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# XLIFF 2 Extraction and Merging Best Practice, Version 1.0

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TAPICC T1/WG3

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## Additional artifacts

This prose specification is one component of a Work Product that also includes:

- Extraction and merging examples from [https://galaglobal.github.io/TAPICC/T1/WG3/wd01/extraction\\_examples/README.md](https://galaglobal.github.io/TAPICC/T1/WG3/wd01/extraction_examples/README.md)

An unstable editorial version of the examples might exist at [https://galaglobal.github.io/TAPICC/T1/WG3/extraction\\_examples/README.md](https://galaglobal.github.io/TAPICC/T1/WG3/extraction_examples/README.md)

## Related work

This note provides informative best practice for XLIFF 2 Specifications:

- XLIFF Version 2.1 [[XLIFF-2.1]]
- XLIFF Version 2.0 [[XLIFF-2.0]]
- ISO 21720:2017 [[ISO XLIFF]]

## Status

This Informational Best Practice was last revised by TAPICC T1/WG3 or the TAPICC Steering Committee on the above date. The level of approval is also listed above. Check the “Latest version” location noted above for possible later revisions of this document.

Contributions to this deliverable or subsequent versions of this deliverable can be made via the GALA TAPICC GitHub Repository [<https://github.com/GALAglobal/TAPICC>] subject to signing the TAPICC Legal Agreement [<https://www.gala-global.org/tapicc-legal-agreement>].

## Citation format

When referencing this specification the following citation format should be used:

[XLIFF-EM-BP]

*XLIFF 2 Extraction and Merging Best Practice, Version 1.0* Edited by David Filip and Ján Husarčík. 24 January 2018. Working Draft 01. <https://galaglobal.github.io/TAPICC/T1/WG3/wd01/XLIFF-EM-BP-V1.0-wd01.html>. Latest version: N/A.html.

## Notices

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The Translation API Class and Cases (TAPICC) initiative is a collaborative, community-driven, open-source project to advance API standards in the localization industry. The overall purpose of this project is to provide a metadata and API framework on which users can base their integration, automation and interoperability efforts.

The usage of all deliverables of this initiative - including this specification - is subject to open source license terms expressed in the BSD-3-Clause License and CC-BY 2.0 License, the declared applicable licenses when the project was chartered.

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### Abstract

This Informational Best Practice specification targets designers of XLIFF Extracting and Merging Tools for content owners. It gathers common problems that are prone to appear when *Extracting XLIFF Documents* from HTML, generic XML, or Markdown. This specification shows why some *Extraction* approaches will cause issues during an *XLIFF Roundtrip*. This best practice guidance provides better thought through alternatives and shows how to use many of advanced XLIFF features for lossless Localization roundtrip of HTML and XML based content.

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## Terminology and Concepts

Context hints	XLIFF attributes on structural or inline elements providing additional contexts, such as <code>disp</code> [ <a href="http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#disp">http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#disp</a> ] or <code>equiv</code> [ <a href="http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#equiv">http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#equiv</a> ].
Inline codes	
marker	

## Introduction

This specification targets designers of XLIFF Extracting and Merging Tools for content owners. XLIFF Roundtrip designers of all kinds will benefit, no matter if they design their XLIFF Extractor/Merger for corporate or blog use.

Extraction and merging behavior is out of the normative scope of OASIS XLIFF Specifications. Although those specifications do provide some guidance for Extractor and Merger Agents, XLIFF TC did not attempt to prescribe how exactly to use XLIFF to represent native content. This is mostly because XLIFF is a native format agnostic Localization interchange Format.

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This specification gathers common problems that are prone to appear when Extracting XLIFF Documents from HTML, generic XML, or Markdown. This specification shows why some *Extraction* approaches will cause issues during an *XLIFF Roundtrip*, issues often so severe that *Merging* back of target content will not be possible without costly postprocessing or could fail utterly. This best practice guidance provides better thought through alternatives and shows how to use many of advanced XLIFF features for lossless Localization roundtrip of HTML and XML based content. Most of the times there are no ultimate prescribed solutions, rather possible design goals are described and best methods how to achieve them proposed.

## Specification

### Inline Codes

#### Representing Spanning Codes

Spanning codes in the original format are created by opening code, content and closing code. In HTML that can be `<bold>text</bold>`, in RTF `\b text \b0`.

In XLIFF2 such code can be represented using `<sc />` [<http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#sc>]/`<ec />` [<http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#ec>] pair universally, or by `<pc></pc>` [<http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#pc>] in case of well formed spanning code.

Ideally the original format is documented enough to instruct Extractor about role of each inline code. For example XML schema allows to declare elements using keyword EMPTY. This way all elements, which are not declared EMPTY, can be represented as described above. To further help the extraction process the following recommendation could be implemented in original XML format: “For interoperability, the empty-element tag *SHOULD* be used, and *SHOULD* only be used, for elements which are declared EMPTY.”[[XML]]

This concept is illustrated by `spanning_as_ph` [[https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/spanning\\_as\\_ph](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/spanning_as_ph)]

•`[spanning_as_ph]` [https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/spanning\\_as\\_ph](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/spanning_as_ph) •Extractor could use knowledge of schema and only use does not use `<ph>` for codes that are declared as EMPTY. To further help the extraction process, following W3C recommendation could be followed: „The empty-element tag *SHOULD* be used, and *SHOULD* only be used, for elements which are declared EMPTY.“ (<https://www.w3.org/TR/REC-xml/#sec-starttags>), e.g. even `<span>` without content would use `<span></span>` as compared to `<br />`. •<https://issues.oasis-open.org/browse/XLIFF-14> <http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#ph>

## Outermost Tag Pairs

•[outermost\_inline\_excluded] [https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/outermost\\_inline\\_excluded](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/outermost_inline_excluded) •Both functional and formatting inline codes provide additional context for translator and could be linguistically significant. •If they are important enough to be in native format, they should be present in extracted content.

## Incomplete Extraction of Inline Codes

•[CDATA] [https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/cdata](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/cdata)  
•[inline\_codes\_plain\_text] [https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/inline\\_codes\\_plain\\_text](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/inline_codes_plain_text) •<http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html#d0e8112> •<https://www.w3.org/TR/xml-i18n-bp/#AuthCDATA> •Not using native XLIFF representation leaves inline codes unprotected and increases risk of roundtrip corrupting them.

## Representing Multiple Subsequent Codes

•[multiple\_codes\_represented\_as\_single] [https://github.com/GALAglobal/TAPICC/tree/master/extraction\\_examples/multiple\\_codes\\_represented\\_as\\_single](https://github.com/GALAglobal/TAPICC/tree/master/extraction_examples/multiple_codes_represented_as_single) •Grouping several independent inline codes into single representation could prove challenging with negative impact on •Translation quality •Fluency •Functionality •Automated actions •Validation •Some codes needs to be removed, copied, added or reordered. •If any of the above actions is to be prevented, it can be controlled using editing hints with finer granularity.

## Target Content in Extracted XLIFF

Inserting unmodified source content into <target>

Inserting possible translation into <target>

State Machine

## Editing and Context Hints

Non-deletable Inline Codes

Preserving Order of Codes

Controlling Segmentation

Providing Context

*Context hints*

Considerations for Using Spanning Codes

## XLIFF Structure

## **File Structure**

## **Role of <unit>**

## **Miscellaneous**

## **Value of attribute `id`**

## **Whitespace Handling**

## **Protecting Non-localizable Content**

## **Merging Translated Content**

## **Selecting Language Tags**

## **Validation of Extracted Content**

## **XLIFF Validations**

## **Summary**

## **References**

### **Normative references**

[XML] W3C: Extensible Markup Language (XML) 1.026 November 2008<https://www.w3.org/TR/xml/>

[XLIFF-2.1] Edited by David Filip, Tom Comerford, Soroush Saadatfar, Felix Sasaki, and Yves Savourel: XLIFF Version 2.112 October 2017 <http://docs.oasis-open.org/xliff/xliff-core/v2.1/cos01/xliff-core-v2.1-cos01.html><http://docs.oasis-open.org/xliff/xliff-core/v2.1/xliff-core-v2.1.html>

[XLIFF-2.0] Edited by Tom Comerford, David Filip, Rodolfo M. Raya, and Yves Savourel: XLIFF Version 2.004 August 2014 <http://docs.oasis-open.org/xliff/xliff-core/v2.0/os/xliff-core-v2.0-os.html><http://docs.oasis-open.org/xliff/xliff-core/v2.0/xliff-core-v2.0.html>

[ISO XLIFF] Edited by Tom Comerford, David Filip, Rodolfo M. Raya, and Yves Savourel: ISO 21720:2017 - XLIFF (XML Localisation interchange file format)November 2017 <https://www.iso.org/standard/71490.html>

### **Non-Normative References**

Error: no bibliography entry: d5e263 found in <http://cdn.docbook.org/release/xsl/bibliography/bibliography.xml>