as part of a language acceptance test for software). An important part of quality assessment is the list of issue types that are being used. Very often, simple issue categories like "correct/incorrect" or "like/dislike" are inadequate; instead, more specific ones such as "terminology" or "grammar" are more helpful in identifying concrete reasons for quality problems and for obtaining a more objective picture of quality levels.

NOTE: Non-normative terminology related to localization quality as used in this section is provided in Appendix ###

This data category can be used in a number of ways, including the following example scenarios:

* A human reviewer working with a web-based tool adds quality markup manually in a text editor, including comments and suggestions, to localized content as part of the review process. A subsequent process examines this markup to ensure that changes were made.
* A fully automatic quality checking tool flags a number of potential quality issues in an XML or HTML file and marks them up using ITS 2.0 markup. A human reviewer then uses another tool to examine this markup and decide whether the file needs to receive more extensive review or be passed on for further processing without a further manual review stage.
* A quality assessment process identifies a number of issues and adds the ITS markup to a rendered HTML preview of an XML file along with CSS styling that highlights these issues. The resulting HTML file is then sent back to the translator to assist his or her revision efforts.

**Note:**

What issues should be considered in quality assessment tasks depends on the nature of the project and tools used. Further guidance is beyond the scope of this specification, but implementers may wish to consult the references cited in Appendix [number?].

The data category defines five pieces of information:

| Information | Description | Value | Notes |
| --- | --- | --- | --- |
| Type | A classifier that groups similar issues into categories (for example to differentiate spelling errors from grammar errors). | One of the values defined in [list of type values](http://www.w3.org/TR/its20/%22%20%5Cl%20%22lqissue-typevalues). | ITS 2.0-compliant tools that use these types [MUST](http://www.w3.org/TR/its20/%22%20%5Cl%20%22rfc-keywords) map their internal values to these types. If the type of the issue is set to uncategorized, a comment [MUST](http://www.w3.org/TR/its20/#rfc-keywords) be specified as well. |
| Comment | A human-readable description of a specific instance of a quality issue. | Text | Comments can be used to explain an issue or provide guidance in addressing an issue. For example, a note about a Terminology issue might specify what term should be used. |
| Severity | A classifier for the seriousness of an issue. The seriousness depends on the Quality Model that is being applied. The Quality Model should be made explicit via the Profile Reference. | A rational number in the interval 0 to 100 (inclusive). The value follows the [XML Schema double data type](http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/#double) with the constraining facets [minInclusive](http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/#rf-minInclusive) set to 0 and [maxInclusive](http://www.w3.org/TR/2004/REC-xmlschema-2-20041028/#rf-maxInclusive) set to 100. The higher values represent greater severity. | It is up to tools to map the values allowed by ITS 2.0 to their own system’s scale. If needed, the original value can be passed along using a custom namespace for XML, or a data- attribute for HTML. |
| Profile Reference | A reference to a description of the quality assessment model (or a specific profile (customization/instantiation) of a model, where relevant) used for the issue. | An IRI pointing to the reference document. | The use of resolvable IRIs is strongly recommended as it provides a way for human evaluators to learn more about the quality issues in use. |
| Enabled | A flag indicating whether the issue is enabled or not. | A value yes or no, with the default value being yes. | This flag is used to activate or deactivate issues. There is no prescribed behavior associated with activated or deactivated issues. One example of usage is a tool that allows the user to deactivate false positives so they are not displayed again each time the document is re-checked. |

[****](http://www.w3.org/TR/its20/#contents)**8.16.2 Implementation**

The [Localization Quality Issue](http://www.w3.org/TR/its20/#lqissue) data category can be expressed with global rules, or locally on individual elements. For elements, the data category information [inherits](http://www.w3.org/TR/its20/#def-inheritance) to the textual content of the element, *including* child elements, but excluding attributes.

GLOBAL: The locQualityIssueRule element contains the following:

* A required selector attribute. It contains an [absolute selector](http://www.w3.org/TR/its20/#selectors) which selects the nodes to which this rule applies.
* Either (in parallel to [local inline markup](http://www.w3.org/TR/its20/#lqissue-local-inline-markup))
	+ At least one of the following attributes:
		- A locQualityIssueType attribute that implements the [type information](http://www.w3.org/TR/its20/#lqissueDefs).
		- A locQualityIssueComment attribute that implements the [comment information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueSeverity attribute that implements the [severity information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueProfileRef attribute that implements the [profile reference information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueEnabled attribute that implements the [enabled information](http://www.w3.org/TR/its20/#lqissueDefs).
* Or (standoff markup) exactly one of the following:
	+ A locQualityIssuesRef attribute. Its value is an IRI pointing to the locQualityIssues element containing the [list of issues](http://www.w3.org/TR/its20/#elem-locQualityIssues) related to this content.
	+ A locQualityIssuesRefPointer attribute that contains a [relative selector](http://www.w3.org/TR/its20/#selectors) pointing to a node with the exact same semantics as locQualityIssuesRef.

**Note:**

The attribute locQualityIssuesRefPointer does not apply to HTML as local markup is provided for direct annotation in HTML.

Example 75: Annotating an issue in XML with locQualityIssueRule element

The locQualityIssueRule element associates the issue information with the value of the text attribute.

<?xml version="1.0"?>

**<doc>**

 **<header>**

 **<its:rules** xmlns:its="http://www.w3.org/2005/11/its" version="2.0"**>**

 **<its:locQualityIssueRule** selector="//image[@id='i1']/@text"

 locQualityIssueType="typographical"

 locQualityIssueComment="Sentence without capitalization"

 locQualityIssueSeverity="50"**/>**

 **</its:rules>**

 **</header>**

 **<para>**Click the button **<image** id="i1" src="button.png"

 text="start button"**/>**.**</para>**

**</doc>**

[Source file: [examples/xml/EX-locQualityIssue-global-1.xml](http://www.w3.org/TR/its20/examples/xml/EX-locQualityIssue-global-1.xml)]

Example 76: Annotating an issue in XML with local standoff markup and a global rule

The following example shows a document using local standoff markup to encode several issues. But because, in this case, the mrk element does not allow attributes from another namespace we cannot use locQualityIssuesRef directly. Instead, a global rule is used to map the function of locQualityIssuesRef to a non-ITS construct, here the ref attribute of any mrk elements that has its attribute type set to "x-itslq".

<?xml version="1.0"?>

**<doc** xmlns:its="http://www.w3.org/2005/11/its" its:version="2.0"**>**

 **<file>**

 **<header>**

 **<its:rules** version="2.0"**>**

 **<its:locQualityIssueRule** selector="//mrk[@type='x-itslq']"

 locQualityIssuesRefPointer="@ref"**/>**

 **</its:rules>**

 **</header>**

 **<unit** id="1"**>**

 **<segment>**

 **<source>**This is the content**</source>**

 **<target><mrk** type="x-itslq" ref="#lq1"**>**c'es**</mrk>** le contenu**</target>**

 **</segment>**

 **<its:locQualityIssues** xml:id="lq1"**>**

 **<its:locQualityIssue** locQualityIssueType="misspelling"

 locQualityIssueComment="'c'es' is unknown. Could be 'c'est'"

 locQualityIssueSeverity="50"**/>**

 **<its:locQualityIssue** locQualityIssueType="typographical"

 locQualityIssueComment="Sentence without capitalization"

 locQualityIssueSeverity="30"**/>**

 **</its:locQualityIssues>**

 **</unit>**

 **</file>**

**</doc>**

[Source file: [examples/xml/EX-locQualityIssue-global-2.xml](http://www.w3.org/TR/its20/examples/xml/EX-locQualityIssue-global-2.xml)]

LOCAL: Using the inline markup to represent the data category locally is limited to a single occurrence for a given content (e.g. one cannot have different locQualityIssueType attributes applied to the same span of text because the inner-most one would override the others). A local *standoff markup* is provided to allow such cases.

The following local markup is available for the [Localization Quality Issue](http://www.w3.org/TR/its20/#lqissue) data category:

* Either (inline markup):
	+ At least one of the following attributes:
		- A locQualityIssueType attribute that implements the [type information](http://www.w3.org/TR/its20/#lqissueDefs).
		- A locQualityIssueComment attribute that implements the [comment information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueSeverity attribute that implements the [severity information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueProfileRef attribute that implements the [profile reference information](http://www.w3.org/TR/its20/#lqissueDefs).
	+ An optional locQualityIssueEnabled attribute that implements the [enabled information](http://www.w3.org/TR/its20/#lqissueDefs).
* Or (standoff markup):
	+ A locQualityIssuesRef attribute. Its value is an IRI pointing to the locQualityIssues element containing the [list of issues](http://www.w3.org/TR/its20/#elem-locQualityIssues) related to this content.
	+ An element locQualityIssues with a xml:id attribute set to the identifier specified in the locQualityIssuesRef attribute. The locQualityIssues element contains:
		- One or more elements locQualityIssue, each of which contains:
			* At least one of the following attributes:
				+ A locQualityIssueType attribute that implements the [type information](http://www.w3.org/TR/its20/#lqissueDefs).
				+ A locQualityIssueComment attribute that implements the [comment information](http://www.w3.org/TR/its20/#lqissueDefs).
			* An optional locQualityIssueSeverity attribute that implements the [severity information](http://www.w3.org/TR/its20/#lqissueDefs).
			* An optional locQualityIssueProfileRef attribute that implements the [profile reference information](http://www.w3.org/TR/its20/#lqissueDefs).
			* An optional locQualityIssueEnabled attribute that implements the [enabled information](http://www.w3.org/TR/its20/#lqissueDefs).

**Note:**

The order of locQualityIssue elements within a locQualityIssues element should reflect the order with which they were added to the document, with the most recently added one listed first.

When the attributes locQualityIssueType, locQualityIssueComment, locQualityIssueSeverity, locQualityIssueProfileRef and locQualityIssueEnabled are used in a standoff manner, the information they carry pertains to the content of the element that refers to the standoff annotation, not to the content of the element locQualityIssue where they are declared.

In HTML the standoff markup [MUST](http://www.w3.org/TR/its20/#rfc-keywords) either be stored inside a script element in the same HTML document, or can be linked from any locQualityIssuesRef to an external XML or HTML file with the standoff inside. If standoff is inside a script element, that element [MUST](http://www.w3.org/TR/its20/#rfc-keywords) have a type attribute with the value application/its+xml. Its id attribute [MUST](http://www.w3.org/TR/its20/#rfc-keywords) be set to the same value as the xml:id attribute of the locQualityIssues element it contains.

Example 77: Annotating an issue in XML with local inline markup

The attributes locQualityIssueType, locQualityIssueComment and locQualityIssueSeverity are used to associate the issue information directly with a selected span of content.

<?xml version="1.0"?>

**<doc** xmlns:its="http://www.w3.org/2005/11/its" its:version="2.0"**>**

 **<para><span** its:locQualityIssueType="typographical"

 its:locQualityIssueComment="Sentence without capitalization"

 its:locQualityIssueSeverity="50"**>**this**</span>** is an example**</para>**

**</doc>**

[Source file: [examples/xml/EX-locQualityIssue-local-1.xml](http://www.w3.org/TR/its20/examples/xml/EX-locQualityIssue-local-1.xml)]

Example 78: Annotating an issue in HTML with local inline markup

In this example several spans of content are associated with a quality issue.

**<!DOCTYPE html>**

**<html** lang=en**>**

 **<head>**

 **<meta** charset=utf-8**>**

 **<title>**Telharmonium 1897**</title>**

 **<style** type=text/css**>**

 [its-loc-quality-issue-type]{

 background-color:yellow;

 margin:2px;

 }

 [its-loc-quality-issue-severity = "100"]{

 border: 2px solid red;

 }

 **</style>**

 **</head>**

 **<body>**

 **<h1>**Telharmonium (1897)**</h1>**

 **<p>**

 **<span**

 data-mytool-qacode=named\_entity\_not\_found

 its-loc-quality-issue-comment="Should be Thomas Cahill."

 its-loc-quality-issue-profile-ref=http://example.org/qaMovel/v1

 its-loc-quality-issue-severity=100

 its-loc-quality-issue-type=inconsistent-entities**>**Christian Bale**</span>**(1867–1934) conceived of an instrument that could transmit its sound

 from a power plant for hundreds of miles to listeners over telegraph wiring. Beginning in

 1889 the sound quality of regular telephone concerts was very poor on account of the buzzing

 generated by carbon-granule microphones. As a result Cahill decided to set a new standard in

 perfection of sound **<span**

 its-loc-quality-issue-comment="should be 'quality'"

 its-loc-quality-issue-profile-ref=grammar

 its-loc-quality-issue-severity=50

 its-loc-quality-issue-type=spelling**>**qulaity**</span>** with his instrument, a standard that would not only satisfy listeners but that

 would overcome all the flaws of traditional instruments.**</p>**

 **</body>**

**</html>**

[Source file: [examples/html5/EX-locQualityIssue-html5-local-1.html](http://www.w3.org/TR/its20/examples/html5/EX-locQualityIssue-html5-local-1.html)]

Example 79: Annotating an issue in XML with local standoff markup

The following example shows a document using local standoff markup to encode several issues. The mrk element delimits the content to markup and holds a locQualityIssuesRef attribute that points to the locQualityIssues element where the issues are listed.

<?xml version="1.0"?>

**<xliff** version="1.2" xmlns="urn:oasis:names:tc:xliff:document:1.2"

 xmlns:its="http://www.w3.org/2005/11/its" its:version="2.0"**>**

 **<file** original="example.doc" source-language="en" datatype="plaintext"**>**

 **<body>**

 **<trans-unit** id="1"**>**

 **<source** xml:lang="en"**>**This is the content**</source>**

 **<target** xml:lang="fr"**><mrk** mtype="x-itslq"

 its:locQualityIssuesRef="#lq1"**>**c'es**</mrk>** le contenu**</target>**

 **<its:locQualityIssues** xml:id="lq1"**>**

 **<its:locQualityIssue** locQualityIssueType="misspelling"

 locQualityIssueComment="'c'es' is unknown. Could be 'c'est'"

 locQualityIssueSeverity="50"**/>**

 **<its:locQualityIssue** locQualityIssueType="typographical"

 locQualityIssueComment="Sentence without capitalization"

 locQualityIssueSeverity="30"**/>**

 **</its:locQualityIssues>**

 **</trans-unit>**

 **</body>**

 **</file>**

**</xliff>**

[Source file: [examples/xml/EX-locQualityIssue-local-2.xml](http://www.w3.org/TR/its20/examples/xml/EX-locQualityIssue-local-2.xml)]

Example 80: Annotating an issue in HTML with local standoff markup

The following example shows a document using local standoff markup to encode several issues. The span element delimits the content to markup and holds a loc-quality-issues-ref attribute that points to a special span element where the issues are listed within a set of other special span elements.

**<!DOCTYPE html>**

**<html>**

 **<head>**

 **<meta** charset=utf-8**>**

 **<title>**Test**</title>**

 **<script** src=qaissues.js type=text/javascript**></script>**

 **<script** type=application/its+xml id=lq1**>**

 **<its:locQualityIssues** xml:id="lq1" xmlns:its="http://www.w3.org/2005/11/its"**>**

 **<its:locQualityIssue**

 locQualityIssueType="misspelling"

 locQualityIssueComment="'c'es' is unknown. Could be 'c'est'"

 locQualityIssueSeverity="50"**/>**

 **<its:locQualityIssue**

 locQualityIssueType="typographical"

 locQualityIssueComment="Sentence without capitalization"

 locQualityIssueSeverity="30"**/>**

 **</its:locQualityIssues>**

 **</script>**

 **<style** type=text/css**>**.qaissue { background-color: yellow; } **</style>**

 **</head>**

 **<body** onload=addqaissueattrs()**>**

 **<p>**

 **<span** its-loc-quality-issues-ref=#lq1**>**c'es**</span>** le contenu**</p>**

 **</body>**

**</html>**

[Source file: [examples/html5/EX-locQualityIssue-html5-local-2.html](http://www.w3.org/TR/its20/examples/html5/EX-locQualityIssue-html5-local-2.html)]

## C Values for the Localization Quality Issue Type

This section is normative.

The locQualityIssueType attribute provides a basic level of interoperability between different localization quality assurance tools. It offers a list of high-level quality issue types common in fully automatic and manual localization quality assessment. Tools can map their internal types to these types in order to exchange information about the kinds of issues they identify and take appropriate action even if another tool does not know the specific issues identified by the generating tool.

Note: The values of locQualityIssueType were derived from an early version of the QTLaunchPad project's Multidimensional Quality Metrics (MQM) framework. MQM is based on a careful analysis of existing translation quality assessment tools and models, such as the LISA QA Model, SAE J2450 [?add reference?], and various commercial tools. The values represent common issue types found in those models and are designed to provide interoperability between models. Differences in granularity and in issue types may prevent full interoperability, but using the shared values will maximize interoperability where possible.

The scope column in the following table identifies whether the issue type applies to the source content (“S”), target content (“T”) or both (“S or T”).

The values listed in the following table are allowed for locQualityIssueType. The values a tool implementing the data category produces for the attribute must match one of the values provided in this table and must be semantically accurate (for example, marking the phrase “These man is” as a *terminology* issue, rather than as a *grammar* issue would be semantically inaccurate). If a tool can map its internal values to these types it must do so and must not use the value other, which is reserved strictly for values that cannot be mapped to these values.

**Note:**

For tools *generating* ITS 2.0 Localization Quality Issue markup, if one internal issue type can be categorized as multiple ITS 2.0 issue types, *the first applicable one from the following table should be used*. The list is ordered with more specific types first. For example, if a terminology database specifies that the term “USB memory stick” should be used instead of “USB pen drive” but the translated content has “Insert a USB pen drive into any available USB port”, *terminology* would be used instead of *mistranslation* because *terminology* occurs earlier in the list and is more specific than a (general) *mistranslation*. In the case where multiple separate issues must be marked on a single span (e.g., it contains both a *mistranslation* and a *grammar* issue), implementers may wish to use standoff annotation, as shown in Example 80 and Example 81.

**Note:**

The [ITS Interest Group](http://www.w3.org/International/its/ig/) maintains informative mappings of tool-specific quality issue types and ITS 2.0 localization quality types. [The ITS IG Wiki](http://www.w3.org/International/its/wiki/Tool_specific_mappings) provides information on [how to update that list](http://www.w3.org/International/its/wiki/Tool_specific_mappings#Update_of_this_page). The purpose of these mappings is to document how tool internal information relates to the ITS 2.0 quality types. To foster interoperability, implementers are strongly encouraged to implement the ITS 2.0 quality types natively.