

VIAF Governance Concerns about the Refurbished VIAF Web and API Interfaces

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ABSTRACT

In January 2025, OCLC made significant changes to the web and application programming interfaces for Virtual International Authority File (VIAF) clusters. This article will compare the old and new interfaces, highlighting the pros and cons introduced and calling attention, especially, to critical errors introduced that compromise the functionality of much of the VIAF product. Consequently, it will raise questions and concerns regarding the governance of VIAF, as well as OCLC's development model, testing, and feedback before public rollout.

INTRODUCTION

The Virtual International Authority File (VIAF) is the well-known clusterization service that has been serving the international community of library cataloguers for decades.¹ Its role in the Universal Bibliographic Control has remained undiscussed for years now.² VIAF (<https://www.oclc.org/en/viaf.html>) started in 1998 and has been managed by OCLC since 2012.³ The web interface remained unchanged from 2011 until the end of 2024, as evidenced by pages saved in the Internet Archive.⁴ Bulk data exports (data dumps) have been available since May 2012.⁵

It is certainly not possible to determine where the services provided by VIAF are being utilized, and it is probably not even feasible to list the various types of usage with certainty. One can assume that most usage occurs during current cataloging work, through manual string searches conducted on the search form available on the VIAF homepage. Within the search results, if a form of the name suitable for the cataloger's agency is found, additional information to verify the match can be obtained, and most importantly, the VIAF identification (ID) to be associated with the entity being processed can be retrieved, whether to be added to an authority record or to an access point of a bibliographic record.

There are also other possible uses of VIAF services, involving systems that have integrated search endpoints, such as autosuggest or direct searches, or those utilizing monthly data dumps for large-scale reconciliation, control processes, ID verification (in cases where IDs have been redirected), ID removal (named "scavenged IDs" in VIAF APIs), and so on.

The author's library, managed by a Koha integrated library system (ILS), primarily utilizes autosuggest to facilitate authority control.⁶ Thanks to Koha's expandability, it has been possible since 2019 to integrate a JavaScript procedure into the cataloguing page. In the same year, a large-scale batch reconciliation was carried out through name string searches and associated ISBNs.⁷ Since then, VIAF, the International Standard Name Identifier (ISNI), and Wikidata identifiers have

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been included in the ongoing cataloging of authority records with the aim of further advancing the application of Resource, Description, and Access (RDA) guidelines.⁸

Additionally, in 2018, the creation of a Wikidata property for authority records of agents in the author’s catalog was proposed and approved.⁹ The ability to record relevant cultural sector information gradually encouraged some colleagues to participate in authority control efforts within Wikidata. Several “gadgets” for Wikidata have also been developed, which are now widely used and described in detail in the following sections.

CHANGES TO THE INTERFACES

The new web interface, available since January 2025, is no longer intended solely for desktop browsers. It is now optimized for mobile devices as well, featuring a modern look and feel. Figures 1 and 2 showcase both appearances.

Figure 1. The old web interface of a Virtual International Authority File (VIAF) cluster, as of September 8, 2024, obtained from the Internet Archive’s Wayback Machine (<https://web.archive.org/web/20240908032843/https://viaf.org/viaf/100160310/>).

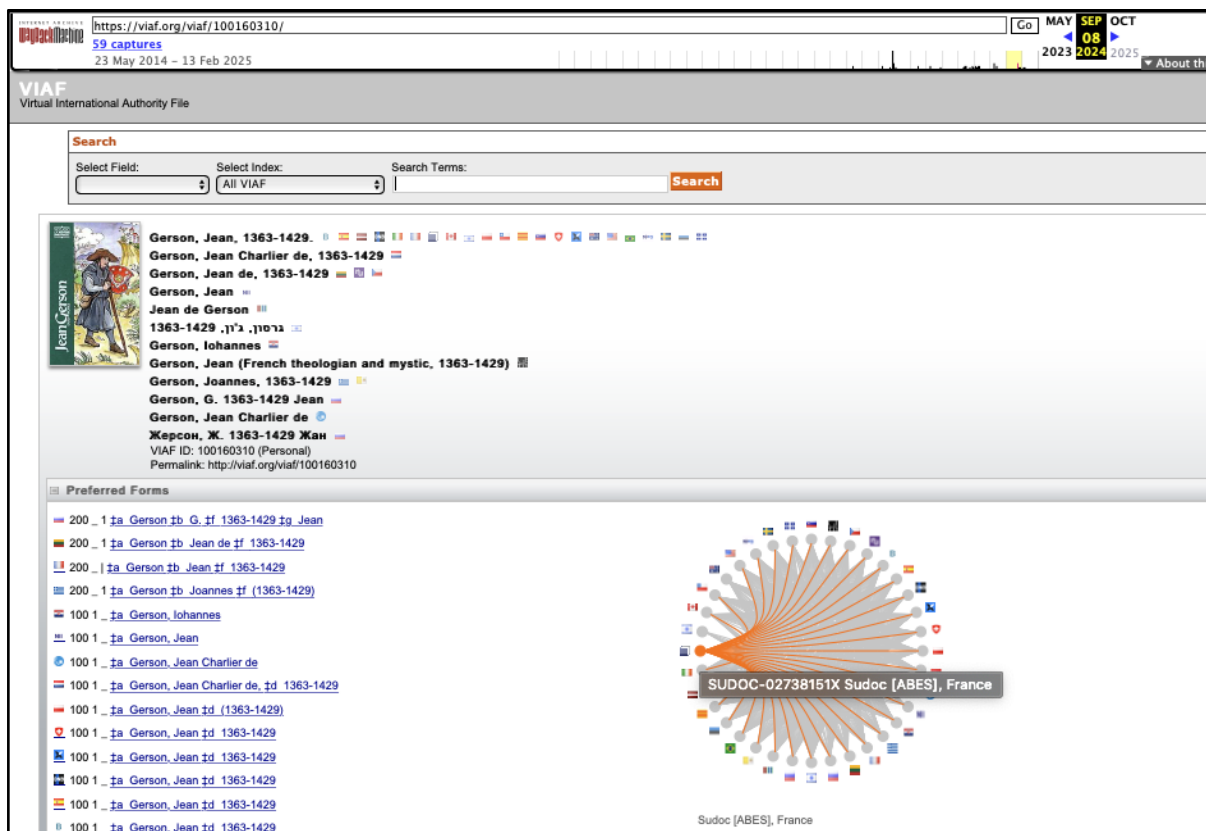
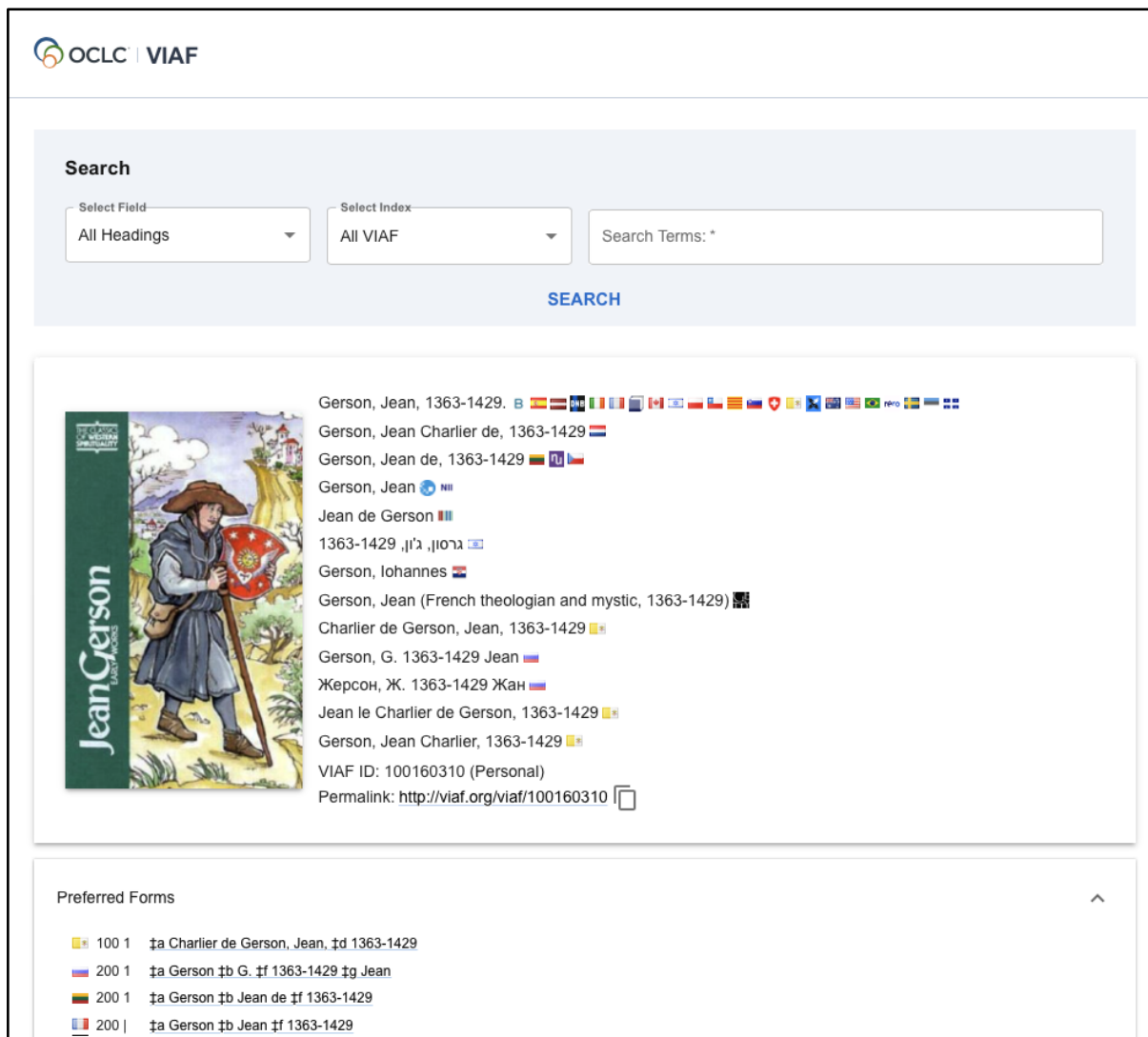


Figure 2. The new web interface of the same Virtual International Authority File (VIAF) cluster as in Figure 1, obtained from OCLC (<https://viaf.org/en/viaf/100160310>).



By comparing the new VIAF interface released in January 2025 with the prior iteration available from the Wayback Machine, this study aims to explore the differences between them, analyzing what was added, modified, and removed. The analysis will focus on one of the most important cluster types, personal names.

Changes to the Web Interface

In the new interface, the cluster page retains the same sections as the previous interface, presenting them again in an accordion format, with some content panels open by default (the cluster itself, non-compressible; “Preferred Forms”; “Related Names”; “Works”; and “Record Views”) and others collapsed by default (e.g., “Alternate Name Forms,” “Selected Co-authors,” “Countries and Regions of Publication,” “Publication Statistics,” “About,” “History of VIAF ID”). While the adoption of the accordion model is useful, the page lacks features that would facilitate even more efficient navigation, especially when it contains a large amount of information.

The “Preferred Forms” panel contains the same list of MARC 21 or UNIMARC tags, indicators, and subfields of main headings. Each heading is preceded by an icon, usually a flag, associated with

VIAF to the source. Some icons are linked to the current authority record in the corresponding source. Système universitaire de documentation (SUDOC), Bibliothèque nationale de France (BNF), International Standard Name Identifier (ISNI), and Wikidata links continue to work, but

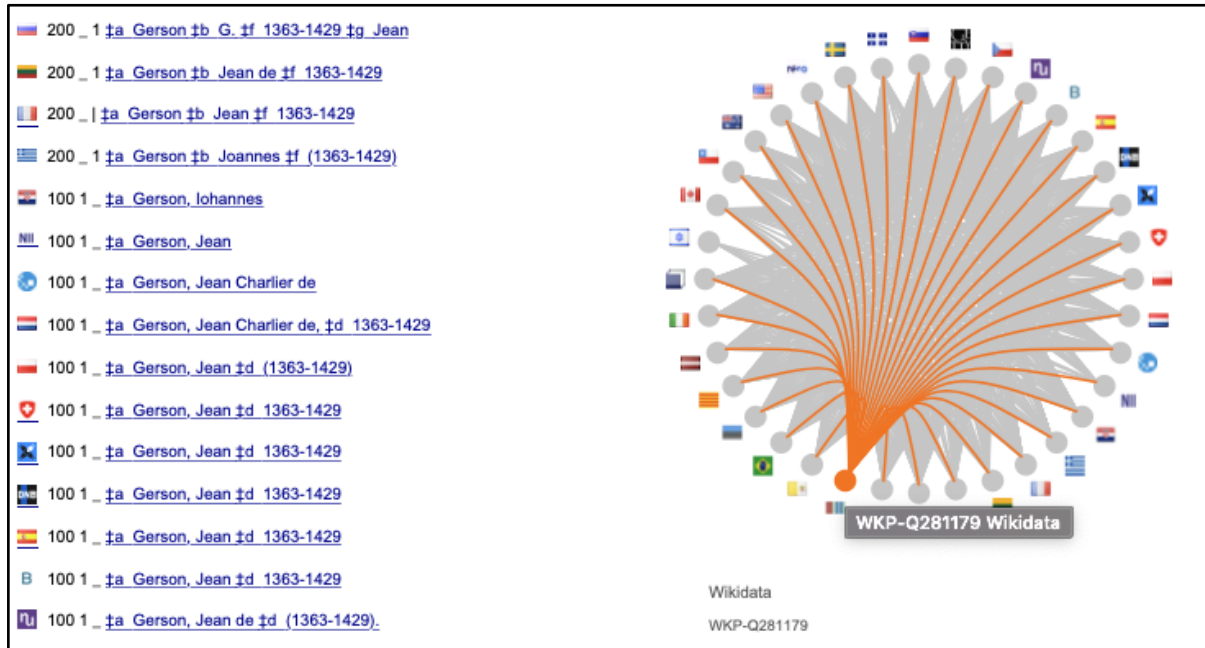
- the link to Library of Congress/Name Authority Cooperative Program (NACO) is now missing;
- Co-operative Online Bibliographic System and Services (COBISS) and Biblioteca Nacional de España (BNE) were and remain broken links; and
- Deutsche Nationalbibliothek (DNB), Swiss National Library, Union List of Artist Names (Getty), and Swedish national union catalogue (SELIBR) were working, but now they are broken links.

There is a simple way to associate a link to each VIAF icon. To link VIAF icon flags to each source record, developers may use the following Wikidata SPARQL query. It returns the VIAF acronym of the source and the “URL formatter,” where “\$1” must be replaced by the VIAF ID:

```
PREFIX wd: <http://www.wikidata.org/entity/>
PREFIX wdt: <http://www.wikidata.org/prop/direct/>
PREFIX wikibase: <http://wikiba.se/ontology#>
PREFIX p: <http://www.wikidata.org/prop/>
PREFIX ps: <http://www.wikidata.org/prop/statement/>
PREFIX pq: <http://www.wikidata.org/prop/qualifier/>
SELECT ?cod ?url_formatter WHERE {
  ?uri wdt:P31 wd:Q55586529;
      wdt:P1630 ?url_formatter;
      p:P1552 _:b2.
  _:b2 rdf:type wikibase:BestRank;
      ps:P1552 wd:Q26921380;
      pq:P3295 ?cod.
}
```

This script can be tested at this Wikidata link: <https://w.wiki/DBsN>.

The “Preferred Forms” panel does not include the famous “VIAF wheel” yet (Figure 3). It was an elegant, even glamorous way to graphically and dynamically represent the same information contained in the list of preferred forms, grouped by label. Therefore, abandoning it was not a relevant decision, in the author’s opinion.

Figure 3. The Virtual International Authority File (VIAF) wheel, now abandoned.

No differences were found for the “4xx’s: Alternate Name Forms” and “5xx’s: Related Names” panels.

The “Works,” “Selected Co-authors,” “Countries and Regions of Publication,” “Publication Statistics,” “Selected Publishers,” and “About” panels contain the same information as before. The “Works” panel has no pagination now; the map included in the “Countries and Regions of Publication” panel has been removed; and the “Publication Statistics” panel sports a graph with horizontal instead of vertical bars.

The “Record Views” panel hosts three buttons: MARC-21 RECORD, VIAF CLUSTER IN XML, and RDF RECORD. Each button downloads (and thus does not display) the record in the corresponding format. The former interface, however, displayed the record in XML directly in the browser. A better choice for the new interface would be to let the user choose to download or display the record in the browser, depending on the user’s intended final use.

The “About” panel of an author lists personal information, but still lacks birth and death dates, even when they are known and unambiguous.¹⁰ Dates, however, are included in the formatted records, available through the “Record Views” panel, and are very relevant in the authority control activity.

The “History of VIAF ID” panel remains unchanged but now contains broken links. Each of them should open the source authority record. In the previous version, the link followed this pattern:

`https://viaf.org/viaf/sourceID/source_acronym|source_identifier`

The current version follows this pattern:

`https://viaf.org/viaf/source_acronym|source_identifier`

However, the correct formulation should be the following:

`https://viaf.org/en/viaf/sourceID/source_acronym%7Csource_identifier`

Therefore, it looks like the `/viaf/sourceID` endpoint is not yet available.

Unlike other panels, the “History” panel is not responsive.¹¹ The table in it has three columns: “Record ID,” “Action,” and “Time,” and the third one remains hidden when the browser window is too narrow.

Finally, a basic analysis of the HTML and JavaScript code used in the new interface shows the development architecture. The HTML code of <https://viaf.org> contains classes such as `MuiTypography-root` and `MuiFormControl-root` that belong to the Material UI framework (also known as MUI). The Material UI framework is a library of code that implements Google’s Material Design system. The associated JavaScript code is minified but does not appear to be obfuscated.¹²

Changes to the API Interface

The changes to the API are more problematic than those of the web interface. Because these changes were neither announced nor documented, and their use is embedded in third-party software utilities such as Wikidata gadgets, they appeared only as errors. Consequently, each of them corresponded to an interruption of services and required immediate studies and application of corrections, when possible.

A technique with growing popularity in linked open data environments consists of the reuse of data stored and managed elsewhere. Most of the time, part of the data is gathered through APIs and included on the fly in dynamically generated content. Wikidata gadgets based on VIAF use this technique to offer quick controls to users. For instance, members of the international authority control community on Wikidata use [MoreIdentifiers.js](#) and [Viaf.js](#) gadgets, both written by the author of this article. Statistics generated on a regular basis by Wikidata show the number of installations and the number of active users of both gadgets.¹³ Users promptly informed the author about the errors generated by changes in VIAF APIs. Waiting for a solution, the author had to attach this message to the errors:

Starting from Jan 12, 2025, [OCLC](#) remastered [viaf.org](#) website interfaces, both graphic and APIs.

Modifications are in progress, undocumented and incompatible with the previous version. This is not acceptable, and the international community of librarians, especially the [Project:Authority control](#), complains with OCLC about the policy of changing their services this way.

In the meanwhile, gadgets like [MoreIdentifiers.js](#) and [viaf.js](#) are broken, and require decisions about a patch. Please, also note that VIAF APIs suffer discontinuity, at least in the moment of writing.

One of the most important APIs broken by OCLC’s updates to VIAF allowed one to retrieve an entire cluster of records in JSON format.¹⁴ A typical call was

```
https://viaf.org/viaf/VIAFID/viaf.json
```

and it was possible to use it directly in a script running in a browser, since it was cross-origin resource sharing (CORS)-compliant.¹⁵ The modified API is now available using the code the author obtained by writing to the OCLC contact at bibchange@oclc.org, an email address included at the bottom of any [viaf.org](#) page. The reply received almost immediately was the following:

OCLC no longer supports advanced SRU [Search/Retrieval via URL] searches in the user interface from the browser.

To get the same information you will need to make an API call.

Supported media types: "application/xml" "application/json" "application/rdf+xml"
"application/ld+json" "application/marc21+xml" "application/unimarc+xml"

example:

```
curl --request GET \  
  --url https://viaf.org/viaf/90051632 \  
  --header 'Accept: application/json'
```

Note that no URL to an official public documentation page is mentioned. The authority cluster page (<https://www.oclc.org/developer/api/oclc-apis/viaf/authority-cluster.en.html>) lists VIAF endpoints available to retrieve records or perform searches in the processed records. Table 1 reports test results.

Table 1. Test results.

| Operation | Resource URL | Test |
|----------------------------|---|---------|
| Get Data | https://www.viaf.org/viaf/{VIAF_Identifier} | success |
| Get VIAF Data by LCCN ID | https://www.viaf.org/viaf/lccn/{Library of Congress Controll Number} | failed |
| Get VIAF Data by Source ID | https://www.viaf.org/viaf/sourceID/{Authority Source Code} {Local Authority ID} | failed |
| SRU Search | https://viaf.org/viaf/search?query={CQL_Query}&maximumRecords=10&startRecord=1&sortKeys=holdingscount | success |
| SRU Browse | https://viaf.org/search?scanClause={CQL_Query}&responsePosition=10&maximumTerms=20 | success |
| Autosuggest | https://viaf.org/viaf/AutoSuggest?query={Search Terms}&callback={Optional Callback Name} | success |

Notes: VIAF is Virtual International Authority File, LCCN is Library of Congress Control Number, and SRU is search/retrieve via URL.

The authority cluster page has been available since at least 2021. It is hard to establish if these methods are currently stable or obsolete.

The lack of CORS compatibility requires the use of a *bridge*. A bridge to avoid the CORS error is a script or program running on another server that calls the VIAF server using the new API and exposes the result but adds the CORS header, thus allowing the browser to accept the incoming data. After some days of discussion, two Wikidata users, User:Ovruni and User:Magnus_Manske, wrote a bridge that can patch the gadgets. Calling the Magnus Manske's bridge looks like the following:

```
jQuery.ajax ( {  
  dataType: "json",  
  url :  
  '/magnustools.toolforge.org/authority_control.php?callback=?',  
  data : { query : 'viaf' , id : 'VIAFID' , r:Math.random() },
```

```

    timeout : 10000,
    error : function () {
        console.log('error');
    } ,
    success : function ( viaf_cluster_in_json ) {
        // use the obtained viaf_cluster_in_json
    }
} ) ;

```

This solution inevitably introduces network delay and adds complexity to service maintenance.

Another solution is to add an extension to the browser.¹⁶ Similar to a bridge, it adds the CORS header to the received data. This solution can be applied as a personal workaround or in controlled environments, but it is not suitable for Wikidata gadgets.

To compound the issue already expressed regarding JSON format cluster retrieval, there is an additional bug. The VIAF ID is a string of up to 23 digits. In the JSON response, the ID is presented as a number, not as a string. However, JavaScript engines cannot manage integers greater than `Number.MAX_SAFE_INTEGER`, usually 9007199254740991 (16 digits, $2^{53}-1$); some of the engines wrongly represent the big integer as another integer, others try to transform it into scientific notation.¹⁷ It is possible to verify this issue using this command in a terminal:

```

$ curl -s --request GET \
  --url https://viaf.org/viaf/27171184506547771093 \
  --header 'Accept: application/json' \
  | json_pp | grep -A3 'ns1:viafID'

[...]
  "ns1:viafID" : 2.71711845065478e+19,
  "ns1:x400s" : {
    "ns1:x400" : {
      "ns1:datafield" : {
[...]

```

A similar error occurs in dates. In the JSON format of the cluster, dates are presented as strings when the precision is day and as numbers when the precision is year, while they should be homogenous. It is possible to verify this nonhomogeneous codification using this command in a terminal:

```

$ curl -s --request GET \
  --url https://viaf.org/viaf/VIAFID \
  --header 'Accept: application/json' \
  | json_pp | grep -E 'ns1:..+Date'

```

The response, for VIAFID 59175183, with dates as strings, is (correctly) the following:

```

"ns1:deathDate" : "1683-09-06",
"ns1:birthDate" : "1619-08-29"

```

The response, for VIAFID 54420521, with dates as numbers, is (incorrectly) the following:

```

"ns1:birthDate" : 1473,
"ns1:deathDate" : 1531

```

The problem of JSON encoders to control the type of numbers is well-known and requires a specific action on the encoding process used on the server side.¹⁸

In the XML representation of clusters, a namespace "ns1" is used but not declared, as mandatory. Affected XML files are MARC 21 Record and VIAF Cluster Record. The Resource Description Framework (RDF) representation is valid XML. A cluster in MARC 21 XML looks like the following:

```
<?xml version="1.0" encoding="UTF-8"?>
<ns1:VIAFCluster >
  <ns1:viafID>100160310</ns1:viafID>
  [...]
</ns1:VIAFCluster>
```

The namespace declarations were included in the old version:

```
xmlns="http://viaf.org/viaf/terms#" xmlns:foaf="http://xmlns.com/foaf/0.1/"
xmlns:owl="http://www.w3.org/2002/07/owl#"
xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
xmlns:void="http://rdfs.org/ns/void#" xmlns:ns1="http://viaf.org/viaf/terms#"
```

The MARC 21-XML representation of a cluster is valid XML, but invalid MARCXML: for <datafield>s related to MARC tags 9xx, it contains data outside <subfield>. For example, cluster 100278846 in MARC 21-XML contains the string BNF|12153145 outside XML tags:

```
<mx:datafield tag="950" ind2=" " ind1=" ">
  <mx:subfield code="a">Symphorien-Auguste [...]</mx:subfield>
  <mx:subfield code="9">4</mx:subfield>
  <mx:subfield code="2">BNF</mx:subfield>
  BNF|12153145
  <mx:subfield code="2">SUDOC</mx:subfield>
  SUDOC|030032784
</mx:datafield>
```

The same error occurs in the UNIMARC-XML representation. In addition, UNIMARC-XML is encoded in Turbo Marc.¹⁹

It is worth highlighting another change made by OCLC to VIAF APIs that was implemented without any prior announcement: on May 23, 2024, the API call named `justlinks.json` stopped working. Until then, it was possible to obtain the links to cluster sources calling (in CORS mode)

```
https://viaf.org/viaf/viafID/justlinks.json
```

This service was never replaced. It has been a quick and simple way to retrieve valuable linked data information. The workaround requires downloading the full cluster. Justlinks as a dump also stopped being available. Until May 2024, it was included in <https://viaf.org/viaf/data>. The first lines of `viaf-20240401-links.txt.gz` were the following:

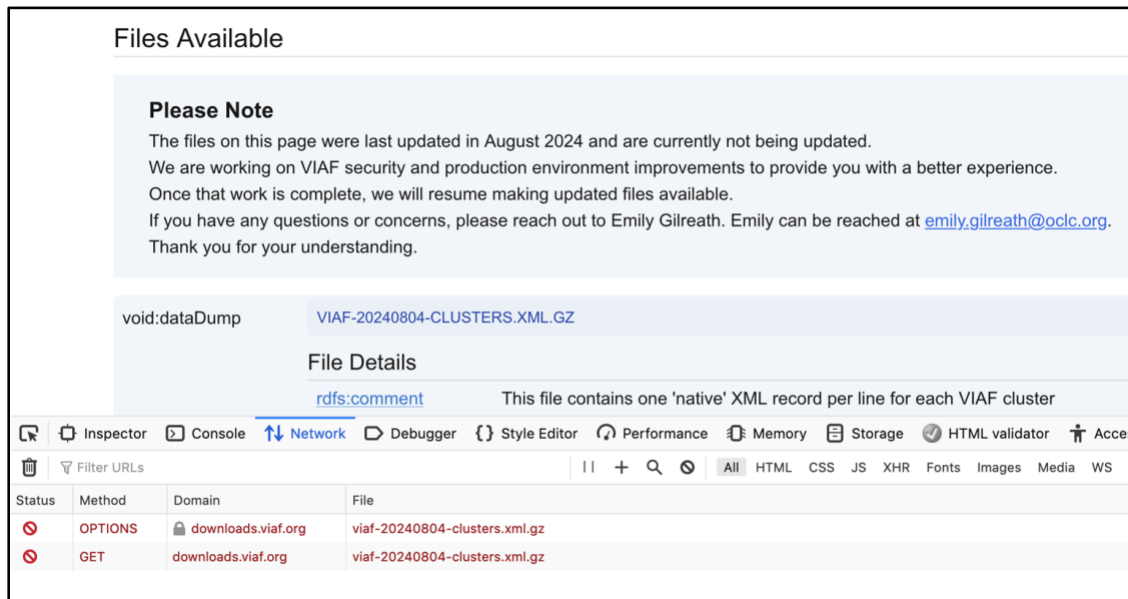
```
http://viaf.org/viaf/100001249 PTBNP|835968
http://viaf.org/viaf/100001249 ISNI|0000000069727399
http://viaf.org/viaf/100009494 PTBNP|85905
http://viaf.org/viaf/100012436 ISNI|0000000068921720
http://viaf.org/viaf/100012436 PTBNP|867238
http://viaf.org/viaf/10001407 SKMASNL|vtls005650933
http://viaf.org/viaf/10001407 BNF@http://catalogue.bnf.fr/ark:/12148/cb13491530p
http://viaf.org/viaf/10001407 NUKAT@vtls011080931
```

Another dismissed dump was the file listing redirected and abandoned identifiers.²⁰ The file was available at <http://viaf.org/viaf/data/viaf-20141217-persist-rdf.xml.gz> and was described as "This file shows redirections within the VIAF dataset (in RDF)."²¹

Monthly Dumps

As of August 2024, the VIAF Data page stated that the monthly dumps of VIAF clusters available in XML, RDF, RDF Triple, and MARC 21 XML formats “are not currently being updated.” Moreover, none of the August 2024 files are available; links are broken and fail silently. Errors are only visible in the browser console, as shown in Figure 4.

Figure 4. Errors (in red) while trying to download the latest monthly Virtual International Authority File (VIAF) dump.



Daily and Monthly Limits

There is a functionally hidden limitation in the retrieval of VIAF clusters, discovered by looking at the HTTP headers associated with API responses. It is not possible to use the service <https://viaf.org/viaf/VIAFID> more than 1,000 times a day or 10,000 times a month. When exceeding, the response (in JSON) is {"message": "API rate limit exceeded"}. This count is probably based on the same incoming IP address, and thus may affect more than one user, for instance, a group of cataloguers of the same library or services. To test it using a terminal, this shell command to retrieve the “Albert Einstein” cluster was used:

```
for i in {1..1001} ;
do curl -s \
-D save_headers.txt \
-H 'Accept: application/json' \
'https://viaf.org/viaf/75121530' > /dev/null ;
echo ;
grep limit save_headers.txt ;
sleep 4 ;
done
```

The output of this command is a repeated series of HTTP headers, where the counters are decreased, up to the error message. The HTTP headers for the last valid and the first invalid daily request are shown here:

```
ratelimit-remaining: 1
x-ratelimit-limit-day: 1000
x-ratelimit-remaining-month: 9001
```

```

ratelimit-limit: 1000
x-ratelimit-limit-month: 10000
x-ratelimit-remaining-day: 1
{ ... the Einstein's cluster ... }

ratelimit-remaining: 0
x-ratelimit-limit-day: 1000
x-ratelimit-remaining-month: 9000
ratelimit-limit: 1000
x-ratelimit-limit-month: 10000
x-ratelimit-remaining-day: 0
{"message":"API rate limit exceeded"}

```

Usually, usage counters are applied for commercial purposes or to limit traffic. No information about how to avoid these limits seems to be available.

Links to VIAF Clusters Used in Web Pages

There are consequences to links used in web pages due to changes to the API interface and endpoints. Examples can be found in authority records of the Library of Congress, where the link to the corresponding VIAF cluster is broken.²²

The Clusterization Process

Even though the monthly dumps are not being produced, the clusterization process is still ongoing. It is possible to verify it through the “History” panel.²³

Management of Changes to VIAF Identifiers

During any clusterization activity, identifiers can be created, merged, or deleted. In any case, the persistence of identifiers is an essential service, whose name could be URI Registry.²⁴ A merge operation usually preserves only one identifier of the merged clusters, so it is necessary to redirect the suppressed identifiers to the preserved identifier, while a delete operation requires a redirect to a special “abandoned cluster” page.

Both of these redirects should be managed by a URI Registry service that was present in the previous version of VIAF. At the moment, the VIAF URI Registry is not available in the new interface.²⁵ Only a 404 not found message is obtained. But this response is valid only for never-used identifiers. Examples of redirected or abandoned VIAF IDs can be obtained from Wikidata. The “Fred Astaire” item contains both types: 6973159248401404870002 was deprecated due to redirection, while 3697159248043904870003 was deprecated as withdrawn.²⁶ Without the URI Registry, they both look like they were never assigned, leading to confusion if registered elsewhere in bookmarks, library catalogs, linked data systems, and so on in the meantime. This service was described by OCLC as follows: “Authority clusters can be merged together over time as additional data is received and algorithms are updated. When an authority cluster is merged into another the client will receive an HTTP 301 redirect to the new cluster URI.”²⁷

In addition, it is relevant to add that VIAF permalinks remain unchanged, as expected:

<http://viaf.org/viaf/VIAFID>.²⁸

VIAF GOVERNANCE

Notably, OCLC’s “Connect authority data across cultures and languages to facilitate research” page states that “in 2012 ... VIAF transitioned into an OCLC service. With advice from the VIAF Council, OCLC maintains the hosting, software, and data for VIAF,” and “VIAF contributors participate in

the governance of VIAF through the VIAF Council, which provides guidance on the policies, practices, and operation of VIAF.”²⁹

Furthermore, the page “Virtual International Authority File service transitions to OCLC; contributing institutions continue to shape direction through VIAF Council”³⁰ states: “The institutions contributing to VIAF will continue to help shape VIAF’s direction through participation in a newly-formed VIAF Council which will provide guidance on policies, practices and operation of VIAF.” On the same page, the roles of VIAF Council and OCLC are outlined once again: “The VIAF Council provides guidance on the policies, practices, and operation of VIAF, including developing policies on the eligibility and selection of new VIAF Contributors. The Council advises OCLC on VIAF’s service features and supported data formats, and it promotes the effective and appropriate use of VIAF. OCLC maintains the hosting, software, and data for VIAF. The VIAF Council may conduct other VIAF business as required.” However, no additional information is available on the internet about the activity of the VIAF Council, and a chair led the Council only until December 2023.³¹

CONCLUSION

The analysis conducted so far has demonstrated that the revision that took place in January 2025 has affected virtually every aspect of the services and the data produced by VIAF. While the long-awaited modernization is appreciated, serious defects can be detected in the results and the methods used. There are an excessive number of errors in the web interface, which can still be fixed without excessive difficulty. However, more disconcerting are the decisions made regarding the APIs and monthly dumps, due to the impact on the systems they are based upon. For the monthly dumps and the URI Registry service especially, the quickest possible restoration is necessary, without a change in the file formats. There is an expected way to write, maintain, and govern APIs that includes at least a time interval from the announcement of a new version to its release and a second time interval before removing the previous version.³² And, of course, the possibility of using the production environment as a test environment is not appropriate.

As a whole, what happened is unacceptable, unless satisfactory future explanations are provided. VIAF is a service that is renowned for being a central hub for linked open data (LOD) in the library environment and is deemed essential for enhancing authority control worldwide.³³ This is why OCLC itself defines VIAF as “a trusted global authority file.”³⁴ Thanks to the internet and a progressive adoption of linked data techniques, standards, and guidelines (RDA is the most relevant example), no catalog remains isolated.³⁵ It could be said as well that any cataloguer, and especially any metadata curator, potentially contributes to the work of a virtual multi-agency metadata office, where interaction is constantly required, even if not formalized.³⁶ As yet, OCLC appears to overlook the significance of VIAF’s role in this global interaction. By not announcing or sharing decisions regarding changes, it has shown a lack of respect for the workers and services that rely on VIAF data and functionalities.

Therefore, VIAF governance now seems to be of primary concern, raising a number of questions:

- What is the relationship between OCLC and the VIAF Council? What are the norms of its regulation, and how are they respected?
- Who really manages VIAF? Is the VIAF Council responsible for services based on data from national libraries and other VIAF sources, or are decisions regarding this topic made unilaterally by OCLC?

- Can OCLC ensure communication to the whole LOD and authority control community about VIAF changes?
- Will VIAF continue as an open service, or will it become a paid service under OCLC?

These doubts and questions caused by the current situation seem to have a distant origin; they were already raised in some way back in 2016 and seem to involve both VIAF and ISNI.³⁷

While awaiting answers, libraries may need to consider developing an alternative to VIAF: an open service governed in a transparent and shared manner, featuring direct manual contributions, open code, modern APIs, a SPARQL engine, and more.

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ADDENDUM

As previously stated, this article and its related tests were prepared prior to the end of February 2025. In early September 2025, the editor kindly asked the author to review and report any changes that may have resulted from debugging activities performed by OCLC in the meantime. Tests where no differences were introduced are not discussed here.

Changes to the Web Interface

Based on cluster VIAF ID 100160310 (<https://viaf.org/en/viaf/100160310>), the icons (flags or logos) representing the authority records contributing to the cluster and linking to their respective sources now include the following: National Library of France, NII (Japan), ISNI, National Library of Spain, Swiss National Library, German National Library, Union List of Artist Names (Getty Research Institute), NUK/COBISS.SI Slovenia, National Library of Sweden, Library of Congress/NACO, SUDOC (ABES) France, and Wikidata. The remaining icons are not linked to the respective source and represent the following: National Library of Russia, National Library of Lithuania, National and University Library in Zagreb, Répertoire International de Littérature Musicale, National Library of the Netherlands, National Library of Poland, BIBSYS, NUKAT Center of Warsaw University Library, National Library of the Czech Republic, National Library and Archives of Québec, RERO—Library Network of Western Switzerland, National Library of Chile, National Library of Australia, National Library of Israel, Library and Archives Canada, National Library of Ireland, National Library of Latvia, National Library of Catalonia, National Library of Estonia, National Library of Brazil, Vatican Library, National Library of Greece, National Library of Russia, and National Library of Israel.

Changes to the API Interface

The page, <https://www.oclc.org/developer/api/oclc-apis/viaf/authority-cluster.en.html>, listing VIAF endpoints is not yet available. Any endpoint listed on it is now broken, except the first one.

The missing declaration of the namespace `ns1:VIAFCluster` has been restored in the XML version of the cluster.

Monthly Dumps

The monthly dumps functionality has been corrected. Dumps are now downloadable, although the most recent available version remains dated August 4, 2024. It was possible to download it, but at the very slow rate of 20 GB / 10h33s, or 0.53 MB/s.

Links to VIAF Clusters Used in Web Pages

Regarding the Library of Congress' (LC) links to VIAF clusters, the link on <https://id.loc.gov/authorities/names/n88274604.html> has been corrected and now functions as expected, whereas the VIAF link on <https://lccn.loc.gov/n88274604> has been removed by LC.

The redirect service has been reinstated. For example, cluster with VIAF ID 9852060, referenced in the Wikidata discussion of “Property talk:P214,” now correctly resolves to 267920293.³⁸ Fred Astaire’s ID 6973159248401404870002 now redirects properly to cluster 9888263. However, his other ID 3697159248043904870003, previously marked as abandoned in <https://www.wikidata.org/wiki/Q100937>, appears as a valid cluster in the VIAF web interface (<https://viaf.org/en/viaf/3697159248043904870003>), yet is flagged as abandoned (scavenged) when accessed via the API:

```
curl -s --request GET \  
  --url "https://viaf.org/viaf/3697159248043904870003" \  
  --header "Accept: application/json"
```

So far, no inconsistencies had been identified between the web interface and the API interface.

ENDNOTES

- ¹ “VIAF: The Virtual International Authority File,” OCLC, <https://viaf.org>; this study was concluded at the end of February 2025, when all images were captured and all links were last visited.
- ² Anila Angjeli, Andrew Mac Ewan, and Vincent Boulet, “ISNI and VIAF: Transforming Ways of Trustfully Consolidating Identities,” in *World Library and Information Congress Papers and Presentations* (International Federation of Library Associations and Institutions, 2014), 2, <https://library.ifla.org/985/1/086-angjeli-en.pdf>.
- ³ “Virtual International Authority File Service Transitions to OCLC; Contributing Institutions Continue to Shape Direction through VIAF Council,” OCLC (press release), April 4, 2012, <https://worldcat.org/arcviewer/7/OCC/2015/03/19/H1426803137790/viewer/file1365.html>.
- ⁴ “VIAF: The Virtual International Authority File,” VIAF (Beta), <https://web.archive.org/web/20110411114912/http://viaf.org/>.
- ⁵ “Data Source,” VIAF, <https://web.archive.org/web/20120503030944/http://viaf.org/viaf/data>.
- ⁶ Koha is one of the most popular open-source integrated library systems: <https://koha-community.org/>.
- ⁷ Stefano Bargioni, “From Authority Enrichment to AuthorityBox. Applying RDA in a Koha Environment,” *JLIS.It* 11 no. 1 (2020): 175–89, <https://doi.org/10.4403/jlis.it-12595>.
- ⁸ Tag 024 (subfields “a” and “2”) of MARC 21 was populated according to <https://www.loc.gov/marc/authority/ad024.html>.
- ⁹ “Wikidata:Property Proposal/PUSC,” Wikidata, https://www.wikidata.org/wiki/Wikidata:Property_proposal/PUSC_ID.
- ¹⁰ Note that “Personal Information” is used in the case of a Corporate Name too.
- ¹¹ Responsive web design refers to using HTML and CSS techniques to automatically shrink or enlarge a website to ensure that its content looks good on all devices (e.g., desktops, tablets, smartphones).
- ¹² Minification aims to reduce the file size for better performance. Obfuscation focuses on making the code very difficult to understand, for commercial or security reasons.
- ¹³ “Wikidata:Database Reports/Gadget Usage Statistics/Wikidata,” Wikidata, https://www.wikidata.org/w/index.php?title=Wikidata:Database_reports/Gadget_usage_statistics/wikidata&oldid=2293707826, ordered by the column named “enabled in,” lists MoreIdentifiers as the first “non-preference” Wikidata gadget and is in use by 879 users, 241 of them active.

- ¹⁴ JSON (JavaScript Object Notation) is a human-readable, lightweight format for storing and transporting data, especially used for sending data from a server to a webpage.
- ¹⁵ CORS and CORS errors are discussed in Leonardo Maldonado, “All You Need to Know About CORS & CORS Errors,” *Telerik* (blog), June 23, 2023, <https://www.telerik.com/blogs/all-you-need-to-know-cors-errors> (archived at Wayback Machine, Internet Archive, July 3, 2023, <https://web.archive.org/web/20250216145528/https://www.telerik.com/blogs/all-you-need-to-know-cors-errors>).
- ¹⁶ An example of this extension is CORS Unblock, available for the most popular browsers.
- ¹⁷ “Scientific Notation,” Wikipedia, https://en.wikipedia.org/wiki/Scientific_notation.
- ¹⁸ The challenges faced on the client side are discussed, for example, in @MoKhajavi75, “Javascript - Convert an EXTRA LARGE Number to String in JSON Before the Default Parsing,” Stack Overflow, October 27, 2018, <https://stackoverflow.com/questions/53022343/javascript-convert-an-extra-large-number-to-string-in-json-before-the-default>.
- ¹⁹ yaz-marcdump (<https://software.indexdata.com/yaz/doc/yaz-marcdump.html>) defines Turbo MARC as follows: “Turbo MARC is a compact XML notation with same semantics as MARCXML, but which allows for faster processing via XSLT.”
- ²⁰ It was presented first and discussed in C. Bianchini, S. Bargioni, and C. C. Pellizzari di San Girolamo, “Beyond VIAF: Wikidata as a Complementary Tool for Authority Control in Libraries,” *Information Technology and Libraries* 40, no. 2 (2021): 7, <https://doi.org/10.6017/ital.v40i2.12959>.
- ²¹ The page is archived at Wayback Machine, Internet Archive, May 3, 2012, <https://web.archive.org/web/20150109184006/http://viaf.org/viaf/data/>.
- ²² See, for instance, VIAF links in “Austin, Jane G. (Jane Goodwin), 1831–1894” in Library of Congress, <https://id.loc.gov/authorities/names/n88274604.html>, and Library of Congress Control Numbers, <https://lccn.loc.gov/n88274604>, where the links to VIAF are broken.
- ²³ As an example, the VIAF record for “Zanelli, Renato” (<https://viaf.org/en/viaf/2846173911323920200000>) was added from DNB|1354063937 at 2025-02-09 05:00:39Z.
- ²⁴ For a general discussion about identifiers, see Laura Manzoni, “Identificatori” (Associazione Italiana Biblioteche, 2022).
- ²⁵ For complaints, see “Redirects No Longer Working,” in “Property Talk:P214,” Wikidata, https://www.wikidata.org/wiki/Property_talk:P214#Redirects_no_longer_working.
- ²⁶ “Fred Astaire,” Wikidata, <https://www.wikidata.org/w/index.php?title=Q100937&oldid=2305730218>.
- ²⁷ “Authority Cluster Resource,” OCLC, <https://www.oclc.org/developer/api/oclc-apis/viaf/authority-cluster.en.html> (archived at Wayback Machine, Internet Archive, December 7, 2021,

- <https://web.archive.org/web/20241206141129/https://www.oclc.org/developer/api/oclc-apis/viaf/authority-cluster.en.html>).
- ²⁸ “Permalink,” Wikipedia, <https://en.wikipedia.org/wiki/Permalink>.
- ²⁹ “VIAF,” OCLC, <https://www.oclc.org/en/viaf.html> (archived in <https://web.archive.org/web/20241219050457/https://www.oclc.org/en/viaf.html>).
- ³⁰ “Virtual International Authority File Service Transitions to OCLC,” OCLC.
- ³¹ “VIAF Council,” <https://www.oclc.org/en/viaf/viaf-council.html> (archived at Wayback Machine, Internet Archive, December 12, 2024, <https://web.archive.org/web/20241203200611/https://www.oclc.org/en/viaf/viaf-council.html>).
- ³² See, for instance, Ikenna Nwaiwu, “Top 5 Policies for Runtime API Governance to Ensure Your APIs are Consistent, Compliant, and Secure,” *Traefik* (blog) September 17, 2024, <https://traefik.io/blog/top-five-policies-for-runtime-api-governance/> (archived at Wayback Machine, Internet Archive, September 19, 2024, <https://web.archive.org/web/20250115011548/https://traefik.io/blog/top-five-policies-for-runtime-api-governance/>).
- ³³ Nathan Putnam, “VIAF and the Linked Data Ecosystem,” *JLIS.it* 13, no. 1 (2022):196–202, <https://doi.org/10.4403/jlis.it-12749>.
- ³⁴ “VIAF,” OCLC, <https://www.oclc.org/en/viaf.html>.
- ³⁵ Carlo Bianchini, “Nessun catalogo è un'isola,” in *Parsifal: Un modello di collaborazione bibliotecaria per condividere la conoscenza registrata*, ed. Silvano M. Danieli (Firenze University Press, 2024), 57–72, <https://doi.org/10.36253/979-12-215-0356-2.10>.
- ³⁶ Interaction among cataloguing/metadata agencies is a necessary requirement for merges or deconflations of entities. A non-pervasive correction of a conflation will not eradicate it from the global authority control system formed by VIAF, national libraries, Wikidata, and other relevant stakeholders.
- ³⁷ Bibliothèque Nationale de France and British Library, “A Global Strategy for Authority Metadata and Identifiers. Lessons Learnt from VIAF and ISNI and How to Build a Sustainable Future” (Library of Congress, 2016), <https://www.loc.gov/aba/pcc/documents/PoCo-2016/VIAF-ISNI-position-paper.pdf>.
- ³⁸ “Property talk:P214,” https://www.wikidata.org/wiki/Property_talk:P214#Redirects_no_longer_working.