

NISO SUSHI Protocol: COUNTER-SUSHI Implementation Profile

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*A Recommended Practice of the
National Information Standards Organization*

Abstract: Defines a practical implementation structure to be used in the creation of reports and services related to harvesting COUNTER reports using the NISO SUSHI Protocol.

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Foreword

About this Implementation Profile

The need to provide information professionals with accurate and timely usage statistics is no longer a matter of debate. The SUSHI protocol was developed out of a need to simplify and automate the harvesting of COUNTER usage reports from the growing number of information providers that librarians and others in the information community work with.

The creators of the SUSHI standard and the COUNTER XML schema were forward looking; developing products that could handle future needs without requiring them to be rewritten. Developing schemas, such as those used by SUSHI and COUNTER, to accommodate future growth requires building in a level of abstraction and flexibility. As a result, the flexibility and abstraction introduce choices that implementers need to make. These choices can be as simple as what value to use for the Type element of the item identifier; or more complex, such as the inclusion of totals in the XML or how to respond when usage is not available.

Without proper guidance on the implementation choices, developers may easily create solutions that are not completely interoperable. Lack of interoperability between SUSHI server implementations requires either the SUSHI client developers to customize their implementation for each variant SUSHI server, or it requires the SUSHI server developers to have to re-work their solution—adding time and expense. All of this adds up to a barrier to widespread implementation of SUSHI and added expense and difficulty for the community it is intended to serve. This was the state of SUSHI and COUNTER XML implementations that led this committee to develop this Implementation Profile.

This Implementation Profile has been developed to improve the consistency and interoperability of SUSHI Client and Server implementation. This profile offers guidance to developers of SUSHI server and client applications by setting out detailed expectations for how the SUSHI protocol and COUNTER XML reports are to be implemented so that they effectively meet the needs of the information community that relies on these reports to provide consistent, credible, and comparable usage statistics. This profile was also developed with the intention that it be used by COUNTER auditors as a means to verify compliance of a content provider's SUSHI server.

Instructions for Submittal of Proposed Change to this Implementation Profile

If a provision of the standard is proposed to be added or deleted, the text of the provision must be submitted in writing. Comments or proposals for revisions to any part of the standard may be submitted to NISO any time. Submissions must be accompanied by the submitter's name, affiliation, telephone number, and e-mail address.

Written comments are to be sent to:

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Part 1: Introduction

1.1 Purpose

This Implementation Profile has been developed to improve the consistency and interoperability of SUSHI client and server implementations. This profile offers guidance to developers of SUSHI server and client applications by setting out detailed expectations for how the SUSHI protocol and COUNTER XML reports are to be implemented so that they effectively meet the needs of the information community that relies on these reports to provide consistent, credible, and comparable usage statistics. This profile was also developed with the intention that it be used by COUNTER auditors as a means to verify compliance of a content provider's SUSHI server.

1.2 Scope

This Implementation Profile addresses the choices and expectations for successfully implementing a compliant and effective SUSHI service delivering consistent and comparable COUNTER XML reports compliant with Release 4 of the COUNTER *Code of Practice*. This document focuses on the use of the various XML schemas that provide for the delivery of COUNTER reports via SUSHI. Specifically:

sushi1_6.xsd	The XML schema that describes the SUSHI Request and Response messages. The Response message includes the COUNTER XML report.
counter4_0.xsd	The XML schema that describes the XML version of a COUNTER report. The COUNTER XML is embedded in the SUSHI Response message.
counterElements4_0.xsd	The XML schema that contains the enumerated list of allowed values for certain COUNTER data elements, such as <i>ItemIdentifier</i> type, report item <i>Data Type</i> , usage <i>Category</i> , and <i>MetricType</i> .
counter_sushi4_0.xsd	The XML schema that describes the overall SUSHI service and binds the COUNTER report to the SUSHI Response.

This implementation profile will also touch on some practical topics of implementation including security and SUSHI client authentication, as well as making information about the SUSHI Server easily available for those that would implement it.

1.3 Principles

This implementation profile is intended to support a widespread implementation and adoption of the SUSHI protocol for the purpose of harvesting COUNTER XML reports. The committee recognized that successful adoption comes with compatibility and consistency in the implementation of both the SUSHI protocol and the COUNTER XML reports delivered by that protocol. Both the SUSHI protocol and the COUNTER schema (which defines the reports delivered by the SUSHI protocol) are flexible by nature and, as a result, the committee's work was about making the many implementation decisions necessary to enforce consistency. This work involved judgment calls that were made based on the committee's understanding of the needs of the librarians that use these statistics and COUNTER's goal of providing reports that are consistent, comparable, and credible.

1.4 Normative References

ANSI/NISO Z39.84-2005 (R2010), *Syntax for the Digital Object Identifier*. Available at:
<http://www.niso.org/standards/z39-84-2005/>

ANSI/NISO Z39.93-2007, *The Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol*. Available at:
<http://www.niso.org/standards/z39-93-2007/>.

COUNTER Code of Practice for e-Resources, Release 4 [draft]. October 2011. Available at: http://www.projectcounter.org/code_practice.html

ISO 2108:2005, *Information and documentation – International standard book number (ISBN)*. Available from: http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=36563

ISO 3297:2007, *Information and documentation – International standard serial number (ISSN)*. Available from: http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=39601

SOAP Version 1.2 Specifications. Available at: <http://www.w3.org/TR/soap/>

The Unicode Standard, Version 6.0.0. Mountain View, CA: The Unicode Consortium, 2011. ISBN 978-1-936213-01-6. Available at: <http://www.unicode.org/versions/Unicode6.0.0/>

The sushi, counter, counterElements, and counter_sushi schemas specified in 1.2.

1.5 Definitions

<u>Term</u>	<u>Context</u>	<u>Definition</u>
journal	ItemDataType	Any publication published in a serial manner, such as a journal, magazine, newspaper, newsletter, conference proceeding, etc.
book	ItemDataType	A publication that is a monograph and is textual in nature. Includes books and e-books.
collection	ItemDataType	A grouping of multimedia content items. Includes audio, video, images, etc.
database	ItemDataType	A collection of content items, such as citations and/or full-text, that is accessed as a unit.
platform	ItemDataType	A content host from which content is accessed. Examples include EBSCOhost, ScienceDirect, Informaworld, etc.
multimedia	ItemDataType	Any non-textual content item. Examples include audio, video, images, etc.
proprietary	ItemIdentifier type	A unique identifier for a report item that is assigned by the content provider.
ISSN	ItemIdentifier type	International Standard Serial Number. A standard identifier assigned to a title that is published serially. In the current version of the ISSN standard (ISO 3297), an ISSN is 9 character spaces long and consists of four numbers, a dash, three numbers and a number or capital “X”.
ISBN	ItemIdentifier type	International Standard Book Number. A standard identifier, assigned to a title that is a monograph. In the current version of the ISBN standard (ISO 2108), an ISBN is 13 character positions long; the first 12 positions can be numbers or dashes with the 13th position being a number or capital “X”.
DOI	ItemIdentifier type	Digital Object Identifier. An identifier of a report item that is assigned according to the DOI standard (ANSI/NISO Z39.84) and registered with an authorized Registration Agency, e.g., CrossRef.