



Detecting insurance fraud with the use of Tovek technology

No data, no evidence

An insurance company asked TOVEK for help in investigating insurance fraud. The goal was to eliminate claims deliberately caused by its clients. These were real claims with an inflated value, as well as fictitious claims that never occurred.

Cases of organised groups belong among the most damaging insurance frauds. These cases, when investigated, usually show that the perpetrators have a good knowledge of the procedures for taking out insurance contracts, investigating the circumstances of claims and the claims settlement proceedings.

In order to investigate similar cases successfully, it is necessary to secure evidence of links between the group members, or at least to find significant indications of links, in order to file criminal charges. Information on links is mostly found by insurers in internal documents on individual business cases. However, links between persons, except for those specifically passed on (e.g. account numbers, names of imaginary persons, address points, telephone and e-mail contacts), are not found there.

There's data, but too much of it

Today, social networks, mandatory disclosures of company business activities, advertisements and media offer a vast amount of data useful for expanding knowledge of potential contacts between entities. They come in an unstructured form, but technically well workable.

We focused on this data to trace possible links between suspicious persons. We selected sources most likely disclosing contacts to complement internal information. In case of searching for links of economically active persons, these were mainly the contents of documents in the Collection

of Deeds (annual reports, notarial deeds). The same applies to entities with foreign participation as their domestic registers provide similar data. For natural entities, it included data traceable in advertising media, discussion groups, social networks and local media.

We solved the problem of large amount of unstructured data by using the full-text technology Tovek. In the first phase of information gathering, we used the Tovek Finder service to search and prepare potentially relevant documents for processing. In particular, these documents contained items such as names of people, events and other data useful for finding links between subjects. The prepared data was processed, i.e. indexed by utilizing the Tovek Server. This full-text technology enabled an automatic extraction of people's names, companies (including identification numbers), email addresses, phone numbers and bank accounts from the documents. But some of the files were only in the form of images. The server-based processing solution, however, allowed us to deploy automatically an OCR technology, making the documents full-text processable.

► „As we have seen, tracking down information from OSINT sources is not enough. For the initial search for suspicious cases, the internal data in relational databases are indispensable. However, they do not make it quick and user-friendly to supplement internal data with open sources. It was the latter that allowed us to confirm the hypothesis of an organized group. That's why we incorporated Tovek's technology into our standard workflow.“

There is evidence, but how to present it clearly

Once we had processed sources with a high potential to find associations between subjects, it was necessary to present the associations found in a convincing way. For most “readers”, reports with a large number of names in a short period of time are not clear. Especially when they are similar or when they differ only in first name.

The graphical treatment of interconnections solves this situation. Multiple links between subjects were made clearer by using large tables. The grouping of persons progressing together into units were supported by the hypotheses stated in the text. For these purposes, we used the integrated linkage graph features in Tovek Tools. We easily supplemented the internal “hard data” presented in the graphs with items found in open sources.

The overall result clearly described the likely links between the entities involved in insurance fraud.

All in one

Most companies make use of database technologies working very well with structured data, including graphical interfaces. However, as we have seen in tracking down information from OSINT sources, this is not enough.

It is clear that internal data in relational databases is irreplaceable for an initial search for suspicious cases. They allow the best stored data evaluation while using configurable criteria. However, they usually do not allow quick and user-friendly addition of open sources to the internal data. And these were what actually allowed us to confirm the hypothesis of an organized group.

The insurance company uncovered the fraud in the scale of the tens of millions of crowns, which the insurance company would have paid out unnecessarily. For this reason we have used the Tovek Server, Tovek Tools and Tovek Finder technologies and incorporated them into our standard workflows.

► **Make an appointment
to learn more.**

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