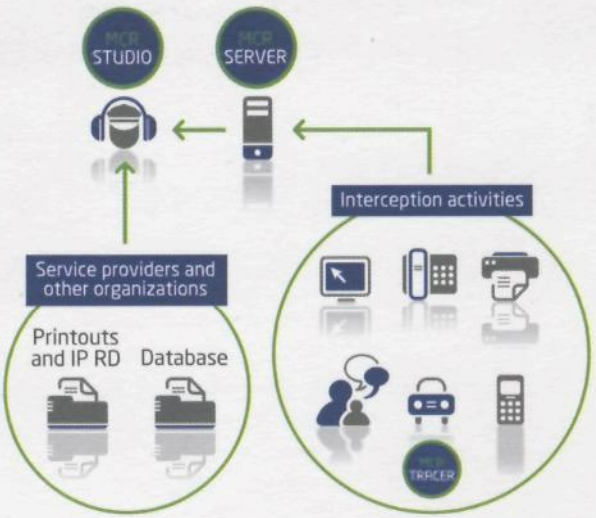
MCR STUDIO

MCR STUDIO is the data-mining solution completely developed in-house by AREA that works in synergy with MCR System to provide LEAs with a State of the Art Monitoring Center for Lawful Interception activities.



MCR STUDIO is designed for LEAs needing a powerful tool to analyze and correlate data collected through:

- telephony and IP interception activities
- GPS/BTS localization of nomadic/mobile targets
- telephony and IP retained data from Telcos and ISPs
- third-parties database import (i.e. credit cards payments, toll payments, airlines tickets and boarding cards).

Besides the great capability to fit different investigation approaches, MCR Studio added value is the effectiveness in finding out both direct and indirect relationships among subjects, identifying behavioral models.
MCR Studio is delivered either as a pure analysis system or, more often, integrated with turn-key Monitoring Centers.
The first option fits in scenarios where MCR Studio is used to analyze databases not continuously updated.
In the second case, LEAs greatly benefit from integration since analysis procedures can be repeated automatically and periodically, AREA data-mining solution is very modular and flexible, so MCR Studio installations range from a few PCs to several servers and workstations, according to the amount of data to be treated.
Key factors for MCR Studio spreading among LEAs are its usable user-interface and its capability to treat huge amount of data without requiring footprint server farms

MCR INTEGRATED MONITORING AND ANALYSIS TOOLS

Thanks to MCR Studio integration with AREA Monitoring Center, analysis can be performed on current intercepted communications, including new calls, e-mails, VoIP calls, chats and IRIs.
In so doing, users work always on updated information so that analysis results represent behaviors of suspects in real-time.
LEAs benefit from convergence of rendering and analysis tools as users can start new analysis at any time while monitoring new intercepted sessions. Similarly, users can simply click output provided by MCR Studio to access and see communications linked to analysis results.
MCR Studio takes advantage from security and anti-tampering mechanisms implemented in AREA Monitoring Center. After Authentication, LEA users can only analyze data related to investigation activities they have been assigned.

WORKFLOW OF ANALYSIS PROCEDURES

MCR Studio has proved its effectiveness and quickness in analyzing huge amount of data. MCR Studio enables LEAs to carry out complete analysis activities simply by following pre-configured processes.

Main steps are:

- import printouts and IP data provided by Telcos, or coming from third-party database;
- verify database consistence and eliminate not relevant data;
- apply any of the pre-configured analysis models or create new ones;
- select the most suitable graphical layout to render the analysis results;
- save the data resulting from analysis procedures, together with their graphical output.

MCR Studio comes with an advanced and very user-friendly GUI.
Thanks to this key feature, even complex inquiries can be represented as flow charts. Results are displayed as grids, matrixes and relational graphs. Moreover, it is possible to check partial results of each analysis step and optimize standard analysis models.

DATABASE PREPARATION

Users rely on many wizards to import files in different formats and from third-party databases. MCR Studio supports TXT, Microsoft Excel®, Microsoft Word®, Adobe® PDF, XML. As far as database format is concerned, MCR Studio handles Microsoft SQL Server®, Postgre SQL, OleDB sources (es. Microsoft Access®), Odbc sources.

READY-TO-USE ANALYSIS MODELS

MCR Studio provides several ways to describe entities on which analysis models apply, such as investigated subjects details, including owned SIMs and other electronic identities (for example E-mail addresses and SIP URI).
Users can select among many ready-to-use analysis models, depending on investigation cases (for example, frequency of communication among subjects and identification of direct and indirect relations for organized crime).
Besides taking advantage of established analysis methods, advanced users can create enhanced models by composing several filtering and correlation operations. New procedures can be saved and shared among users of the same work-group.

EXAMPLES OF ANALYSIS PROCEDURES

Some examples of meaningful analysis models that can be carried out by following ready to use templates are:

- search for specific contents among thousands of intercepted sessions and IRIs (i.e. key-word among e-mails, phone numbers among IRIs);
- analyze and correlate printouts related to different BTSs, to point out movements of suspects while using mobile phones;
- find out relationships among suspects by merging and correlating IRIs and printouts to obtain a graphical representation of connections;
- identify "chained events" and recurring behaviors by investigating on crimes (i.e. sequence of calls among suspects linked to hierarchy in a group);
- represent on cartography the subjects communications whenever geographical data are available (i.e. display on maps the position of BTSs covering places in which suspects are making calls);
- put together movements of subjects by analyzing credit card payments and boarding cards of airlines.

As Internet communication services are increasingly used to exchange sensitive information, AREA continuously includes analysis models by leveraging specific features of IP services.

OUTPUT OF ANALYSIS

In order to make the results of analysis procedures immediately understandable, MCR Studio supports many graphical output layouts. The most used ones are:

- matrix, to represent the frequency of contact among a group of subjects
- bar charts, to count how many times a certain interesting condition or event applies
- Gantt charts, to display timeline of events or communications involving subjects
- graphical charts, to display relationships among subjects together with the way used to communicate and the number of contacts
- maps, displaying places where subjects are located when communicate with others.

MCR Studio enables the export and archiving of databases obtained by applying any analysis method.
In so doing, LEAs can consolidate investigation milestones and evidences.
Moreover, MCR Studio exports the graphical representation of any analysis result using file formats supported by Microsoft Office® Suite.

SUPPLY OF MCR STUDIO AND PROFESSIONAL SERVICES

AREA Training and Consulting team provides LEAs with professional services at different levels, to assist users after system delivery and allow them to achieve maximum results from MCR Studio.