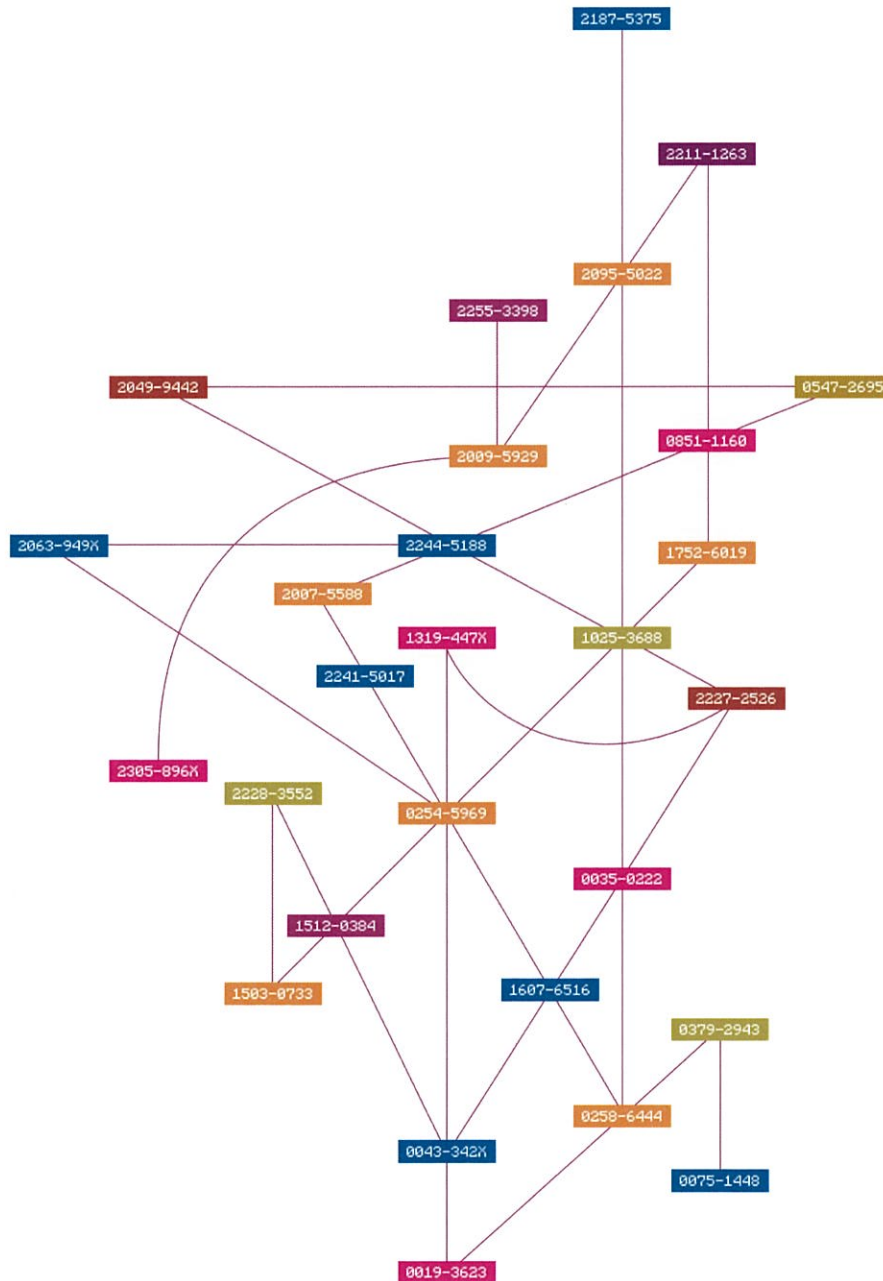


Request for information for the development of a new ISSN production tool



This document constitutes a request for information issued by the ISSN International Centre (ISSN IC), which plans to develop a new ISSN production tool.

Companies interested in the ISSN+ project, presented in Chapter 1, will send to ISSN IC an application file the content of which is presented in Chapter 2.

Based on the criteria outlined below, ISSN IC will then retain several candidates and will forward to them detailed specifications.

On the basis of these specifications and of a dialogue meeting with ISSN IC, the interested candidates will provide a technical and financial offer, which can then be the basis of presentations and negotiations.

1. Purpose of the ISSN+ project

1.1 The ISSN International Centre

ISSN IC (International Center for the Registration of Serial Publications) also called ISSN International Centre was created in 1975.

The ISSN IC is an intergovernmental organization, created on the basis of an agreement between France and UNESCO, whose function is to coordinate at the international level the identification, via the ISSN, and the description of serials and continuing resources, print and online, in all disciplines.

As of December 2018, ISSN IC employs 14 people.

ISSN IC' missions and activities are described on its website <http://www.issn.org/>.

The main responsibilities of ISSN IC are:

- Maintenance and publishing of the ISSN Registry,
- Coordination of the activities of the ISSN National Centres,
- The assignment of ISSN to international publications and resources published in countries without an ISSN National Center.

The ISSN Network spans 90 countries, each having its own National Center, built into one of the major bibliographical or scientific institutions in the country (e.g. BnF for France, the Library of Congress for the USA). These centres assign ISSN to the resources published in their respective countries and catalog the corresponding ISSN records. ISSN IC supervises and coordinates the activities of these ISSN National Centres.

Some geographic areas are however poorly covered by ISSN Centres (such as Africa, Asia as well as Austria, Albania, Ukraine in Europe) and, in this case, ISSN IC directly assigns ISSNs for publications issued in these countries and creates the corresponding records, thus acting as a National Centre.

More than 2,150,000 ISSN have been assigned by the ISSN Network to date.

1.2 The ISSN database (portal.issn.org)

The database grows every year by about 60 000 to 70 000 ISSN, corresponding to an equivalent number of identified publications. About 130 000 corrections and modifications are made per year.

The ISSN database consists of bibliographic records in Marc 21 format, using a subset of fields / subfields of this format called the «ISSN profile».

To one specific ISSN corresponds one and only one ISSN bibliographic record.

The reciprocal is true: each bibliographic record of the ISSN database corresponds to one and only one ISSN.

The ISSN database is designed as a database managing a numeric identifier based on coded or textual bibliographic metadata and not as the equivalent of a traditional library catalogue, even if it consists of records in Marc 21 format. The maintenance of its logical consistency, in particular those of the ISSN, is an essential constraint of the system.

The maintenance of this logical coherence and of the quality of data is also based on a set of binding validation rules which cannot be circumvented, and which applied in a differentiated way according to the specific record categories that mark the exact status of the ISSN in the ISSN number workflow; this workflow goes from the initial assignment of the number to its possible cancellation / suppression.

External file import operations (which make up the bulk of the input into the database, i.e. 60%) are managed exclusively in the form of mergers with existing ISSN records according to specific profiles. Similarly, direct cataloging, used for the remaining 40%, also to maintain logical consistency, strictly limits the permissions granted to catalogers by blocking the modification of certain automatically managed areas.

1.3 The current production tool

The ISSN database is fed within the ISSN network:

- For the National Centres having their own management system (55 countries):
 - By regular exports of records created by the Centres, which are then injected into the production system of ISSN IC (1.5 FTE are now employed to ISSN IC loading this data),
- For some national Centres (35 countries, about 50 users, but with a variable frequency of use) or by the ISSN IC (international publications or publications produced in countries without National Center):
 - By direct cataloging in the production system of ISSN IC.

The ISSN IC production system is based on a significant amount of controls and intrinsic rules to avoid especially duplicate assignments (i.e. to avoid the same resource being identified by 2 different ISSN) and to ensure the internal logical consistency of the database (especially at the level of the linking system between ISSN records).

For its production system, ISSN IC has been using the Virtua software package since 2004, an integrated library management system published by VTL (which has since been acquired by Innovative) and which has been strongly adapted to the needs of ISSN IC, which only uses a customized version of the cataloging module.

1.4 The ISSN+ project for a new production system

The existing software «ISSN Virtua» has so far covered the basic needs of ISSN IC and is working satisfactorily. The ISSN IC plans to stop its use in the coming years in order to ensure the sustainability and scalability of its production activities.

Therefore, ISSN IC strategic plan 2015-2018 has set the objective of ***Renewing the IT tools for the internal activities of the ISSN International Centre: this is the object of the project called ISSN +.***

Among the essential innovations expected from the new system, which lead from a functional point of view to initiate the process of replacing the current software, we can note in particular the following innovations (without the list being comprehensive):

- **Application based on open source bricks** that can be easily re/configured, adapted, enriched (and not a proprietary application),
- **Web Clients for cataloging and for the management of the « back office »** (no dedicated Windows clients),
- **More flexible (including faceting)** and richer data indexing allowing in particular to index by default all areas and sub-areas of the Marc 21 format as well as their characteristics through metadata describing the structuring of data (presence of this or that field / sub-field etc.),
- **Parallel data management of data associated with ISSNs but outside Marc 21 records** (annotations, marking of records, data imported from external sources to the ISSN network, etc.) with the possibility of mass injection / modification on the basis of tabulated files or JSON files using the ISSN as a matching key,
- **More efficient import module** allowing simultaneous file visualization of existing records alongside ready-to-import records marking up differences and possibility of direct editing,
- **Management of the automatic transliteration in Latin alphabet** for data in other scripts (Cyrillic, Greek ...) allowing at the same time a direct cataloging in the local alphabet (Russian etc.) as well as a parallel storage of the transliterated data.

The main features of the new system will be the following:

- Allocation of ISSN ranges by ISSN IC to the ISSN National Centres,
- Management of the validation rules applied to any record modification in the system,
- Management of records put to the «error » status due to changes that do not comply with the validation rules,
- Automated management of links between records (ISSN cancellations, reciprocal links, insertion of listed data in records),
- Automated management of ISSN-L based on the ISSNs contained in Marc 21 links of type 776 (ISSN-L are “linking ISSNs” allowing to federate the paper and electronic versions of the same resource) and possibility of creating other groupings of records if necessary,
- Management of authorities and associated identifiers (publishers, issuing bodies, subjects, abbreviations used for abbreviated titles),
- For the ISSN Centres using the ISSN IC cataloging system (≈ 35) or for the ISSN IC itself (on behalf of countries that do not have a National Center):
 - Assigning an ISSN to a resource,
 - Cataloging resources, in MARC21 format, with an ISSN profile,
 - Direct cataloging in non-Latin alphabets (Cyrillic, Greek) and automatic transliteration,
- For ISSN National Centers that have their own management system (≈ 55):

- Import by ISSN IC of the records with ISSN exported in batches by the Centers from their local systems, through parameterized mergers of records using the ISSN as matching key,
- in the long term, use of an API between the National Center management system and ISSN+ for the assignment of an ISSN to the publication being catalogued in the record,
- Administration of the database by the ISSN IC (e.g. managing editing responsibilities for ISSN records, administration of any data on the records, modification of records by batch, imports and completion of batches of records without ISSN, exports on demand, production of standard or on-demand activity indicators ...),
- For ISSN IC and all Centers, research on the full base (on the fields and sub-fields of the records),
- Integration with the existing Publisher Extranet (via an API assigning one or more ISSNs to the resources corresponding to a request submitted by a publisher) and with the ISSN Portal (via daily exports of the ISSN database).

A prototype (POC proof of concept) of the production system has already been developed by the ISSN IC IT department using Elastic-Search (also used by the ISSN portal) and developments in PERL. This prototype offers a web interface for entering records, indexing them and making them accessible by the search engine.

ISSN IC therefore wishes to commission on the external service provider:

- **that will carry out the necessary developments to achieve the features expressed** in the full requirement specifications and in the detailed specifications produced and improved as the sprints progress,
- **Relying on open source technologies** (operating system, database, search engine, development framework ...),
- **In close collaboration with the ISSN IC team** (agile method for sprints of specifications / implementations on the major modules of the system, skills transfer from ISSN IC to the provider on the formats of the records, the validation rules, etc),
- **By organizing the skills transfer to ISSN IC on the development carried out in the implementation phase, which will ultimately enable ISSN IC to fully take ownership of the software developed** (explanation of the technical choices implemented during the sprints, assistance in the hiring of a developer at ISSN IC, support and guidance, companionship and training of this developer so as to help him master the software developed by the provider)

The provider will carry out maintenance operations, as well as long-term support with ISSN IC team, once the software has gone into production.

One of the strategic objectives of this redesign will enable ISSN IC to make the necessary changes in its own production system in order to adapt, complement and enrich the system and to be autonomous and responsive on the major forthcoming developments:

- Evolution of the data model to take into account changes in international bibliographic formats (RDA, LRM);
- Interoperability of the ISSN with other identification systems (for example: ARK, ISNI for Publishers and issuing bodies, DOI for resource titles and documents).

The switch to production of the new system is desired for April 2020 at the latest, and if possible at the end of 2019.

Hosting services are not part of the market. The production system will be hosted by a provider outside ISSN IC. The tenderer will be asked to provide a set of hosting requirements for production.

2 Information requested from interested candidates

Candidates interested in the project briefly described above are asked to submit an application file containing at least the following information.

2.1 Functional and technical scope of the company's activity

The candidate will describe its activity in connection with the need expressed above:

- Development and integration around open source components,
- Agile methods of project management interacting with the customer,
- Software Maintenance,
- Transfer of skills to the customer's internal teams.

2.2 Key figures

The company will provide elements of measure of its volume of activity:

- Sales figures,
- Annual Results for the past 3 years,
- Total numbers of staff per category (consultants, project managers, developers, etc.).

2.3 Economic model and fundamental financial elements

The company will describe one or more business models that it usually implements to meet this type of need.

The company will also provide a price range (excluding VAT) for the work units it considers most relevant.

2.4 References

The company will present its references comparable with the need expressed above, and give an adequate description of each reference:

- Technical environment
- Functional typology
- Cost
- Workforce used

- Project duration
- Result obtained.

In particular, the following proven references will be detailed:

- In open source software, and in particular for the components proposed for ISSN + ,
- For international user environments (knowledge of the problems of multilingualism and transliteration issues),
- For projects with complex data formats (including bibliographic formats),
- In designing and implementing complex projects with agile methods,
- Answers to questions.

2.5 Interest of the company in receiving the consultation file

The candidate will formulate in a synthetic way and at this stage of the exchanges:

- His understanding of the needs,
- The technical environment envisaged for the case of ISSN + (at this stage, several alternatives are naturally possible)
- In the end, the motivation of the company to engage eventually in the project (naturally subject to the study of the detailed specifications and contents of the exchanges with the ISSN IC in the subsequent dialogue stages).

3 Elements of procedure

3.1 ISSN IC contact

Potential questions will be forwarded to Pierre Godefroy, Head of the Department of Information Systems (informatique@issn.org).

Questions must be forwarded to the ISSN IC by January 10th, 2018.

3.2 Deadline for submission of applications

Potentially interested candidates will send their application to the following address:
tender@issn.org.

The deadline for submitting applications is Tuesday, January 15th, 2019 at noon (CET). Applications received after the deadline will not be accepted. It is the responsibility of the company to ensure that the application has arrived by the deadline stipulated. There will be no appeals process for late applications.

3.3 Protection of submissions

ISSN IC undertakes to deal with the elements communicated by the company with the strictest confidentiality and to communicate them only to the persons in charge of conducting the consultation.

3.4 Criteria for analysis and selection of applications

Applications will be evaluated on the basis of:

- Skills (see 2.1 Functional and technical scope of the company's activity)
- The strength of society (see 2.2 key figures)
- Proven references (see 2.4 references)
- Interest expressed by the company to receive the tender documents (see 2.5).

3.5 Continuation of operations and provisional timetable

3.5.1 Applications

Applications which have been received by January 15th, 2019 noon at the latest will be analyzed by ISSN IC.

ISSN IC will retain several candidates on the basis of the criteria expressed in §2.9 above.

ISSN IC will inform all applicants of the results of the selection on January 21st, 2019.

3.5.2 Specifications

Successful candidates will receive the detailed specifications in the fourth (4th) week of 2019.

The specifications will contain:

- The main document: the detailed specification document with its annexes,
- A response framework to be filled in by the tenderer,
- A price list to be filled in by the tenderer.

The contents of these specifications are confidential. Anyone who receives or holds these specifications undertakes to disclose the content and content only for the purposes of the possible development of a service offer.

3.5.3 Offers

In the weeks following the transmission of the specifications, a dialogue session will be organized with each candidate who is still interested, in order to allow them to submit a first technical and financial offer.

The technical and financial offers will then be analyzed by ISSN IC.

The content of the tenders must contain at least the following documents:

- The general and technical response framework, completed by the tenderer,
- The price list, completed by the tenderer
- A technical brief, which will give any precision and all necessary information.

The submitted offer must remain valid for a period of 90 calendar days from the deadline for submission of tenders.

Presentation of tenders and negotiation sessions may be organized for the offers that the ISSN IC will consider the most interesting.

The tenders will be evaluated on the basis of criteria that are described in the detailed specifications.

The selection process should be completed by March 8th, 2019.