



# MUSE

## MuseKnowledge™ Source Factory Overview

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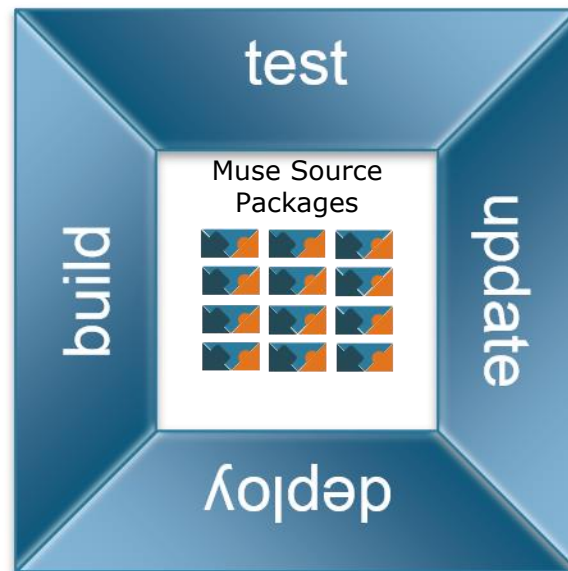
Version: 1.1  
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# MuseKnowledge™ Source Factory

**Over the last decade, Muse has amassed a library of more than 6,500 Source Packages.**

This global library, called the MuseKnowledge™ Source Factory, serves as a central repository of Source Packages that are licensed to Muse implementations, metadata that describes them and delivery mechanisms that bring them to customers.

## MuseKnowledge™ Source Factory Framework



# MuseKnowledge™ Source Factory: a connector ecosystem

## Identification

- Tools for finding content sources
- System for gathering metadata and technical info about sources

## Design

- Framework for recording source capabilities
- Syntax translator generation
- Applications for visually defining content tagging

## Building

- Database of test parameters
- Automated build and versioning

## Deployment

- All sources are packaged in the Source Factory with details
- Automated Source Update deploys updated packages

## Monitoring

- Automated Source Checker operates constantly
- Results of user operations are used for early warning

## Repair

- Automatic and user notification
- Tracking, testing and building system

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# MuseKnowledge™ Source Factory Life Cycle

New Sources can be built and delivered in a few days; repairs can be made in a few hours.

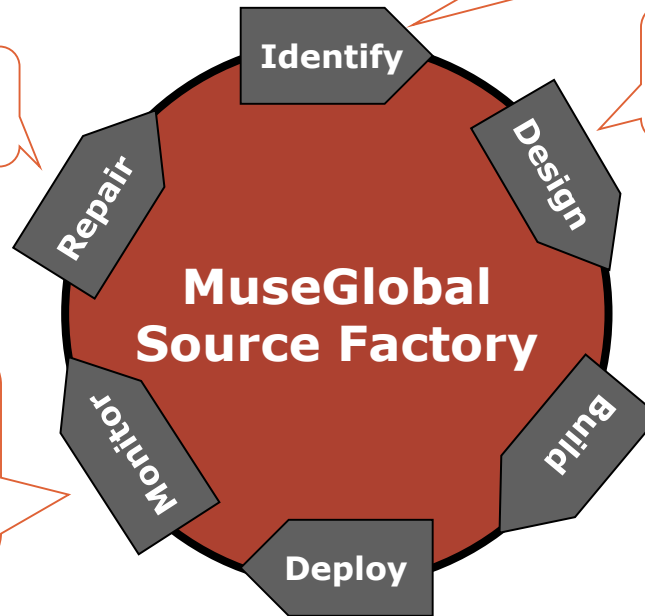
Individual Sources or Source subject areas are requested and the process begins.

Many repairs are handled by MuseKnowledge™ software.

Developers and subject specialists define how the connector will work.

MuseGlobal monitors Source Package performance with an automated program that checks every Source, every day.

Muse has developers building and maintaining Source Packages.



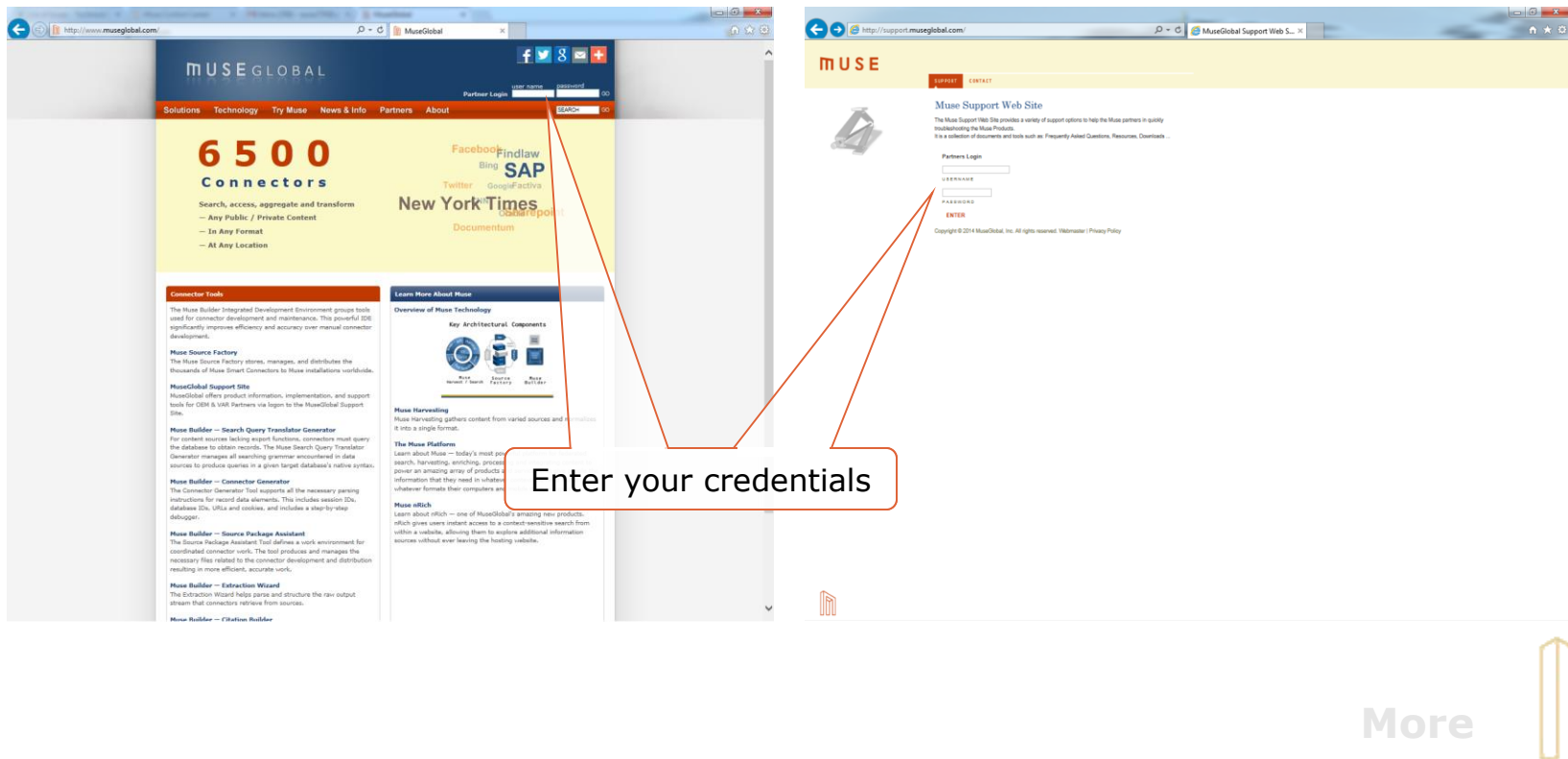
Completed Source Packages are flagged 'released' and are available for manual or automated download to MuseKnowledge™ systems.

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# MuseKnowledge™ Source Factory Interface

- Accessible on HTTP as part of the MuseKnowledge™ Support website;
- 2 entry points can be used:
  - MuseGlobal Website – www.museglobal.com
  - Support Website – support.museglobal.com



# MuseKnowledge™ Source Factory Interface



- List all Source Packages currently Released by default with the following details: Source Name, Source ID, Status, Data Service, Host, Protocol, Package Version;
- Source Packages that were retired, replaced or they are new requested by customers can be tracked on this list;
- Export lists of Source Packages to CSV file;
- Filters can be used to locate a Source Package:
  - names beginning with;
  - names containing;
  - IDs containing;
  - Production status;
  - Protocol.

**Show only the Sources having**

↓ names beginning with:   
 ↓ names containing:   
 ↓ IDs containing:  Space separated list of case insensitive Source IDs (or part of IDs).  
 ↓ production status:  ▼  
 ↓ protocol:  ▼

	APPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	AP Photo Archive	AP Photo Archive (APPA)
Skip to: <input type="text"/> <input type="button" value="Go"/>	<p><b>the Sources having</b></p> <p><small>Space separated list of case insensitive Source IDs (or part of IDs).</small></p>				

All Values  
 Awaiting Development  
 Awaiting Release  
 Awaiting Testing  
 Cancelled  
 Defunct  
 Defunct with replacement  
 Duplicate  
 In Progress  
 Maintenance  
**Released**  
 Requested  
 Under Investigation

# MuseKnowledge™ Source Factory Interface

- Detailed view of Source Package characteristics;

The screenshot displays the 'Source Detail' page in a web browser. The browser's address bar shows the URL: `http://factory.museglobal.com:8000/factory/servlet/MuseInfoBase`. The page title is 'Source Detail' and there is a 'Download' button in the top right corner.

The main content area provides the following details for a source package:

- Source ID:** NYTCoNYTimes
- Source Name:** New York Times: New York Times On the Web (1981-Present)
- Access Restrictions:** Subscription
- Package Version:** 1.99
- Production Status:**  (Green checkmark)
- Test Status:**  (Red X)
- Full Name:** New York Times: New York Times On the Web (1981-Present) @ New York Times Company (The) [HTTP/HTML]
- Subscription Info:** Free
- Data Service Name:** New York Times On the Web (The)
- Data Service Type:** Web Portal
- Host Name:** New York Times Company (The)
- Protocol:** HTTP/HTML
- Source Package Contents:** (Section header)
- ISR File Name:** ISR.NYTCoNYTimes.xml
- Version:** 1.5
- IDR File Name:** IDR.HTML.xml
- Version:** 1.32
- Source Package Transmission Record:** NYTCoNYTimes.sp
- Build Date:** 2014-01-11 06:54:36 UTC
- Connection:** (Section header)
- Search URL:** `http://query.nytimes.com/search/query`
- Home URL:** `http://www.nytimes.com/`
- Connector:** Nytimes
- Module:** `com.edulib.ice.modules.connectors.Nytimes`
- Description:** (Section header)
- Text:** The Web edition of The New York Times, 1981-Present
- From:** (Section header)
- Location:** `http://www.nytimes.com/ref/membercenter/nytarchive.html`
- Classification:** (Section header)
- Text:** (Section header)
- Type:** (Section header)
- Subject Spectrum:** (Section header)
- Text:** (Section header)
- Type:** (Section header)

At the bottom of the page, there are two legend boxes:

- Production States:** Released (Green checkmark), Under Investigation (Yellow question mark), In Progress (Red X), Awaiting Testing (Blue X), Defunct (Grey square), Defunct with replacement (Grey square with diagonal line), Awaiting Release (Purple square), Requested (Blue square), Awaiting Development (Black square), Maintenance (Green X), Cancelled (Red X), Duplicate (Blue square).
- Test States:** Tested: Working (Green checkmark), Not Confident (Green question mark), Not Working (Red X), Unknown (Yellow question mark); Not Tested: Working (Green square), Probably Working (Green square), Might Not Work (Yellow square), Not Tested (Grey square).

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# MuseKnowledge™ Source Factory Interface

- Production States - stages in the life cycle of a Source Package:
  - Released; The usable state for a Source Package: it is working (see its Test State) and is available for download and installation. Source Packages will remain in this state until they become broken and need fixing, or they become Defunct.
  - Under Investigation; Once a Source Package is reported by the Muse Source Checker or by an user as being "Not Working", it is moved to this state while the Source Factory team investigate the cause. It will stay in this state until work on fixing it actually starts.
  - In Progress; This is the generic rubric for initially building or fixing a Source Package. It is when the programmers and specialists are actively working on the Source Package. From this state the Source Package moves to Awaiting Testing.
  - Awaiting Testing; The Source Packages are tested after being built or fixed by the programmer who did the work and then by their team leader and finally through an automated and human Quality Assurance stage.
  - Awaiting Release; This state is briefly passed through by all completed Source Packages while they are awaiting the automated deployment processes which move them from the programming and testing shop to the Released state within the Source Factory where they are available for download.

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# MuseKnowledge™ Source Factory Interface

- Requested; This is the first time a Source Package appears in the Source Factory.
- Awaiting Development; Each request for a new Source Package is validated, both to determine that it does not already exist in the Source Factory (in which case the requestor is notified of the existing Source Package name), and that the supplied details are accurate. At this stage a permanent ID is created for the new Source Package and MuseGlobal contacts the content provider to obtain technical details and invite them to join our Content Partner Program. The Source Package will wait in this state until work on creating it (In Progress) starts.
- Maintenance; A non 'Defunct' Source will have a Maintenance Production status if it is reported as not working, and the intention is to fix it, but there is no estimate of how long that will take.
- Defunct; At the end of its useful life a Source Package is declared Defunct. This may be because the actual Source to which it connects has disappeared or merged with another or changed its name or been sold or any of the other commercially inspired things that happen to content. The Source Package will continue to exist in the Source Factory in this state until there are no copies of Muse using it.
- Defunct with replacement; This state is the Defunct state and additionally there is a Source Package that provides a replacement, connecting to the same Source.

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# MuseKnowledge™ Source Factory Interface

- Duplicate; The Source Package has been replaced by a better, more functional one connecting to the same Source. Or it may be found that the Source Package is a duplicate and has been rationalized out of use. In all cases the Source Package will continue to exist in the Source Factory in this state until there are no copies of Muse using it. It is marked with this state and a link to the replacement Source Package.
- Cancelled; Sometimes it is necessary to cancel a requested Source Package.



# MuseKnowledge™ Source Factory Interface

- Test States – the test status of a Source Package:
  - Regular testing of Source Packages; The Source Checker determines if each Source Package is performing correctly and records the results of its test in the Test History portion of the Source Package record.
  - Where Source Packages are not tested, we assume they are working when deployed in the Source Factory and that they will stay with a good chance of working for some time. An aging algorithm changes the state of each Source Package every day so that eventually they will move to the Probably Working state and finally (after about 9 months) to the Might not Work state.
  - Available test statuses:

Legend Icon	Name	
	Working	Tested
	Not Confident	
	Not Working	
	Working	Working
	Probably Working	
	Might Not Work	
	Not Tested	Administrative
	Unknown	



# MuseKnowledge™ Source Factory Interface

- Source Groups – create groups of Source Packages for different customers. For example create special subject based Groups or size limited Groups to offer to customers.
- Customers - create new Customers and view/edit details of existing Customers. Customers can be created here to give them access to the Source Factory from their Muse Consoles.
- Registration Service – information about Serial Numbers issued.
  - Filter, Export to CSV functionalities;
  - Detailed information for a Serial Number;
  - Request Extension;
  - Serial Numbers about to expire.

Source Factory Lists / Serial Numbers

## Serial Numbers

1 - 3 of 3 Records

Status	Version	Lifespan Start	Lifespan End	Serial Number
1 <input checked="" type="checkbox"/>	2.6.0.0	2013-12-12	2015-01-31	xo01+37AsLl3s7v5+7j08lr6JdqW+/pQE2T7ZHNeerQ=
2 <input checked="" type="checkbox"/>	2.6.0.0	2013-06-05	2014-07-31	1qGfppH1+1z7v5+7j08lr6JdqW+/pQE2T7ZHNeerQ=
3 <input checked="" type="checkbox"/>	2.7.0.0	2014-04-17	2014-07-17	BPoIQjdc0ey9KgHsbj2Fr6JdqW+/pQ21NAkch5qI=

1 - 3 of 3 Records

Show only the Serial Numbers

which are:

for Muse version:

with lifespan ending between:  and:   The format of the input should be 'yyyy-mm-dd'.

Serial Number Status:  Active  Disabled  Expired  Replaced  Extension Requested

Source Factory Lists / Serial Numbers / Serial Number Detail

## Serial Number Detail

Serial Number: xo01+37AsLl3s7v5+7j08lr6JdqW+/pQE2T7ZHNeerQ=

Status

Tracking Number 0

Build Date 2013-12-12

Version 2.6.0.0

Lifespan Start 2013-12-12

Lifespan End 2015-01-31

Registered IPs  
 fe80:0:0:0:8c2f:638d:7a22:4225%13  
 fe80:0:0:0:cdcb:10d5:5e96:a5c%11  
 fe80:0:0:0:48f7:a5e5:58f9:eeec%15  
 10.12.10.98  
 fe80:0:0:0:128bc:e9fe:1e40:833c%10  
 fe80:0:0:0:5efe:a0ca:62%17

### Maximal Limits

Number of Applications 3

Concurrent Sessions 0

Source Packages per Application 35

### Extension request

Requests History History

### Registered products and applications

Registered products  
 Information Connection Engine Server  
 Muse Local Source Factory  
 MuseSearch  
 Muse Web Bridge  
 Muse Admin Bridge  
 Muse Proxy Server  
 Muse Consoles for Applications Administration  
 Embedded Apache Tomcat  
 Muse Control Center  
 Muse InfoBase Bridge  
 Muse XML DB Management System  
 Muse Statistics Monitor  
 Muse InfoBase Management System

Registered Applications  
 Muse Guest  
 Muse Foundation Application

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# MuseKnowledge™ Administration Consoles

- Add Sources
  - MuseKnowledge™ Administration Consoles connect to MuseKnowledge™ Source Factory and retrieve the list of available Source Packages which can be installed in a MuseKnowledge™ Application;
  - Filters are available to locate the desired Source Package;
  - Multiple Source Packages can be added at a time.

**Add Source(s)**

List all Sources | List all Data Services | List all Hosts      Installed: 12   Marked: 0   Total: 12   [Add](#)  Show Progress

1 - 7 of 7 Records      Skip to:  [Go](#)      Per Page: 20 [Go](#)

[Mark](#) | [Clear](#) All Sources on page.

	Source	Status		Tier	Data Service	Type	Host
		Production	Test				
1	<input type="checkbox"/> Chadvyck-Healey: Historical Index to The New York Times, 1851-1923	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	Historical Index to The New York Times, 1851-1923	Database	Chadvyck-Healey
2	<input type="checkbox"/> Gale: New York Times & New York Post (InfoTrac)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3	New York Times & New York Post	Database	Gale
3	<input type="checkbox"/> New York Times: New York Times Archive (1851-1980)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	New York Times Archive (1851-1980)	Database	New York Times Company (The)
4	<input type="checkbox"/> New York Times: New York Times On the Web (1981-Present))	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	New York Times On the Web (The)	Web Portal	New York Times Company (The)
5	<input type="checkbox"/> ProQuest: Historical Newspapers--The New York Times (SRU)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	ProQuest Historical Newspapers--The New York Times	Database	ProQuest Company
6	<input type="checkbox"/> ProQuest: Historical Newspapers--The New York Times With Index (SRU)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	ProQuest Historical Newspapers--The New York Times With Index	Database	ProQuest Company
7	<input type="checkbox"/> ProQuest: New York Times	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0	New York Times (1999 - )	Database	ProQuest Company

1 - 7 of 7 Records      Skip to:  [Go](#)      Per Page: 20 [Go](#)

[Add](#)  Show Progress

Shows only the source names beginning with:

Shows only the source names containing:

IDs:  Space separated list of case insensitive Source IDs (or part of IDs).

Shows only the sources having status:  [Go](#) [Reset Filters](#)

Production States  Released    Under Investigation    In Progress    Awaiting Testing    Defunct    Defunct with replacement  
 Awaiting Release    Requested    Awaiting Development    Maintenance    Cancelled    Duplicate

Test States  Tested    Working    Not Confident    Not Working    Unknown  
 Not Tested    Working    Probably Working    Might Not Work    Not Tested

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# MuseKnowledge™ Control Center

- Automatic Source Upgrade
  - Eliminate or greatly reduces the need for Administrators to manually run the MuseKnowledge™ Console Source Upgrade process to keep Sources in their Application up-to-date and functioning optimally for their users;
  - The MuseKnowledge™ Control Center Automatic Source Upgrade is a Source update process that can be run on a user-determined frequency to automatically upgrade all selected Source Packages;
  - Out of the box pre-configured task file - SourcePackagesUpgradeTasks.tsk;
  - Easy to configure the desired upgrade algorithm:

Algorithm Properties

The task will upgrade only those sources that have been selected and are out of date.

The list of upgradable sources can also be filtered by source status:

Upgrade both working and non-working sources

Restore sources if they aren't working anymore after the upgrade

The task needs to have a backup copy and to know the status of a source before and after the upgrade to restore it.

Upgrade only non-working sources

---

Download all sources from all applications

ForEach Application in Applications do

Update status of sources before upgrade

Force upgrade modulesutil.jar

ForEach upgradable source do

Backup source

Upgrade source

Clean-up source related files

Merge profile

Update status for source after upgrade

Restore source

endfor

endfor

**Warning:** Updating the Source's status by testing the Source implies bandwidth usage (depending on the Source the amount may vary) and also may be prohibited by the content vendor. Testing a vast amount of sources each time (possibly a certain number of sources going to the same content vendor) may put a high load on the vendor's servers which serve the content.

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# MuseKnowledge™ Control Center

- MuseKnowledge™ Source Checker
  - Test Source Packages on regular basis and store the test results into the Global InfoBase;
  - The daily test status obtained is used to compute the overall test status of the Source Package, only the last 7 consecutive tests are used with the following algorithm:
    - Working. This means that almost all tests of the Source Package were successfully; the Source Package is allowed 1 failure and will keep the Working status;
    - Not Confident. This means that successful and failed test results are being recorded alternatively for that Source Packages; 2 consecutive failures will change the test status to Not Confident;
    - Not Working. 7 consecutive failed tests for the Source Package will declare it Not Working;
    - Not Tested. The test statuses from this category are not computed based on tests on Source Packages but they are based on how much time passed since the last repack of the Source Package due to changes inside the Source Package.
  - The test statuses are kept for historical purposes;

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# MuseKnowledge™ Control Center


Source Factory Lists / Muse Sources / Test History













## Test History

**Name:** PubMed (MEDLINE)

**ID:** PUBMED

**Application:** mgbcheck

**Test Status:** 000 

No.	Date (UTC)	Test Status	Query	Hits	Retrieved	Description	Type
1	2014-05-26 11:38:55		computer	564834	11	[PUBMED]: Received 11 records from an estimated 564834	Source Checker
2	2014-05-23 11:47:52		computer	564711	11	[PUBMED]: Received 11 records from an estimated 564711	Source Checker
3	2014-05-21 11:47:12		computer	564464	11	[PUBMED]: Received 11 records from an estimated 564464	Source Checker
4	2014-05-19 11:40:07		computer	564104	11	[PUBMED]: Received 11 records from an estimated 564104	Source Checker
5	2014-05-18 11:40:19		computer	564104	11	[PUBMED]: Received 11 records from an estimated 564104	Source Checker
6	2014-05-16 11:44:11		computer	563951	11	[PUBMED]: Received 11 records from an estimated 563951	Source Checker
7	2014-05-14 11:44:06		computer	563740	11	[PUBMED]: Received 11 records from an estimated 563740	Source Checker
8	2014-05-12 11:39:29		computer	563526	11	[PUBMED]: Received 11 records from an estimated 563526	Source Checker
9	2014-05-11 11:38:42		computer	563526	11	[PUBMED]: Received 11 records from an estimated 563526	Source Checker
10	2014-05-09 11:43:43		computer	563205	11	[PUBMED]: Received 11 records from an estimated 563205	Source Checker
11	2014-05-07 11:43:48		computer	562963	11	[PUBMED]: Received 11 records from an estimated 562963	Source Checker
12	2014-05-05 11:39:25		computer	562823	11	[PUBMED]: Received 11 records from an estimated 562823	Source Checker
13	2014-04-28 11:41:29		computer	562060	11	[PUBMED]: Received 11 records from an estimated 562060	Source Checker
14	2014-04-27 11:40:11		computer	562060	11	[PUBMED]: Received 11 records from an estimated 562060	Source Checker
15	2014-04-25 11:46:39		computer	561952	11	[PUBMED]: Received 11 records from an estimated 561952	Source Checker
16	2014-04-23 11:46:00		computer	561623	11	[PUBMED]: Received 11 records from an estimated 561623	Source Checker
17	2014-04-21 11:39:20		computer	561228	11	[PUBMED]: Received 11 records from an estimated 561228	Source Checker
18	2014-04-20 11:39:05		computer	561085	11	[PUBMED]: Received 11 records from an estimated 561085	Source Checker
19	2014-04-18 11:43:20		computer	561085	11	[PUBMED]: Received 11 records from an estimated 561085	Source Checker
20	2014-04-16 11:43:13		computer	560895	11	[PUBMED]: Received 11 records from an estimated 560895	Source Checker
21	2014-04-14 11:41:17		computer	560431	11	[PUBMED]: Received 11 records from an estimated 560431	Source Checker
22	2014-04-13 11:39:29		computer	560431	11	[PUBMED]: Received 11 records from an estimated 560431	Source Checker

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**MuseKnowledge™ Source Factory  
Overview**