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## Safeguards and Multimedia Data: Appraisal of New Techniques

Open Source information plays an important role in International Atomic Energy Agency (IAEA) verification activities. The IAEA's organisational capacity for monitoring textual data is already highly developed. In contrast, the burgeoning category of accessible, digital data in multimedia formats, such as pictures, video and audio files, has presented a more challenging target for efficient monitoring in a verification context.

New technologies, e.g. automated audio transcription and extraction of data in multiple languages, would provide greater sophistication and reach for IAEA verification activities, enabling its analysts to efficiently collect, process and analyse greater quantities of multimedia data. Similarly, developments in Optical Character Recognition (OCR), e.g. in identifying, capturing and transcribing embedded text in video files, would enable useful incremental improvements in the systematic incorporation of multimedia data into verification analysis.

In this paper, we assess the suitability for verification analysis of a range of commonly-available open license and commercially-developed tools for analysing audio and video data. The paper adopts a use-case approach in order to test the efficacy of tools and techniques in scenarios directly relevant to IAEA Safeguards research, and by benchmarking the viability of these tools according to their demonstrated Safeguards-relevant applications.

### Which "Key Question" does your Abstract address?

TEC2.7

### Topics

TEC2

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