

ANALYSIS SOLUTIONS & SERVICES



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CENTRAL COMMAND & CONTROL AND ANALYSIS SOLUTION

Introduction

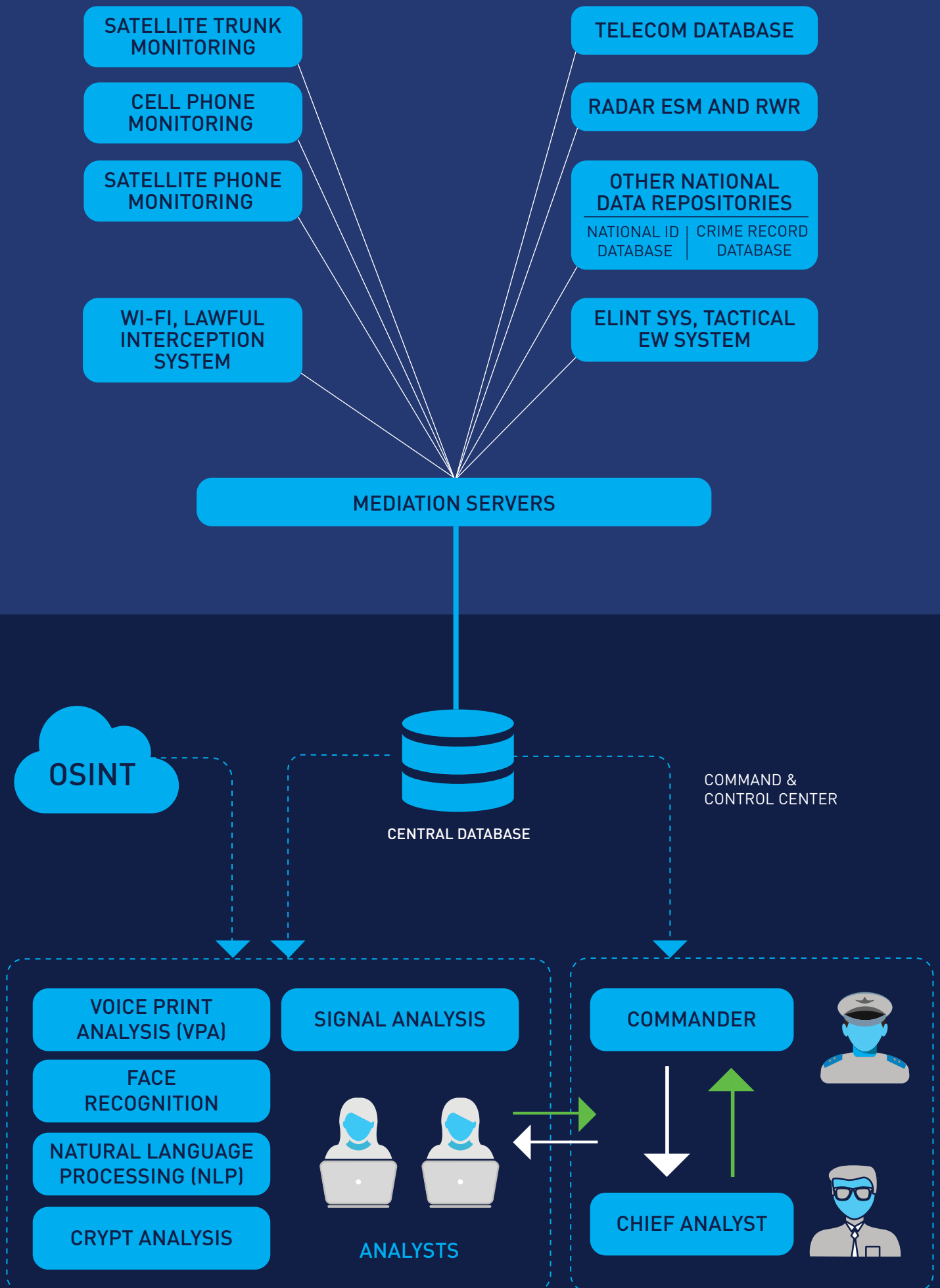
In an increasingly complex and hyperconnected world, security and defense organizations need a level of insight, collaboration and optimization not possible before. To achieve battlespace dominance, you need key intelligence delivered across the full communications spectrum. Stratign's Central Command and Analysis Solution is an intelligent decision support and operations management platform which enables the user to Intercept, Collect, Process, Analyze and Disseminate intelligence information in real time. The system collects data from sensors such as COMIT Systems, ELINT Systems and National Data

Repositories into a central database. The collected data is analyzed using a subsystem. The analysis includes Voice Print Analysis, Image and Video Analysis, Natural Language Processing, Link Analysis, Open Source Intelligence and Cryptanalysis. The results of the analysis are stored as a metadata in the same database along with call related information and intercepted content. Various filters based on all the metadata information can be created by the users. The system will generate reports based on these filters. The operators and the administrators will be able to access and react upon this information.

Features

- Stratign's Central Command and Analysis Solutions enable you to Intercept, Collect, Process, Analyze and Disseminate intelligence information in real time.
- The System can integrate existing third-party sensors or sensors from Stratign.
- Provides visualization and advanced graphical analytics.
- Could be integrated with active jamming systems operating across the extensive frequency range to neutralize signals of interest.
- Integrated GIS for situational awareness.
- Voice Print Analysis includes Speaker Identification, language identification, Keyword spotting, Gender detection, Emotion detection and Age detection.
- Image and Video Analysis include Face Recognition, Age, Gender, Identification of vehicle types and registration number etc.







OPEN SOURCE INTELLIGENCE (OSINT)

Introduction

Stratign's Open Source Intelligence (OSINT) platform is an innovative cyber intelligence solution designed to meet a wide range of operational needs for enterprises, cyber analytics professionals, banking and government agencies. The system is primarily used for national security, law enforcement and business intelligence functions. The platform is designed to collect and analyze information gathered from public, or open sources. The open source platform includes Social Media, Content Storage Platforms, News Websites, etc.

Scanning: The system can scan huge numbers of data in a matter of few minutes and give the operator the complete picture of the social media accounts and activities of the target.a

Query/Search: Stratign's solution can take any form of input identifier, i.e. either a phone number or email address to get all information associated with it. The solution has multiple query/search options based on mobile number, email, keyword, sentences, group names, etc.

Geo-Fencing or Location Based Search: Our technology allows the operator to carryout area searching to get all activities performed or ongoing in that geographical area.

Result Visualization: Stratign's Graphic-Visualizers provides power to user to get all searched results into graphical view of relation between targets and activities.

Features

- Mass Profiling: Build a personal profile from multiple sources in minutes.
- Multiple Web Sources: Collect information from the widest range of social networks and web aapplications.
- Geo-political risk analysis.
- Built-in intelligence workflows supporting the entire range of operational needs.
- Profile Analytics: Performs keyword spotting, target spotting, track events and discover social connections.
- Forensics: Generates a target profile based on an unknown number extracted from a device at the forensics laboratory.
- Link analysis – identifying social connections, similar preferences and common groups between suspects at multiple levels.
- Sentiment analysis capabilities – analyzing the target's posts and identifying feelings and word and context anomalies.
- Identifying potential activity in Deep Web and Dark Web.
- TimeLine – viewing and analyzing all target posts and social network activities, easily finding the most-liked post and all relations between targets according to likes, tagging and comments activity.
- The system is Fully Scalable and can be customized to meet the specific requirements & increased performance demands of the client.





FACIAL RECOGNITION SYSTEM

Introduction

Stratign's Facial Recognition System is an artificial intelligence-based solution capable of identifying or verifying a person from a digital image or a video frame from a video source. The system is imperceptible, fast, and accurate, capable of identifying a person in a crowd in a fraction of a second. Its main application areas include defense and intelligence, public safety, banking, retail, events, access control, and social networks environment.

Stratign's solution can detect an unlimited number of faces in an image, which makes it an ideal security solution. The system can detect faces in complex conditions and is effective even when there is a significant change in light, posture, and face angle.

It can verify a face even if there is a dramatical change in appearance such as the presence of a beard or mustache, glasses, a semi covered face, etc. The system can process billions of entries in a facial database searches with the highest possible accuracy and speed. It can detect age with 95% accuracy within 5 years range. The system is also capable of determining a person's gender with 99% accuracy. It can also recognize 7 basic and 50 complex human emotions. The system incorporates an original liveness detection technology allowing to distinguish a real human from a photo or video.

Features

- **Face Detection:** Detects an unlimited number of faces in an image even when there is a significant change in light, posture, and face angle.
- **Face Verification:** Capable of detecting dramatical change in appearance such as the presence of a beard or moustache, glasses, a semi covered face, etc.
- **Face Identification:** Scans 500 million faces less than 0.3 sec.
- **Attributes:** The algorithm extracts the following attributes: gender, age, emotions, glasses, beard etc.
- **Liveness:** 2D liveness technology based on passive detection ideal for access control.
- **OSINT Integration:** Integration with Stratign's OSINT solution to identify targets based on social media profiling.





NATURAL LANGUAGE PROCESSING (NLP)

Introduction

Stratign’s Natural Language Processing (NLP) solution is designed to extract meaningful information from textual contents. The system employs multiple levels of text mining, text extraction, natural language processing techniques. Our technology applies computer algorithms to apprehend the meaning of texts and uses expert techniques to identify how words and sentences are constructed. The system evaluates how the natural language allies with the grammatical rules, via various techniques such as Lemmatization,

Word segmentation, Parsing, Sentence breaking and Stemming.

Our technology is used in National Security, Intelligence, Marketing, Recommendation Engines, Customer Insights, Knowledge Engines, Relevant Search, Cognitive Computing. The solution automates, simplifies and accelerates human understanding from an infinite pool of intercepted textual data.

Features

- Extracting entities – such as companies, people, dollar amounts, key initiatives, etc.
- Categorizing content – positive or negative (e.g. sentiment analysis), by function, intention or purpose, or by industry or other categories for analytics and trending.
- Clustering content – to identify main topics of discourse and/or to discover new topics.
- Fact extraction – to fill databases with structured information for analysis, visualization, trending, or alerts.
- Relationship extraction – to fill out graph databases to explore real-world relationships.

VOICE FORENSIC SYSTEM (VFS)

Introduction

Stratign’s VFS is a speech analysis system intended for use by law enforcement, public safety, investigation and forensic experts. The platform can handle almost any speech-processing challenge, whether it is the analysis of massive amounts of audio recordings for investigation purposes, or just a few audio tracks for

forensic experts. The system uses Voice Biometric technology to quickly search and accurately identify language, speakers and keyword within large amounts of audio recordings making it ideal for law enforcement and intelligence agencies. VPA can also analyze audio files for Speech/Non-speech detection.

Features

- Speaker Identification in signal under analysis from known database of speaker voice samples.
- Multiple language and dialect identification.
- Keyword spotting.
- Gender detection.
- Emotion detection.
- Age detection.
- Based on a client server mode/architecture use of standard hardware
- Multi-parallel processing supported.
- Scalability and Flexible interfaces for the integration of classifiers





CRYPT ANALYSIS

Introduction

Stratign has been indigenously developing and implementing crypto algorithms which are tailor-made to meet the customer requirements for the past 20 years. Over the years, we have worked with various government and intelligence agencies worldwide in the field of communication intelligence, signal analysis and processing. The experience and knowledge gained over this period is unparalleled.

Stratign has successfully broken crypto algorithms used in communication networks like GSM, Thuraya, Iridium, INMARSAT, etc. Special algorithms like DES has been deciphered by Stratign. These developments have been converted into successful products and are being successfully used by various government intelligence agencies worldwide.

Features

- Strong tie ups with international crypto analysis resources.
- Access to High Speed Performance computing and software design.
- Dedicated team of in-house experts on cryptography Stratign is already creating simulations and crypto verification program.

Our Offerings

- Establishing a dedicated crypt analysis lab for carrying out offline analysis, decryption and restoration of recorded encrypted streams.
- Processing of cipher data using crypt analytical knowledge-base, software and processing tools

to create simulation and softwares for appropriate decryption.

- Joint Research Activity can be initiated between the end customer and Stratign whereby Stratign Engineers shall be positioned on customer site for a defined period of operations.
- All the required crypto analytical tools applications and logistics will form the part of the proposal. This shall include manpower resource and high-speed computing.
- The creation of laboratory will provide the end customer with continuous training. The laboratory can also be further used by the customer after completion of the programmed with Stratign.

HIGH-SPEED COMPUTING

Stratign's Super Computing Architecture is based on one of the world's fastest and most efficient high-performance computing design use of CPU GPU as a powerful combination for preforming Number Crunching application for key recovery in Crypto Analytical attacks Seismic Survey

Weather Prediction Data Modeling Synthetic Aperture radar processing etc. Stratign has extensive knowledge base and experience in writing customized software applications for utilizing efficiently High-Speed Parallel Processing.

STRATIGN'S HIGH PERFORMANCE COMPUTING USING GPU

- **System scalable up to:**
 - o 1,536 NVIDIA Tesla® V100 Tensor Core GPUs
 - o NVIDIA CUDA® Cores 7,864,320
 - o NVIDIA Tensor Cores 983,040
 - o NVSwitches 1,152
- **System Memory 144TB DDR4**
- **Networking Mellanox CS7510 Director Switches**
- **Storage IBM Spectrum GPFS GS4S**
- **Performance (approx.):**
 - o FP64: 12 PFLOPS
 - o FP32: 25 PFLOPS
 - o FP16: 200 PFLOPS





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