Automated Communications Data Cleansing

CSAS, CDAN and Indexer Product Family Overview

Version 1.3
0135-SPEC

March 2018

Forensic Analytics
Communications Data Experts

The Forensic Analytics Portfolio
Evidential, Proven, Trusted

Since 2013 Forensic Analytics has been providing law enforcement agencies with best in class evidential communications data processing and analytics software. Our range of products offers advanced capability for both analysts and investigators alike.

Developed by cell site analysis professionals, the **CSAS** (Cell Site Analysis Suite) family of products provide flexible, end-to-end, evidential comms data processing, analysis and data indexing from a series of integrated modules.

CSAS is the ultimate comms data cleansing, analytics and mapping tool, which enables analysts to produce reliable, court-ready exhibits in a fraction of the time of traditional or competitor methods.

CDAN and **INDEXER** offer scalable automated data cleansing and reporting for investigators or analysts requiring immediate intel from forward facing or historic comms data silos. **INDEXER** indexes databases of call detail records (CDR), automatic number plate recognition (ANPR) and handset download data to facilitate force-wide or national searches of the data for common identifiers and attributions.

The **Radio Frequency (RF) Survey Module** is a specialist tool for processing and mapping RF Surveys from devices such as Forensic Compass, Nemo and CSurv.

CSAS and CDAN Modules

CSAS
In-depth granular analysis for **Analysts and Investigators**

CDAN
Immediate automated data cleansing and reporting at scale for **Intel**

INDEXER
Creates searchable index from all force comms data DBs to access cross-case attribution for **Intel**

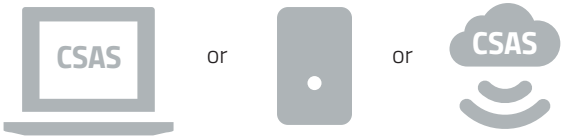
RF SURVEY
Inputs and maps cell site data from most common RF survey devices - e.g. Nemo, Forensic Compass, CSurv

CSAS Desktop

CSAS
Evidential Communications Data Processing for Analysts

- **CSAS Desktop** is a mature and proven technology trusted by law enforcement agencies, forensic science providers and defence experts to automate the cleansing of time-critical comms data.
- With **CSAS Desktop,** the time-consuming and error prone aspects of comms data analysis are automated. This allows more comprehensive and deeper analysis to be performed upon the data, enabling analysts and investigators to get to the evidence faster than any other solution currently available.
- **CSAS** recognises and cleanses over 200 UK and International CDR and comms data formats, typically at a rate of around 1,000 calls per second. It is evidential and includes a full audit log and our unique 'visual parser' to explain exactly how the data has been processed, providing full transparency and peace of mind for users.
- **CSAS** includes our best in class, **CSAS Analytics** query engine, **integrated CSAS Mapping** and powerful data visualisation tools to produce an unrivalled solution for data analysts and investigators.
- **CSAS** can process the following data formats: cellular CDRs, landline CDRs, international gateway/interconnect CDRs, cell dumps, ANPR logs, Wifi session logs, handset downloads and ad hoc geo data.
- **CSAS Desktop** can be supplemented with the **CSAS Collaboration Server,** which provides a central case backup and sharing facility and also supports the provision of concurrent or 'floating' licences, allowing members of the same team to share cases in a cost effective way.

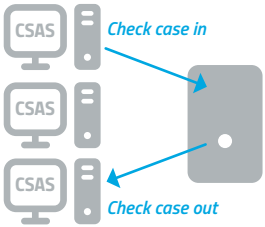
CSAS Configuration options



Laptop, Desktop, Networked and Offline

Server

Secure Cloud Based



Collaboration Server with floating licences

CDAN
Indexer

CDAN and INDEXER
Communications Data Automated Normalisation

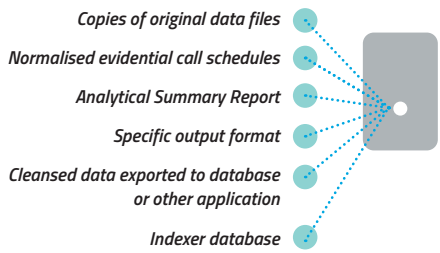
CDAN and INDEXER provide investigators with an unrivalled solution to rapidly extract meaningful intelligence from large scale communications databases and handset downloads.

- **CSAS Desktop** has been deployed (in either live or evaluation configurations) with over 30 UK LEAs and other organisations. It has benefited from the input of numerous professional telecoms analysts and experts, and offers a range of data handling and presentation services beyond just the data cleansing – including exhibit creation, data analysis and intelligence mapping.
- The functionality that sits at the heart of **CSAS Desktop** has been redeployed to create **CDAN (Communications Data Automated Normalisation).**
- **CDAN** takes just the data cleansing and normalisation functions and wraps them in a set of automated processes. It acts as a centralised 'cleansing engine' to automatically ingest, process and output CDR files in a simplified and normalised format without the need for a manual operator.
- **CDAN** can be securely deployed to process comms data as it arrives from the network service provider's disclosure systems.
- **CDAN** automatically creates normalised call schedules and analytical summary reports for each requested comms data file as it is received, without affecting the original copies of the data.
- **CDAN's Analytical Summary Report** provides critical analytical intelligence (top 10 numbers, top 10 landlines, top 10 used cells, etc) that can be used immediately by investigators without needing to wait for an analyst to be assigned to their case.
- **CDAN** provides immediate intel for investigators that was not previously available and in a fraction of the time and cost per file. It also adds over 95% operational efficiency to the processing of comms data.

CDAN Indexer

CDAN Inputs and Outputs Options

CDAN Outputs



CDAN Inputs

*File formats are recognised **automatically** and cleansed without the user needing to provide input or instructions – CDAN recognises and automatically cleanses over 155 formats of comms data. As we encounter new formats these are centrally updated.*

CDAN output is available in a variety of forms:

- **Standard call schedule and analytical report** - a standardised call schedule (in Excel) and a PDF report that highlights key information from each source file.
- **Machine-readable output** - for example .dat, that can be directly ingested by a downstream analytical system.
- **Output directly** into other proprietary software, such as IBM i2, Altia workflow, GeoTime and others. It is also possible to create bespoke **CDAN** output report formats for specific customer requirements.
- **Indexed data – CDAN** can automatically update a **CDAN Indexer database** with details from each new file that is processed.

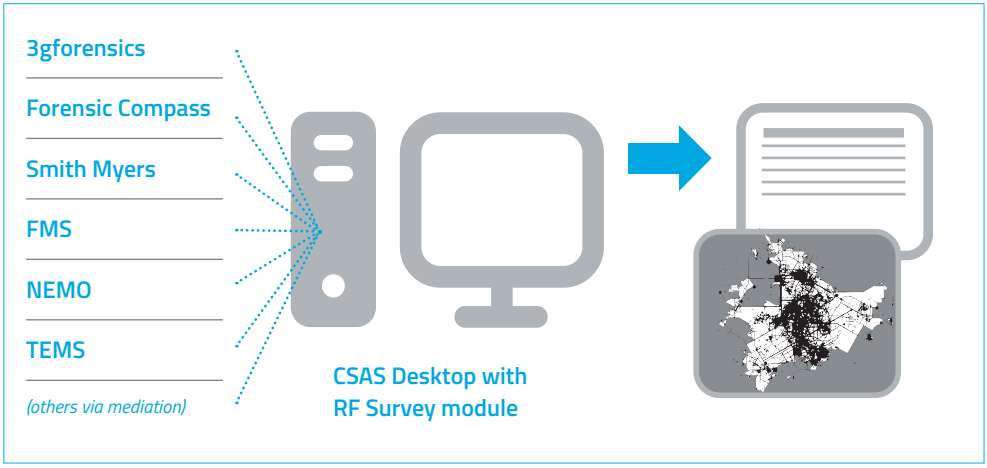
CDAN INDEXER

- **CDAN INDEXER** is an addition to **CDAN** that can be set to automatically work through a historical store of data files and normalise them into usable Intel.
- **The process** creates a stand-alone database of historical data organised on a case-by-case basis. At the end of the conversion process, **CDAN INDEXER** provides a 'query tool' function, that highlights the coincidence of phone numbers, IMEIs and IMSIs across different cases. This allows investigators to see links and patterns that may not previously have been visible. The query tool is available as either an installable PC application or as an intranet-based web tool.

CSAS RF Survey Module

CSAS
Desktop

- **CSAS** is complemented by the specialist **Radio Frequency (RF) Survey Module**. The RF survey module is the only tool currently available that comprehensively processes and maps the outputs from Radio Frequency Propagation Survey devices such as Nemo™, CSurv™, Smith Myers and Forensic Compass.™
- **RF Surveys** are now a critical part of crime scene preservation. The ability to correlate the cell site evidence (upon which an evidential proposition relies) with the cell site footprint at the time of the incident, is considered best practice.
- The **RF Survey Module** provides increased efficiency and accuracy for radio survey engineers involved in cell site mapping for digital forensic crime scene preservation.
- The **RF Survey Module** defines the outputs by technology e.g 2G, GSM, 3G and 4G, and by Network. It processes and maps location, route and coverage surveys.
- **RF Survey** evidence can then be used in conjunction with mobile phone billing records (which contain details of the cells used to carry each call) in an attempt to determine the potential location of 'subject' mobile phones when particular calls were made.



Evaluating CSAS, CDAN and INDEXER

We are very happy to demonstrate our capability online or onsite. As experts in the field of Cell Site Analysis, we can also offer comprehensive training as well as consultancy in Communications Data Forensics.

- **CSAS** and **CDAN INDEXER** lend themselves easily to online demonstration, and we offer a no-obligation evaluation for analysts or Investigators to use for live cases.
- We have produced a couple of short videos, briefly detailing the features and capability of **CSAS** and **CDAN INDEXER** solutions, which can be viewed at:

https://secure.forensicanalytics.co.uk/video

Please contact us for further information or visit www.forensicanalytics.co.uk

- We can provide references from police forces across the UK and international agencies that have enjoyed years of excellent service from Forensic Analytics, who will attest to the quality and capability of our products.

Avon and Somerset Police
City of London Police
Dedicated Card and Payment Crime Unit
Essex Police
Greater Manchester Police
Humberside Police
Kent Police
Lancashire Constabulary
Metropolitan Police
North Yorkshire Police
Nottinghamshire Police
Serious Fraud Office
South Yorkshire Police
Staffordshire Police
West Midlands Police
West Yorkshire Police
Federal Bureau of Investigation

CSAS Desktop

CDAN Indexer

CSAS Parsing API

Cell Site Analysis

Training Services

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