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## To our Readers



This issue of the Nuclear Information and Knowledge Newsletter conveys some general information about the Nuclear Information Section and its activities. Special emphasis was placed on the INIS Collection search application. This search application is based on Google technology and represents the main access point not only to the INIS collection of 3.4 million records, but also to the IAEA Library holdings.

Combined together, the INIS and IAEA Library collections comprise one of the world's largest resources of published and unpublished information on the peaceful uses of nuclear science and technology.

Articles on the International Nuclear Library Network (INLN) and digital preservation efforts are just some of the many INIS and IAEA Library activities. Recent mobile customization of the INIS website proves our commitment to bringing our products and services closer to scientists, researchers and students.

Inspirational reading!

*Dobrica Savic*

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## INIS Collection and Activities



By the end of July 2012, 68 645 bibliographic records were added to the INIS Collection, making a total of 3 436 096 records available to the public. An additional 21 755 full text documents were prepared and uploaded, bringing the total of full text documents in the Collection to 461 069, of which 311 962 are available to the public.

[Read more](#)

## IAEA Library Collection and Activities



Since 1958, the IAEA Library has been at the heart of nuclear information management. Throughout its long history, and assisted by new technologies, the library has provided unmediated access to reusable digital data and credible information in all areas of nuclear energy and its applications. Collections include print, audio-visual and electronic resources, the latter representing the largest share.

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## The International Nuclear Library Network (INLN)

The International Nuclear Library Network (INLN) is a global nuclear information and knowledge management initiative aimed at strengthening international cooperation. Libraries, information centers and research institutes from Argentina, Australia, Austria, Belarus, Brazil, Canada, China, Czech Republic, Egypt, France, Ghana, India, Indonesia, Ireland, Japan, Mexico, Morocco, New Zealand, Nigeria, Norway, Pakistan, the Republic of Korea, the Russian Federation, Serbia, Tunisia, Turkey, and Uzbekistan already reap the benefits which the INLN offers.

[Read more](#)

## The History of the INIS Collection Search



The INIS Collection Search (ICS) is "the free and open web access to INIS Collection". This was the definition chosen to present the ICS during the last IAEA General Conference. Behind this simple definition a significant amount of work was done during the last two years to develop a strong web search application. This article looks into the history of the ICS, describing its powerful

functionalities. The current version of the ICS was released at the end of July 2012.

[Read more](#)

## Collection Search – Technology Overview

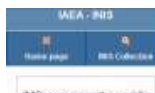


The INIS Collection Search (ICS) enables its users to search and retrieve information both efficiently and effectively. This article gives a glance behind the scenes, looking at the software technology, the search solutions and the development methodologies which were used to make the ICS a high performance application.

A customized version of Google Search Appliance® (GSA) is used by the ICS to perform its search operations. GSA is an enterprise level search solution offered by Google, consisting of a rack-mounted device providing document indexing functionality. GSA crawls and indexes full text PDF documents and bibliographic data in the INIS and Library Collections.

[Read more](#)

## Mobile Version of the INIS Website



In line with a recommendation from the 13th INIS/ETDE Joint Technical Committee Meeting, INIS implemented a mobile version of its website.

With this development, INIS website visitors can easily explore the site on a variety of mobile devices, including iPhone, Blackberry and Android. When accessing INIS from a mobile device, visitors will automatically be re-directed to the mobile version of the INIS website, which optimizes the display for such devices. [Read more](#)

## INIS Web Analytics



Using data gathered through Google Analytics from 1 January to 31 August 2012, the quantitative and qualitative analyses of the following websites were performed: INIS Collection search, INIS home page and INIS Members' area. [Read more](#)

## Digital Preservation



From the creation of INIS in 1970 until 1996, over 312 000 non-conventional literature reports received from Member States and international organizations were collected and converted to microfiche. The microfiche collection contains over 1 million items, with an estimated 25 million pages of full texts. [Read more](#)

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## INIS Collection and Activities

The International Nuclear Information System (INIS) was established in 1969 by the IAEA, in collaboration with interested Member States and international organizations. The main objective of INIS is to provide access to information on scientific literature on the peaceful uses of nuclear science and technology published worldwide. INIS operates under special membership arrangements that set specific duties and privileges. Currently 128 Member States and 24 international organizations are members of INIS.

The role of INIS, the world's largest custodian of published information in the field of nuclear science and technology, is to collect and process bibliographic metadata and electronic texts of nuclear literature published in IAEA Member States, electronically preserve non-conventional or 'grey' literature, such as IAEA documents, policy reports and full text publications from Member States, and to make the INIS Collection of publications freely available to Internet users.

By the end of July 2012, 68 645 bibliographic records were added to the INIS Collection, bringing the total records available to the public to 3 436 096. An additional 21 755 full text documents were prepared and uploaded, for a total of 461 069 full-text documents available in the Collection, of which 311 962 are publicly accessible. This collection of documents on the peaceful uses of nuclear science and technology is now fully indexed and searchable online using Google-based technology. Over 50 000 searches and 4000 downloads were performed monthly.

With the completion of the Japanese version of the Joint INIS/ETDE Thesaurus, the multilingual Thesaurus is now available in eight languages: the six official languages of the IAEA, namely Arabic, Chinese, English, French, Russian, and Spanish, as well as German and Japanese. It represents a unique multilingual thesaurus in the nuclear field, and serves as a major tool for indexing and describing nuclear information and knowledge in a structured form, assisting in multilingual and semantic searches of the INIS Collection.

Provision of assistance to the national INIS centres to facilitate their active participation in INIS has continued during 2012. The national INIS centre of Georgia was provided with a set of equipment to facilitate their contribution to the INIS Collection and the provision of information services to users. This assistance included an expert assist visit which gave on the job training on all aspects of INIS input preparation and products utilization. The national INIS centre of Egypt hosted training for two fellows from the INIS centre of Yemen, covering all aspects of INIS input preparation, utilization of INIS products and INIS promotion and outreach. The national INIS centre of Belarus hosted one fellow from Croatia and covered all aspects of input preparation and products utilization.

*Taghird Atieh*  
Head, INIS

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## **IAEA Library Collection and Activities**

Since 1958, the IAEA Library has been at the heart of nuclear information management. Throughout its long history, and assisted by new technologies, the Library has provided unmediated access to reusable digital data and trusted information in all areas of nuclear energy and its applications.

The Library's collections are unique, making it one of the essential nuclear information centres in the world. Novel methods of making the IAEA's vast historical and current nuclear information resources available to the largest possible audience are continuously employed. The digitisation projects undertaken have brought into focus new ways of accessing old and current research materials.

The key objectives of the IAEA Library are ensuring the continuous availability of nuclear information to stakeholders, contributing to the preservation of digital information for future generations, and developing innovative nuclear information services for the benefit of the IAEA Secretariat, countries with advanced nuclear power programmes and newcomers. The provision of exemplary customer service through skilled search and information seeking techniques and personal relationships is core to the mission and purpose of the IAEA Library. The services offered to IAEA Staff, Members of Permanent Missions in Vienna, and registered participants of IAEA meetings and workshops include:

### **Resources**

The Library collects materials in a wide variety of formats, covering a broad spectrum of subjects relating to IAEA programmes, focusing on nuclear energy and its applications. As a hybrid library, more than 45% of all resources are available in electronic form. The majority of these resources can be freely accessed by users worldwide through the Library catalogue.

### **Library Subscriptions**

The IAEA Library establishes and maintains subscriptions to numerous resources and vendors. Currently subscriptions encompass more than 40 databases, 10 000 electronic journals and other on-line resources. Within the IAEA IP range, articles found and downloaded by users are made available through the Library's subscriptions or through linking mechanisms provided by sophisticated technology run and supported by the Library.

### **Circulation and Interlibrary Loan**

The Library lends books, documents, technical reports, standards, and audiovisual material to registered library clients and other libraries through interlibrary loans. The Library can also borrow similar materials from other libraries on behalf of eligible library users. We also lend materials to researchers through other libraries.

### **Article or Document Delivery**

The Library can purchase documents from document delivery vendors, retrieve articles, technical reports, standards and other documents from our print or online resources, or borrow such materials through interlibrary loans for eligible clients.

### **Alerts**

The Library offers a daily, weekly or monthly alerting service on select topics relating to scientific research, news, citations, and the Library catalogue. Every two weeks, an announcement service with the latest resources added to our collections and other relevant information is distributed to registered Library

users.

## Reference and Research Support

The Library offers full reference or research support services to eligible clients, and limited services to the public. The research service incorporates literature searches and the use and evaluation of both closed and open access sources.

## Training and Consultation

Specialized, custom-made training sessions on nuclear information and knowledge management are offered on a regular basis. Eligible participants are notified through the IAEA Library announcement service or the Library's intranet website. Library staff are available to IAEA Staff or IAEA Member States for consultation on the organization and availability of nuclear information.

## Quiet Study

A reading room provides space to browse new books, recent journals and daily newspapers. Electronic resources can be accessed through the workstations available to Library visitors. Guest Wi-Fi access is also available.

## Events

The Library organizes, co-organizes and supports regular lectures, workshops and meetings on topics relevant to the IAEA's fields of action.

## Networking

The IAEA Library is the coordinating Library of the International Nuclear Library Network (INLN), where nuclear information professionals from 27 countries around the world come together to share knowledge and information. The INLN, as a global nuclear knowledge management initiative, aims to strengthen international cooperation. Find more information at: <http://inln.iaea.org>

In short, a strong customer orientation provides information on all Library services and activities. Because personal connections are critical to providing Library users with the right information at the right time, the Library has a team of agile and skilled nuclear information professionals who respond quickly and know the appropriate resources in breadth and depth.

More about the IAEA Library: [www.iaea.org/OurWork/ST/NE/Library](http://www.iaea.org/OurWork/ST/NE/Library)

Contact: [IAEA.Library.InformationDesk@iaea.org](mailto:IAEA.Library.InformationDesk@iaea.org)

*Thanos Giannakopoulos*

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## **The International Nuclear Library Network (INLN)**

The International Nuclear Library Network (INLN), coordinated by the IAEA Library, is a global nuclear information and knowledge management initiative. It provides a high benefit solution for nuclear information centres, libraries and research institutes to enhance their information pool and stakeholder services without generating additional costs to their parent organizations. The Network allows for the identification, creation, distribution, and, where appropriate, adoption of insights and experiences that relate to nuclear information management; this represents the INLN's added value. A community of information management best practices in the making, which, coupled with the shared culture of information exchange, is the reason behind the dramatic increase in membership: 37 members from 27 countries currently constitute the INLN.

Members from Argentina, Australia, Austria, Belarus, Brazil, Canada, China, the Czech Republic, Egypt, France, Ghana, India, Indonesia, Ireland, Japan, Mexico, Morocco, New Zealand, Nigeria, Norway, Pakistan, the Republic of Korea, the Russian Federation, Serbia, Tunisia, Turkey, and Uzbekistan reap the benefits of participation in the INLN. The work of the members within the Network focuses on concrete actions: bringing the right information in the right format at the right time to the right people is the Network's major objective.

At a time when digital resources are growing in great proportion, the INLN facilitates the exchange of nuclear information, and provides a forum in which new relationships among nuclear information professionals are built, and existing ones strengthened. Connecting people to people and people to nuclear information is the daily routine of the Network. Among the services offered by members to members, Requests for Information (RfIs) represent by far the largest share. Requests incorporate literature searches, the use and evaluation of both closed and open access nuclear information sources, methods of setting alerting services, nuclear information management research questions, the exchange of insights or experiences, and queries about general guidance on nuclear information. The Document Delivery Service (DDS) remains a major attraction of the INLN, representing a considerable share among all requests submitted. Requests for Interlibrary Loan (RILL) are one of many benefits the INLN offers its members, while the newly introduced service of offering guidance on nuclear information and knowledge management via telephone or Skype has also become popular.

Dedicated to continuous improvement, the Network brings a culture of sharing in nuclear information management and cultivates open communication and exchange among members. Research on nuclear energy is encouraged and assisted, barriers to sharing are overcome, and the exchange of scientific and technical information is fostered.

More about the INLN: [inln.iaea.org](http://inln.iaea.org)

Become a member: [IAEA.Library.InformationDesk@iaea.org](mailto:IAEA.Library.InformationDesk@iaea.org)

*Thanos Giannakopoulos*

Librarian/Communications Specialist

International Nuclear Library Network Coordinator

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## The History of the INIS Collection Search

The INIS Collection Search (ICS) is “the free and open web access to the INIS Collection”. This was the definition chosen to present the ICS during the 2011 IAEA General Conference. Behind this simple definition there is a significant amount of work was done during the last two years to develop a strong web search application. This article looks into the history of the ICS, describing its powerful functionalities.

The implementation of the INIS Collection Search web application followed the recommendation of the 35th INIS Liaison Officer (ILO) meeting to have the Google Search Appliance (GSA) as the underlining search technology for the entire INIS collection. In October 2010, the first presentation of an alternative technology was given to the ILOs, who gave their approval to replace the BASIS search technology previously used by the INIS Online Database (IODB).

In April 2011, the first release of the ICS was completed and made available to the nuclear information community. The rationale behind the release was to maintain the most important functionalities available in the IODB, while taking advantage of the world's leading search technology, and the increased speed and ease of use of the GSA. The result was a tool capable of supporting multilingual queries, searches by metadata fields and Boolean searches. The introduction of the Advanced Search made it possible to build complex queries. However, the main improvement, at that time, was the ability to perform full text indexing and searches within the PDF documents of the non-conventional literature collection, which drastically increased the effectiveness of the search results.

The users positive feedback of the first version of the ICS generated new ideas. Efforts to improve the application resulted in a new project to develop version 2 of the ICS. The project was aimed at deploying a set of new features. Three different sub-releases were deployed in 2011.

In July, the ICS version 2.1 went live, introducing user profiles which allowed users to register and create their own set of saved queries. This feature moved away from the old concept of email notification, offering the users a more sophisticated control tool. The results obtained from multiple searches were available for export in different formats and the download of bibliographic records in citation format was also implemented. The latter functionality fulfilled past requirement from ILOs, not previously available in the IODB.

The two main aspects which drove the improvements of the ICS in the following releases were integration and usability. Three months later, a newer release of ICS included, among other new features, the integration of the INIS Collection and the INIS/ETDE English Thesaurus, with over 30 000 well defined nuclear terms, allowing one entry point to the two main INIS products.

The end of 2011 coincided with the end of the ICS version 2 project, culminating in release 2.3 of the web application. This version focused on improving usability of and accessibility to the search engine. Internationalization of the ICS was achieved through a multilingual user interface available in Arabic, Chinese, English, French, German, Russian and Spanish. A new cross-language search functionality allowed users to perform simultaneous searches in multiple languages, thus increasing the accuracy of the resulting records.

Given the success of the ICS, the Nuclear Information Section (NIS) continued to improve existing and develop new functionalities for the web search engine. The highest level of integration among all INIS products was reached with ICS version 3.1, released at the end of March 2012. The INIS Multilingual Thesaurus, with descriptors in Arabic, Chinese, English, French, German, Russian, Spanish and Japanese, and the remaining INIS authorities - subject categories, journals and report prefixes - were made accessible and searchable through the ICS Advanced search interface.

The current version of the ICS was released at the end of July 2012. A new chapter started with version 3.2

with the introduction of several innovative features, such as: dynamic filtering of search results, translating bibliographic records in different languages, creating RSS 2.0 feeds subscriptions, and associating chosen result sets with user profiles for later consultation or export.

A new concept to explore is not only the integration, but also the extension of information resources. Over 90 000 IAEA Library bibliographic records were added to the INIS Collection Search. This enables a simplified and more efficient single access point to both the INIS and IAEA Library collections.

Nowadays, the nuclear information community has fragmented access through several access points to knowledge available worldwide. Within the IAEA Department of Nuclear Energy, there are different valuable information resources still requiring different search approaches and gateways. The type and format of information are often different, as well as the level of accessibility and usability. We see the opportunity to make the ICS the main access point for many other repositories, taking advantage of the know-how developed during the last two years, in order to simplify and channel the users' search experience.

*Domenico Pistillo*  
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## Collection Search – Technology Overview

The INIS Collection Search (ICS) enables its users to search and retrieve information both efficiently and effectively. This article gives a glance behind the scenes, looking at the software technology, search solutions and the development methodology which were used to make the ICS a high performance application.

The ICS is a web based application built on Microsoft technologies. It is programmed in C# (pronounced as C-Sharp), and targets Version 4.0 of the .Net Framework. A 3-tier client server architecture was designed, in which the user interface, functional process logic, computer data storage and data access are developed and maintained as independent modules.

The user interface (or front end) refers to the contents rendered on the user's browser. As in the Advanced Search query builder, the ICS uses the JQuery JavaScript library extensively to create a rich interactive user experience, allowing the user to progressively build a query, adding multiple options from the designer.

The ICS uses a customized version of Google Search Appliance © (GSA) to perform its search operations. GSA is an enterprise level search solution offered by Google, made of a rack-mounted device providing document indexing functionality, which can be integrated into a web site using a Google search-like interface for end-user retrieval of results. GSA crawls and indexes the full text PDF documents and bibliographic data in the INIS and Library Collections. When a user performs a query on ICS, the query is first converted to a GSA compliant format. This query is then passed on to GSA, which uses its built-in algorithm to search through its index and fetch the most relevant search results for the given query. The search results are then sent back to ICS in XML format, where it is transformed and rendered on the user's web browser. User authentication in ICS is achieved through NUCLEUS, the IAEA's common access point. NUCLEUS account holders have access to over 130 IAEA scientific, technical and regulatory resources. The mechanism of using a single user account to access various other websites and applications is called Single Sign On.

ICS uses a SQL Server database to store user settings, saved queries and workspace related information. It uses LINQ-To-SQL as the Object Relational Mapper for data access.

ICS was developed according to Ivar Jacobson's model of Essential Unified Process (EssUP), focusing on the Iterative Software development method. Each software development cycle is divided into four iterations, namely, Inception, Elaboration, Construction and Transition:

- Inception: the scope of the project is agreed and the high level requirements are finalized.
- Elaboration: the user cases related to the requirements are further defined and a prototype with the implemented user cases is prepared and shared with project management and senior users. All technical risks are identified and mitigation plans outlined.
- Construction: the source code is modified adhering to the coding standard and best practices, and at the end of this iteration a release candidate is reached.
- Transition: the release candidate is tested for user acceptance and any bugs are fixed. At the end of this iteration, the software is deployed on the production environment for all users.

IT landscape evolves very quickly and today's new technologies quickly become old. The key factor of a successful web application is to stay simple but innovative, always meeting users' needs. NIS will continue to look at up-and-coming opportunities, embracing new technologies which could further improve the ICS.

*Balu Ramachandran*  
INIS Consultant

## International Nuclear Information System

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# Mobile Version of the INIS Website

**6 July 2012** - The INIS website has gone mobile!

In line with a recommendation from the 13th INIS/ETDE Joint Technical Committee Meeting, INIS has implemented a mobile version of its website.

With this development, INIS website visitors can easily explore the site on a variety of mobile devices, including iPhone, Blackberry and Android. When accessing INIS from a mobile device, visitors will automatically be re-directed to the mobile version of the INIS website, which optimizes the display for such devices.

The new version of the INIS website has been thoroughly tested on various types of mobile devices running different operating systems. However, should problems be encountered with the display of the contents, visitors can always switch to the website's full version, the same version which is accessible from your desktop.

We hope that this will make the INIS website more accessible and convenient, especially for those who use mobile devices and are often on the go. We also hope with the increase in the use of mobile devices to target new audiences.

Take a look at our new mobile view at <http://www.iaea.org/inis/m>



## INIS Web Analytics

Galileo Galilei once said “Measure what can be measured, and make measurable what cannot be measured.” This approach is well incorporated in the collection of all web statistics and subsequent web analytics. An abundant wealth of information created by web traffic represents a great source for the analysis of various trends and aspects of users’ Internet behaviour. Once collected and analysed, this information can be used by both web site developers and web managers to improve their web presence and to achieve their ultimate goals for running a website.

Web Analytics is the analysis of both qualitative and quantitative data collected from a website, the purpose of which is to drive continuous improvement of the on-line experience to the visitors of the site. Web analytics offers an answer to questions such as, who visits the website and why; what they are looking for; why they are there; and, finally, to determine, according to the predefined criteria and goals, if the site is a success.

This overview uses data from Google Analytics covering the period 1 January to 31 August 2012 for the following websites maintained by INIS:

- INIS Collection Search ([inis.iaea.org/search/](http://inis.iaea.org/search/))
- INIS home page ([www.iaea.org/inis/](http://www.iaea.org/inis/))
- INIS Members area ([www.iaea.org/inis/Members-area](http://www.iaea.org/inis/Members-area))

### 1. INIS Collection Search

**1 January–31 August 2012**

	<b>Total 2011</b>	<b>Monthly average 2011</b>	<b>Total 2012</b>	<b>Monthly average 2012</b>	<b>Monthly increase from 2011</b>
Visits	38 054	3171	48 970	6121	+93%
Unique Visitors	20 917	1743	23 554	2944	+69%
Pageviews	321 695	26 807	386 010	48 251	+80%
Pages / Visit	8.45	/	7.88	/	/
Avg. Visit Duration	00:09:01	/	00:08:40	/	/
Bounce Rate	30.71%	/	37.46%	/	/
New Visits	54.35%	/	46.66%	/	/
Returning visitors	44.65%	/	53.34%	/	/
Downloads	17 527	1460	22 048	2756	+89%

Comparing a monthly average in 2011 to the one in 2012, the INIS Collection Search indicates a substantial increase, or 93%, in the number of visits and almost a 70% increase in unique visitors accessing the search page. Each month, approximately 3000 visitors searched the INIS Collection, viewing almost 50 000 web pages.

Out of 49 000 visits, over 30 000 were through different referral sites. Around 8000 visits came from various areas of the INIS home page, with an additional 2500 from [iaea.org](http://iaea.org). This includes 1500 visits from [nucleus.iaea.org](http://nucleus.iaea.org). The biggest outside referral was [worldwidescience.org](http://worldwidescience.org), followed by two Japanese sites.

The Advanced Search was used 30 000 times, 8% of all searches using advanced features.

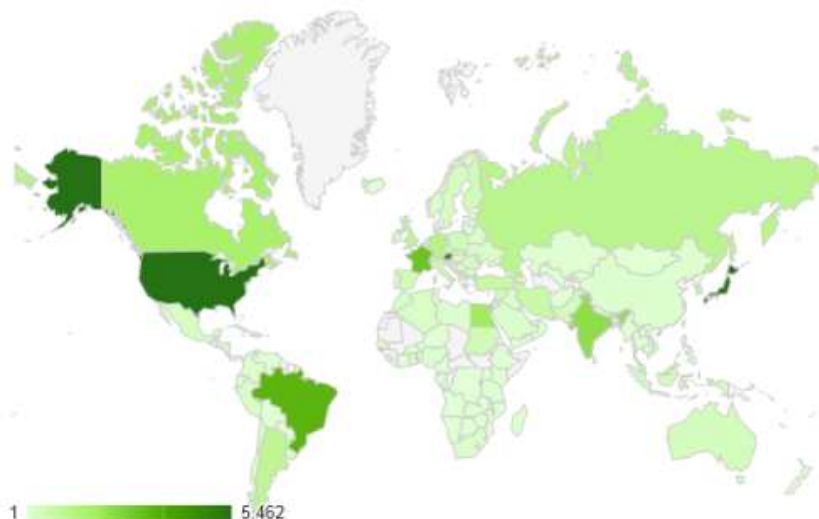
48% of all visitors accessed the INIS home page only once, while approximately 28% accessed it more than 10 times.

The most frequently used search term was Fukushima, followed by Chernobyl, nuclear safety, nuclear, Three Mile Island, plasma, and nuclear reactors.

Internet Explorer was used in 55% of searches, followed by Firefox, with 24%, and Chrome, with 14%.

#### Visitors' Location

Country/Territory	Visits
USA	5462
Japan	5349
Austria	5018
Brazil	3372
France	2991
India	2269
Egypt	1902
Canada	1648
Germany	1235
Russia	1128
	48 970



The greatest number of visits came from the United States of America, closely followed by Japan and Austria. Twelve countries had more than 1000 visitors. Almost 80% of all INIS Collection searches came from 20 countries, which clearly indicates the need for more promotional activities to be conducted within INIS Member States.

Language	Visits
en-us	24 022
ja	4987
fr	3767
pt-br	3290
es	1868
ru	1200
en-gb	902
de	819
ko	771
en	603
	48 970

#### Visitors' Language

English was the most frequently used language on the browser (US and GB), used in more than 50% of the cases, followed by Japanese, French, Brazilian Portuguese, French and Russian.

## 2. INIS Home Page

1 January–31 August 2012

	Total 2011	Monthly average 2011	Total 2012	Monthly average 2012	Monthly increase from 2011
Visits	29 587	2465	27 431	3428	+39%
Unique visitors	14 887	1240	13 980	1747	+40%

Pageviews	79 644	6637	66 473	8309	+25%
Pages / visit	2.69	/	2.42	/	/
Avg. visit duration	00:02:47	/	00:02:27	/	/
Bounce rate	58.34%	/	54.37%	/	/
New visits	48.90%	/	48.23%	/	/
Returning visitors	51.10%	/	51.77%	/	/

INIS home page analytics indicate a substantial increase of 40% in the number of visits and unique visitors. Over 8300 web pages were viewed by almost 3500 visitors per month.

During this period, 48% of all visitors accessed the INIS home page only once, while around 28% of visitors accessed it more than 10 times.

#### Visitors' Location

Country/Territory	Visits
Austria	3859
USA	1965
India	1749
France	1246
Japan	1156
Russia	1125
Malaysia	1099
Germany	793
Republic of Korea	749
Nigeria	736
	27 431

#### Visitors' Language

Language	Visits
en-us	15 007
fr	2353
ja	1004
ru	900
ru-ru	804
ko	725
es	718
en-gb	704
pt-br	669
en	553
	27 431

Due to the physical location of the INIS and IAEA headquarters, Austria had the most visits, followed by the USA, India, France and Japan.

The INIS contacts, the INIS Collection, and the reference series were the most frequently visited pages. They were viewed more than 1000 times each, followed by INIS history, events, web page search, activities, and the site index, which had over 500 views.

Internet Explorer, the most popular browser, was used in around 45% of the visits, followed by Firefox, with 31%, and Chrome, gaining ground with just over 16%.

### 3. INIS Members' Area

1 January–31 August 2012

	Total 2011	Monthly average 2011	Total 2012	Monthly average 2012	Monthly increase from 2011
Visits	1738 145	1208	151	+4%	
Unique visitors	464	39	356	45	+15%
Pageviews	6251	521	6084	761	+46%
Pages / visit	3.60	/	5.04	/	/
Avg. visit duration	00:03:26	/	00:04:41	/	/
Bounce rate	51.67%	/	36.67%	/	/

New visits	48.90%	/	25.41%	/	/
Returning visitors	51.10%	/	74.59%	/	/

Analytics for the INIS Members' Area indicate that on average, 45 users visit the site each month, at least 3 times. This is a small increase compared to 2011, but the number of pages viewed shows a significant increase of 46%. During this period, 25% of all visitors accessed the INIS Members' Area only once, while 27% of visitors accessed it more than 25 times.

#### Visitors' Location

Country/Territory	Visits
Austria	305
Malaysia	91
Japan	65
Niger	47
Kenya	37
India	35
Brazil	32
Ghana	28
Côte d'Ivoire	22
France	22
	1208

#### Visitors' Language

Language	Visits
en-us	737
fr	120
ja	64
es	38
pt-br	31
ru	28
en	22
zh-cn	21
en-gb	20
hu-hu	17
	1208

Due to the physical location of the INIS and IAEA headquarters, Austria had the most visits, followed by Malaysia and Japan.

The pages hosting INIS Correspondence, the Membership Agreement, and Promotion were the most frequently visited.

Internet Explorer was the most popular browser used in around 60% of visits, followed by Firefox, with 27%.

*Dobrica Savic*  
Head, NIS



## Digital Preservation

From the creation of INIS in 1970 until 1996, over 312 000 non-conventional literature (NCL) reports received from Member States and some international organizations were collected and converted to microfiche. The microfiche collection contains over 1 million items, with an estimated 17 million pages of full texts.

In 1997, the INIS Secretariat replaced the microfiche based production system with an imaging system designed to process and disseminate all NCL documents in electronic format. The in-house digitization of the microfiche collection started in 2002 after the acquisition of a Sunrise 2000 microfiche scanner. Initially aimed at fulfilling document delivery requests, the digitization of the full collection became an actual topic in 2003, after a release of the new INIS on-line database that supported direct access to full-texts.

INIS decided to outsource a substantial part of the microfiche scanning in order to support the existing in-house digitization capabilities. Contracts were issued after a formal invitation to bid with the amount of microfiche scanning requests dependent on available funds. Some funding for this project was provided by the Nuclear Knowledge Management Unit (NKM) of the IAEA. Throughout the years, three different contractors were engaged.

Efficient coordination and a well defined strategy are necessary to ensure the success of such a project. It was especially important to avoid duplication of work and to take into consideration the different digitization initiatives by the IAEA Member States. For this reason, INIS chose the country of publication as the main selection criteria and an extensive coordination effort with the respective Member State followed each decision to digitize their respective parts of the INIS based microfiche collection. In order to support national document and knowledge preservation efforts, the INIS Secretariat provided Member States with DVD country sets of their digitized non-conventional literature (NCL). The following table gives a detailed overview of INIS microfiche digitization activities since its inception in 2003.

**Digitization of the INIS NCL Collection on Microfiche**

<b>Year</b>	<b>PDF</b>	<b>Pages</b>	<b>Size (GB)</b>
2003	566	49 574	3.7
2004	19 962	1 325 217	36.5
2005	36 935	1 577 365	32.1
2006	23 163	1 367 637	33.3
2007	9 313	668 769	16.3
2008	25 675	1 228 057	29.7
2009	81 221	3 939 811	77.3
2010	33 881	1 969 110	45.9
2011	24 027	511 990	16.2
2012	20 434	843 579	40.7
<b>Total:</b>	<b>275 177</b>	<b>13 481 109</b>	<b>331.8</b>

Close to 80% of the INIS microfiche collection has been digitized since the beginning of the project. An estimated 3.5 million pages still need to be processed before project completion. Depending on available resources, this major project is expected to be completed within the next two years. The ultimate goal is the complete integration of the microfiche-based NCL into the INIS Collection with on-line access to full texts provided via the Google-based INIS Collection Search.

The INIS Collection Search (ICS) offers Internet users free and open web access to INIS Collection. It currently holds over 3.5 million bibliographic (metadata) records and over 450 000 full text NCL documents, of which over 320 000 are available to the public. This collection of documents on the peaceful uses of nuclear science and technology is now fully indexed and searchable online using Google-based technology. Around 50 000 searches and 3000 downloads are performed monthly. A direct link to the INIS Collection search is available from the INIS home page ([www.iaea.org/inis](http://www.iaea.org/inis)) or directly from <http://inis.iaea.org/search/>.

In addition to the digitization of its microfiche collection of NCL, INIS is also involved with the digitization of old IAEA publications. Examples of INIS in-house efforts include the digitization of the IAEA Bulletin in all available languages, including by INIS bibliographic metadata ([www.iaea.org/bulletin](http://www.iaea.org/bulletin)); the digitization of Member States' Technical Reports and Proceedings Series, done in cooperation with the IAEA Library; digitization of reports from the International Nuclear Data Committee Collection (INDC); and the digitization of out-of-print IAEA publications.

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