



ID: P4.3-420

Type: E-poster

## conditions and special considerations to the use of natural language processing for analysis of proliferation-related technologies development: case of non-P5 states

The authors put forward a hypothesis that when independent organizations in Country N carry out nuclear/high-tech-related developments, a basis for a network of intellectual property clusters is created. When reviewed separately, they do not raise additional doubts about their end use potential. However, such clusters collectively create prerequisites for acquiring technologies for creating testable explosives. Data mining methods are to be used for hypothesis verification. Currently, the use of such mechanisms for an open network segment processing may be limited due to (i) incomplete descriptions of target systems with development potential and (ii) the non-additive nature of the data. The authors introduce the innovative agent system (AS) for big data processing and use it in a distributed manner. In the study, the AS is considered a tool enabling the Comprehensive Nuclear-Test-Ban Treaty Organization's decision making bodies to identify and prevent efforts to establish testing infrastructure at an early technology development stage. In the CTBT's context, Annex 2 States profiles with traceable packages of registered IP are suggested to be introduced and maintained, thus complementing the conventional International Monitoring System's capability. The model, transparent exchange of methodologies and updates in the database enable the international community to monitor information on activities potentially violating the testing regimes.

### E-mail

ivnasteka@gmail.com

### In-person or online preference

**Primary authors:** Mr NASTEKA, Ivan (National Research Nuclear University MEPhI); Ms SHESTAKOVA, Sofya (Moscow State University)

**Presenters:** Mr NASTEKA, Ivan (National Research Nuclear University MEPhI); Ms SHESTAKOVA, Sofya (Moscow State University)

**Session Classification:** P4.3 Use of enabling Information Technologies

**Track Classification:** Theme 4. Sustainment of Networks, Performance Evaluation, and Optimization: T4.3 Use of enabling Information Technologies