



Contribution ID: 56

Type: poster

Technical Publications As Indicators For Nuclear Fuel Cycle Declarable Activities

Thursday, 23 October 2014 09:50 (40 minutes)

The Department of Safeguards aims to provide credible assurances to the international community that States are fulfilling their safeguards obligations in that all nuclear material remains in peaceful use. It does so in part by developing and implementing methodologies for early detection of undeclared activities or misuse of nuclear material or technology, based on large and diverse sources of information.

Analysing scientific, technical and patent information allows analysts in the Department to understand the technology available to a State, to forecast possible technical developments, to map collaborative research activities within and across States, and compare that information with declarations received by the State for completeness and correctness. Furthermore, with regard to patent information, scientists or companies want to make sure their intellectual property is protected; accordingly, patents are frequently filed before the information is published elsewhere, making patent information also an early indicator of relevant activities.

Dealing with such large information sources requires the use of an innovative methodology conducting analysis. The Department has recently begun to examine the efficacy of link analysis tools to help carry out its mission. Using the link analysis platform Palantir, the authors conducted several case studies with the aim of deriving sound analytical results from large amounts of technical information within a reasonable time frame. The authors used data sets of bibliographic references from the IAEA International Nuclear Information System (INIS), Web of Science, Science Direct and data on worldwide patents from the European Patent Office (EPO). Based on these case studies, the authors are developing methodologies for the efficient application of link analysis to scientific and technical information, thus strengthening the Department's information collection and analysis capabilities and the overall process of State evaluation.

Country or International Organization

IAEA

EPR Number (required for all IAEA-SG staff)

729

Primary authors: EL GEBALY, Ahmed (IAEA); SCHULER, Regine (IAEA); FELDMAN, Yana (IAEA)

Co-authors: GAGNE, Danny (IAEA); FERGUSON, Matt (IAEA); SCHOT, Paul-Marc (IAEA)

Presenter: SCHULER, Regine (IAEA)

Session Classification: Technical Aspects of Information Collection and Analysis: E-Posters