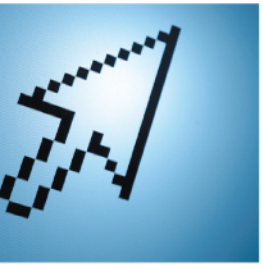

SUSHI, COUNTER and ERM Systems

An Update on Usage Standards

Ressources électroniques dans les bibliothèques électroniques : Mesure et Usage

Lille 3, vendredi 28 Novembre 2008

Oliver Pesch
EBSCO Information Services

opesch@ebsco.com

SUSHI

"The *Standardized Usage Statistics Harvesting Initiative (SUSHI) Protocol* standard (ANSI/NISO Z39.93) defines an automated request and response model for the harvesting of electronic resource usage data utilizing a Web services framework."

http://www.niso.org/workrooms/sushi

EBSCO INFORMATION SERVICES

Overview

- The progression of usage standards
- SUSHI : what it is and how it works
- Implementing SUSHI for libraries
- Relationship with ERMs
- Importance of Release 3 of COUNTER Code of Practice
- The future of SUSHI

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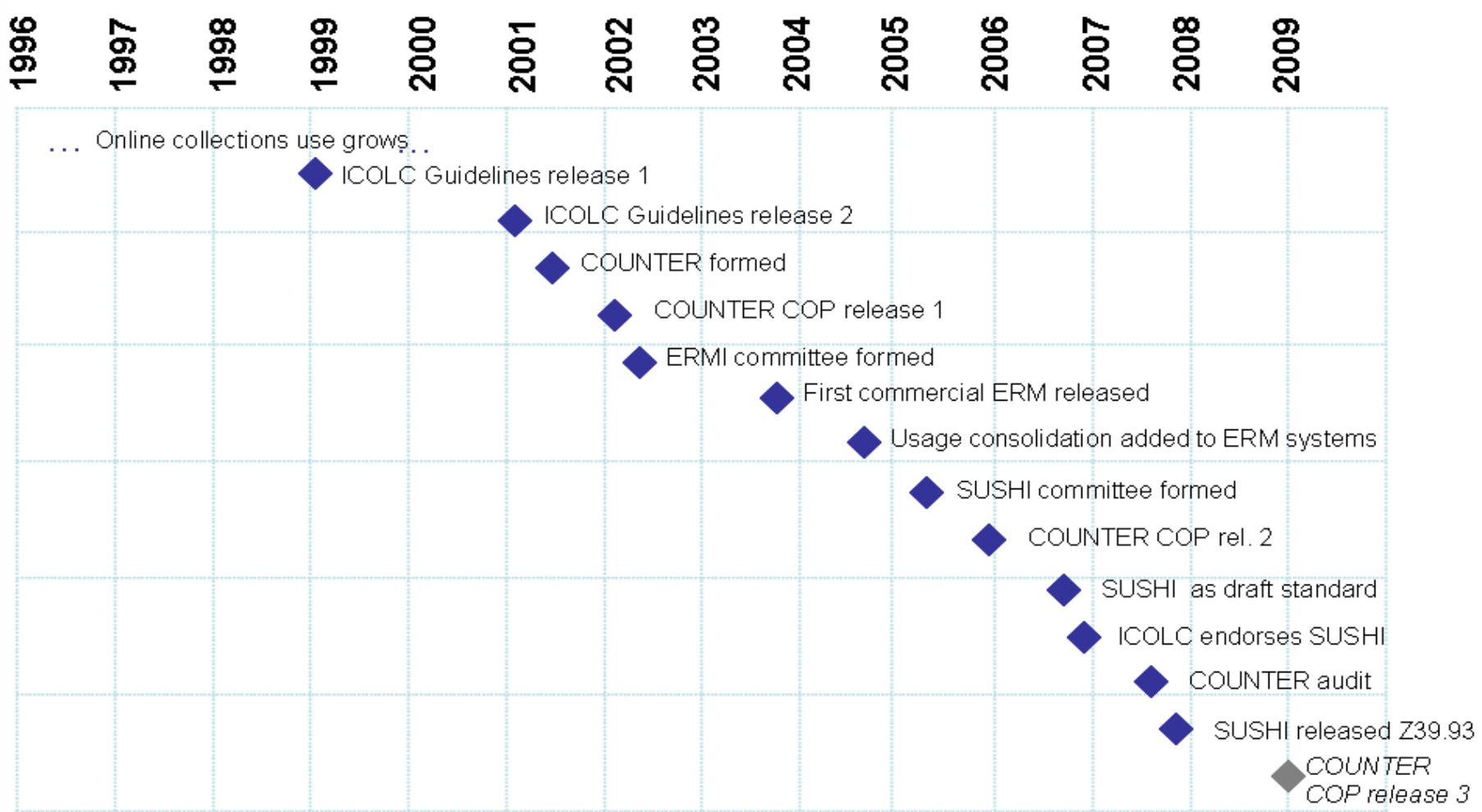
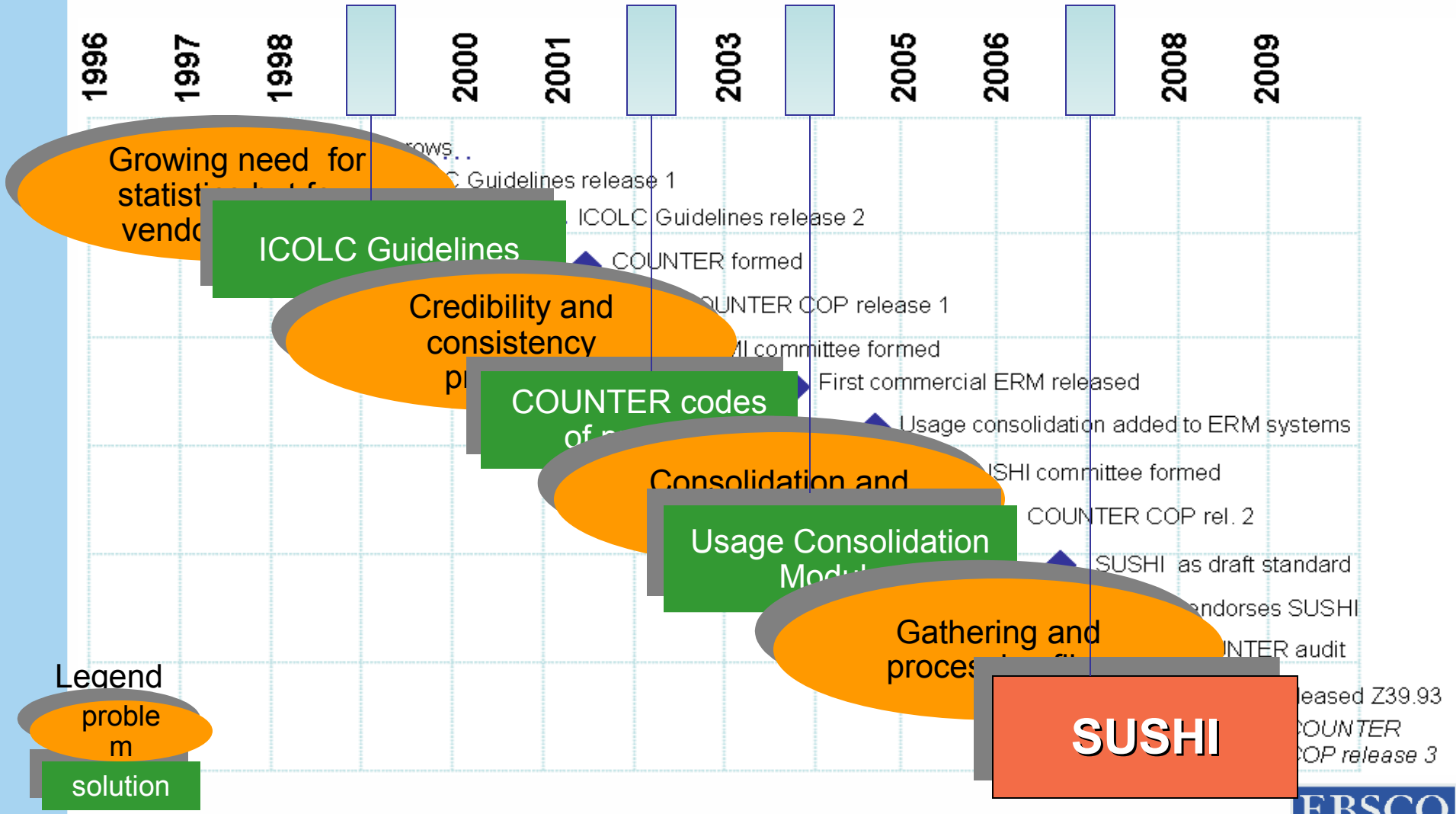
Timeline for usage related standards efforts



Timeline for usage related standards efforts



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SUSHI: Objectives

- COUNTER statistics provides a good model and rules for usage statistics counting
- Librarians needed:
  - ***A more efficient data exchange model***
    - Current model is file-by-file spreadsheet download
    - Background query and response model is more efficient and scalable

SUSHI: What it is and Isn't

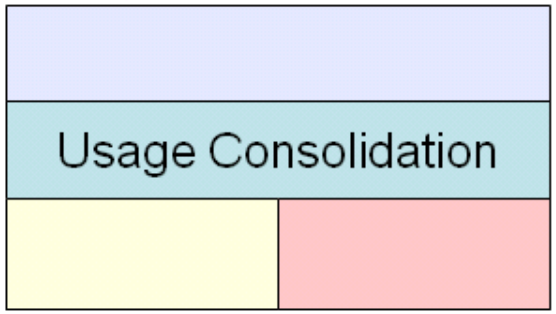
- What it is:
  - A web-services model for requesting data
    - Replaces the user's need to download files from vendor's website
  - A request for data where the response includes COUNTER data
    - Using COUNTER's schema
- What it isn't:
  - A model for counting usage statistics
  - A usage consolidation application

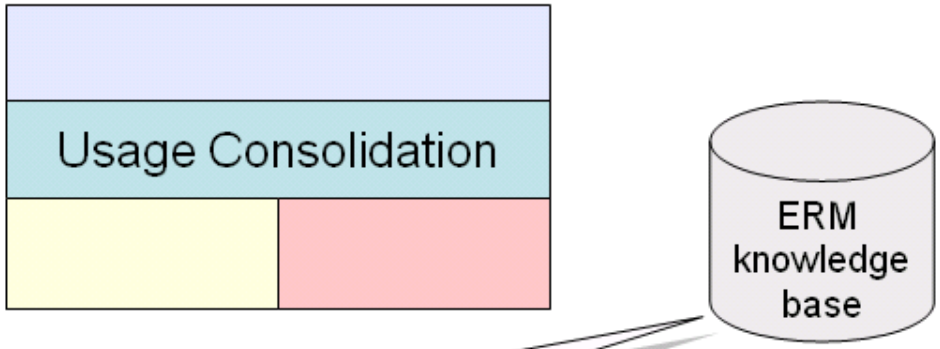
SUSHI: COUNTER Reports

Usage Reports

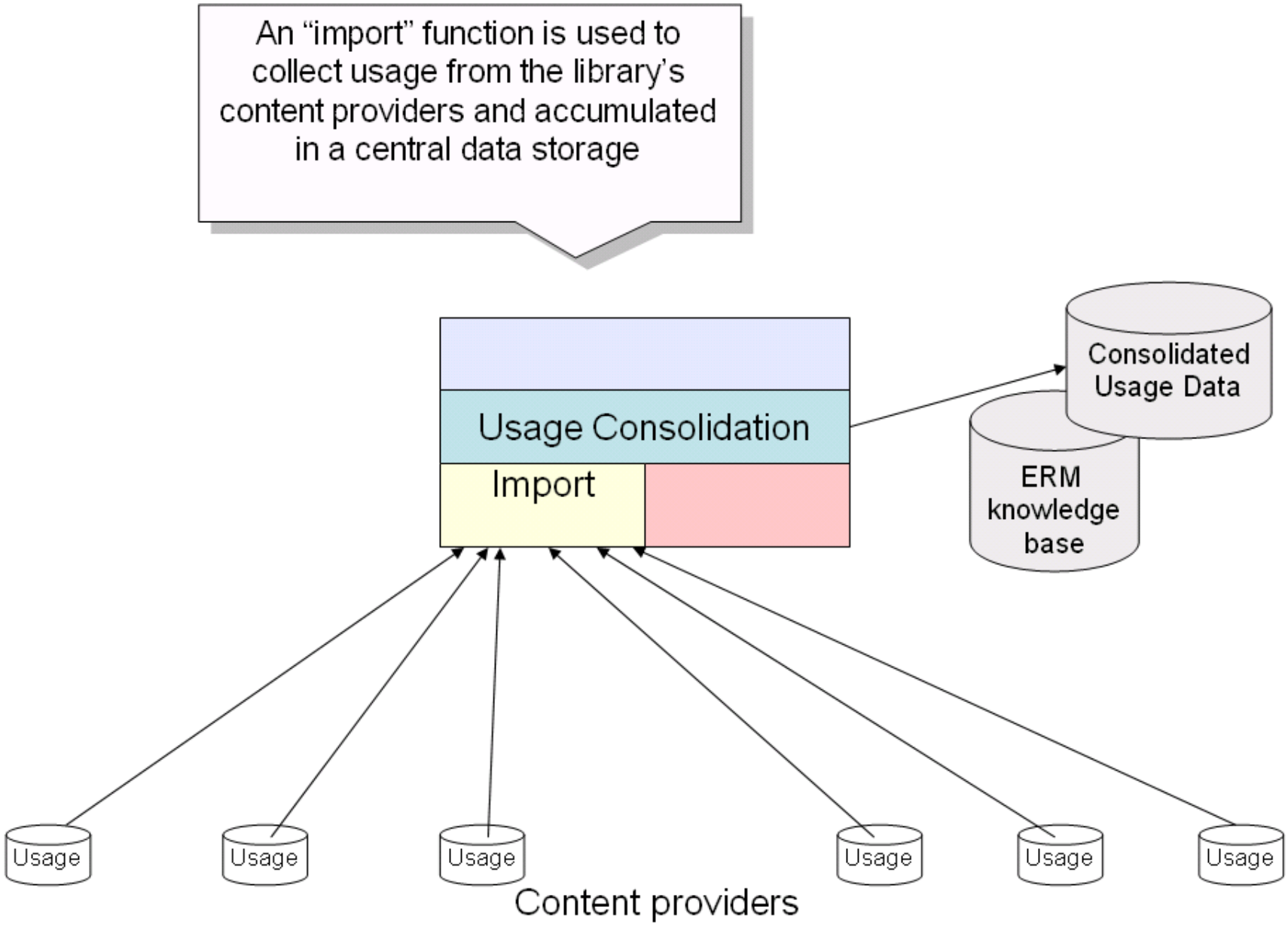
- Journal Report 1
  - Full text article requests by month and journal
- Journal Report 2
  - Turnaways by month and journal
- Database Report 1
  - Total searches and sessions by month and database
- Database Report 2
  - Turnaways by month and database
- Database Report 3
  - Searches and sessions by month and service

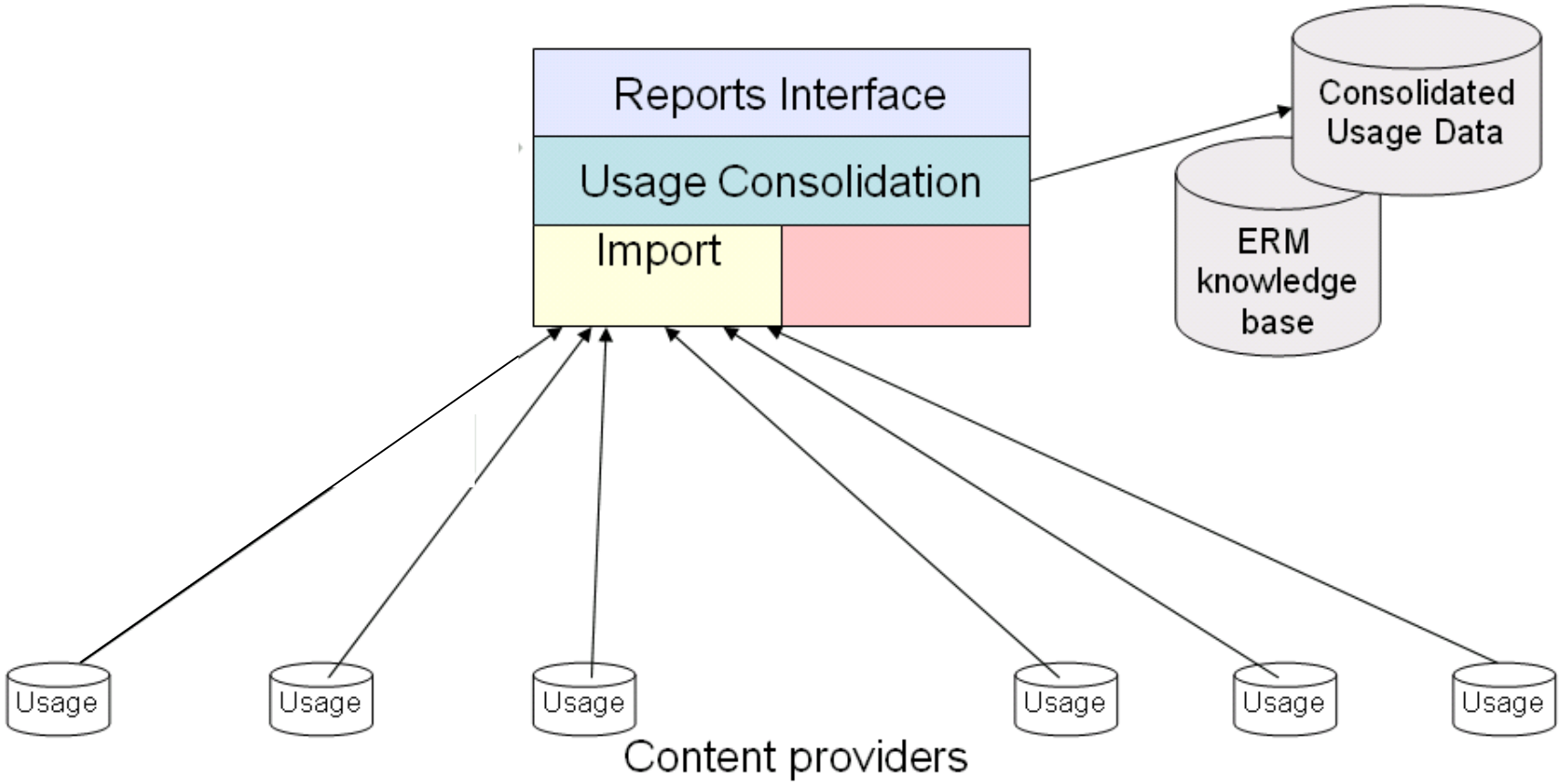
A new genre of application is being offered to assist with dealing with use statistics. Usage Consolidation software is being offered by many ILS vendors and other service providers to the library market.

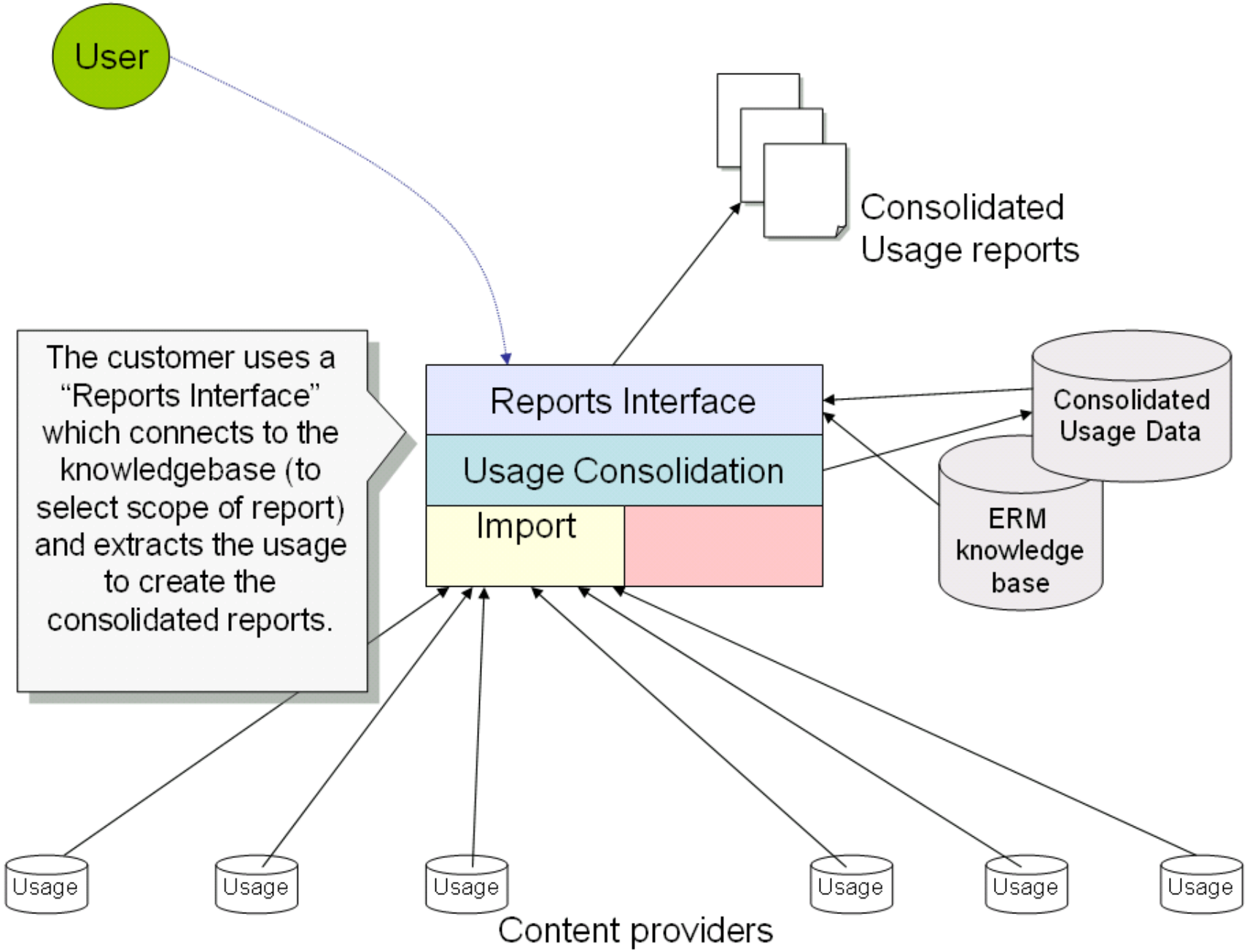


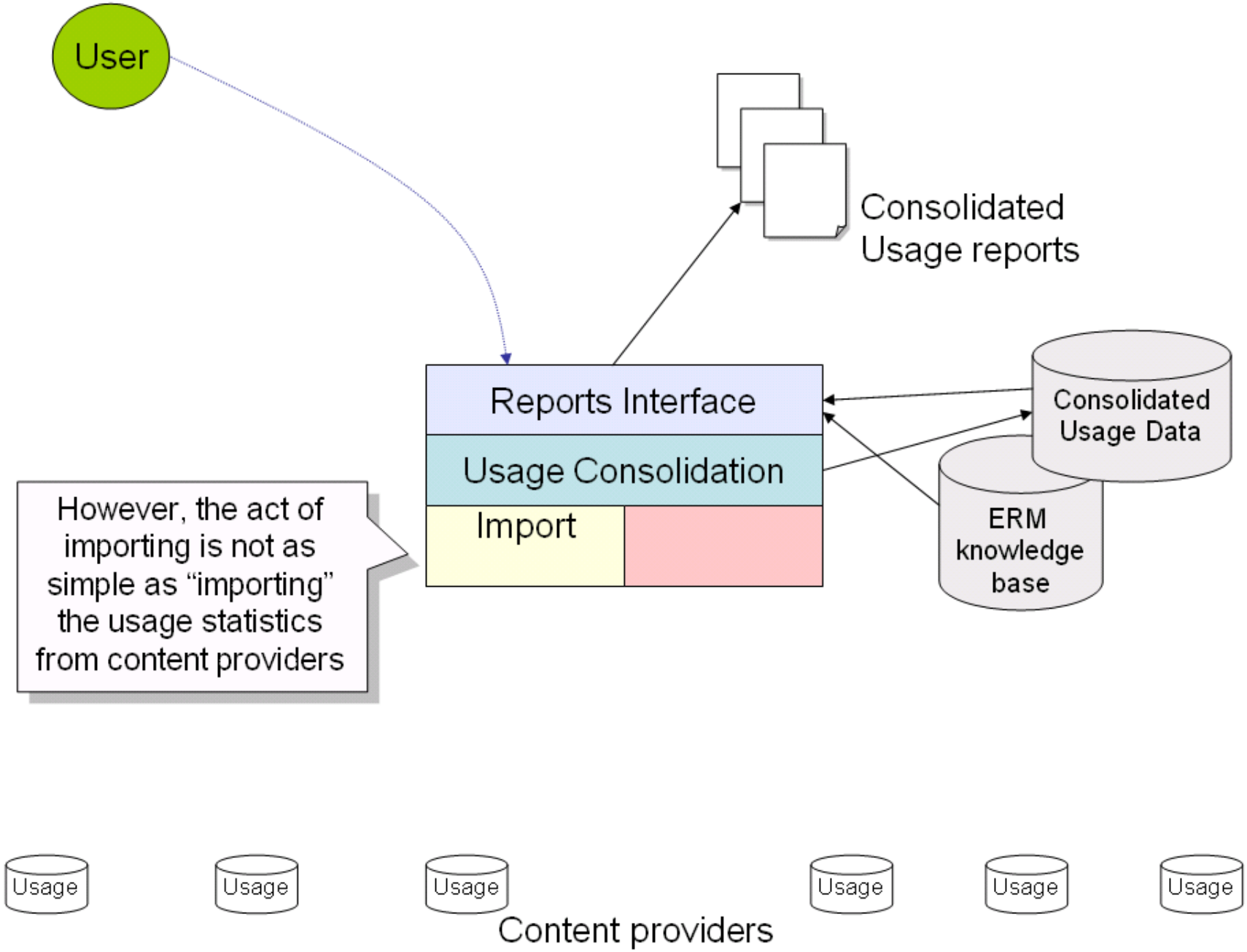


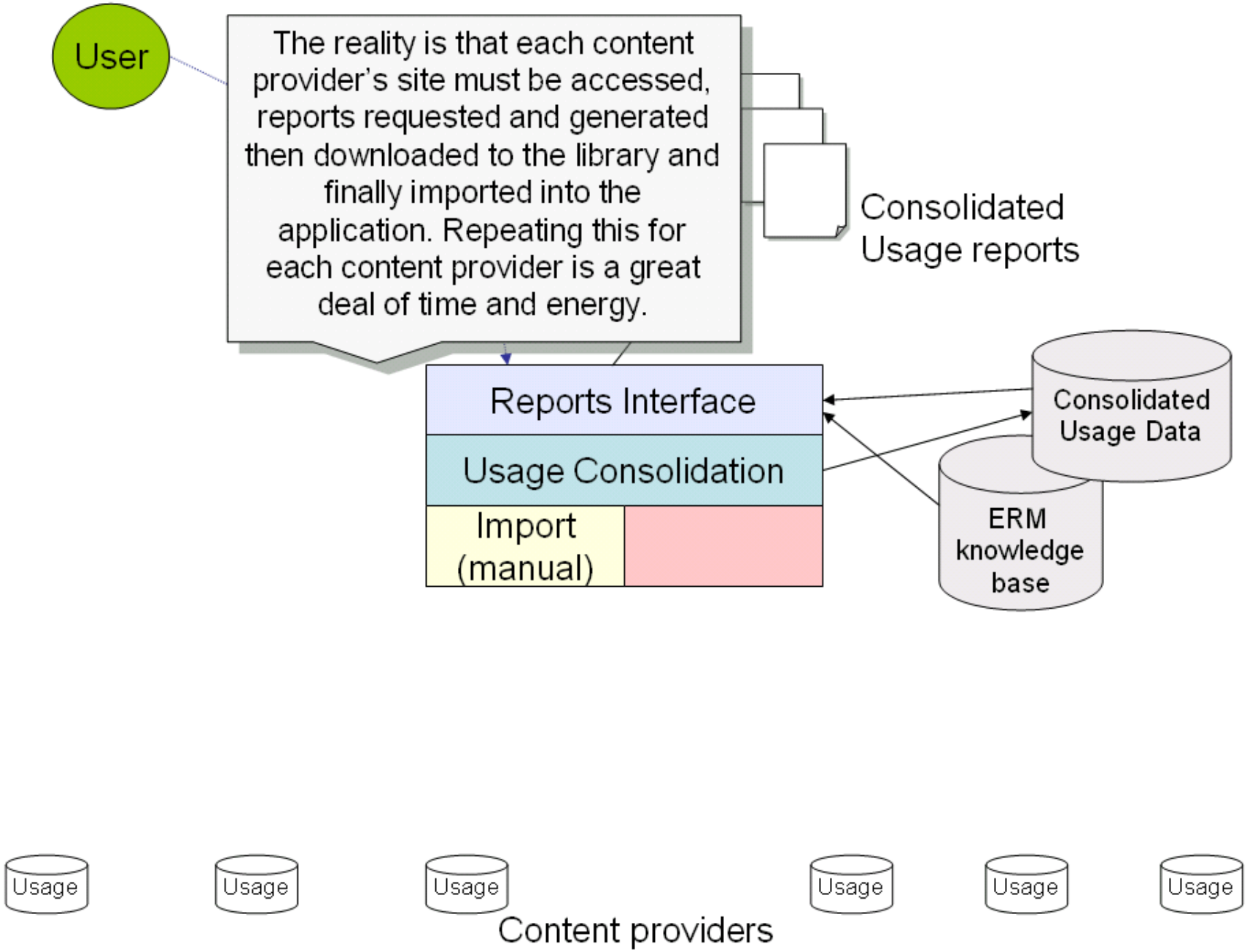
Associated with these applications will be a knowledgebase that describes the e-resources (e.g. the databases and packages the library subscribes to and the titles contained within). Frequently this is the same knowledgebase that controls a library's ERM system.

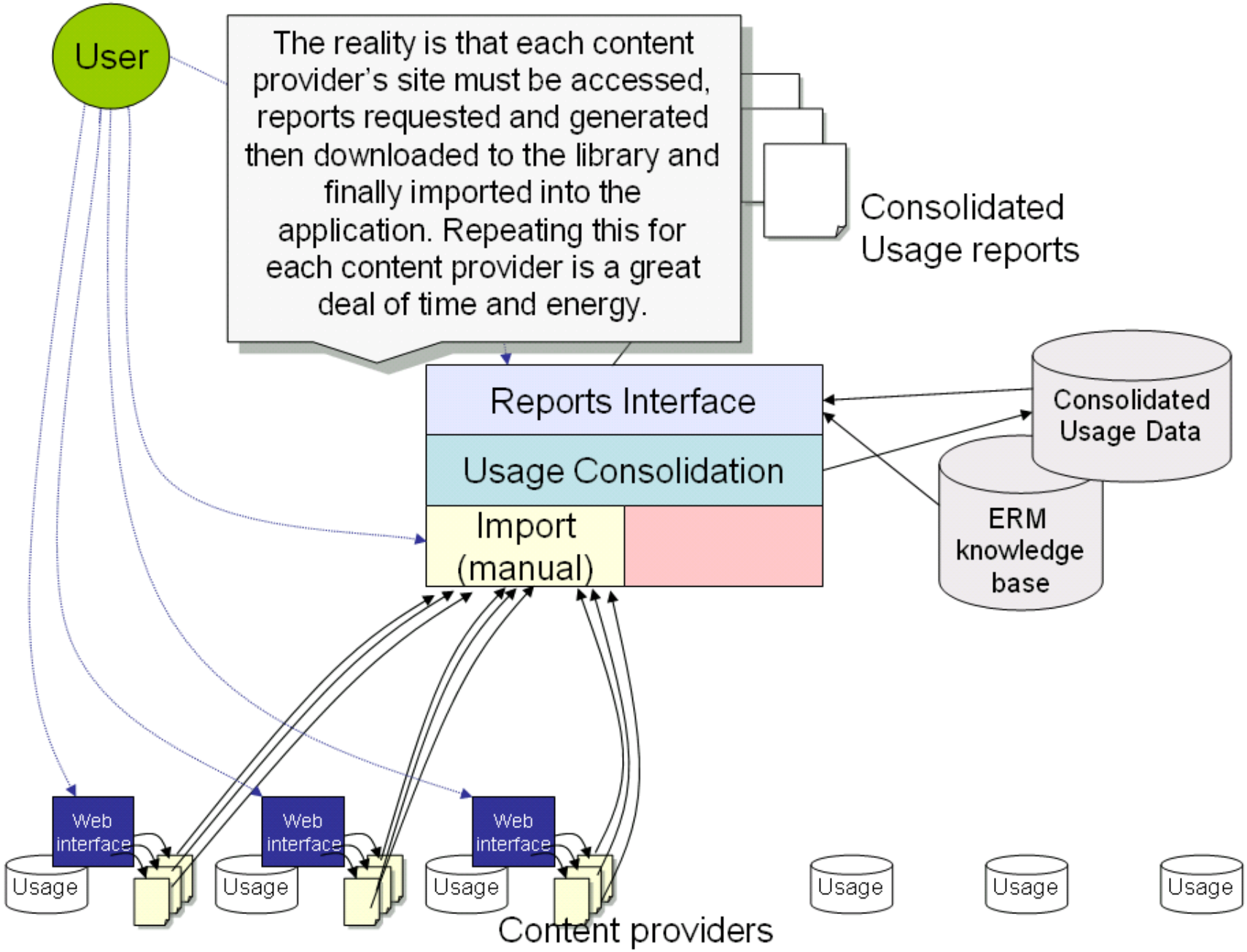

An “import” function is used to collect usage from the library’s content providers and accumulated in a central data storage
Usage Consolidation
Import
Consolidated Usage Data
ERM knowledge base
Usage
Usage
Usage
Usage
Usage
Usage
Content providers


Reports Interface
Usage Consolidation
Import
Consolidated Usage Data
ERM knowledge base
Usage
Usage
Usage
Usage
Usage
Usage
Content providers


User
Consolidated
Usage reports
The customer uses a "Reports Interface" which connects to the knowledgebase (to select scope of report) and extracts the usage to create the consolidated reports.
Reports Interface
Usage Consolidation
Import
Consolidated
Usage Data
ERM
knowledge
base
Usage
Usage
Usage
Usage
Usage
Usage
Content providers


User
Consolidated
Usage reports
Reports Interface
Usage Consolidation
Import
Consolidated
Usage Data
ERM
knowledge
base
However, the act of importing is not as simple as “importing” the usage statistics from content providers
Usage
Usage
Usage
Usage
Usage
Usage
Content providers


User
The reality is that each content provider's site must be accessed, reports requested and generated then downloaded to the library and finally imported into the application. Repeating this for each content provider is a great deal of time and energy.
Consolidated Usage reports
Reports Interface
Usage Consolidation
Import (manual)
Consolidated Usage Data
ERM knowledge base
Usage
Usage
Usage
Usage
Usage
Usage
Content providers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Web interface
Web interface
Web interface
Usage
Usage
Usage
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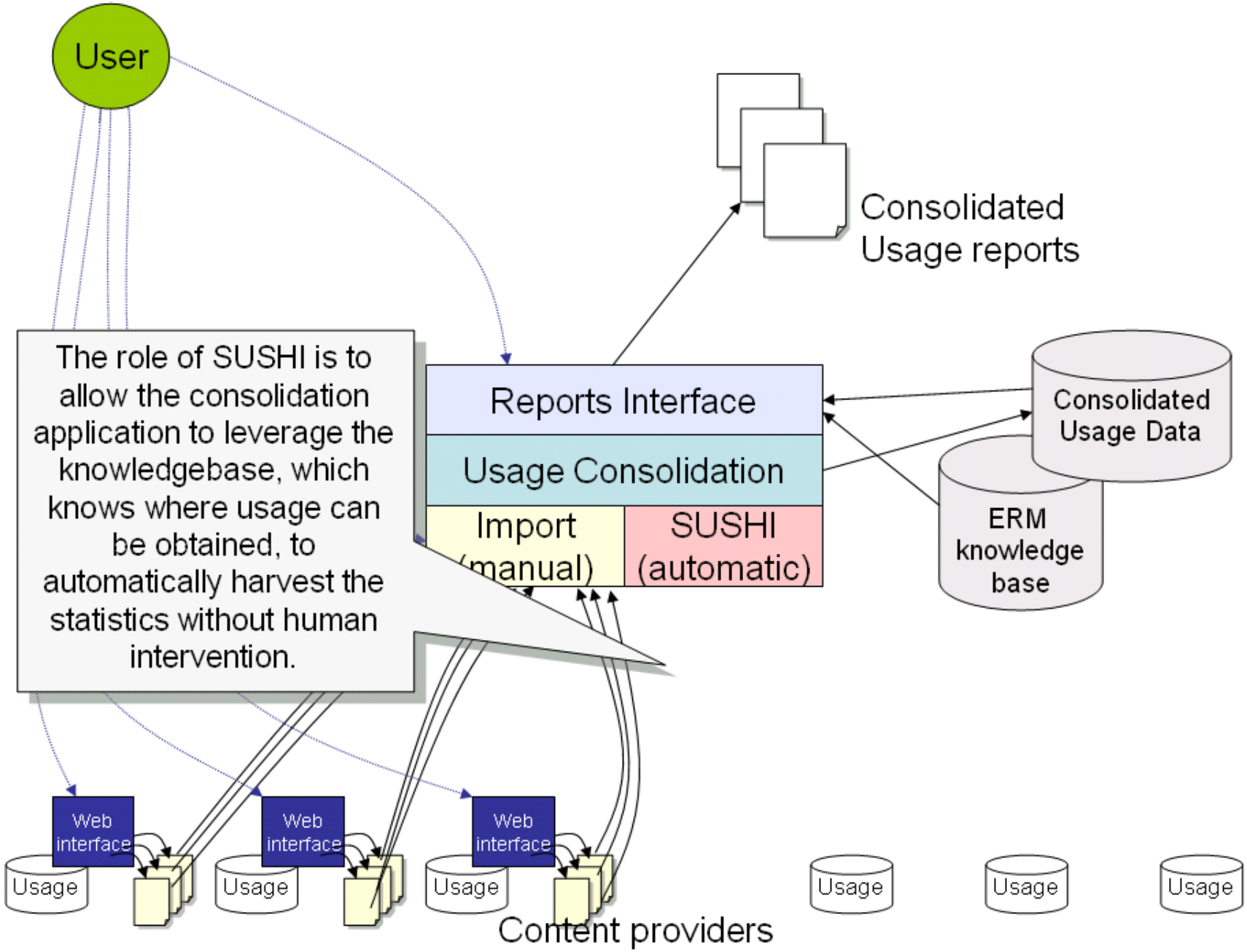
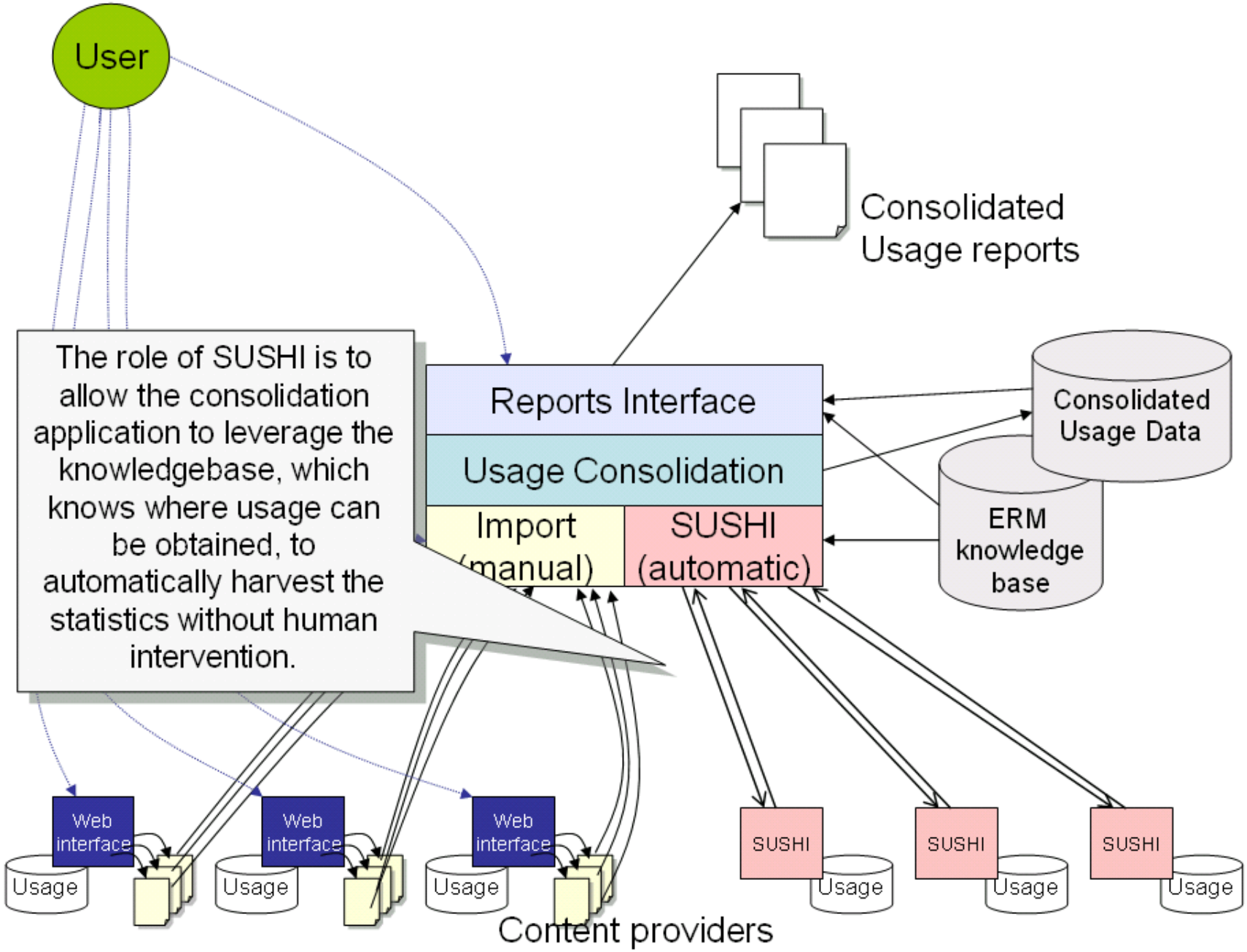
Usage
Usage
Content providers


User
Consolidated
Usage reports
The role of SUSHI is to allow the consolidation application to leverage the knowledgebase, which knows where usage can be obtained, to automatically harvest the statistics without human intervention.
Reports Interface
Usage Consolidation
Import (manual)
SUSHI (automatic)
Consolidated Usage Data
ERM knowledge base
Web interface
Web interface
Web interface
Usage
Usage
Usage
Usage
Usage
Usage
Content providers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SUSHI (automatic)
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ERM knowledge base
Web interface
Usage
Web interface
Usage
Web interface
Usage
SUSHI
Usage
SUSHI
Usage
SUSHI
Usage
Content providers

Web Services: the chosen approach for SUSHI

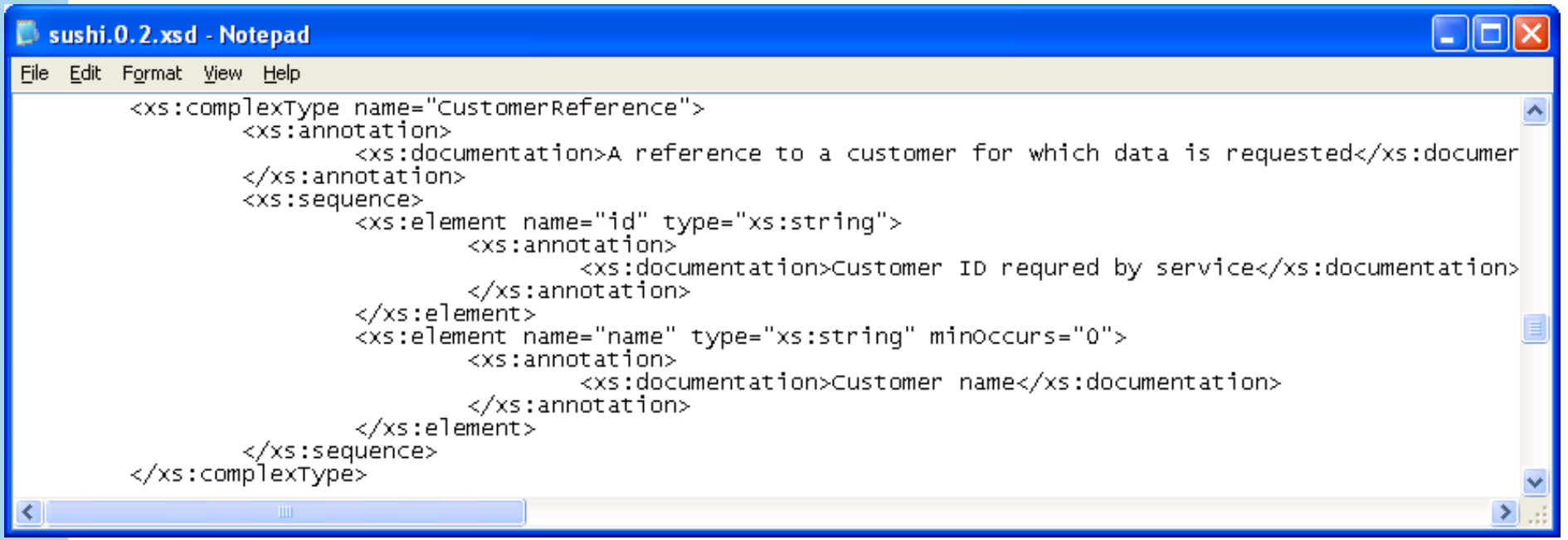
- Web services combine the best aspects of component-based development and the Web.
- Commercially accepted
- Widely supported (W3C)
- Secure

Definitions

XML Schema (XSD)

A language for describing the structure and constraining the contents of XML documents.

(*reactivity.com glossary*)



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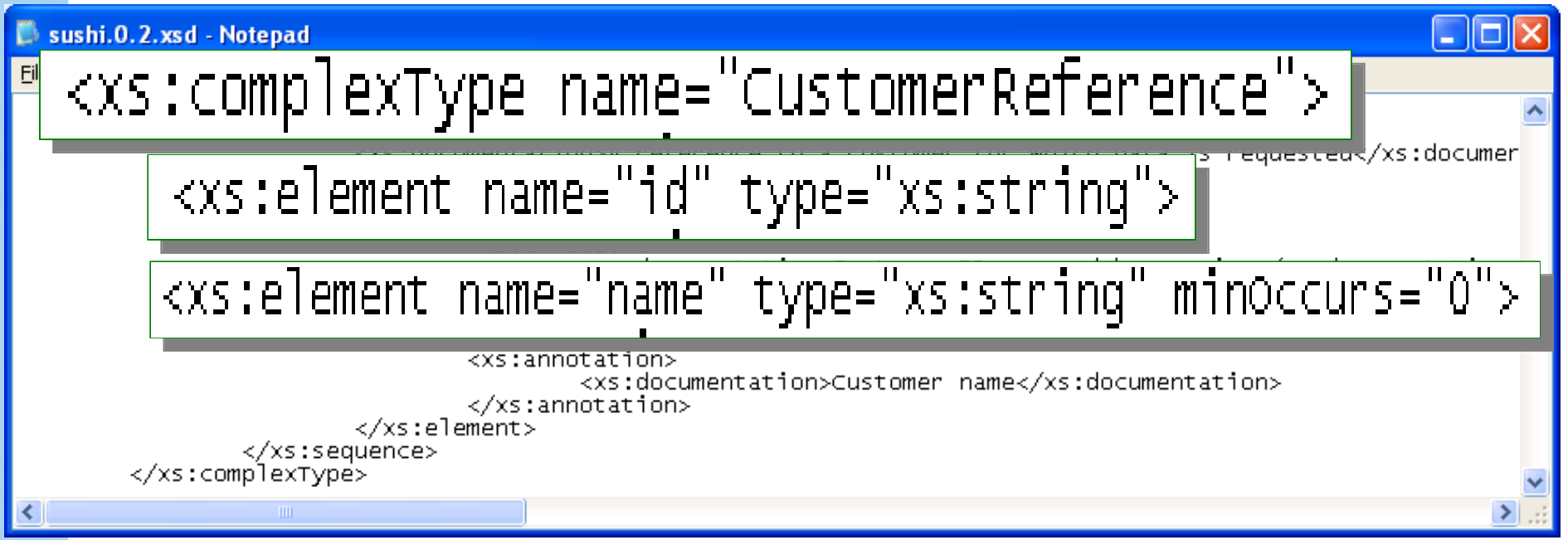


Definitions

Web Services

Open, standard (XML, SOAP, etc.) based Web applications that interact with other web applications for the purpose of exchanging data.

(lucent.com)

Definitions

Simple Object Access Protocol (SOAP)

SOAP is a lightweight XML based protocol used for invoking web services and exchanging structured data and type information on the Web.

(oracle.com)

Definitions

Web Services Description Language

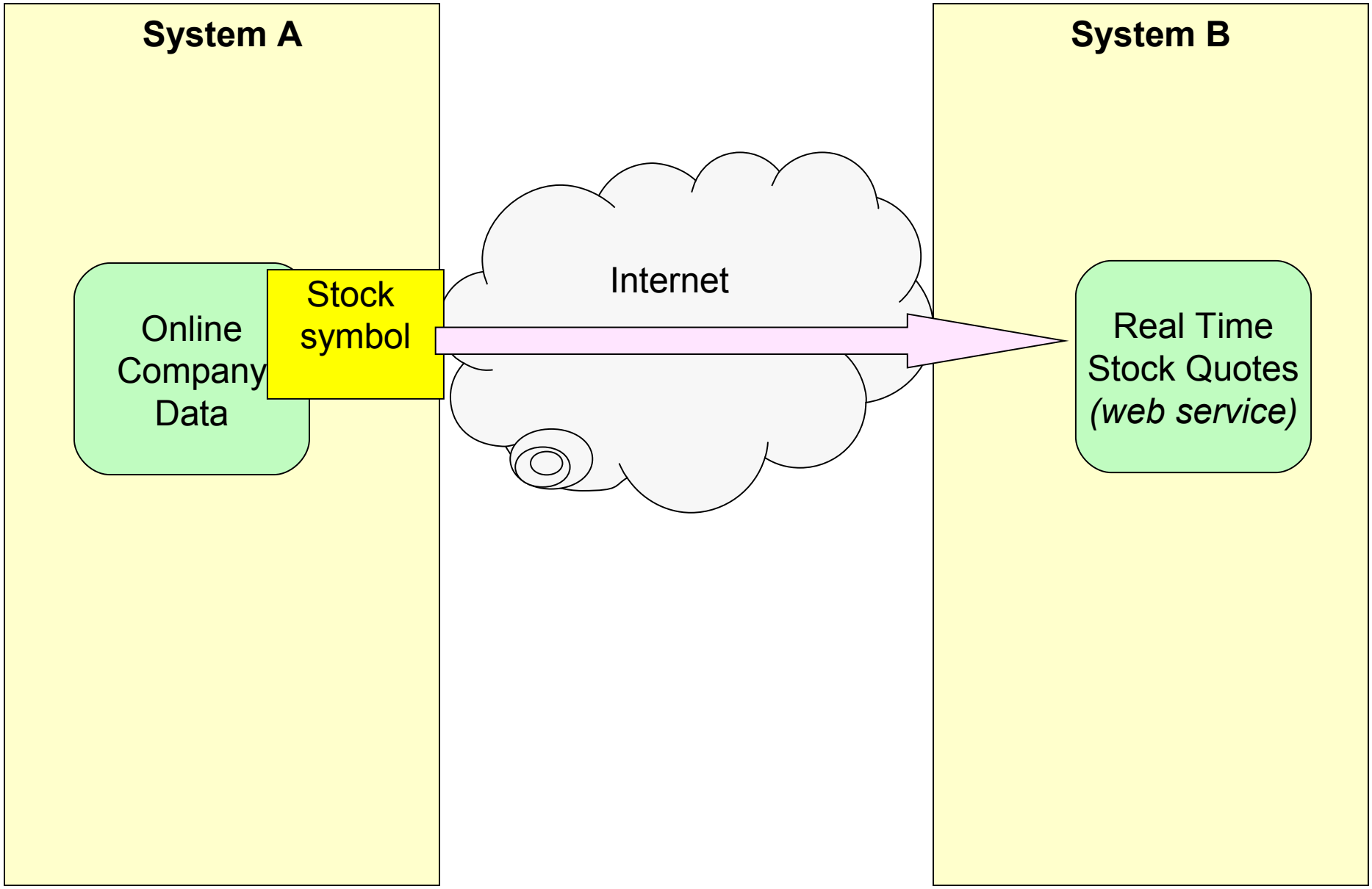
(WSDL) is an XML format published for describing Web services.

(wikipedia.org)

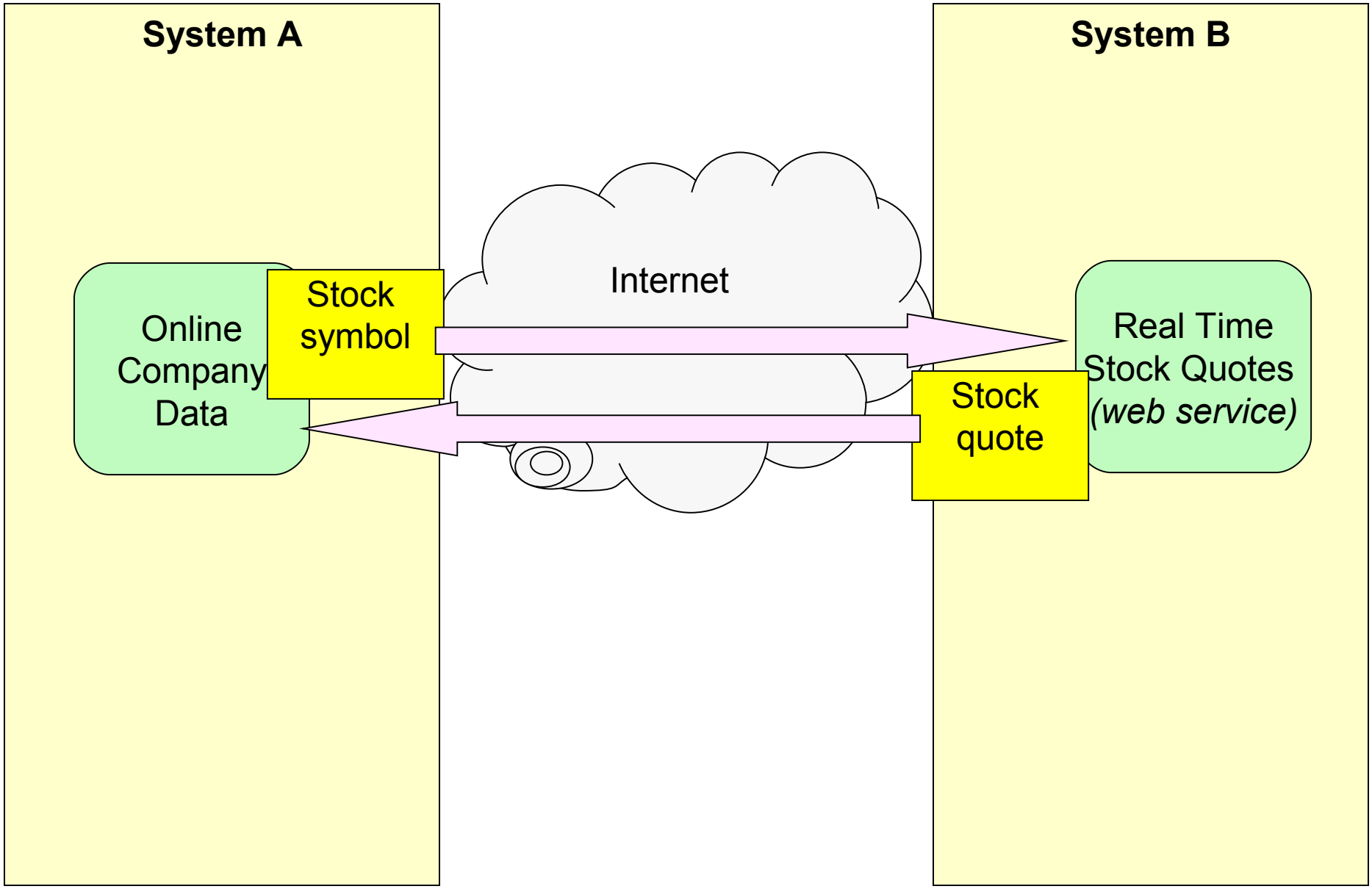
Web Services: An example

- System A provides online information about companies.
- System B provides real-time stock quotations.
- Using Web Services, System A can integrate real-time stock quotes into the company information they provide.

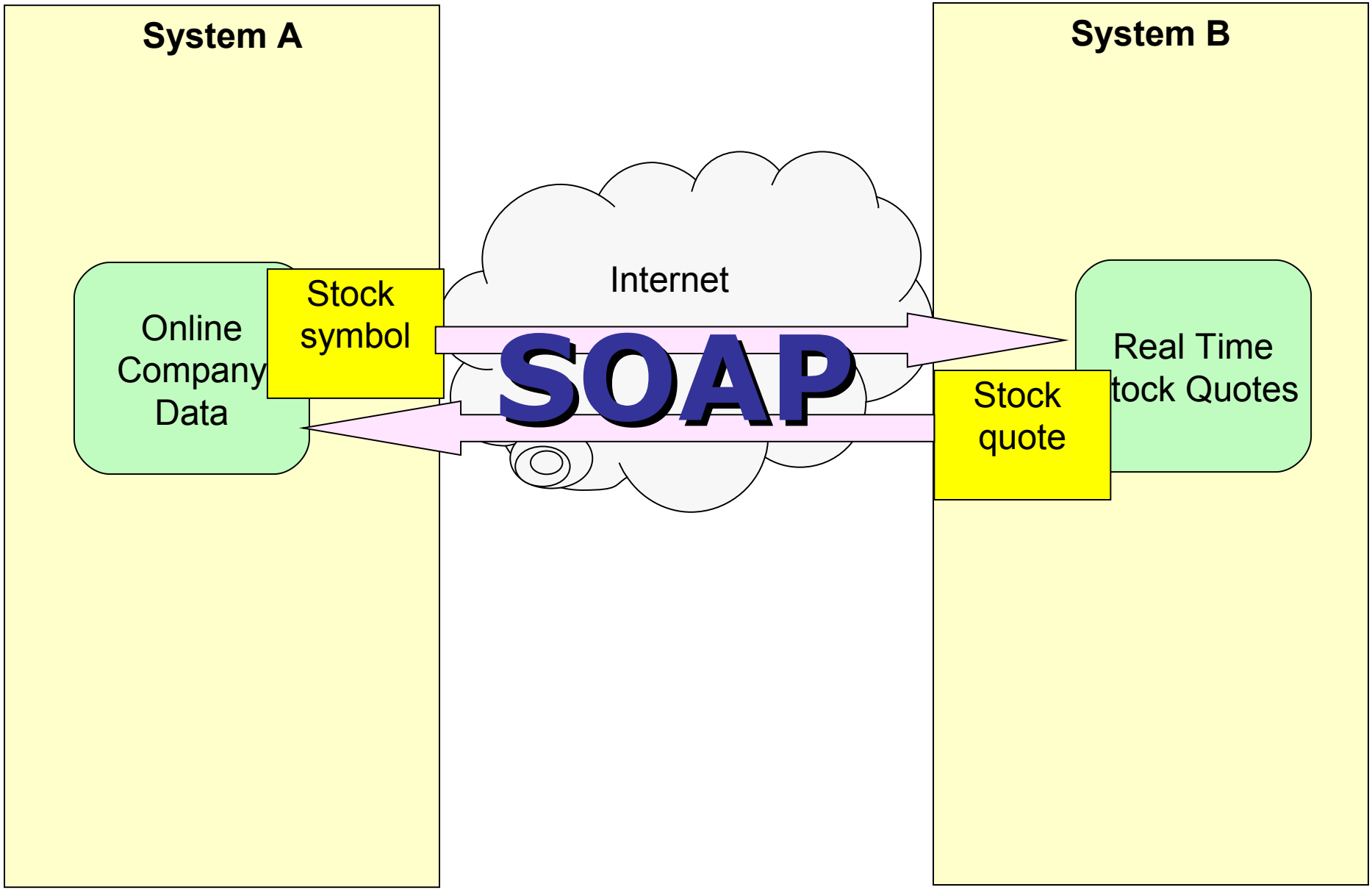
System A sends the stock symbol to System B.



System B returns the quote. All of this happens in milliseconds.



"Messages" are formatted in XML, and the protocol used to communicate is SOAP (Simple Object Access Protocol).



SUSHI : The Exchange

- ✓ Report Request
  - <Requester>
  - <Customer Reference>
  - <Report Definition>
- ✓ Report Response
  - <Requester>
  - <Customer Reference>
  - <Report Definition>
  - <Report as payload>

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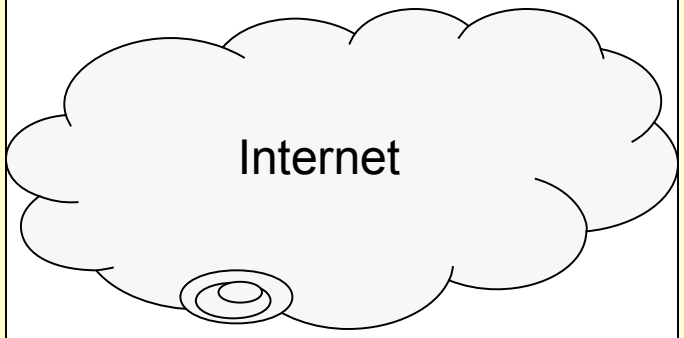
SUSHI: Architecture

- The next series of slides graphically show a SUSHI transaction
  - Library's ERM system requests a usage report
  - SUSHI client makes the request
  - SUSHI server processes request
  - SUSHI server prepares COUNTER report
  - SUSHI server "packages" and returns response
  - SUSHI client processes COUNTER report

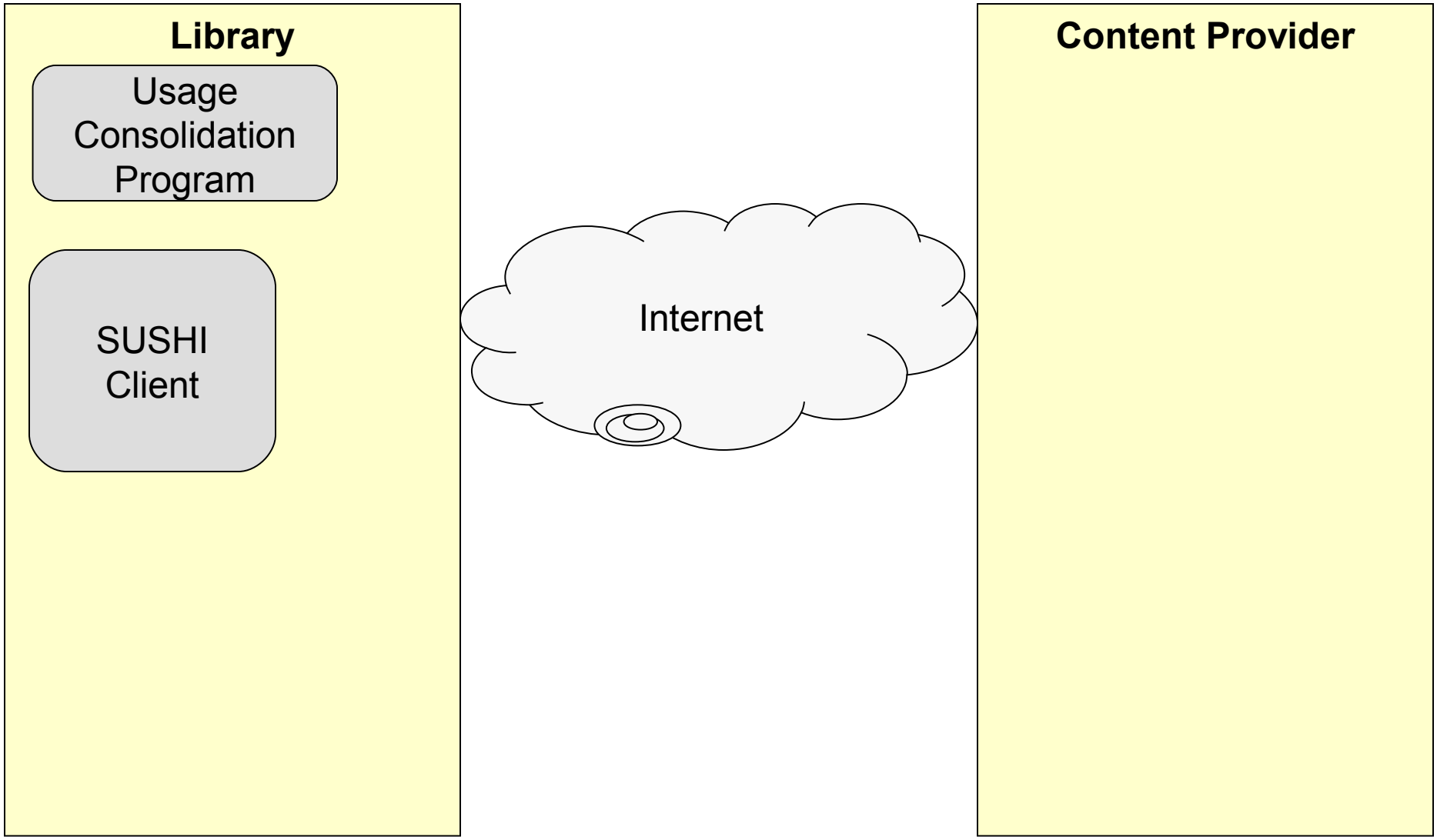
The Library's ERM and Content Provider's systems are both connected to the internet.

Library

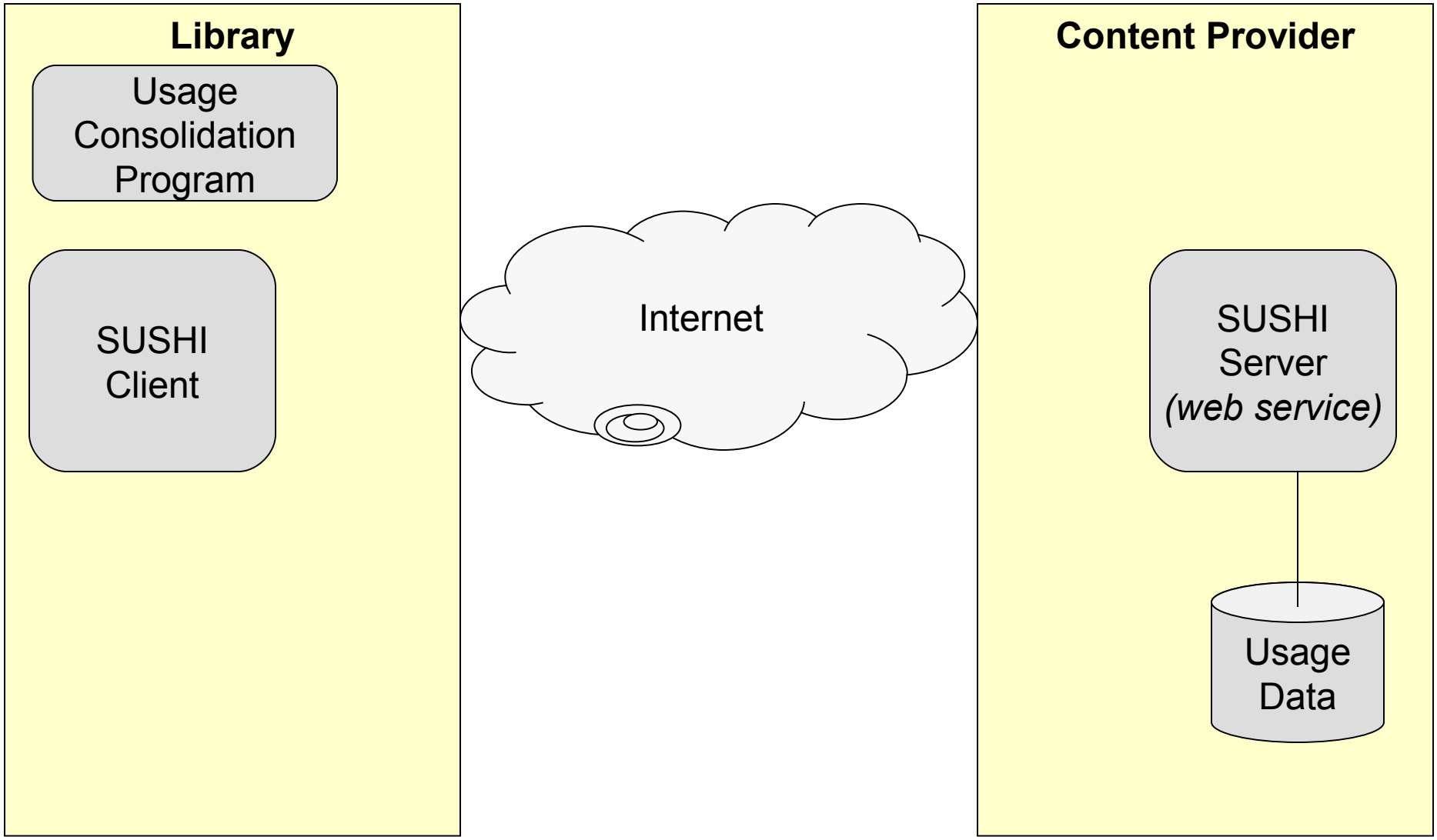


Content Provider

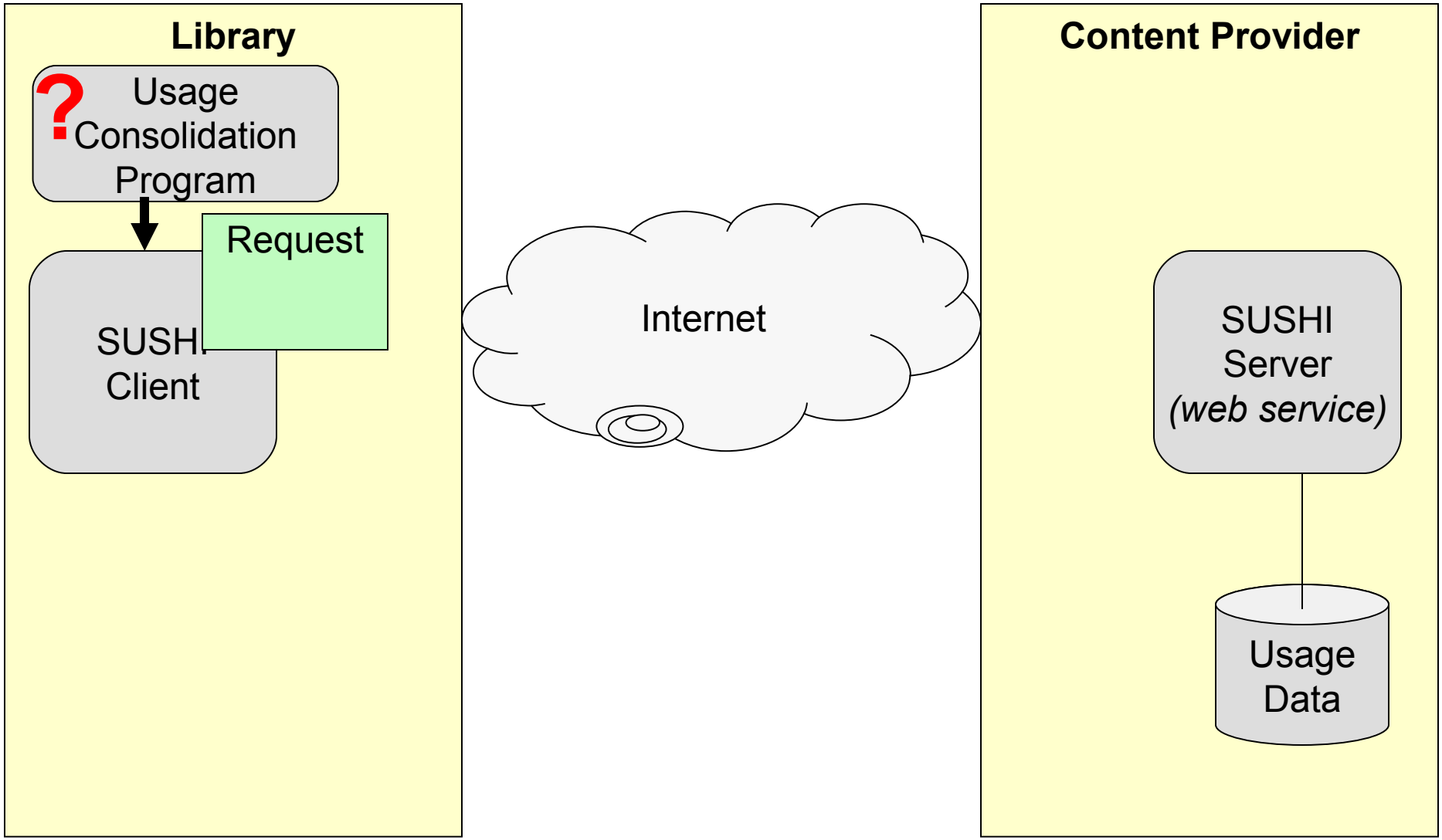
The SUSHI client is software that runs on the library's server, usually associated with an ERM system.



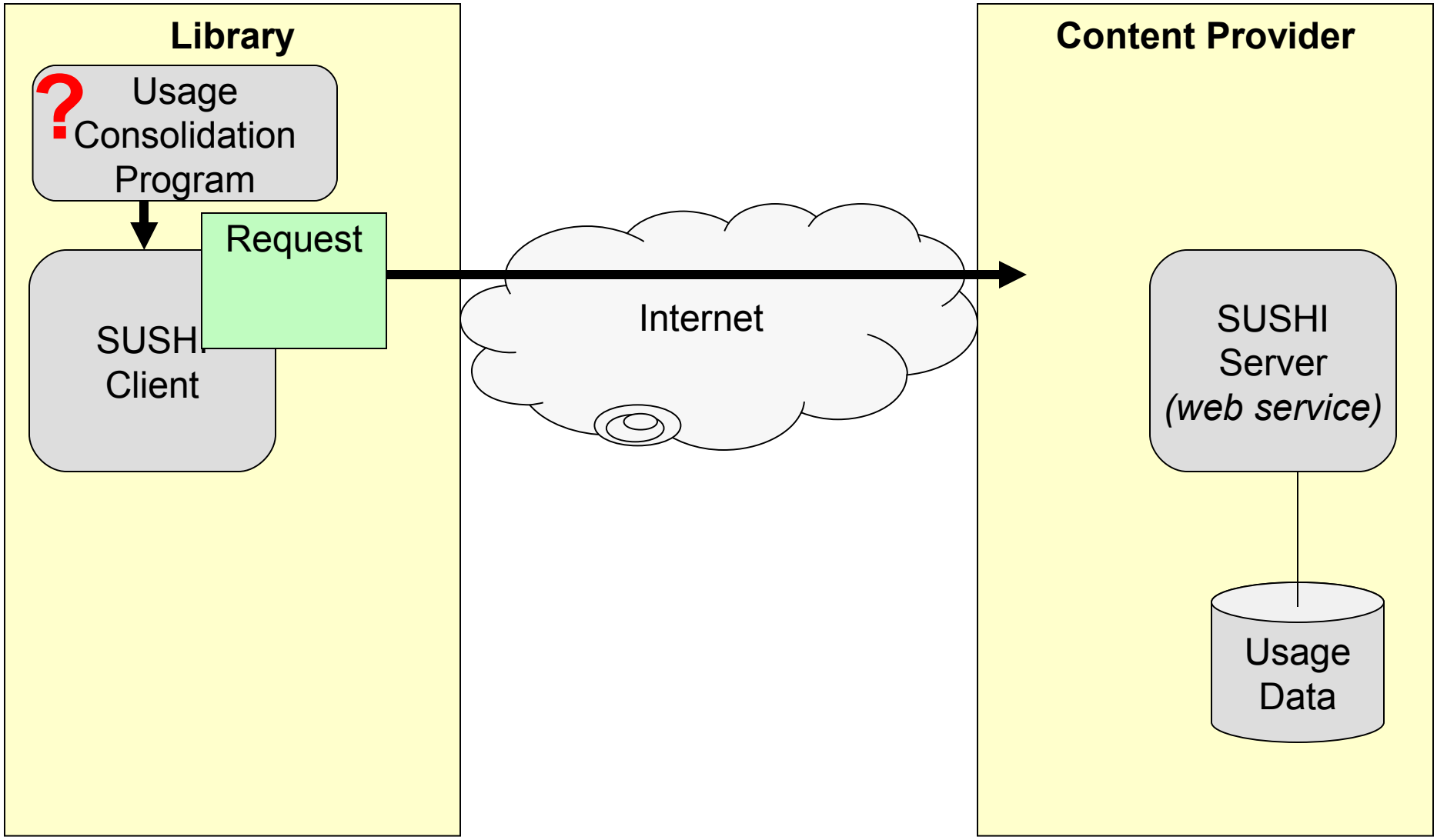
The SUSHI server is software that runs on the Content Provider's server, and has access to the usage data.



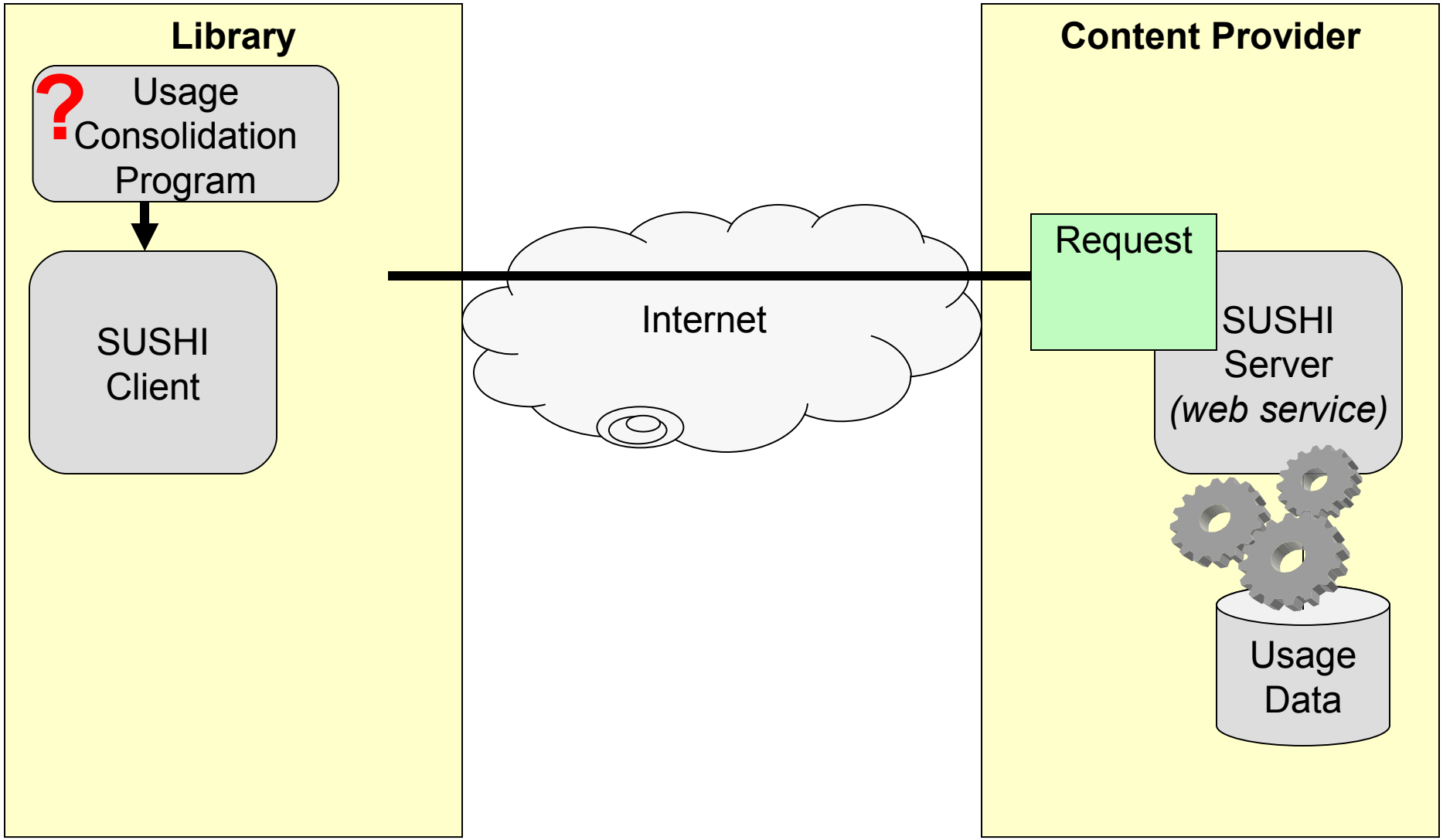
When the usage management system wants a COUNTER report, it sends a request to the SUSHI client, which prepares the request.



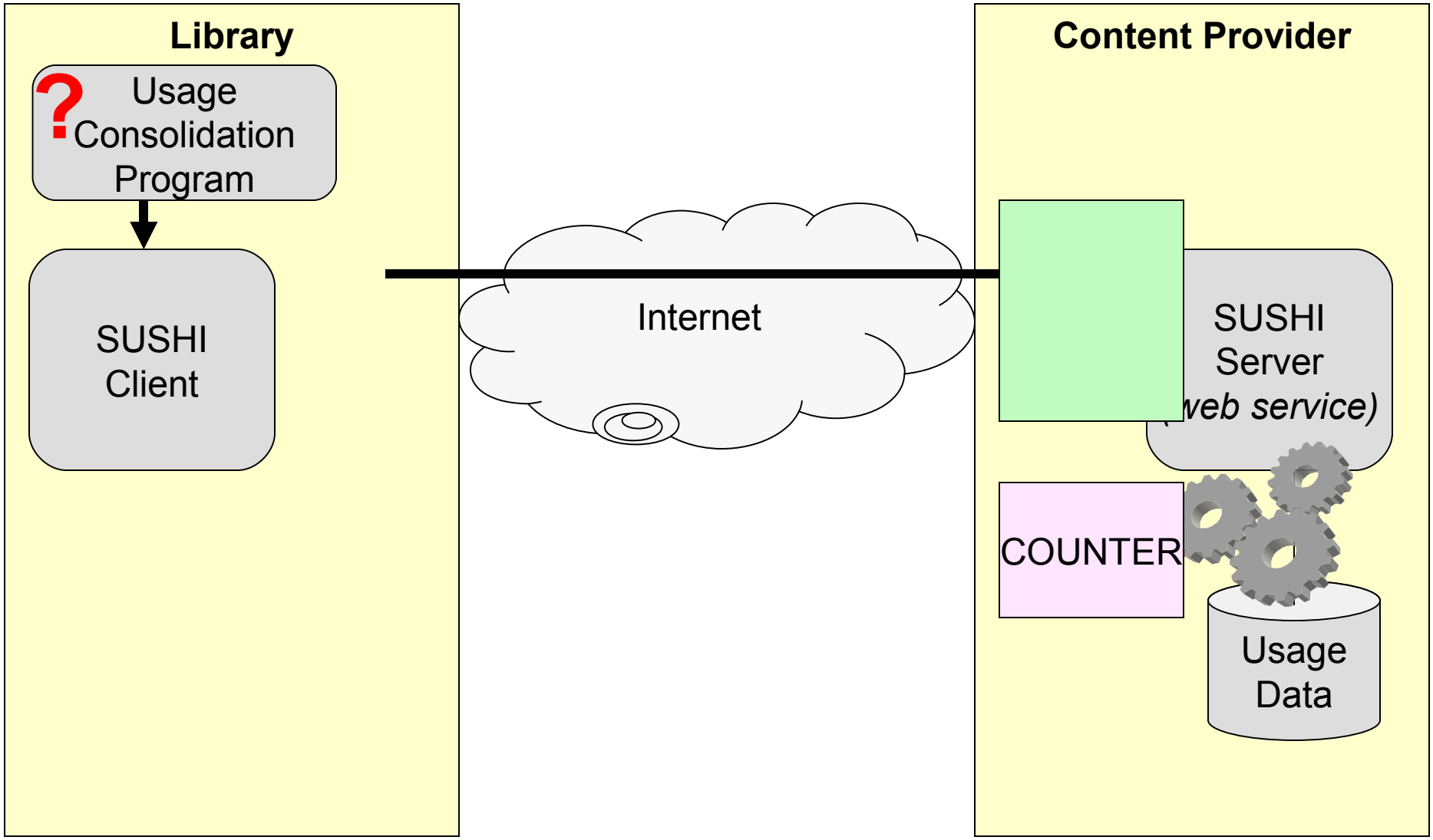
The SUSHI request is sent to the Content Provider. The request specifies the report and the library the report is for.



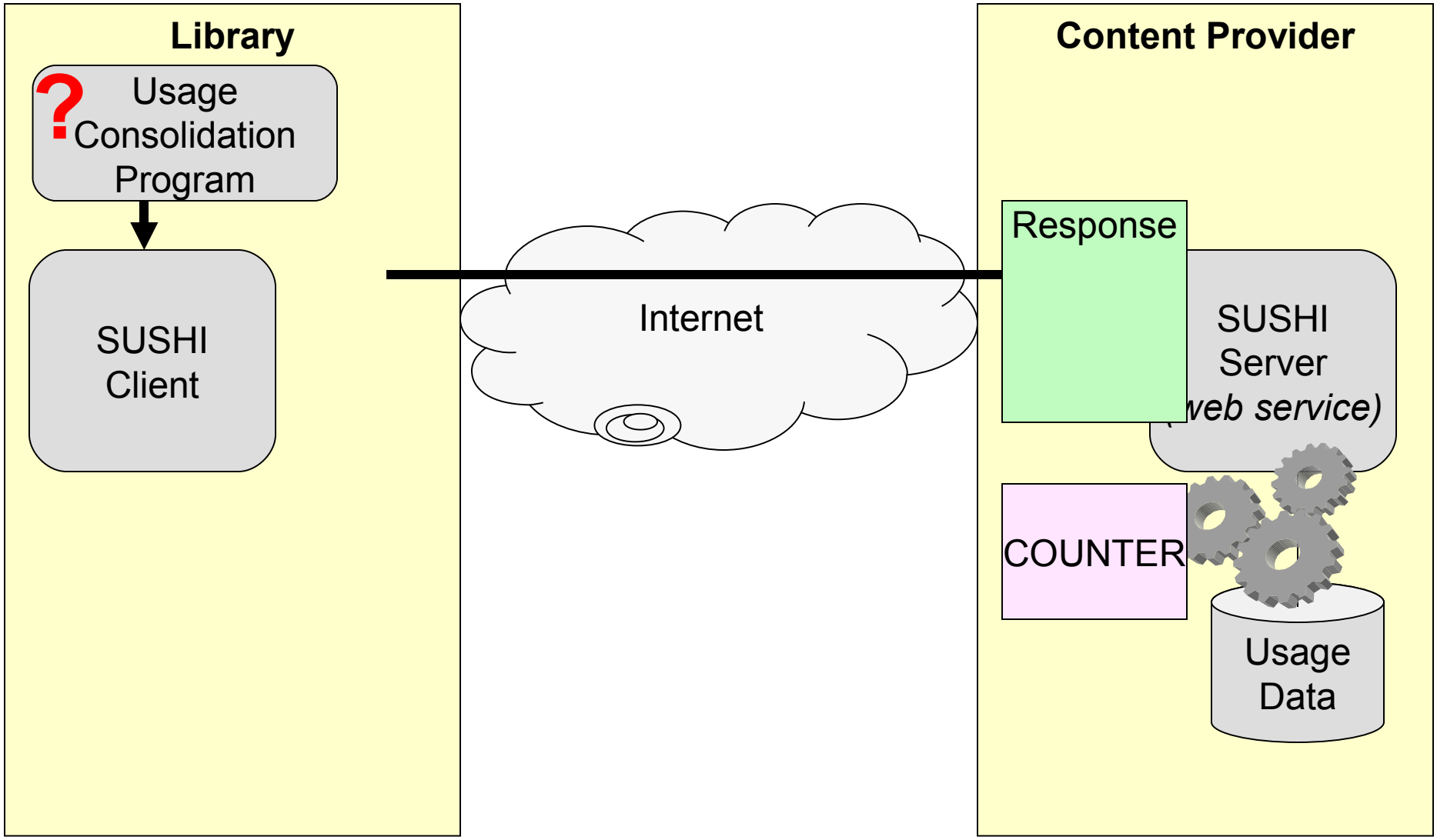
The SUSHI server reads the request then processes the usage data.



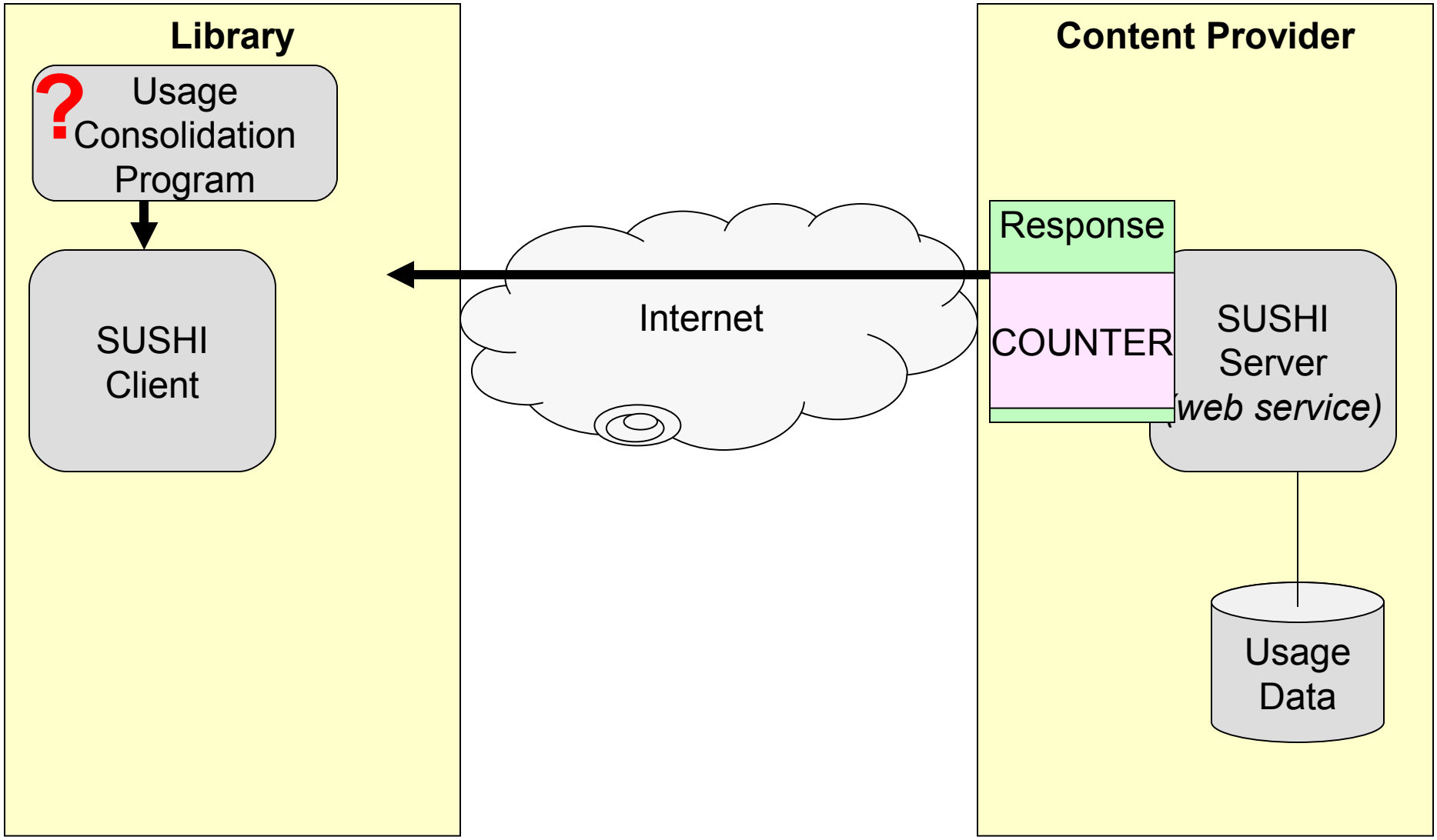
The SUSHI server reads processes the request creates the COUNTER report in XML format.



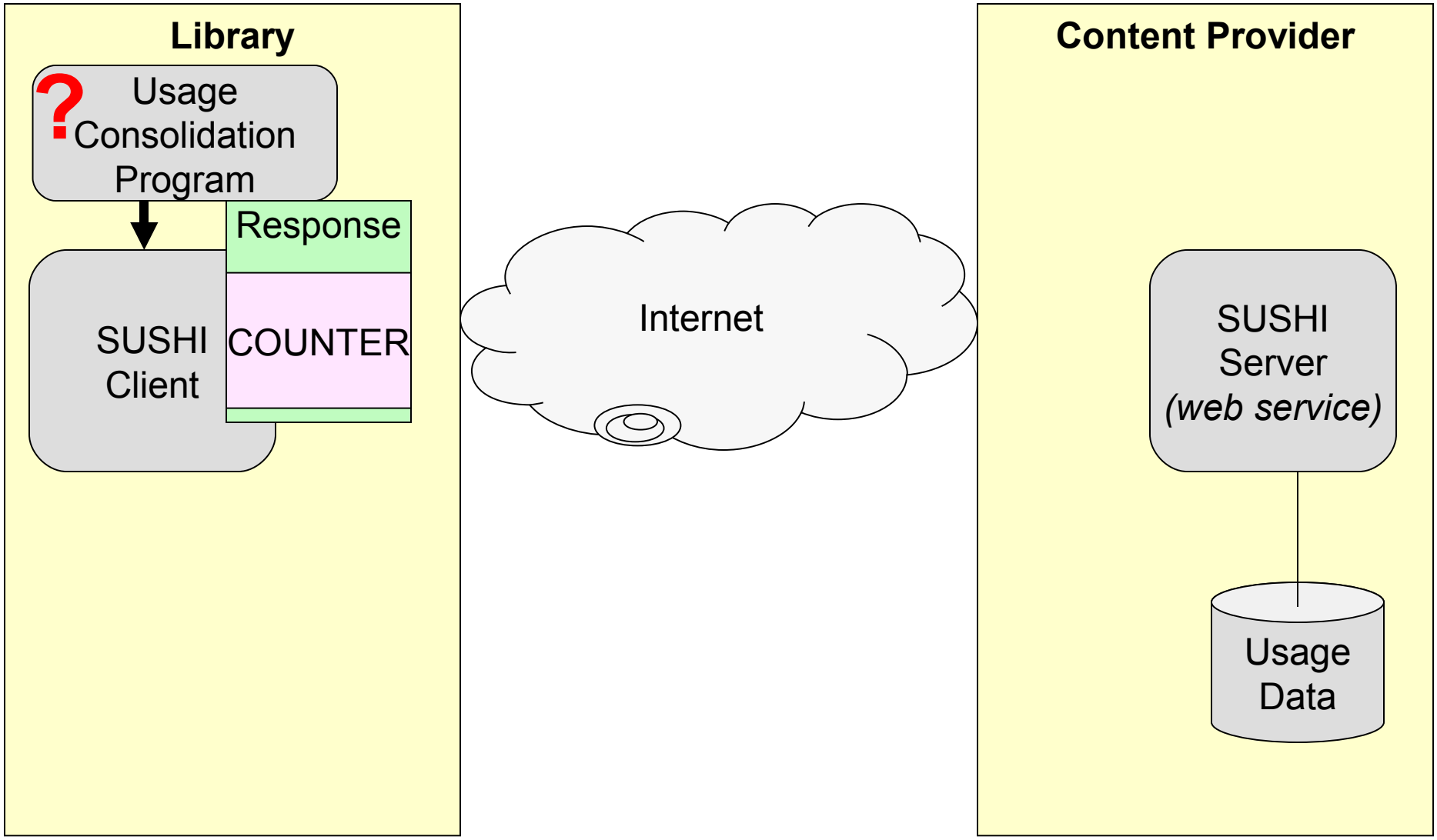
A response message is prepared according to the SUSHI XML schema. And the COUNTER XML Is added.



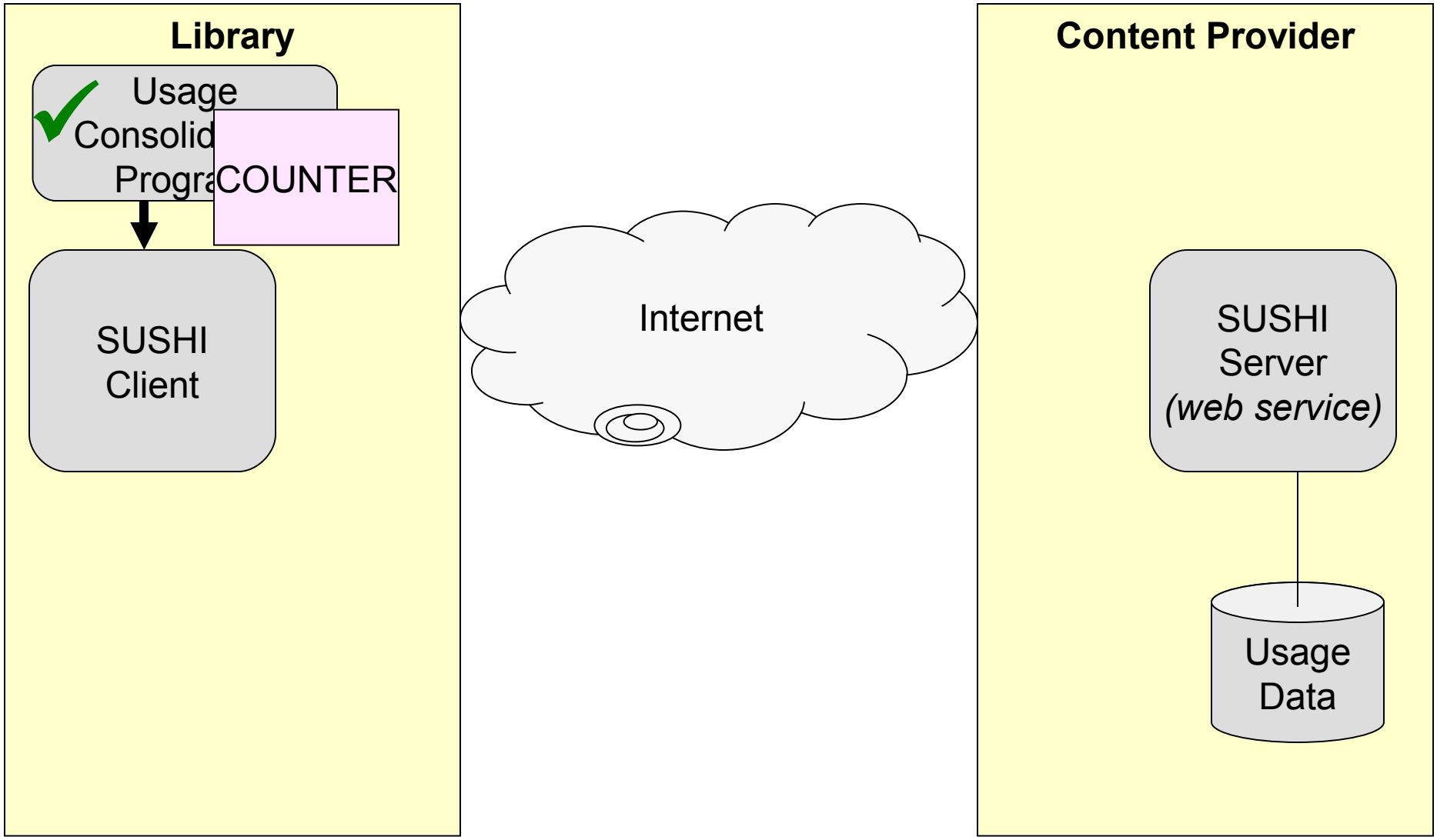
The COUNTER report (XML) is added to the Response as its payload. The response is sent to the client.



The SUSHI client processes the response and extracts the COUNTER report.



The extracted COUNTER report is passed to the ERM system for further processing.



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Implementing SUSHI

- SUSHI is not a stand-alone application, it works with another system to retrieve COUNTER usage reports
- The COUNTER reports are in XML format so they are not readable by humans; therefore,
- COUNTER reports need to be loaded into another system for processing and reporting

- For SUSHI to be effective, a Usage Management system must be in place

Developing a Usage Management System

- Check-list of general features
  - Database to store usage data and relate it to titles in databases and packages and the platforms where they are hosted
  - Data structure to allow usage to be consolidated (be able to find all usage for a particular title)
  - A mechanism to load COUNTER reports
  - A method of matching variants of titles and variant ISSNs
  - An interface to generate reports

Developing a Usage Management System

- Check-list of features for SUSHI implementation
  - Develop a SUSHI client
  - Store SUSHI related data about the hosts of content
    - Are they SUSHI compliant?
    - URL of their SUSHI server and login credentials
    - Day of month to retrieve reports
  - Create a scheduler to detect when its time to harvest the usage and automatically start the SUSHI client
  - Create a mechanism to process and import COUNTER data in XML format
  - Add some error handling

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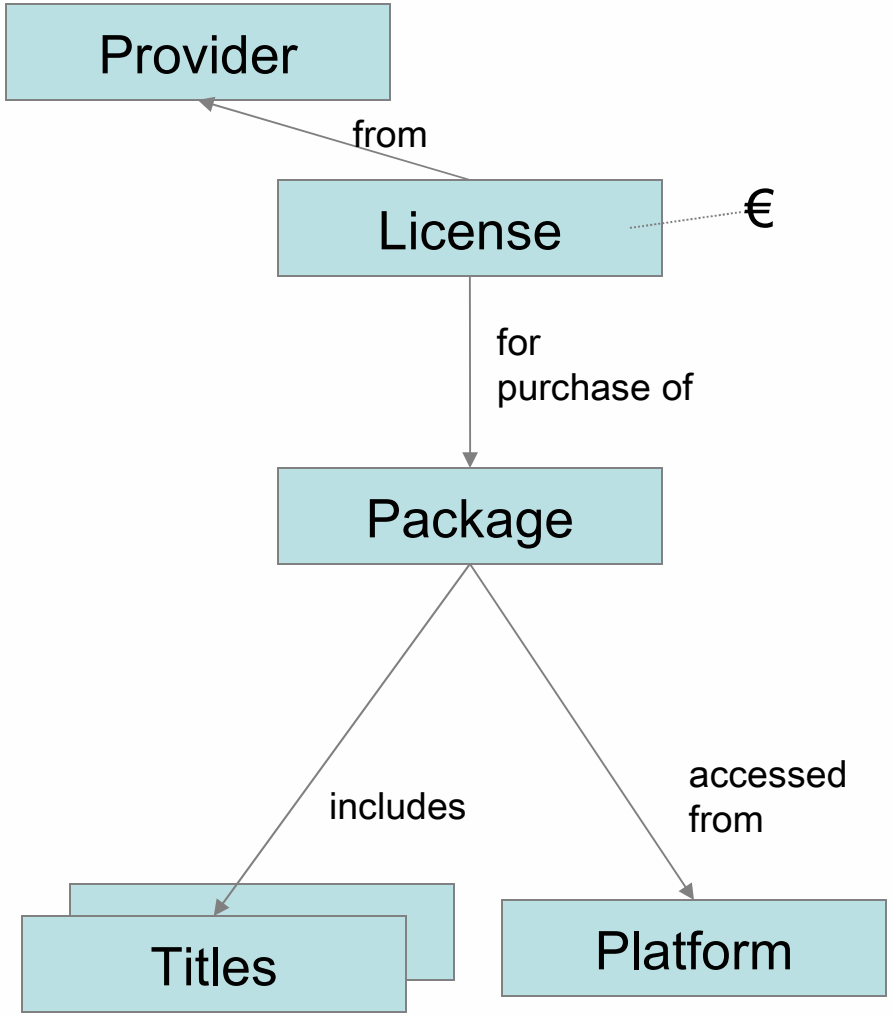
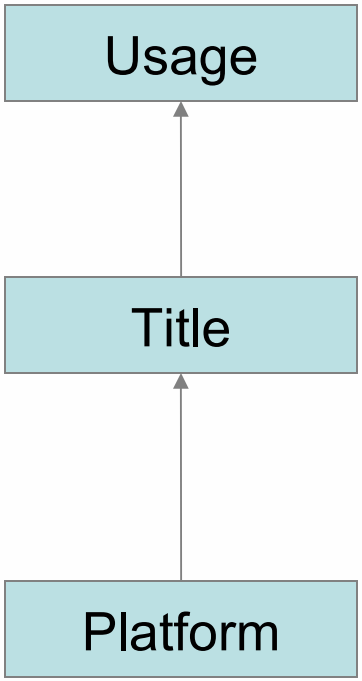
Relationship with ERMs

- ERMs are a central place for information about e-resources
  - Including information on costs of those e-resources
- ERMs are used to assist with making decisions based on the value of resources and return on investment
  - Usage is one factor in determining value
  - Usage evaluation often includes cost analysis as well (cost-per-use and cost-per-search metrics)
- Combining usage with the ERM makes sense

ERM Data Structure: A simple example



COUNTER Report Structure



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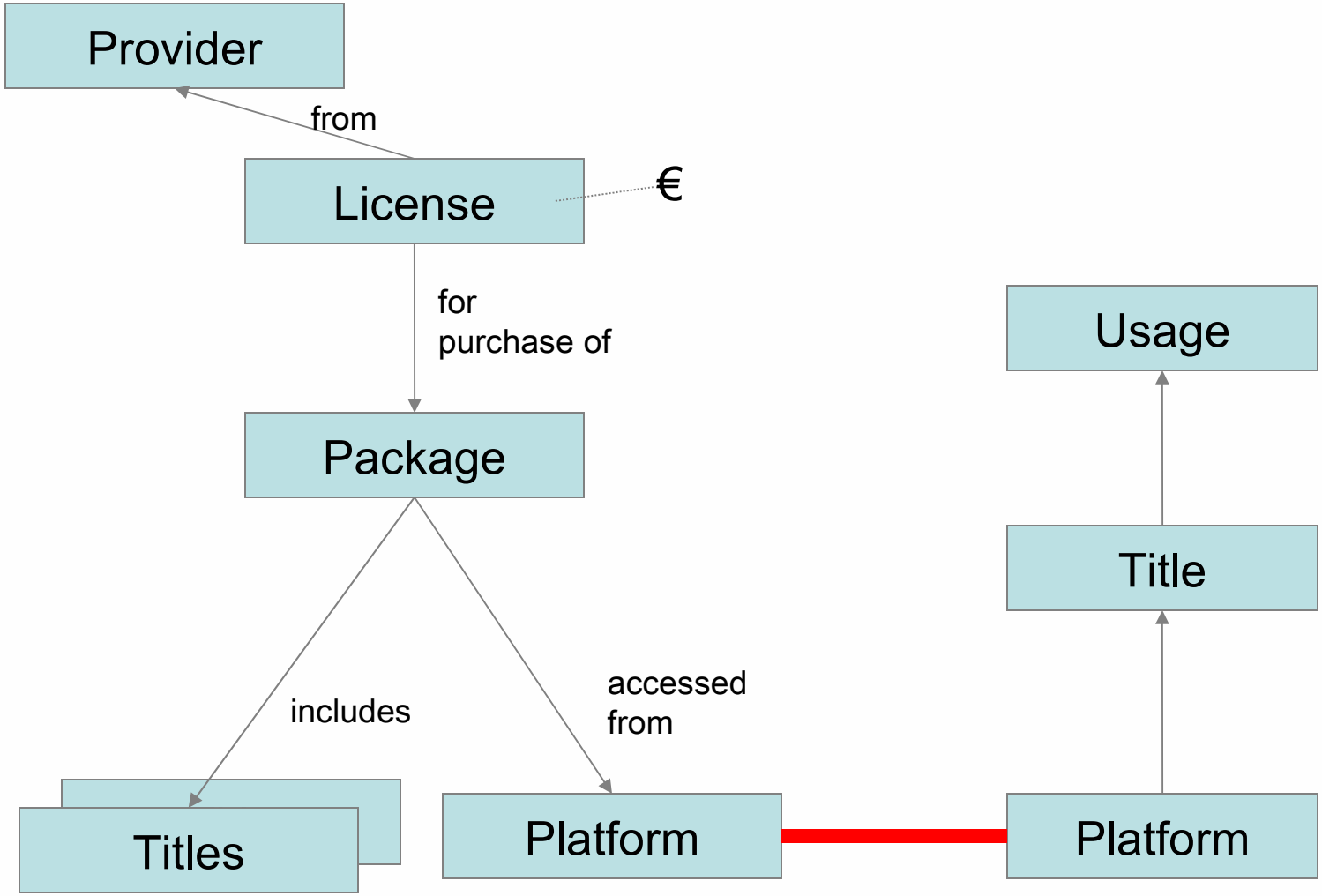

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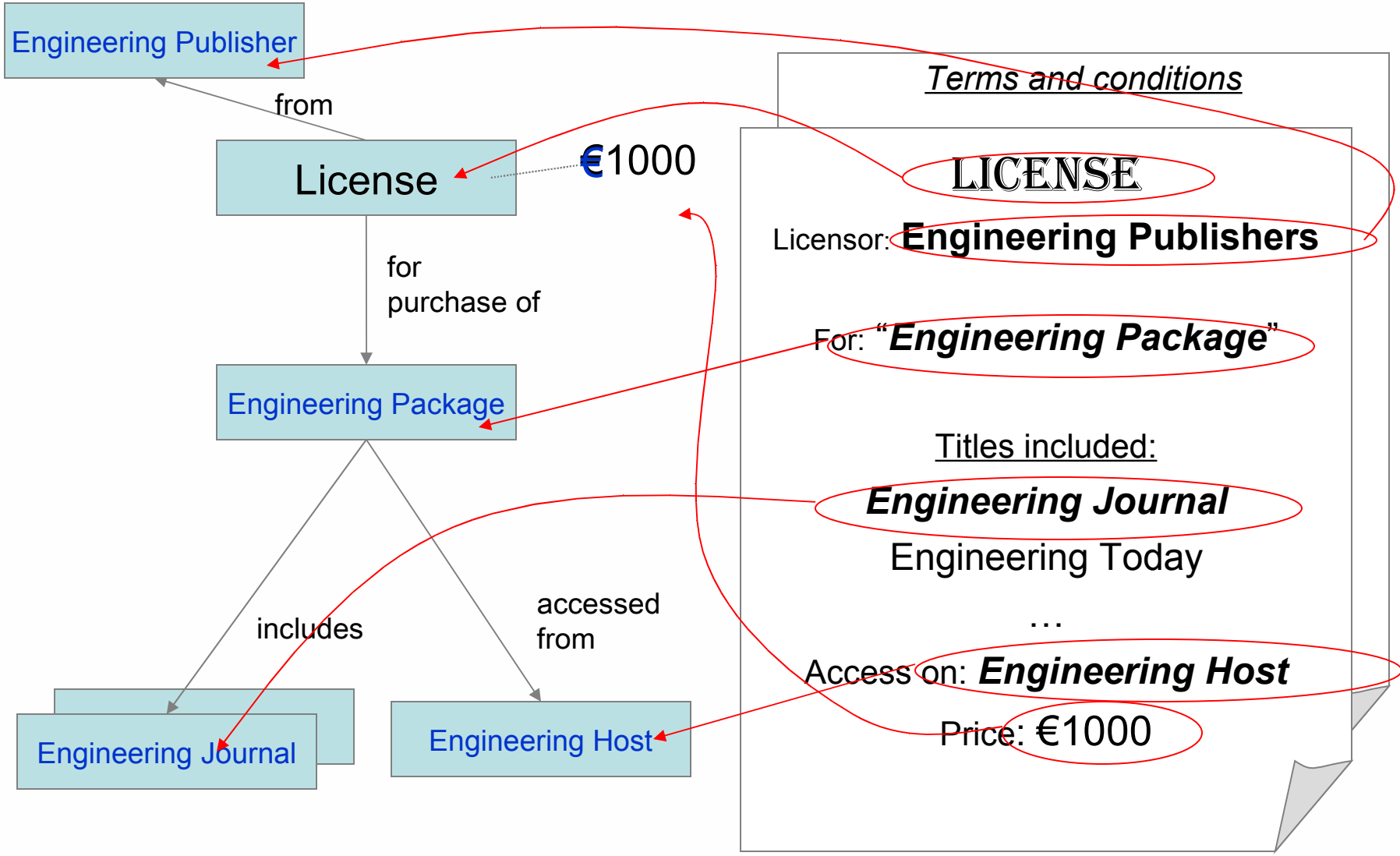

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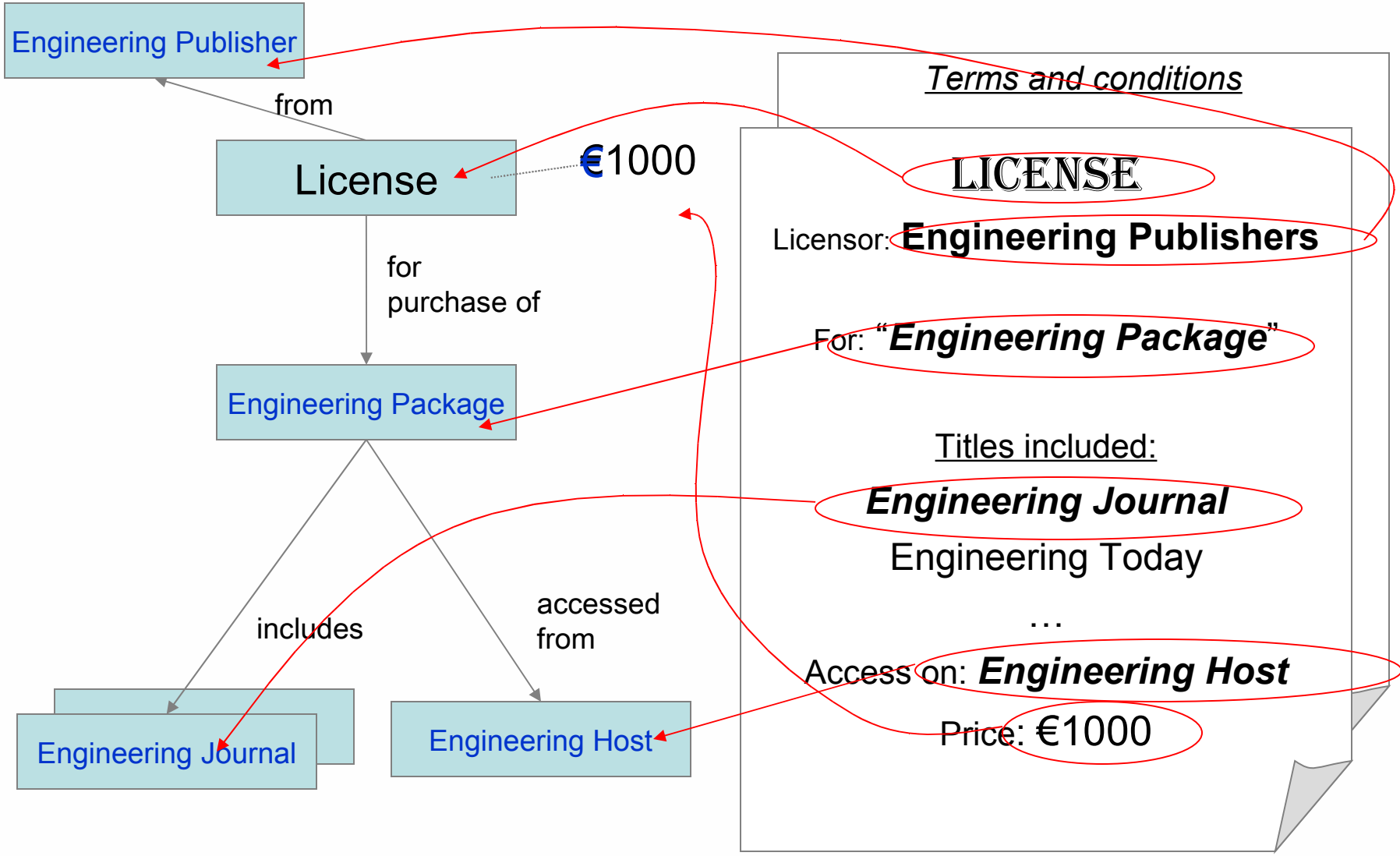
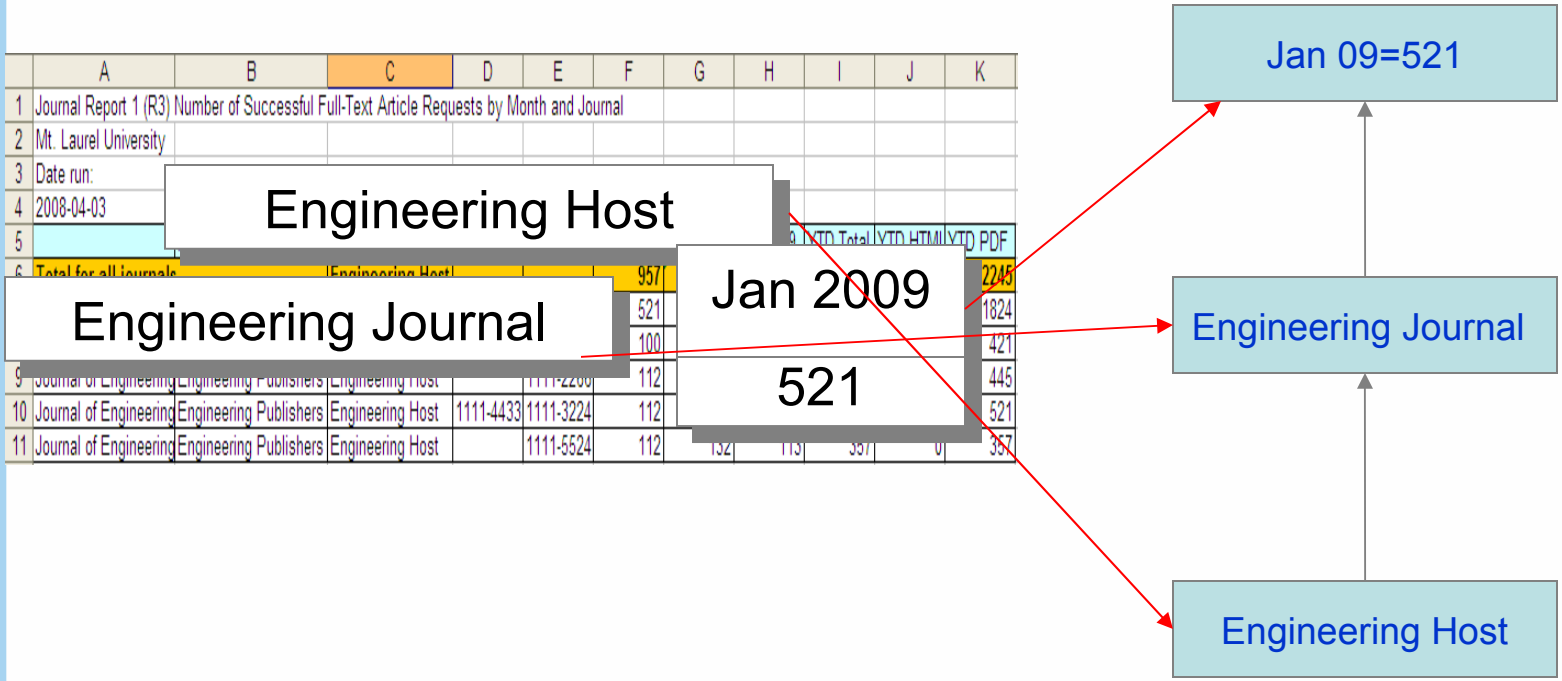


COUNTER Report Structure



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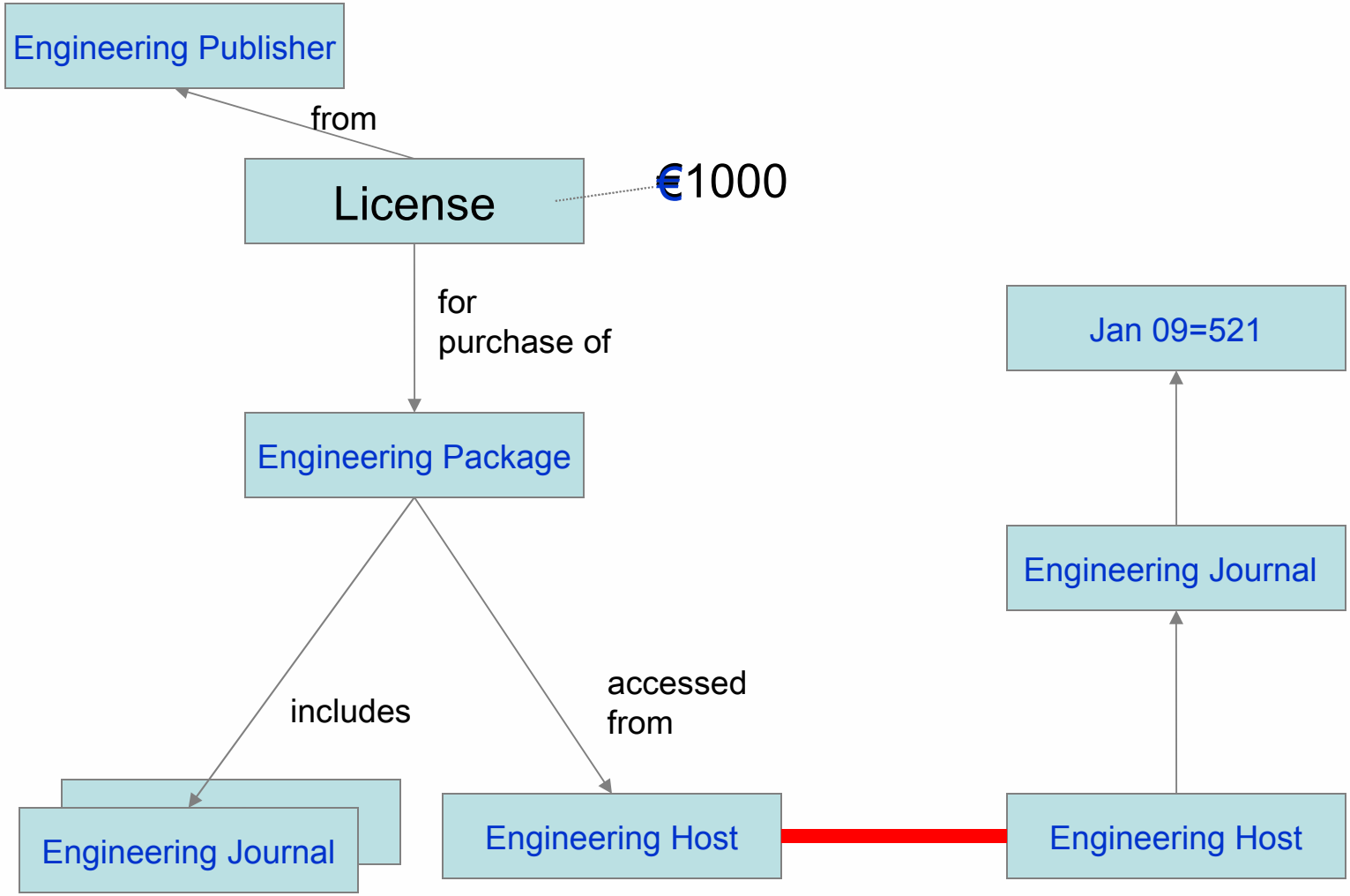

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Recap of Release 3 of the Journals and Databases Code of Practice

Key features…

- New reports
  - Journal Report 1a (full text requests by archive)
  - Journal Report 5 (breakdown by year of publication)
  - Consortium reports (for full text requests by title and searches by database with breakdown by consortium member)
- Data processing
  - Federated searching
  - Internet robots and archives like LOCKSS
- Reports must be available in XML format
- Revised COUNTER XML Schema
- SUSHI support becomes a requirement for compliance

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Future of SUSHI: NISO Support

- SUSHI Standing Committee
  - Created summer 2008
  - Actively maintaining the standard
  - Also managing COUNTER schema
  - Providing tools and support to developers
    - Web site
    - Webinars
    - Implementer listserv
    - Recruiting experts -- 寿司職人 (SUSHI Shokunin)

SUSHI Web Site (http://www.niso.org/workrooms/sushi)

Future of SUSHI: Beyond COUNTER reports

- SUSHI was designed as a general protocol for retrieving XML “reports”
- SUSHI can be used for other usage reports
- SUSHI can also be used for other XML “messages”, for example, automate delivery of:
  - Holdings data with ONIX-SOH
  - License terms with ONIX PL

Summary

- **COUNTER** *provides the consistency and credibility*
- **ERM Systems/Usage Consolidation** service *provide the tools for more effective consolidation and reporting of usage data*
- **SUSHI** *acts as an enabling technology by allowing Usage Consolidation modules to automate the harvesting of COUNTER reports*
- **Release 3 of COUNTER Codes of Practice,** *will turn the theory and promise of these systems into reality by making make SUSHI support a requirement for compliance.*

Thank you!

Oliver Pesch
opesch@ebsco.com

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