Program for Analysis Retrieval And Navigation On
Intelligence Data

# PARANOID

PARANOID:
Quick processing of structured and unstructured information for intelligence.



*Figure 1:   PARANOID navigation and analysis on interrelated data*

## Information and Intelligence in Peace Support Operations

During the preparation for and the conduct of military operations large quantities of information have to be processed quickly to provide Intelligence to support the commander's decision making process.
Up until now, the main interest during military operations has been in the status and movements of military units. However, in the current environment of Peace Support Operations (PSO) this requirement has expanded to include a need for other information, for example about people, civil organisations, populations, and different kinds of (not necessarily military) events.

Another important change concerns the format in which information is received. These formats can either be those of formatted massages or documents in free text format, provided by a range of different sources and agencies.

To be able to conduct analyses both manually and automatically, the information from the incoming documents, reports and messages must be stored in a structured database.

Because the stored structured data is just an abstract of all the available information, the original documents also need to be stored for the purpose of transparency, traceability and archiving. It has been shown that during the preparation and the conduct of military operations the information needs change continuously. For that reason the structured database should be flexible; the user must be able to define the data structure completely, and adapt continuously to the ever-changing information need. The new information requirements of PSO have resulted in requirements for other ways of processing, visualising and analysing information. Current methods of depicting information as icons on military geographical maps do not provide this functionality.

## PARANOID

TNO Defence, Security and Safety supports the Royal Netherlands Armed Forces and Civil Authorities in this changing environment through its work in the area of processing information into Intelligence. One aspect of this is the development and application of techniques for searching for, storing and analysing information.

For this purpose a framework, PARANOID (**P**rogram for **A**nalysis **R**etrieval **A**nd **N**avigation **O**n **I**ntelligence **D**ata), has been developed in which techniques are being implemented and tested.
PARANOID also supports the process of specifying the total functionality for an operational processing system for Intelligence, such that it reflects the workflow of an intelligence staff.

PARANOID processes information in support of PSO, but is equally applicable to other areas such as counter-terrorism operations, the fight against fraud, and the acquisition of business intelligence.

## Functionality

The functions of PARANOID reflect the workflow in the Intelligence Process, starting from the definition of the information need through to the storage of the Intelligence products. Three main functions have been defined:

● *Profiles:*

In this function the user is able to define certain factors, such as time and space definitions, certain types of events, and particular individuals, that have to be taken into account while processing the incoming information.

● *Documents:*

This function carries out a range of different operations on all incoming information. One example is the storage and transformation of structured and unstructured data from documents into a structured database, carried out by developing and applying different information extraction techniques.

● *Analysis:*

There is a need for different types of analyses to be able to support the different sub processes of Processing: link analysis, pattern recognition, trend analysis and threat/risk analysis. There is also a need to be able to visualise the data and results. This should be possible not only by using a geographical information system, but also through a number of innovative ways of navigating through a network of different types of related data and information (Figure 1). The way in which the results are presented is influenced by the constraints and other factors defined in Profiles, and the credibility, reliability and accuracy of the incoming information.

### TNO Defence, Security and Safety

TNO Defence, Security and Safety provides innovative contributions to the advance of comprehensive security and is a strategic partner of the Dutch Ministry of Defence to build up the defence knowledge-base. We employ our acquired knowledge for and together with contractors.

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