

# Technical Meeting on Development of New Nuclear Information Resources and Their Integration

4 – 7 June 2007, Vienna, Austria

Terms of Reference

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## Background

Managing nuclear knowledge requires paying attention not only to the concept of organizational knowledge but also to nuclear information sources external to the organization. External information encompasses regulatory, economic, technological and market factors that could potentially influence present and future trends in the nuclear sector. External nuclear information is therefore considered key for strategic decision-making in most nuclear organizations.

The Internet has revolutionized the way organizations seek information and call attention to their own activities. As a specific advanced information technology, Internet is also helping organizations to access a wider range of information sources and to improve the speed of information acquisition. However, web information sources are often volatile. Acquiring, preserving and making nuclear knowledge and information accessible from the Internet for future generations is important (*Web archiving for long term access*). Complex collection of information sources need to be harvested and the information spread to be integrated with the goal of improving the quantitative and qualitative value of the knowledge available to decision makers (*Business intelligence and knowledge management*). This shift can be addressed through the utilization of taxonomy, ontology and intelligent agents.

In 2002, the IAEA General Conference adopted a new resolution on Nuclear Knowledge, emphasizing the importance of nuclear knowledge management. The resolution was reiterated in subsequent years. The lately IAEA General Conference of 2006 (GC(50)/RES/13c) requested the Secretariat to continue to develop tools and methods to capture, share and preserve nuclear knowledge, considering also the increasing importance of information and knowledge available through the Internet. In response the IAEA has started a pilot project under the heading NuArch (Nuclear Archives) that started to tackle the issue of web harvesting in the knowledge preservation in the nuclear field. An IAEA technical document, "*Web harvesting for nuclear knowledge preservation*", is to be published soon. Moreover the IAEA is currently conducting pilot projects such as the Fast Reactor Knowledge Management Portal with the aims of preserving nuclear knowledge and building a comprehensive nuclear knowledge base on Fast Reactors to the service of Member States.

## Programmatic context

The project is being developed under task C.3.03/01 in the Agency's Programme & Budget for 2006–2007 by the INIS&NKM Section, Department of Nuclear Energy.

## Technical Meeting

To facilitate the development of new nuclear information resources and their integration, an IAEA Technical Meeting will be held 4-7 June 2007 at the Agency's headquarters in Vienna, Austria. During this meeting, experts from representative Member States will overview the actual best practices and possible ways in which information resources can be shared and

structured (e.g. information exchange using [open-archives initiative \(OAI\)](#), semantic search, creating domain-specific ontologies).

## **Objectives of the Technical Meeting**

The following objectives have been set for the meeting:

- To describe the types of nuclear information resources which are, or can be made, available by organizations in Member States and evaluate their usability.
- To provide a forum sharing experiences and best practices regarding practical methods in
  - a) knowledge preservation and archiving for long term access
  - b) harvesting and building comprehensive knowledge repositories.
- To identify typical obstacles and ways of overcoming them, if available, in harvesting knowledge items from Internet.

Participant presentations and discussions should allow accomplishment of these objectives.

## **Outcomes of the Technical Meeting**

At the conclusion of the Technical Meeting, the participants and Agency representatives will be expected to have generated the following work-products:

- Recommendations on best practices and standards relevant to build knowledge repositories from Internet information resources
- Agreed-upon examples of current practical methods being used or developed by Nuclear Knowledge Management
- Recommendations for types of knowledge services the IAEA should provide in the nuclear field.

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