



národní  
úložiště  
šedé  
literatury

## **INIS: Repozitář šedé literatury z oblasti jaderné energie**

Savić, Dobrica  
2015

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8th Conference on Grey Literature and Repositories

21 October 2015, Prague

# INIS: Nuclear Grey Literature Repository

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# Presentation at a glance

- Challenges and solution
- IAEA nuclear information goals
- International Nuclear Information System (INIS)
- INIS collection
- Search engine
- ICS simple and advanced search
- Main features of the INIS Collection Search (ICS)
- Advantages and disadvantages
- Lessons learned

# Challenges and solution

## Challenge

*How to increase use, accessibility, usability, and expandability of an on-line repository with 3.8 million bibliographic records and over a million full-text nuclear related documents*

## Solution

- Make it open and freely accessible to the public
- Replace a legacy database search with a top-of-the-line one
- Simplify the basic search interface and improve the advanced search
- Incorporate rich features but make them as discrete as possible
- Incorporate with Google.com, Google Scholar and other search engines



*[inis.iaea.org/search](http://inis.iaea.org/search)*

# International Atomic Energy Agency (IAEA)

## ■ International Atomic Energy Agency (IAEA)

- The world's leading Agency for cooperation in the nuclear field
- Created in 1957 as part of the United Nations family
- The IAEA works with its 165 (as of September 2015) Member States and multiple partners worldwide to promote safe, secure and peaceful uses of nuclear technologies
- The IAEA Secretariat is based in Vienna, Austria, with 2300
- Multi-disciplinary professional and support staff from more than 100 countries



## ■ IAEA nuclear information goals

- Foster the exchange of scientific and technical information on the peaceful use of nuclear science and technology (collect, process, preserve and disseminate)
- Increase awareness in Member States of the importance of maintaining efficient and effective systems for managing nuclear information resources
- Assist with capacity building and training
- Provide information services and support to Member States

# International Nuclear Information System (INIS)

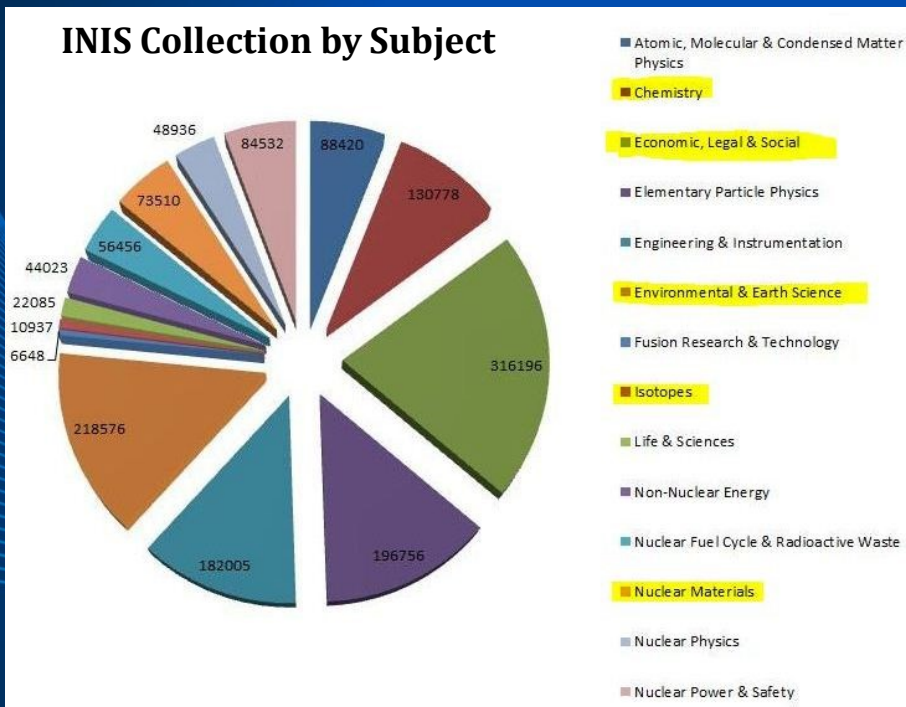
- One of the world's largest custodians of non-conventional published literature in the field of nuclear science and technology
- Established as part of the IAEA in 1970
- 130 states and 24 international organizations are INIS Members
- The role:
  - to collect and process bibliographic metadata and full-texts of nuclear literature published in IAEA Member States
  - to electronically preserve non-conventional or 'grey' literature, such as IAEA documents, policy reports and other full-text publications from Member States
  - to make the INIS Collection of publications freely accessible to all Internet users around the world

Free, open and unrestricted web access  
to the INIS Collection since April 2009

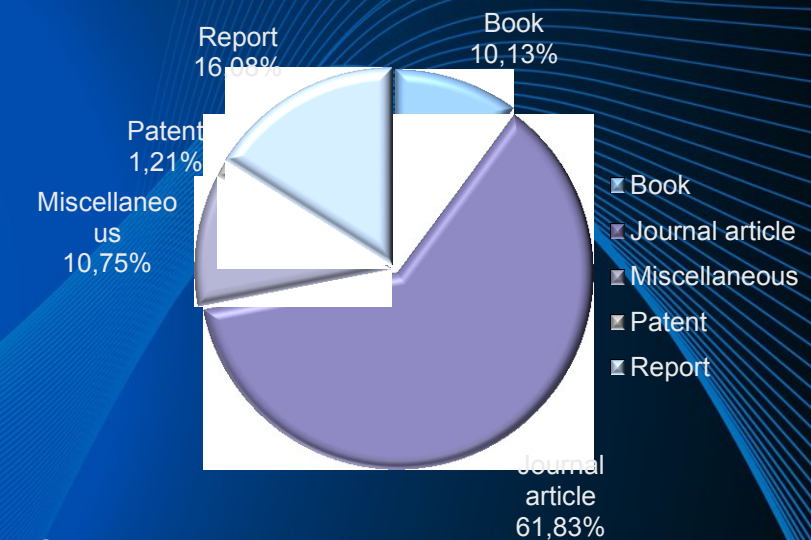
# INIS collection

- Average annual input 120,000+ bibliographic records
- Collection status on 1 September 2015
  - over 3.8 million bibliographic records
  - 1,070,000 full-text documents (NCL), 750,000 INIS & 320,00 other sources

### INIS Collection by Subject



### Bibliographic Records by Type



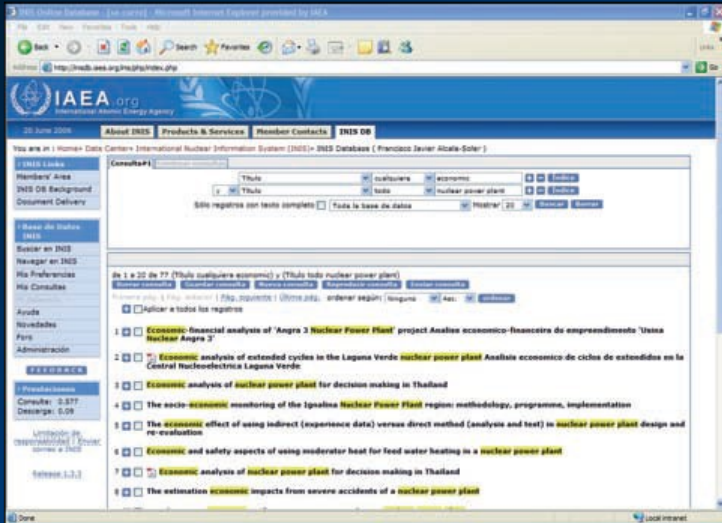
1 October 2015: 3,846,526 records

# Search engine

## Old Search 1970-2011

### BASIS RDBMS

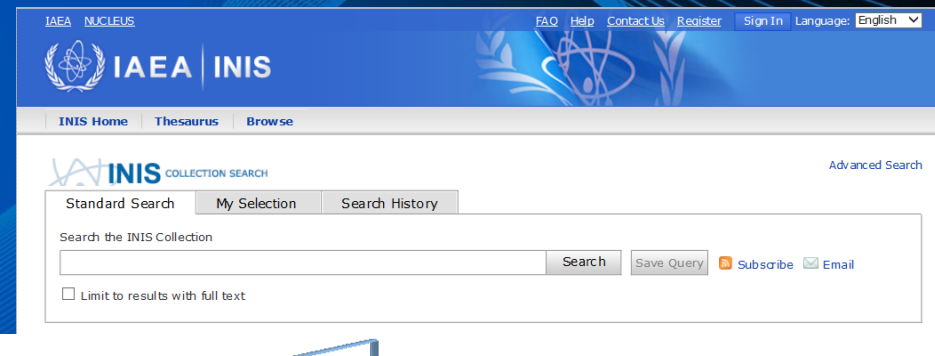
- Ownership and support (OpenText)
- Speed
- Cluttered interface made for librarians
- Only advanced search
- Full-text indexing not implemented
- Multilingual interface/search support
- Support for use of thesaurus and authorities



## New Search 2011

### Google Search Appliance (GSA)

- Great speed and scalability
- Uncluttered, easy to use start-up interface
- Advanced options to broaden or tighten search
- Full-text indexing
- More relevant results
- Faceted/filtered search



[inis.iaea.org/search](http://inis.iaea.org/search)



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**Help - All words**  
All the terms entered in this textbox will be searched EVERYWHERE in the search results. All the terms will appear in the results, but not necessarily together.  
Example: if you enter the terms *nuclear safety aspects*, all the search results will contain all of the words "nuclear", "safety" and "aspects".

**Standard Search**

**Advanced Search**

Search INIS Collection for documents that...

Indude:  
   [Add Another](#)

But do **not** indude:

- All words
- Exact Phrase
- Abstract
- Author
- Country/Org.
- Descriptors
- DEC
- DEI
- INIS Issue
- INIS Volume
- Journal
- Language
- Library Subject
- Record Type
- Ref. Number
- Rel. Record
- Report Number
- Source
- Subject Category
- Title
- Publ. Year

[INIS Collection Search Highlights](#)

**Also Search:**

- 中文
- English
- Français
- Deutsch
- 日本語
- Русский
- Español

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**Advanced Search**

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Search INIS Collection for documents that...

**Indude:**  
All words      All words      Add Another

**But do not indude:**  
Anywhere      Add Another

**Also Search:**  
 中文  
 English  
 Français  
 Deutsch  
 日本語  
 Русский  
 Español


Abstract  
Author  
Country/Org.  
Descriptors  
DEC  
DEI  
INIS Issue  
INIS Volume  
Journal  
Language  
Library Subject  
Record Type  
Ref. Number  
Rel. Record  
Report Number  
Source  
Subject Category  
Title  
Publ. Year

Search

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**Standard Search**

**Advanced Search**

Search INIS Collection for documents that...

Indude:  
All words ▼

But do **not** indude:  
Anywhere ▼

**Also Search:**  
 中文  
 English  
 Français  
 Deutsch  
 日本語  
 Русский  
 Español

All words  
Exact Phrase  
Abstract  
Author  
Country/Org.  
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Journal  
Language  
Library Subject  
Record Type  
Ref. Number  
Rel. Record  
Report Number  
Source  
Subject Category  
Title  
Publ. Year

Clear All

Add Another


Add Another

Search

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**Standard Search**

**Advanced Search**

Search INIS Collection for documents that...

Indude:  
All words ▼

But do **not** indude:  
Anywhere ▼

**Clear All**

**Also Search:**  
 中文  
 English  
 Français  
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**Search**

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**Dropdown Menu:**  
All words  
Exact Phrase  
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Record Type  
Ref. Number  
Rel. Record  
Report Number  
Source  
Subject Category  
Title  
Publ. Year

# Main features of the INIS Collection Search (ICS)

## Platform

- Google Search Appliance© technology - renowned, simple, fast, flexible
- Project started in 2010. Current interface version 4.4, May 2014
- Virtual servers within the IAEA
- 24/7 availability



## Accessibility

- Free and open web-based application. Nothing to install
- Mobile Apps for iPad, iPhone, Android
- Widget for searches from other websites with or without filter

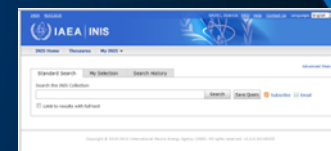


## Ease of use

- Intuitive, self-explanatory initial screen
- No previous INIS Collection knowledge required
- A single search box communicates confidence to users that our search tools can meet their information needs from a single point of entry

## Advanced Search

- Offers more precise search
- Metadata and Boolean search
- Query builder with syntax generator
- Search for all words & exact phrase; include/exclude metadata; select languages; range queries (2007..2009) ; dropdown menus



# Main features (cont.)

- **Faceted search**

- Dynamic navigation through country, language, publication year, INIS Volume and subject

- **Expandability**

- To new collections, databases, repositories
- To new formats/types of documents



- **Multilingualism**

- ICS interface available in 8 languages
- INIS Thesaurus also available in 8 languages (cross-language search)
- Automatic Google translation into 8 languages



- **Authority Files**

- Journal titles; CODEN; ISSN; Subject category; Descriptor; Country/Organization; Author; Report number

# Main features (cont.)

## ■ Usability

- Print/export results in different formats (PDF, HTML, Excel, XML)
- Download of citations in plain text, RIS format, RefWorks, EndNote
- Creation of RSS feeds
- E-mail search results as a link
- Stop words for languages other than English
- Translation of bibliographic records into other languages using Google Translator
- Browse subject categories, top searches, Thesaurus



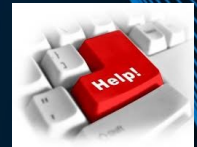
## ■ User profiling

- User registration (Single Sign-On)
- Set up interface language; number of displayed results per page; save queries; search updates; email query results
- Workspace concept (save documents found; translate into other languages)



## ■ Help

- FAQ (on INIS and on ICS)
- On-line help file
- Pop-up hints: examples on how to build a query using metadata
- E-training course





# Advantages and disadvantages

## Impact of using GSA

### PROS

- Users' familiarity with a Google-type interface
- Many features available out of the box with little configuration
- Possibility to include many features in foreground or background
- Quick and relevant response to searches
- Easy to customize the UI by editing the XSLT
- Scalability

### CONS

- Cost: license for records, development, daily running and maintenance
- GSA index and/or database is not in administrator's control, no direct access to it
- GSA is a search tool. It is not a collection management tool, not a reporting tool, and not a statistical tool
- Branding and long-term indirect impact



## Impact of opening access to Google.com and Google Scholar

- 2013: 50,000 searches and 3,000 downloads a month
- 2015: 200,000 searches and 160,000 downloads a month (95% of downloads are through Google)

# Lessons learned

## To increase use

- Make the repository open and freely accessible to the public
- Replace a legacy database search with a top-of-the-line one
- Provide full-text of documents

## To improve usability (meet user needs)

- Simplify the basic search interface and improve the advanced search
- Incorporate rich features but make them as discrete as possible

## To enable expandability (scalability)

- Get a top performance technical solution
- Provide for different record formats

## To increase accessibility

- Incorporate it with Google.com, Google Scholar and other search engines
- Invest in promotion

***Age si quid agis!***

If you do something, do it well!

**Thank you!**