



## **IN-FIELD INSPECTION SUPPORT SOFTWARE: A STATUS REPORT ON THE COMMON INSPECTION ON-SITE SOFTWARE PACKAGE (CIOSP) PROJECT**

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IAEA have invested much thought and effort into developing software that can assist inspectors during their inspection work. Experience with such applications has been steadily growing and IAEA have recently commissioned a next-generation software package.

This kind of software accommodates inspection tasks that can vary substantially in function depending on the type of installation being inspected as well as ensures that the resulting software package has a wide range of usability and can preclude excessive development of plant-specific applications.

The Common Inspection Onsite Software Package is being developed in the Department of Safeguards to address the limitations of the existing software and to expand its coverage of the inspection process. CIOSP is “common” in that it is aimed at providing support for as many facilities as possible with the minimum re-configuration. At the same time it has to cater for varying needs of individual facilities, different instrumentation and verification methods used. A component-based approach was taken to successfully tackle the challenges that the development of this software presented.

CIOSP consists of the following major components:

- A framework into which individual plug-ins supporting various inspection activities can integrate at run-time.
- A central data store containing all facility configuration data and all data collected during inspections.
- A local data store, which resides on the inspector’s computer, where the current inspection’s data is stored.
- A set of services used by all plug-ins (i.e. data transformation, authentication, replication services etc.).

This architecture allows for incremental development and extension of the software with plug-ins that support individual inspection activities. The core set of components along with the framework, the Inventory Verification, Book Examination and Records and Reports Comparison plug-ins have been developed. The development of the Short Notice Random Inspection (SNRI) plug-in is planned for this year.

Extensive beta and field testing of the CIOSP software has been performed at several facilities in Japan and Indonesia. The feedback received has been reflected in the software and the system is ready to be accepted for inspection use.

The significance of this work cannot be underestimated. It will allow facilities to be supported by a single automated tool thus streamlining and improving efficiency of inspection activities. In addition, support for new requirements can be delivered more rapidly.