The COUNTER Code of Practice for Articles

Release 1

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Abstract

The COUNTER Code of Practice for Articles (COUNTER Articles) provides specifications for the recording and reporting of usage at the individual article level that are based on and are consistent with the COUNTER Code of Practice for e-Resources.

This Code of Practice provides the specifications and tools that will allow COUNTER-compliant publishers, repositories and other organizations to record and report usage statistics at the individual article level that are credible, compatible and consistent. (Non-COUNTER-compliant organizations may use the Secondary Clearing House services described in Section 1.10 below and in Appendix D to generate COUNTER Articles compliant usage reports from their raw usage data).

COUNTER-compliant publishers may build on the existing COUNTER tools generate the COUNTER Articles reports, while an alternative approach is provided for non-COUNTER compliant repositories, which is tailored to their systems and capabilities. This Code of Practice contains the following features:

- A list of Definitions and other terms that are relevant to recording and reporting usage of individual items
- A methodology for the recording and reporting of usage at the individual article level, including specifications for the metadata to be recorded, the content types, and the versions whose usage may be counted.
- Specifications for the COUNTER Article Reports.
- Data processing rules to ensure that the usage data reported are credible, consistent and compatible
- Specifications for the independent auditing of the COUNTER Articles reports ▯   A description of the role of:
  - A Central Clearing House (CCH) in the calculation and consolidation of COUNTER usage data for Articles.
  - Other Clearing Houses in relation to the CCH.

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Copyright: Counter Online Metrics

1   General Information

The COUNTER Code of Practice for Articles has been established as an outcome of the JISC- funded PIRUS (Publisher and Institutional Repository Usage Statistics) project[1].

The primary aims and objectives of PIRUS were to assess the feasibility of and develop the technical, organizational and economic models for the recording, reporting and consolidation of usage of *Journal Articles* hosted by Publishers, Aggregators, Institutional Repositories and Subject Repositories.

The COUNTER Code of Practice for Articles builds on the work undertaken by PIRUS, and the work of the JISC Usage Statistics Review and the Knowledge Exchange Institutional Repositories Workshop Strand on Usage Statistics.

This COUNTER Code of Practice for Articles has been developed by COUNTER, which is also responsible for its on-going management and implementation. COUNTER Articles is consistent with the COUNTER Code of Practice for e-Resources.

To have their usage statistics and reports designated COUNTER Articles-compliant vendors and services must provide usage statistics that conform to this Code of Practice.

A number of developments have meant that it would now be appropriate to publish a COUNTER standard for the recording, reporting and consolidation of usage statistics at the individual article level. Most important among these developments are:

- Growth in the number of journal Articles hosted by institutional and other repositories, for which no widely accepted standards for recording and reporting usage statistics have been developed
- Emergence of online usage as an alternative, accepted measure of article and journal value and usage-based metrics being considered as a tool to assess the impact of journal Articles.
- Authors and funding agencies are increasingly interested in a reliable, global overview of usage of individual Articles
- Implementation by COUNTER of the SUSHI (Standardised Usage Statistics Harvesting Initiative) protocol facilitates the automated consolidation of large volumes of usage data from different sources.
- The outputs of the PIRUS project (the XML schema for the individual article usage reports, the tracker code and the associated protocols) are already being implemented by publishers and repositories (e.g. PLoS and SURF). It is important that these outputs are fully tested and, if necessary, refined, before they are too widely adopted.

1.1   Purpose

The purpose of the COUNTER Code of Practice for Articles is to facilitate the recording, exchange and interpretation of online usage data at the individual article level by establishing open, international standards and protocols for the provision of vendor- and service-generated usage statistics that are consistent, credible and compatible.

1.2   Scope

The COUNTER Code of Practice for Articles provides a framework for the recording, exchange and interpretation of online usage statistics for individual full-text journal Articles. In doing so, it covers the following areas:

- article types to be counted;
- article versions to be counted;
- data elements to be measured;
- definitions of these data elements;
- content and format of usage reports;
- requirements for data processing;
- requirements for auditing;
- guidelines to avoid duplicate counting when intermediary gateways and aggregators are used.

1.3   Application

COUNTER Articles is designed for research institutions, authors, librarians, repositories and publishers and others who require reliable online usage statistics at the individual article level. COUNTER Articles also provides publishers and repositories with the detailed specifications they need to generate data in a format useful to authors and customers.

Though this Code of Practice deals with full-text Articles, it is designed also be applied to other individual items of content, provided that these items meet similar data and metadata standards as full-text journal Articles.

1.4   Strategy

The COUNTER Code of Practice for Articles is an open standard that will evolve in response to the demands of the international scholarly publishing community (publishers, authors, librarians, researchers, research institutions or funding agencies).

The Code of Practice is kept continually under review and new Releases will be published when appropriate; feedback on its scope and application are actively sought from all interested parties. See Section 8 below.

1.5   Governance and Relationship to COUNTER

The COUNTER Code of Practice for Articles is owned and developed by Counter Online Metrics, a not-for-profit company registered in England. Counter Online Metrics is governed by a Board of Directors. An Executive Committee reports to the Board, and the day-to-day management of Usage Factor is the responsibility of the COUNTER Project Director, who reports to the COUNTER Executive Committee.

Implementation of the COUNTER Code of Practice for Articles is not a requirement for compliance with Release 4 of the COUNTER Code of Practice for e-Resources. Rather, it provides a standard that builds on COUNTER and can be implemented by those organizations wishing to record and report usage at a more granular individual item level.

1.6 Definitions

This Code of Practice provides definitions of data elements and other terms that are relevant to the recording and reporting of usage at the individual item level and which are consistent with COUNTER definitions. See Appendix A.

1.7 Versions

This Code of Practice will be extended and upgraded as necessary on the basis of input from the communities it serves. Each new version will be made available as a numbered Release on the COUNTER website; users will be alerted to its availability. Only those organizations compliant with this Code of Practice will be considered to be providing COUNTER Articles-compliant individual item usage statistics.

1.8 Auditing and COUNTER Articles compliance

An independent annual audit is required of each organization's reports and processes to certify that they are COUNTER Articles-compliant. The auditing process is designed to be simple, straightforward and not to be unduly burdensome or costly to the vendor or service, while providing reassurance to customers of the reliability of the COUNTER Articles usage data.

Organizations that are currently COUNTER-compliant, e.g. publishers, will already satisfy many of the requirements of the COUNTER Articles audit which will, in consequence, be shortened for COUNTERcompliant organizations.

For organisations that are not currently COUNTER-compliant, e.g. Institutional and Subject Repositories, a subset of the COUNTER Articles protocols are designed to allow such organisations to be become COUNTER-compliant through participation in a third-party service - the COUNTER Articles Central Clearing House or other (national or regional) statistics aggregation service - which takes responsibility for the collection of raw usage data, the subsequent processing of those raw data into COUNTER statistics, and the supply of those COUNTER statistics back to the source organisations. In this case, only the third party service, itself, needs to be audited. The contributing organisations do not. This will result in a considerable reduction of the costs of achieving COUNTER-compliance for each organisation involved.

See Section 6 below and Appendix F for more details.

1.9 The role of the COUNTER Articles Central Clearing House

The COUNTER ARTICLES Central Clearing House will be supervised by COUNTER. The Central Clearing House will have two main functions:

- To collect and process usage statistics at the individual article level from publishers, aggregators, repositories and other sources in order to derive consolidated COUNTER Articles usage statistics per article
- To provide a central source of validated, consolidated COUNTER Articles usage statistics for Articles (and, potentially, other items).

1.10 The role of other statistics clearing houses

Other statistics clearing houses, e.g. national or regional statistics aggregation and consolidation services, are likely to play an important role in consolidating usage data from institutional repositories and in feeding the resulting COUNTER Articles-compliant article usage statistics to the COUNTER Articles Central Clearing House.

The role of such Secondary Clearing Houses (SCHs) will differ in detail, depending upon the context within which they operate, but their output should include the standard COUNTER Article Report 1 (Section 4.5 below), which can be fed into the Central Clearing House(CCH). In order to be an authorised provider of usage statistics to the CCH, such secondary clearing houses must be independently audited by a COUNTER-approved auditor.

A COUNTER Articles-approved model for a secondary clearing house is the IRUS-UK service – a national clearing house for UK Institutional Repository statistics - described further in Appendix D.

1.11 Register of COUNTER Articles-compliant Organizations

A Register of organizations (publishers, repositories, etc.) that are compliant with the COUNTER Articles Code of Practice is maintained by COUNTER.

1.12 Making comments on the Code of Practice

The COUNTER Executive Committee welcomes comments on the COUNTER Code of Practice for Articles. See Section 7 below.

2 Definitions of terms used

Appendix A lists the terms relevant to this Code of Practice and provides a definition of each term, along with examples where appropriate. In order to be designated compliant with this Code of Practice, organizations must adhere to the definitions provided in Appendix A.

3 SUSHI Protocol

The SUSHI (Standardized Usage Statistics Harvesting Initiative) protocol is designed for the transmission and sharing of COUNTER and COUNTER Articles usage reports.

SUSHI is intended for use by publishers, aggregators and other third-party services capable of producing their own COUNTER- and COUNTER Articles-compliant statistics. For guidance on protocols suitable for the transmission and exchange of *raw* usage data, please see Appendix D.

The advent of the SUSHI protocol (http://www.niso.org/workrooms/sushi/) has greatly facilitated the handling of large volumes of usage data and its implementation by vendors allows the automated retrieval of the COUNTER and COUNTER Articles usage reports into local systems, making this process much less time consuming for the librarian or library consortium administrator.

For this reason, in addition to providing the usage reports specified below (as a Microsoft Excel file, as a TSV file, or as a file that can be easily imported into Microsoft Excel pivot tables), COUNTER usage reports **must** also be provided in XML format in accordance with the COUNTER XML schema that is specified by the SUSHI protocol and may be found on the NISO website at:

http://www.niso.org/schemas/sushi/counterElements4_0.xsd   The COUNTER schema covers **all** the usage reports listed in Section 4 below. COUNTER reports in XML must be downloadable using the SUSHI protocol.

3.1   Further information on SUSHI

Further information on SUSHI is available in Appendix C of Release 4 of the COUNTER Code of Practice for e-Resources.

Comprehensive information on SUSHI is also available on the NISO/SUSHI website (http://www.niso.org/workrooms/sushi/). As well as full documentation on the standard itself, the SUSHI website provides:

- • Information on Getting Started
- • SUSHI Tools
- • SUSHI Schemas
- • SUSHI Reports Registry
- • SUSHI Server Registry
- • SUSHI Developers List
- • SUSHI FAQs

4   Usage reports

This section lists the COUNTER Articles Usage Reports for collection, consolidation and dissemination of individual article usage data; it also specifies the content, format and delivery specifications that these reports must meet to be designated 'COUNTER Articles-Compliant'.

A pre-condition for vendors to provide valid COUNTER Articles usage statistics is compliance with the COUNTER Code of Practice for E-resources (www.projectCounter.org); the usage data on which the COUNTER Articles reports are based must be COUNTER-compliant.

The information in this section is intended for use by publishers, aggregators and other third-party services capable of producing COUNTER-compliant statistics themselves.

The procedures described, here, may also be followed by COUNTER-compliant repositories, but an alternative approach for repositories is described in Appendix D.

4.1   Process for gathering individual item usage data

The COUNTER Articles usage statistics must be calculated in a way that is consistent with the data processing rules specified in Section 5 of Release 4 of the COUNTER Code of Practice for E-resources.

To reflect the very different technologies used by publishers/aggregators on the one hand and by repositories on the other hand, two alternative approaches to this are allowed:

1. The procedure to be followed by publishers/aggregators is described in Section 4 below. (This procedure may also be followed by COUNTER-compliant repositories.)
2. An alternative approach for repositories is described in Appendix D. This approach describes guidelines that have been developed to enable repositories to transmit raw usage data to a

third party – the COUNTER Articles Central Clearing House or other statistics aggregation service - for processing into COUNTER-compliant statistics and reports.

The same metadata, described in Section 4.2 below, must be recorded for each item by publishers, aggregators and repositories, irrespective of the approach used to collect the usage data.

4.2   Article Metadata

Publisher/aggregator organizations should collect the usage data in the format specified in Article Report 1, provided in Appendix E. The following data and metadata must be collected for each article:

- Either Print ISSN OR Online ISSN
- Article version, where available
- Article DOI
- Date of First Successful Request
- Monthly count of the number of successful full-text requests - counts must remain available for at least 24 months from the online publication date or date of First Successful Request

The following metadata are optional, but are desirable:

- Journal title
- Publisher name
- Platform name
- Article publication date
- Journal DOI
- Article title
- Article type

4.3   Content Type

Organizations should, if possible, be able to record and report usage of the following categories of journal content at the individual article level:

- research Articles (full Articles and short communications)
- review Articles

In addition the usage reports on the following individual items are acceptable, provided they meet the data and metadata requirements listed in 4.2 above:

- editorials
- book reviews
- theses

4.4   Article Versions

Only usage of the following 5 Article Versions (of the 7 versions defined by the ALPSP/NISO JAV Technical Working Group (http://www.niso.org/publications/rp/RP-8-2008.pdf)) may be counted:

- Accepted Manuscript (AM)

- Proof (P)
- Version of Record (VoR)
- Corrected Version of Record (CVoR)
- Enhanced Version of Record (EVoR)

Usage of the following 2 Article Versions must not be counted:

- Author's Original (AO)
- Submitted Manuscript Under Review (SMUR)

In cases where specific Article Version information cannot be provided the reporting organization must ensure that usage is only reported for the Accepted Manuscript onwards and that usage of Authors Originals and Submitted Manuscripts Under Review must not be included in the COUNTER ARTICLES reports
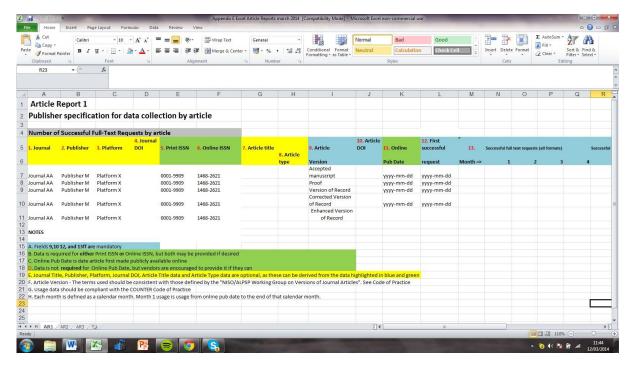
4.5 Collection and consolidation of individual article usage statistics

Publishers, aggregators and COUNTER-compliant repositories must collect individual article usage data in the format specified in Article Report 1, below.

Those publishers wishing to report consolidated usage statistics for their individual full-text Articles and other items, based on usage data from a number of sources in addition to the publisher's own platform (e.g. aggregators, subject repositories, or institutional repositories) may do this consolidation themselves, or may use the Central Clearing House to fulfil this function.

Publishers wishing to use the Central Clearing House for this purpose must supply it with usage data in the format specified in Article Report 1 below of this Code of Practice. Only COUNTER-compliant publishers shall have the right to submit usage data to the Central Clearing House.

Article Report 1: Publisher specification for data collection by article (See Excel Spreadsheet in Appendix E)

Note:

1. Article title data is highly recommended, but optional 2.
Usage data should include:

a. **Include:** successful full-text requests (HTML plus PDF)

b. **Include:** Accepted Manuscript, Proof, Version of Record versions

c. **Exclude**: Author's Original Manuscript and Submited Manuascript Under Review versions

d. **Exclude:** any internal use by publisher and host, downloads from LOCKSS caches, and usage driven by robots
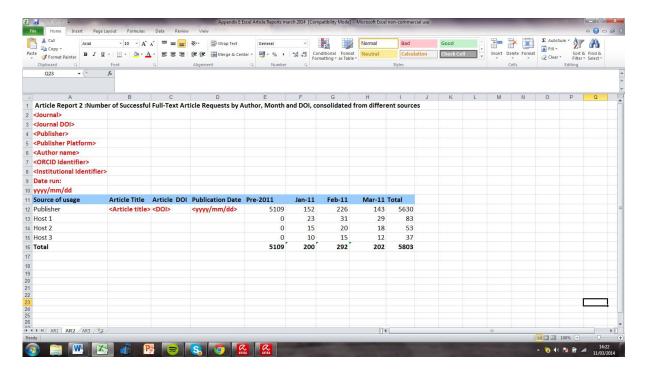
4.6 Example COUNTER Articles Reports for reposting usage of Articles to authors & institutions

This section lists the COUNTER Articles Reports that publishers and repositories must provide to their authors and institutions in order to be designated COUNTER Articles-compliant.

Article Reports 2 and 3 provide standard formats for the reporting of individual article usage statistics to authors and their institutions. Specified are the data they must include, as well as the format they must adopt.

While these examples are in Excel format, (See Section 4.4 below for other report delivery options), primarily for visualisation purposes, all COUNTER ARTICLES usage reports **must** be available in XML, irrespective of other formats provided. Reports must comply exactly with the formats specified in order to be COUNTER ARTICLES compliant.
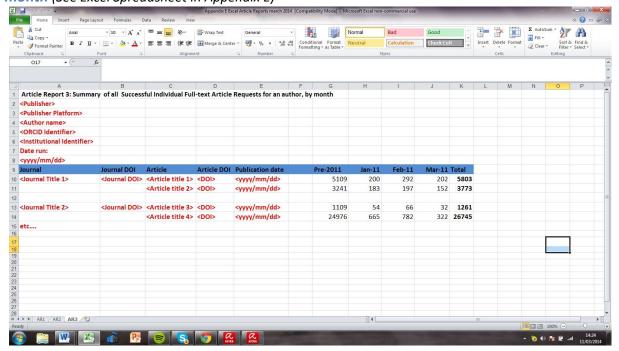
Article Report 2: Number of Successful Full-Text Article Requests by Author, Month and DOI, consolidated from different sources *(See Excel Spreadsheet in Appendix E)*

Note:

1. The ORCID Identifier for identification of the author is highly recommended, but opional 2. Usage data should:
   a. **Include:** successful full-text requests (HTML plus PDF)
   b. **Include:** Accepted Manuscript, Proof, Version of Record versions
   c. **Exclude**: Author's Original Manuscript and Submited Manuascript Under Review versions
   d. **Exclude:** any internal use by publisher and host, downloads from LOCKSS caches, and usage driven by robots

Article Report 3: Summary of All Successful Individual Article Requests for an author, by month (See Excel Spreadsheet in Appendix E)

Note:

1. The ORCID Identifier for identification of the author is highly recommended, but optional
2. Article title data is highly recommended, but optional 3. Usage data should include:
   a. **Include:** successful full-text requests (HTML plus PDF)
   b. **Include:** Accepted Manuscript, Proof, Version of Record versions
   c. **Exclude**: Author's Original Manuscript and Submited Manuascript Under Review versions
   d. **Exclude:** any internal use by publisher and host, downloads from LOCKSS caches, and usage driven by robots

4.7   Report Delivery

Unless specified otherwise, all COUNTER Articles reports must conform to the following standards:

- Reports must be provided in the following formats:
  o Microsoft Excel file (see Section 4.1 above), or as a TSV file, or as a file that can be easily imported into Microsoft Excel pivot tables. o As XML formatted in accordance with the COUNTER Articles schema (available at: http://www.niso.org/schemas/sushi/counterElements4_0.xsd). More information on XML formatting is available in Appendix H.
- Each report should reside in a separate file or page to avoid files of unwieldy size
- Reports should be made available on a password-controlled website (accompanied by an email alert when data is updated).

- Reports must be available annually, on a calendar-year basis, within three months of the end of a given calendar year as a minimum
- A minimum of the most recent 24 months of usage data must be available

4.8   COUNTER Articles Central Clearing House

Publishers may consolidate the COUNTER Articles individual article usage data from various sources themselves, or in the future will be able to use the Central Clearing House that will be developed for this purpose.

The main features of the Central Clearing House will be:

- A home page that provides summary information on:
  - the number of Articles and journals indexed
  - overall totals of successful full-text article requests recorded from publishers, repositories and other organizations
- A Search facility that makes it possible to find individual Articles or groups of Articles by:
  - DOI
  - Title/Author
- A number of reports can be generated:
  - Article Report 1j (AR1j) – this is a variant of the Article Report 1 (AR1), with usage events restricted to one journal at a time to reduce the report sizes. Its main purpose was to allow easy cross-checking that the data exposed from the COUNTER

    Articles database matches the original data supplied by publishers ○ Article Report 2 (AR2) – this report is intended for article authors – showing usage consolidated from publishers and repositories for their Articles

Each of the reports may be viewed in a web page in the portal or downloaded for use locally as MSExcel/TSV files (See Appendix E for examples of the various reports). These reports must also be available via the SUSHI protocol.

5   Data Processing

Usage data collected by organizations must be in the formats specified in Article Report 1 and be consistent with the COUNTER Code of Practice for e-Resources. The data processing rules to be followed will be found in Section 5 of Release 4 of the COUNTER Code of Practice for e-Resources.

5.1   Gaming

As attempts to game individual article usage statistics are not unlikely, the following measures are necessary to counteract the potential inflationary effects of such gaming. COUNTER protocols against machine-driven gaming

- A programme of statistical forensics to identify suspicious behaviour, both human and machine-driven in origin

6   Auditing

An important feature of the COUNTER Articles Code of Practice is that, from 1 January 2016, compliant vendors will have to be independently audited on an annual basis in order to maintain their COUNTER Articles compliance listing. This audit is supplementary to the existing COUNTER audit and is designed to validate those aspects of the COUNTER Articles data processing and presentation not already covered in the COUNTER audit. These supplementary auditing standards and procedures

will be published in Appendix F of this Code of Practice. As with COUNTER, these audits will be conducted online using the detailed test scripts included in the auditing standards and procedures, and will be carried out at the same time as the main COUNTER audit.

COUNTER will recognize a COUNTER Articles audit carried out by any CPA (Certified Public Accountant) (USA), by any CA (Chartered Accountant) (UK), or by their equivalent in other countries. Alternatively, the audit may be done by another, COUNTER-approved auditor that is not a CA or a CPA. Information on COUNTER-approved auditors is available from COUNTER.

6.1 The Audit Process

1. COUNTER Articles-compliant publishers and services will be notified in writing that an audit is required at least 3 months before the audit is due.

2. Publishers and services should respond within 1 month of receiving the reminder by informing COUNTER of their planned timetable for the audit and the name of the organization that will carry out the audit. Any queries about the audit process may be raised at this time.

3. Irrespective of the auditor selected, the audit must adhere to the requirements and use the tests specified in Appendix F of this Code of Practice.

4. Upon completion of the audit the auditor is required to send a signed copy of the audit report to the COUNTER office (lorraine.estelle@counterusage.org).

5. Categories of audit result are as follows:

   a. A Pass, in which case no further action is required by the publisher or service as a result of the audit. In some cases the auditor may add Observations to the audit report, which is designed to help the publisher/service improve its COUNTER Articles reporting, but which are outside the scope of the audit itself.

   b. A Qualified Pass, in which the auditor deems the vendor or service to have passed the audit, but where the auditor raises a Minor Issue requiring further action to maintain a valid listing in the COUNTER Articles Register. A Minor Issue does not affect the reported figures, but is one which should be resolved within 3 months of the audit to COUNTER's satisfaction. An example of a Minor Issue is where a report format does not conform to the COUNTER Articles specifications.

   c. A Fail, where the auditor has identified an issue that must be resolved immediately for the publisher or service to maintain a valid listing in the COUNTER Articles Register.

7 Compliance

Timetable and procedure

Release 1 of the COUNTER Articles Code of Practice, published in final form in March 2014, is the only valid version of the Code of Practice.

Applications for COUNTER Articles-compliant status

A Register of Vendors and their products for which COUNTER Articles compliant usage reports are available is maintained by the COUNTER office and posted on the COUNTER Articles page of the COUNTER website. Vendors may apply to the Project Director (lorraine.estelle@counterusage.org) for their products to be included on the Register. Upon receipt of the application vendors will be required to allow at least one of the COUNTER library test sites to evaluate their usage reports. When the usage reports are deemed to comply with the COUNTER Code of Practice for Articles the vendor will be asked to sign a Declaration of COUNTER Articles-compliance (Appendix B), after which the vendor and its products will be added to the Register. From 2016, and annually thereafter, a report from an independent auditor, confirming that the usage reports and data are indeed COUNTER Articles-compliant, will be required. See Appendix F for a description of the auditing procedure. The signed declarations should be sent to the COUNTER office as email attachments, to: lorraine.estelle@counterusage.org

8   Maintenance and development of the Code of Practice

COUNTER has overall responsibility for the development and maintenance of the COUNTER Code of Practice for Articles. Each new Release will be made openly available in draft form on the COUNTER website for comment before it is finalised. Comments may be sent to the COUNTER Project Director, Lorraine Estelle at lorraine.estelle@counterusage.org.

When providing your comments you are requested to adhere to the following guidelines:

- Please be as specific as possible, making sure to note the relevant section and subsection of the Code of Practice.
- Where you are proposing an addition to the Code of Practice, please indicate the preferred section within the current version.

9   Appendices

Appendix A: Glossary of Terms relevant to COUNTER Articles

Appendix B: Vendor Declaration of COUNTER Articles Compliance Appendix

C: Specification for Gathering of COUNTER Articles data

Appendix D: Protocols for Repositories

Appendix E: Excel Usage Report examples
Appendix F: Audit Requirements and Tests (to be added before 31 December 2014)

Appendix G: XML overview, with links to the up to date schemas

10 References

1. Needham, P., and Shepherd, P., Publisher and Institutional Repository Usage Statistics: the COUNTER   ARTICLES2   Project:
   http://www.projectcounter.org/News/COUNTER ARTICLES2_oct2011.pdf