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btt-Scope

COMPLETE INVESTIGATION, SURVEILLANCE AND ANALYSIS SYSTEM

"extract signal from noise"

Our Company

BTT LTD was founded in 1999, by group of experienced electronic and software engineers and since then dedicated to serve excellent quality systems and products for Law Enforcement Agencies, Government Intelligence Agencies, Emergency Services and Financial Institutions.

The company gains its strength from the innovative approach and cooperative culture continued since its foundation, besides its economical solution strategy and high level of client satisfaction.

BTT-Scope

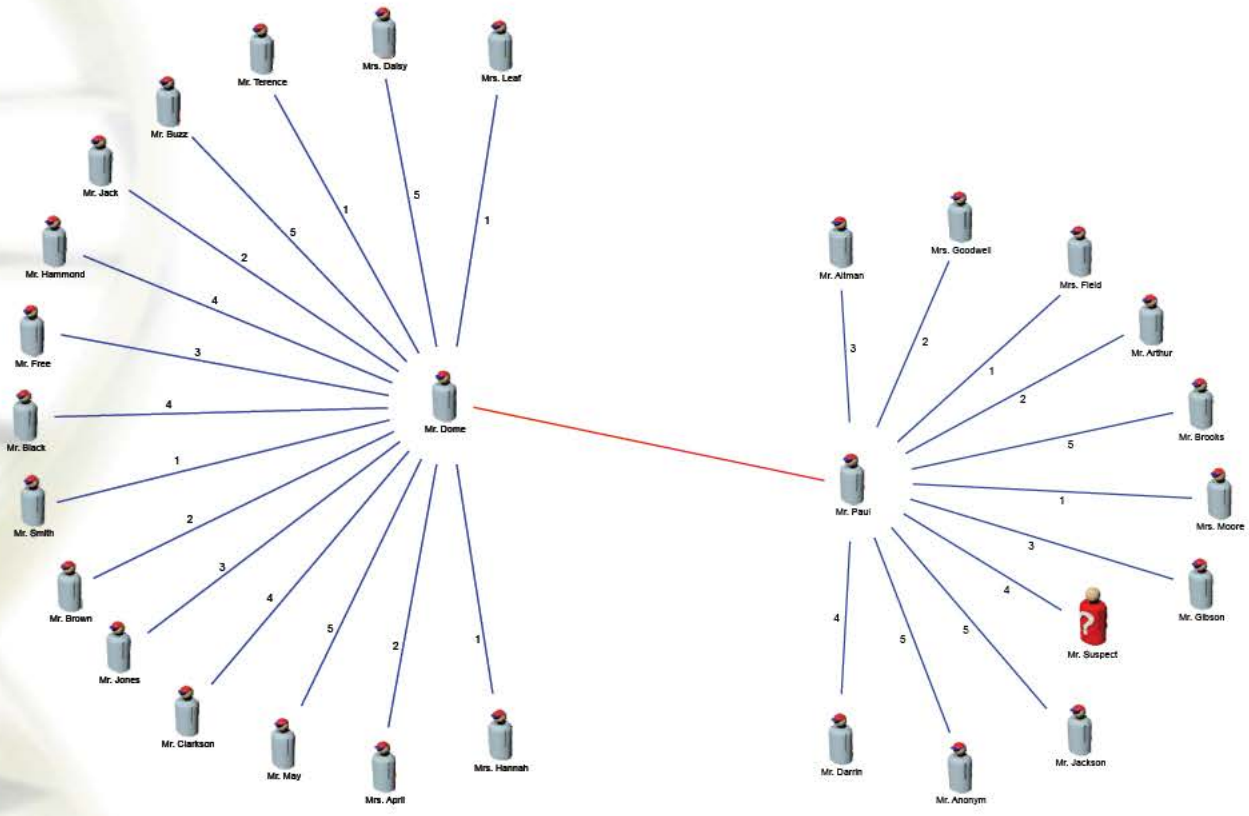
Recently there is huge amount of data that exceeds an humans capacity of tracking and analysis in all areas.

Phone conversations, ATM transactions, even a small surf over the internet transfers a lot of data to investigators about the people or the events. To collect and compose the desired data sometimes takes a lot of time and too many personnel.

BTT has used its experience to develop the most sophisticated and powerful tool that supports strategical and tactical operations.

With BTT-Scope's customizable solutions and ease of use, every single personnel executes his own investigation. Just by using the mouse, an time spending investigation becomes effortless.

BTT-Scope helps decision makers in these points:
- *Opportunities and dangers, especially unexpected developments which requires a reaction.*
- *Motives, objectives, strengths, and vulnerabilities of adversaries, allies, and other actors.*
- *Direct and indirect sources of friendly parties' leverage on foreign players and issues.*
- *Tactical alternatives for advancing stated national policy goals.*



BTT-Scope Components

Scope-MEDIA:
The main data loading engine for all Scope applications. It parses and loads the huge amount of bulk CDR data from operators to the main storage database.

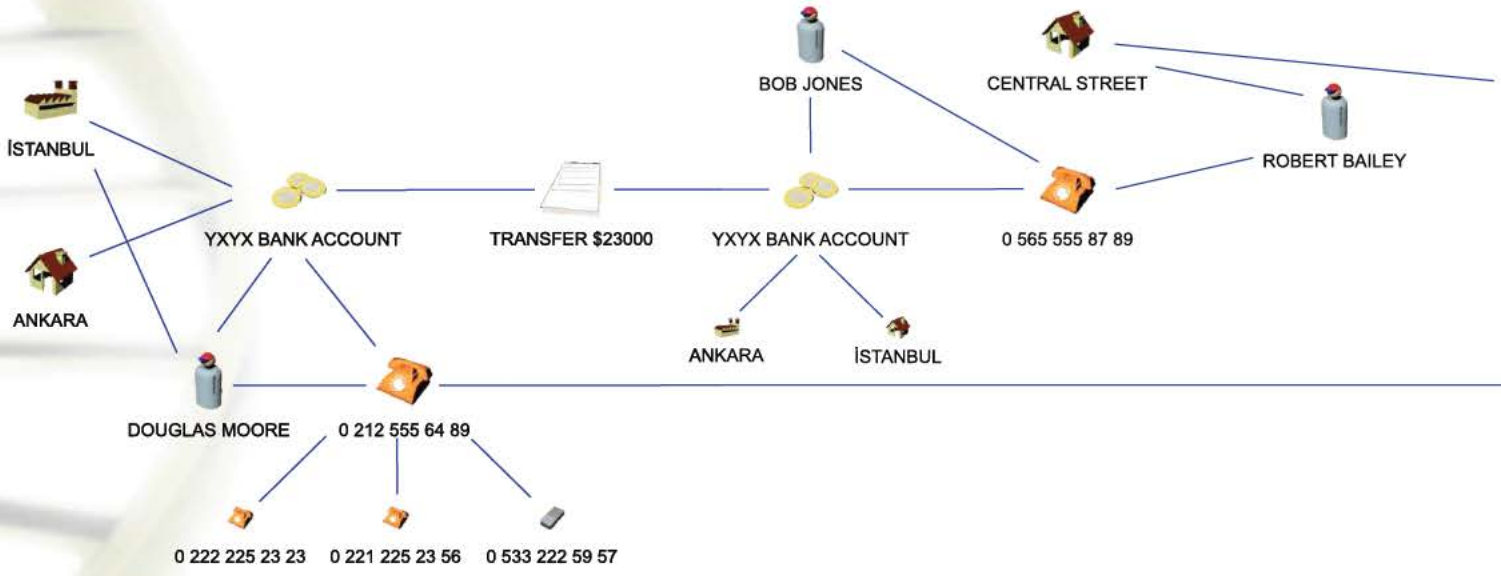
Scope-TIE:
Collects data from different sources and analyzes the relations and prepares these data for Scope-OBSERVER.

Scope-TRACKER:
Deeply analyzes the data finds the hostile networks and peoples relationship with these networks. It prepares these data for Scope-OBSERVER.

Scope-OBSERVER:
Scope-OBSERVER can be used to identify links between other entities based on the following types of link support information:
- *Target to Phone – a target can be linked to one or more phone numbers;*
- *Phone to Phone – a call can be linked to two phone numbers;*
- *Phone to Address – a phone can be linked to one or more addresses.*

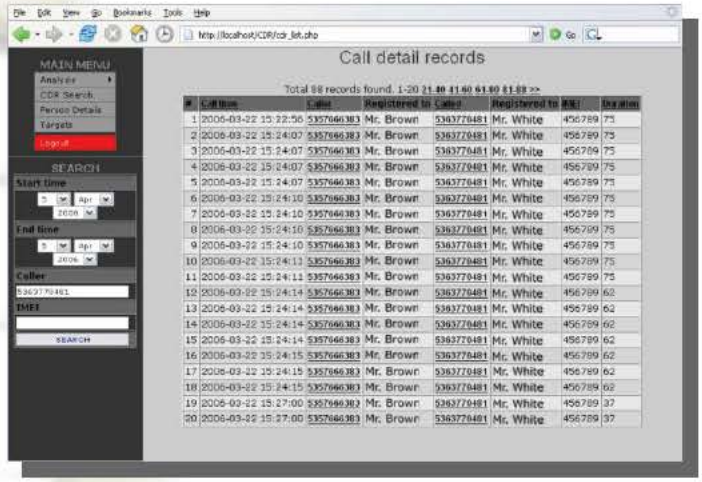
Scope-OBSERVER uses this information to identify links not only about the phones but only the whole scenario. For instance, the collected data may show that “Mr. Brown” and “Mr. Red” are both linked to Phone “1234”. “Mr. Red” may also be linked to Address “Central” which is also linked to Phone “5678” which is registered to “Mr. Anonym”.

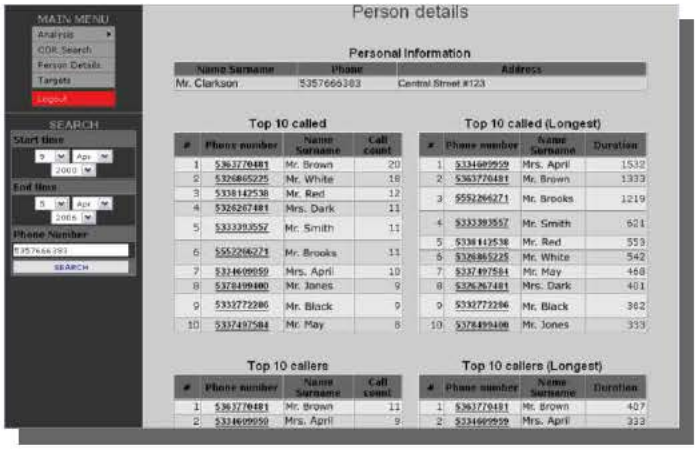
Scope-OBSERVER, with the help of these data, can identify an indirect link between “Mr. Brown” and “Mr. Anonym”. As a result, Scope-OBSERVER identifies links between entities distanced by different degrees of separation.



Scope-OBSERVER can cross check entities with watch-lists and present those entities on the graph with a different visual design. The relative weight of the links is automatically set by the system as a weighted average of the criteria according to the importance of each criteria which is set by the user. These links can be color coded to indicate the strength of the connection. Scope-OBSERVER can also include only those links that meet a minimum strength threshold which is set by the user. Additional criteria can be defined by the End-User using Scope-CONFIG.

Scope-ACADRA:
Scope-ACADRA link analysis models use the CDRs and related data as the sources of link support information. CDRs can be searched and browsed through, as well as filtered using various search parameters.





Quick and Robust Textual browsing allows to browse to contact details, view connection statistics, subscriber information and other valuable information.

Contact statistics and relationship details cards are available in Scope-ACADRA.

Contact analysis options are also available helping to identify links, determine link strengths, and to find relationships. The following sample criteria are available for contact analysis and inferring links between phones:
- *At least X number of call/s between two phones during a defined period of time;*
- *Existence of bi-directional calls – each phone initiated at least one call to the other;*
- *At least X percentage of calls were made during particular hours of the day (for instance after work hours).*

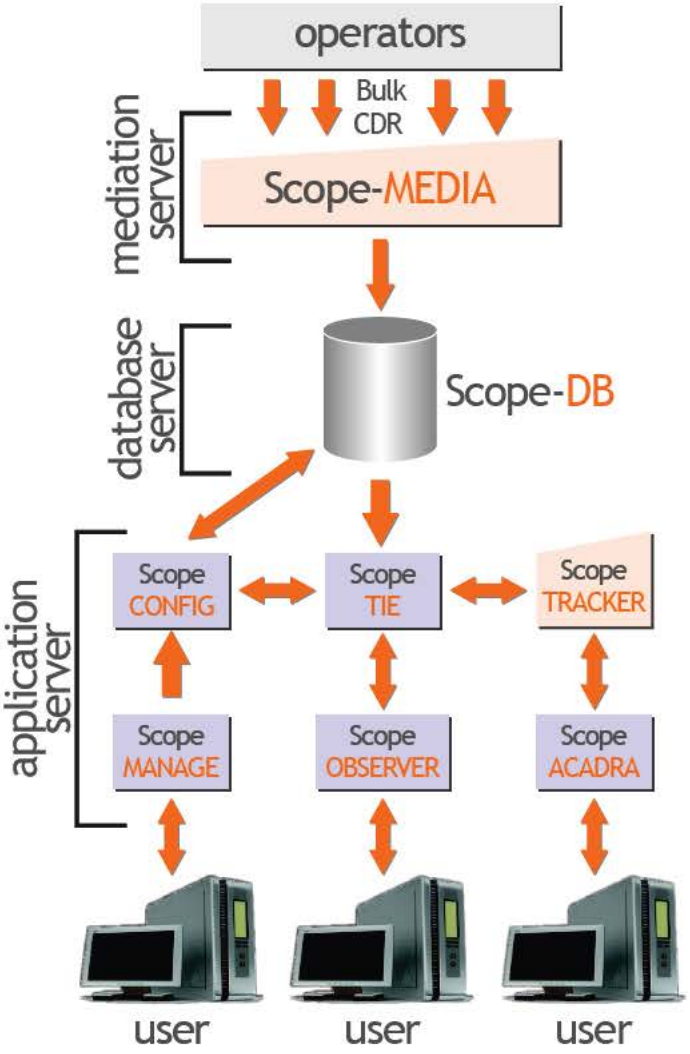
Other kinds of statistical analysis are:
- *Call Frequency;*
- *Contact Count;*
- *IMEI Change Activity;*
- *Mutual Contacts;*
- *Contact Matrix;*
- *Contact Analysis;*
- *Contact Statistics;*
- *Use Period Statistics.*

All these results can be viewed online or printed as a report.

Scope-MANAGE:
Performs user audit and management over web interface.

Scope-CONFIG:
Produces link relationship for database entities for Scope-TIE

BTT-Scope Architecture:



BTT-Scope Usage Areas:

Law Enforcement:

Investigation takes too much time and effort in law enforcement. But with analysis, the traces that a suspect left and the actions that he is going to do is easily detected.

Criminals take all the actions to hide evidence and avoid trace. The attention to disguise, pushes the criminal to change his behaviour pattern. And eventually that makes him abnormal than the others. At the end BTT-Scope seperates him from the others.

The worlds biggest security problem is the terrorism and BTT-Scope has special tools to help law enforcement agencies to get over terrorism. Typical terrorist organization is arranged in a pyramid. The hierarchical structure of terrorist groups is divided into four levels. The smallest group is the command group located at the top of the pyramid. The second level is active cadre which is responsible for carrying out the mission of the terrorist organization. Under the active cadre, there are active supporters who can carry out a bombing or kidnapping.

The last and largest category is the organization's passive supporters. This group is extremely difficult to identify and characterize because supporters do not readily join terrorist groups. By the help BTT-Scope, with its specialized design, operators can easily locates the command group at the top of the pyramid.

Organized crime is the main target for intelligence analysis. With BTT-Scope's easy web interface "Scope-ACADRA" an operator can use almost every analytic technique available, from activity flow charts to conversation analysis and CDRs.

BTT Scope provides investigating teams the next generation solution to store, collate, analyze and report any type of information used in their investigations. It is a comprehensive proven solution, used globally, based on innovative network-centric analytical methodology and technology:

- *Inference engine to build and analyze hostile networks by flexible criteria;*
- *Hostile network scoring based on easy to define rules and criteria;*
- *Link analysis of high-volume data streams;*
- *Data fusion of heterogeneous data sources;*
- *Flexible network analysis methodology and work processes to answer dynamic needs;*
- *Visualizing and documenting complex relationships.*

Some typical analytical products that BTT-Scope uses are:

CDR Analysis

Using CDR and location information, Scope-OBSERVER can display in a graph the locations the suspect has visited and the people he has contacted.

Event Analysis

Using data received from surveillance, police reports, court decisions, informants and eyewitnesses, etc. Scope-TIE produces the links between suspects, events, objects, phones, and members of the hostile network. The graph will display connections between suspects, colleagues, car model, addresses, post codes, places or entities.

Internet Analysis

Using data received from internet monitoring application, Scope-OBSERVER can display the suspects mail traffic, visited sites, and interconnection with other suspects.

Network Analysis

BTT Scope network analysis provides answers to questions like: Who is involved? How is it structured? How and where does it operate? What are its behavior trends? What are the changes over time? and other intelligence relevant to the networks. It can also expose and score networks that fit profiles of suspicious attributes from massive amounts of data even when none of the members of the network have been previously identified.

Financial Fraud Events:

Nowadays, financial fraud events can give irredeemable loss all over the world's markets both the individuals, big capital companies or the economic systems of the countries.

Money laundering:

With the help of specific analysis and visualization tools BTT-Scope can solve the money laundering networks.

Currency counterfeiting:

The currency counterfeiting is one of the oldest crimes in the world. On the other hand the criminals uses hi-tech equipments both for counterfeiting and for distributing. BTT-Scope s ready to take control and analyze the actions that is done with its Scope-TRACKER plug-in.

Payment card Frauds:

The use of payment cards rapidly increasing day by day, as a result the payment card fraud s becoming one of the biggest problems of the financial institutions. BTT-Scope with its developed and up to date tools is ready to help you to override payment card frauds like; "card not received", "lost/stolen", "counterfeit", "card not present(CNP)".

Telecom Frauds:

Telecom fraud is the main cause of revenue loss in service provider companies. With the latest developments in telecom technology, and increased customers, the service providers need advanced and sophisticated solutions like BTT-Scope to catch all types of fraud like; opening an unauthorized telephone account, slamming, cramming, call forwarding scam and modem hijacking.

BTT-Scope uses automatic social network detecting tools using criteria such as; Degrees, Betweenness, and Closeness.

Degrees

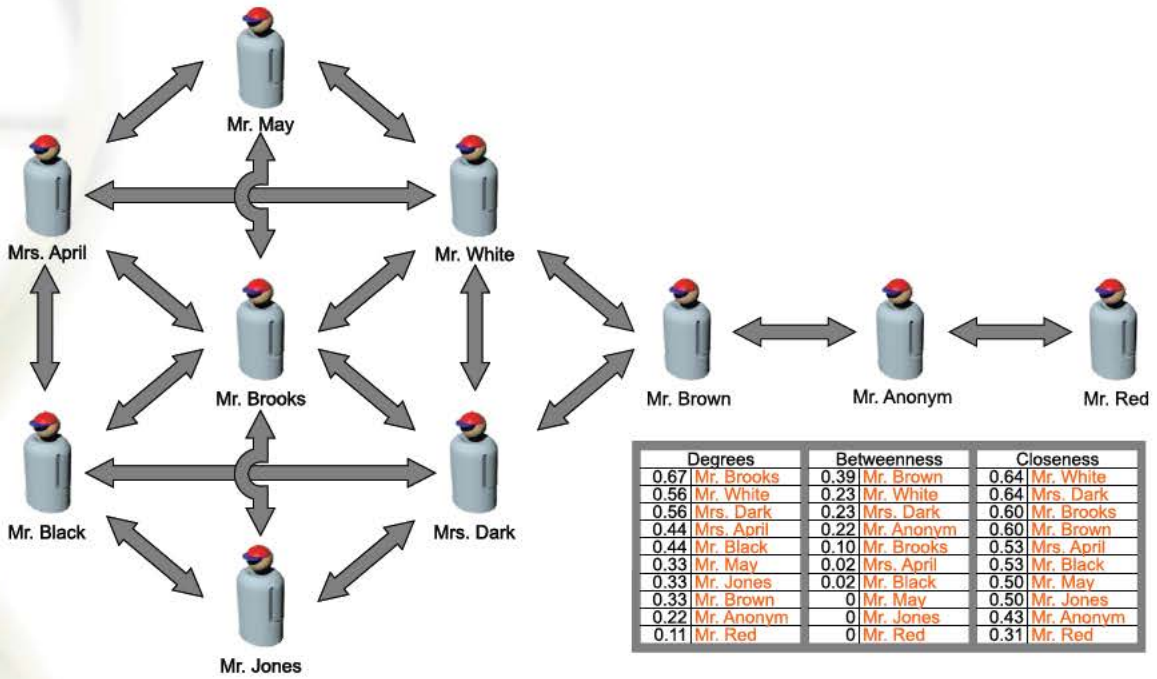
Social network research is measure network activity for a node by using the concept of degrees: the number of direct connections a node has. In the kite network, "Mr. Brown" has the most direct connections in the network, making him the most active node in the network. He is a “connector” in this network. Common wisdom in personal networks is “the better it is, the more connections you have”. This is not always so. What really matters is where those connections lead to and how they connect or unconnected. "Mr. Brown" has connections only to "Mr. Red" in his immediate cluster. He connects only those who are already connected to each other.

Betweenness

While "Mr. Brown" has many direct ties, "Mr. Anonym" has few direct connections, fewer than the average in the network. But, he has one of the best locations in the network, he is between two important constituencies. He plays a 'broker' role in the network. The good news is that he plays a powerful role in the network, the bad news is that he is a single point of failure. Without him, "Mr. Yellow" and "Mrs. Dark" would be cut off from information and knowledge in "Mr. Brown"'s cluster. A node with high betweenness has great influence over what flows in the network. A node like "Mr. Anonym" holds a lot power over the outcomes in a network.

Closeness

"Mr. White" and "Mr. Brooks" have fewer connections than "Mr. Brown", yet the pattern of their direct and indirect ties allow them to access all the nodes in the network more quickly than anyone else. They have the shortest paths to all "Mr. Red", they are close to everyone else. They are in an excellent position to monitor the information flow in the network. They have the best visibility into what is happening in the network.



Degrees		Betweenness		Closeness	
0.67	Mr. Brooks	0.39	Mr. Brown	0.64	Mr. White
0.56	Mr. White	0.23	Mr. White	0.64	Mrs. Dark
0.56	Mrs. Dark	0.23	Mrs. Dark	0.60	Mr. Brooks
0.44	Mrs. April	0.22	Mr. Anonym	0.60	Mr. Brown
0.44	Mr. Black	0.10	Mr. Brooks	0.53	Mrs. April
0.33	Mr. May	0.02	Mrs. April	0.53	Mr. Black
0.33	Mr. Jones	0.02	Mr. Black	0.50	Mr. May
0.33	Mr. Brown	0	Mr. May	0.50	Mr. Jones
0.22	Mr. Anonym	0	Mr. Jones	0.43	Mr. Anonym
0.11	Mr. Red	0	Mr. Red	0.31	Mr. Red

CDR
EVENT
NETWORK
INTERNET
ANALYSIS

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