INIS: Repozitář šedé literatury z oblasti jaderné energie

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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

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

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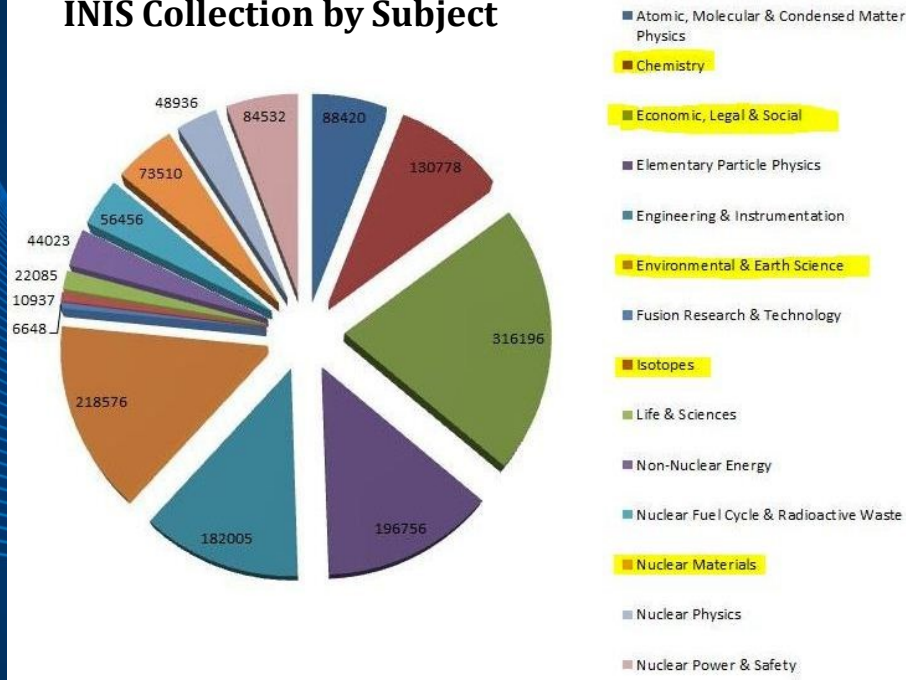# International Nuclear Information System (INIS)

- 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

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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

- Atomic, Molecular & Condensed Matter Physics
- Chemistry
- Economic, Legal & Social
- Elementary Particle Physics
- Engineering & Instrumentation
- Environmental & Earth Science
- Fusion Research & Technology
- Isotopes
- Life & Sciences
- Non-Nuclear Energy
- Nuclear Fuel Cycle & Radioactive Waste
- Nuclear Materials
- Nuclear Physics
- Nuclear Power & Safety

88420, 130778, 316196, 196756, 182005, 218576, 6648, 10937, 22085, 44023, 56456, 73510, 48936, 84532

Bibliographic Records by Type

- Report 16.08%
- Book 10,13%
- Patent 1,21%
- Miscellaneous 10,75%
- Journal article 61,83%

Legend:
- Book
- Journal article
- Miscellaneous
- Patent
- Report

1 October 2015: 3,846,526 records

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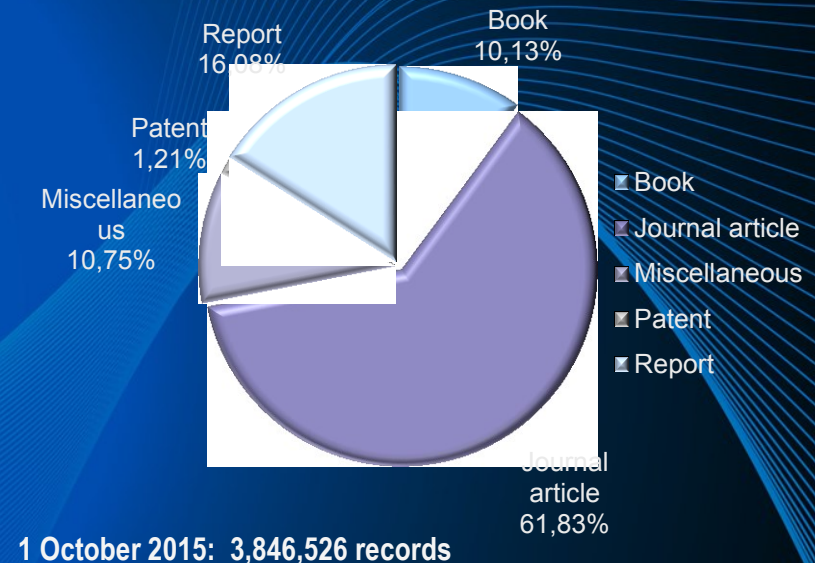
Search engine

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
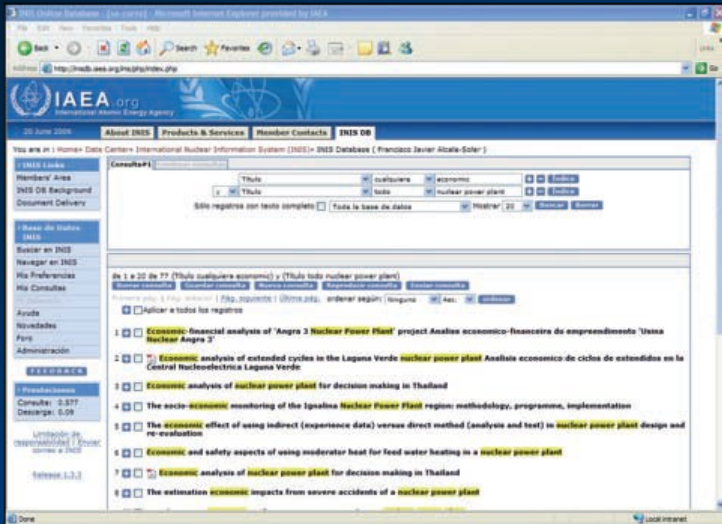
New Search 2011

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

ISC: Simple Search

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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
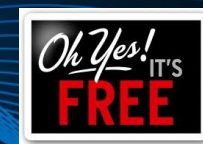
Google

Oh Yes! IT'S FREE
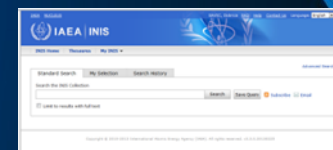
Main features (cont.)

- **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

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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)

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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!