



# C5 CDR ANALYZER



**Product Feature**

The future of CDR Data Analytics



# Overview

A Call Detail Record (CDR) is a data record produced by the telecommunications equipment from all mobile network providers in the country.

The CDR of a person reveals the number of calls he/she made and received. The number to whom the calls were made or received from, the date, the time and duration of the calls. The CDR also holds the phone number of sent and received SMS of a mobile phone but not the contents of the message. Most importantly the records also reveal the location from where the calls were made.

However, inferring all this information can be a daunting task without the aid of data analytics applications.

C5 CDR Analyzer is a comprehensive solution, which provides the tools necessary for complex data analytics and makes it elementary for the Investigating Officer (IO). C5 CDR Analyzer, is the most advanced data analytics application we have developed yet.

Our application is peppered with industry leading features and functionalities, here are some glimpses of them.



## C5 CDR ANALYZER

- We have been at the developmental forefront of CDR data analysis solutions for over a decade.
- With 1000+ clients, including some of the elite Law Enforcement Agencies such as **NIA, CID, ED, ACB, Income Tax**, and all of the **CBI** branches throughout India utilize our application to carry out their investigative analysis.
- Tested by **STQC** and **CERT-IN** empaneled vendor "**Digital Age Strategies**" during **e-Governance** project for CBI Delhi.



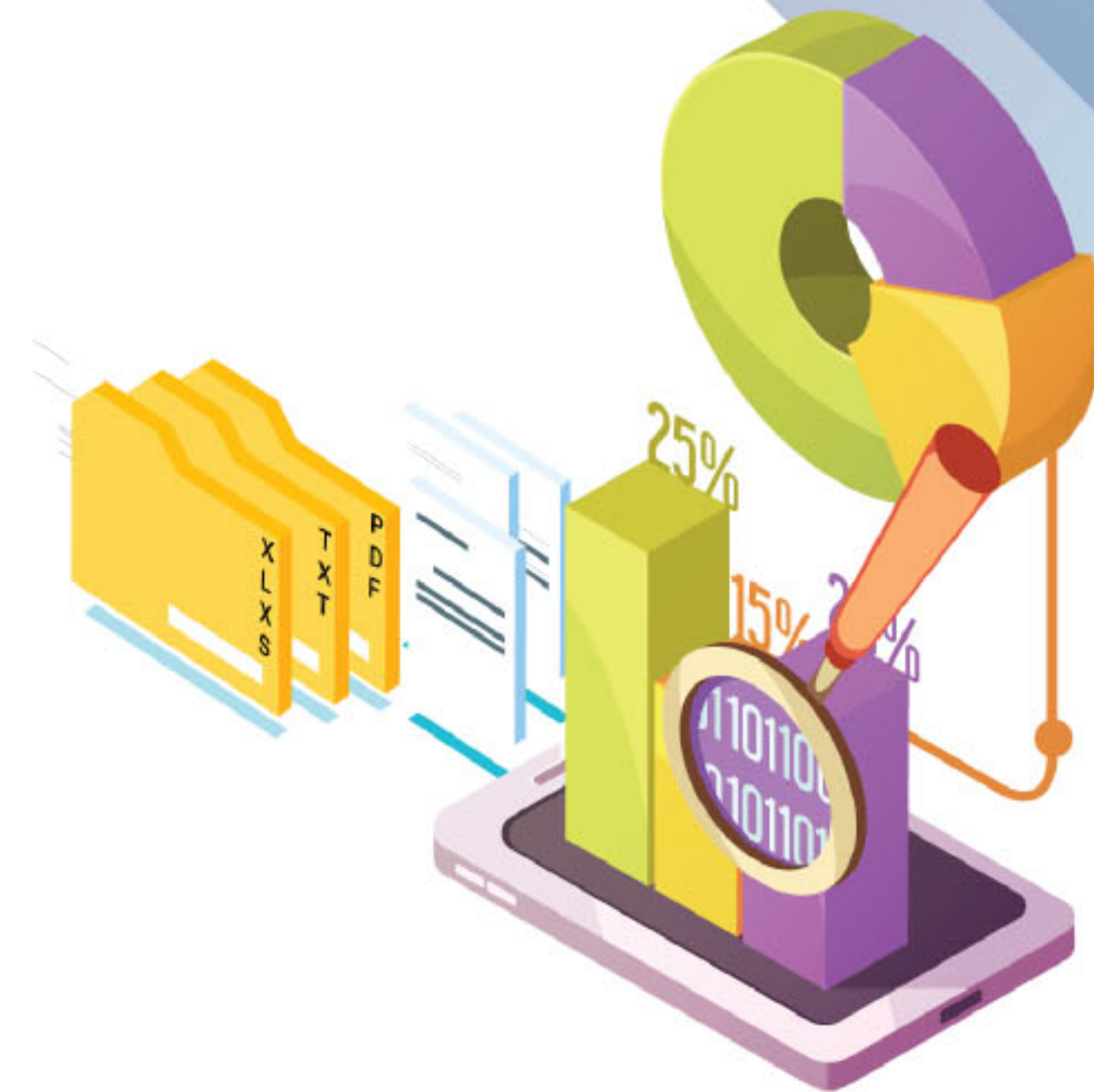
- We offer **Enterprise, Professional, Lite** and **Mobile** editions of the C5 CDR Analyzer application.
- ISO 9001:2015 Certified.





# Data Acquisition

Getting started with a CDR analysis has never been simpler, with our intelligent data acquisition module, you can browse and save almost all formats of CDR data. The application can handle complex volumes of data and with minimal interaction from the user. The ETL methodology implemented is exceptionally advanced, processing bulk data without sacrificing on performance and able to maintain accuracy throughout the data sets.



CS CDR Analyzer - AAA\_New Between Date: 30/Aug/2016 07:15:00 - 14/Sep/2016 23:55:07

Dashboard Analysis Geo Analysis Visualization

## Frequency

CDR Phone No	Called Phone No	Total Calls	Total Duration	Type of Call	First Call	Last Call
919845342814	DCC35D40710	93	93	SI=93	30-Aug-2016	13-Sep-2016
919845342814	919241905501	22	1620	CI=21,SI=1	30-Aug-2016	13-Sep-2016
919845342814	919986073409	21	1591	CI=11,CO=3,SI=7	30-Aug-2016	13-Sep-2016
919845340836	919845748319	17	864	CI=4,CO=13	10-Sep-2016	10-Sep-2016
919845340836	919902083145	16	65	CO=2,SI=14	12-Sep-2016	13-Sep-2016
919845342814	1C48C956630	15	15	SI=15	30-Aug-2016	12-Sep-2016
919845340836	919900188706	13	404	CO=13	11-Sep-2016	11-Sep-2016

## Summary

States	Total Calls	Total Duration	Callers
KARNATAKA	17	45744	325
DELHI	17	974	6
HARYANA	10	488	3
MAHARASHTRA &...	5	85	4
MUMBAI	3	254	2
KERALA	1	31	1

## Common Numbers

22 Common numbers matched within analysis.

## Common IMEI

1 IMEI's matched within analysis.

## Location

379 - Most probably work location time i.e., (06:00:00 to 17:59:59)

Cellsite	No of Calls	Total Duration	Service Provider A	Tower
13242	79	4390	BSNL	
4044526371241	67	3970	AIRTEL	Kamak
40445658202	51	3381	AIRTEL	Indran
4044500651	32	2190	AIRTEL	MADA

## Movements

CDRPhoneNo	CellSite	NoOfCalls	TotalDuration	Tower
919845340836	4044526371241	158	11208	Banga
919845342814	40445658202	135	6160	Banga
919845342814	404451121191	111	5518	Banga
919448142871	13242	96	5248	Updat
919845340836	4044590651	84	6527	Banga

## Statistical

Description
6 - State wise Calls
0 - Roaming Details
3 - Country wise Calls
4 - Type of Calls
Other Statistics
Dates when no calls are m...

## Frequency Chart

## Summary Chart

## Dashboard

The panel which becomes the main area for user interaction, with its intuitive UI, all the relevant data that an IO needs is made available at a glance. Improving the odds of understanding the nature of each individual's CDR. Data is represented in charts and graphs along with Common Numbers and Suspect List to make it easy to cross-examine suspects.

# Analysis

One of the fundamental characteristics of the C5 CDR Analyzer are its analysis reports. Analysis of the imported CDR data generates automatically, to provide the Investigating Officer an overview of the person of interest. Key aspects such as Frequency, Common Number, Location, Statistics and Suspect List get dedicated visual representations within the dashboard. Furthermore, the Investigating Officer can pick and choose the desired type of analysis he/she wants to pursue further, to narrow down the data and zero in on the suspect.





# Quick Analysis

Sometimes there isn't enough time to comb through all the CDR data and reports, this is where this feature shines. The Investigating Officer has to just import the CDR, the application does the rest, employing the same ETL module it directly prepares ready to use intelligence reports, that are printable and shareable with higher authorities.



## Geospatial Analysis

An encompassing feature combines all the geo analysis in one powerful tool. IO are provided with maps with all the activities present in the CDR. Movements of the suspect or the most frequent sites can reveal hidden location on the map. Geo-fencing can narrow down the list of individuals who were at the location during the time window under investigation. Meeting Points can provide an insight into the involvements and relationships of different individuals.

LUA Phone No	Landed Phone No	Type of Call	INICI	Tower Name A	C
1 919845342814	919241905501	SMS-IN	35227201304132	Munireddypalya	3

# Data Visualization

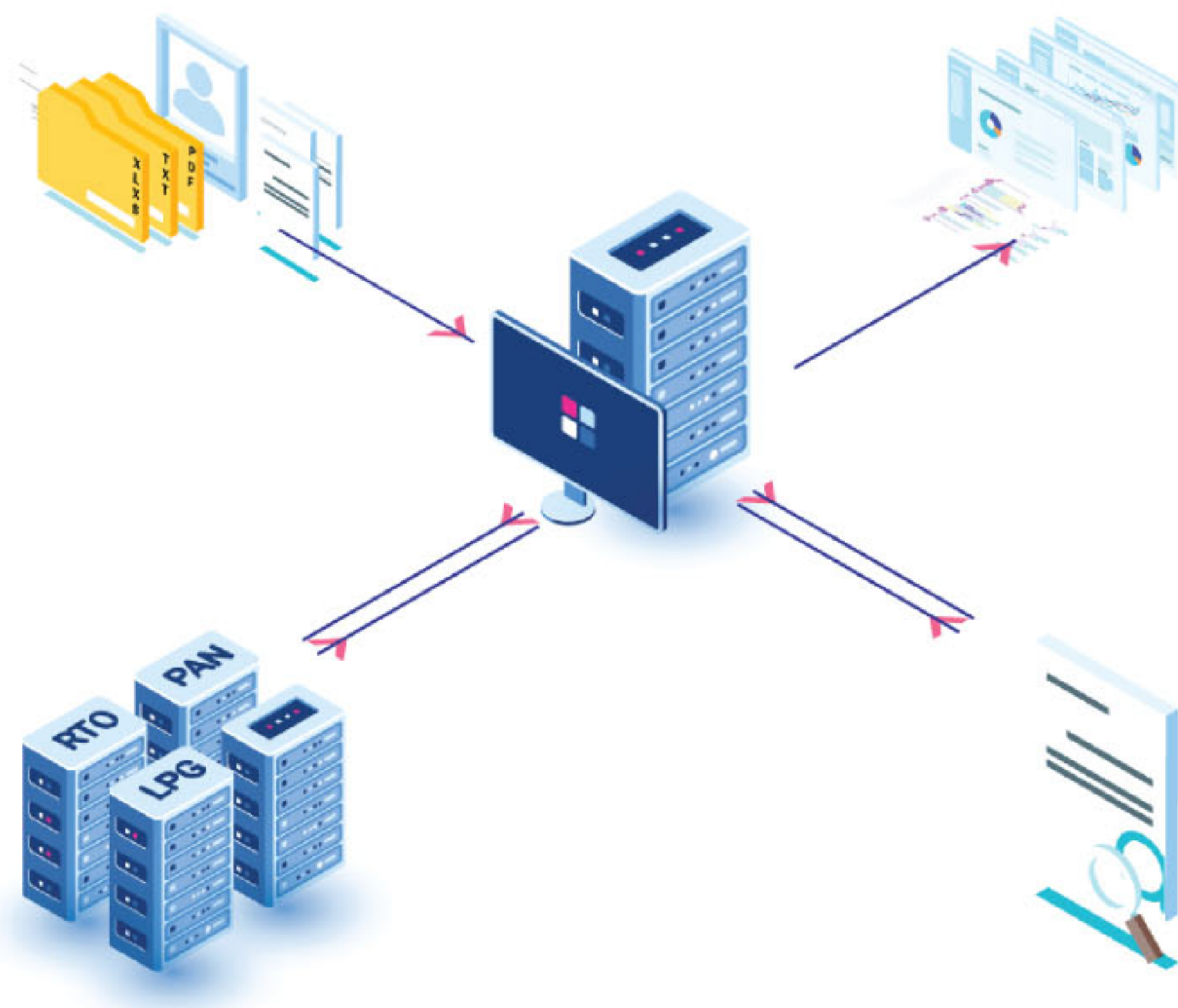
Reading data reports line by line can be a tedious task for anyone. With our data visualization module all the endless CDR data gets accurately and functionally represented as various clusters, helping you to understand the connection between numbers and present you with the complete picture. With visual representations such as the Neural Graph, Hierarchical Graph, Circular Graph, Timeline Graph and much more, interrogating the data is made simple and efficient.





# Search

The application has a robust search feature built from the ground up. It's an integral part when it comes to accessing specific data. Search can be single, multiple, nested and almost all data fields are searchable within the application such as LRN, Open Database, CDR, SDR, Geo search and more. IO can benefit with this feature, saving them valuable time and resources.



# Data Repository

A data library making up the backbone of the C5 CDR Analyzer application. We have worked diligently on making this the most efficient, well connected and dependable data repository yet. IO have a plethora of options to browse and view the database with regards to their respectable cases. Crime data, Organizations, CDR, SDR, IPDR, Cell ID files, Entity creation and management are a few examples. Suspect Profiling can be achieved using these tools.

# Case Management

A convenient feature that provides the Investigating Officer with a summary and ease of handling all his/her cases. Each case has a dedicated profile which consists all the relevant data at a glance such as Case type, Modus Operandi, Documents, Media, Metadata and more.





# Other Database Collaboration (ODBC)

Other Database Collaboration, is a feature we are proud to include in the application. Employing relation matrix and other innovative methodologies the Investigating Officer can search for information among other databases pertaining to the case under investigation for example RTO database, LPG database, PAN database etc. making it effortless to focus resources on the person(s) of interest.

A screenshot of the 'C5 CDR Analyzer' application. The interface features a blue sidebar on the left with navigation options: Activity, Case Management, Data Repository, Reports, Options, Search, Help, and Exit C5. At the bottom of the sidebar is a 'Check for Updates' button. The main content area displays a search bar at the top, followed by 'Recent Analysis' and 'List of Analysis' sections. The 'Recent Analysis' section includes a radio button menu for 'CDR', 'IPDR', and 'ILD', and a 'Quick Search' field. Below these are two lists of analysis entries, each with a title, creation date, and creator. A 'Quick Analysis' tooltip is visible over the first entry in the 'Recent Analysis' list. At the bottom right, there is a 'Sync to Mobile App' button with the text 'Synchronize data between PC & Phone'.

**And More...**

A centralized management system for the role-based users. IO can perform updates, manage multiple user profiles, assign privileges, send analysis through email from within the application, process requested SDR, database maintenance and more.





# C5 CDR Analyzer *Mobile App*

This is a subscription based **Android application** for on the go Investigating Officers, with a passion to fight crime with the help of data analytics.

Import & analyze CDR data through your android device. Convenient and simple to use, find crucial information within seconds. Benefits Investigating Officers to take informed & demanding decisions from where ever they are.



## A glimpse of the features of the Android application:

- **Works offline:** Being on the go, data connectivity isn't vital to the application, once the files are updated from the local machine. However, for Geo Analysis a data connection is advised.
- **Smart suspect matching:** The application lets you add the suspect mobile number, IMEI number or cell site data and auto matches it for a connected view of multiple CDR.
- **Cloud updates:** The application updates details of Cell site, IP, ISD, IMEI and SDR data instantaneously, which helps in analysing the detailed CDR reports efficiently. (Access to SDR data is only from the local machine.)
- **Geospatial Analysis:** An all-inclusive feature that pins day-night calls, frequent cell sites visited and movements of target number on the map, along with finding route details and matching CDR.
- **Common data:** The C5 CDR Analyzer automatically gathers and displays all the common IMEI, Mobile CDR and common IP.
- **Data sync:** Lets you sync data between mobile application and the local machine with C5 Desktop Software.
- **Data Visualisation:** C5 CDR Analyzer is developed with data visualization in mind, which enables the Investigating Officers to visually interrogate the data using various types of graphics such as node representation.



# Why Choose Us?

Prosoft e-Solutions India Pvt. Ltd. is a research based software development company committed to delivering world class software and enterprise solutions. We add value to your organization by our domain expertise and capability to handle big data.



We all live in BIG DATA age where the capability of organization to handle big data plays a key role in determining the success and growth of the organizations. Our expertise in handling big data will give your organization a distinct advantage in making smarter decisions.



Customer centric approach. We engage with our customers at every level of product development so our customers are not only involved in product development but actually shape how a specific feature works.



We are committed for creating an environment that facilitates the flow of ideas from every level of organization and uphold the dignity of work and individual. We will uphold the highest level of honesty and fairness in all our interactions.

## A few cases, our experties helped solve

- ▶ High Court Bomb Blast Case at Hubli, Karnataka.
- ▶ Abhishek Mishra Murder Case at Durg, Chhattisgarh.
- ▶ Jisha Murder Case at Poonthura, Kerala.
- ▶ Steel Robbery Case at Bagalkot Dist
- ▶ Train Robbery, Bhopal Railways.
- ▶ UBI Bank Robbery Case at Bhilai, Chhattisgarh.
- ▶ Society Robbery at 3 different places in Bijapur Dist.
- ▶ and many more...





# Testimonials



The C5 CDR Analyzer has been implemented as a state wide project in Karnataka wherein all the district police units and Commissionerate have been given a copy of the software to do CDR analysis of their cases pertaining to crime. Investigation, surveillance, enquiry etc. The software has been quite successful in solving several important & complicated cases. The field officers are finding it quite easy to use and get different types of analysis reports pertaining to their cases.

Based on the feedback of the officers, software is being further modified by the developers to fine-tune it to our present requirements.

This continuous support being given by the company is the main key to their "SUCCESS" and commitment.

**B. DAYANANDA IPS,**  
Deputy Inspector General of  
Police State Intelligence,  
Bangalore.



CDR analysis software provided by Prosoft e-Solutions India is really good and it is really evolving, there are really good features like Geo Analysis, Common Numbers, Peacock Chart, and playing with Peacock Chart according to our needs is the greatest advantage. What I like the most is the response of the technical support team; they are there for you always to help and assist you at any time. This software is user friendly and really good to be used. It will be helpful to all LEA officers in technical analysis of the case. I congratulate the team for providing the best software for analysis.

**SHARATH M.D**  
Cyber Crime Police Station,  
Bangalore.



With the help of C5 CDR application it has become easy to generate various types of report depending on the requirement of investigation officer irrespective of intensity of cases. With the help of application, analysis may be done with no time, which saves lot of time for IOs. Especially the application places very vital role while analyzing tower data, finding common between many numbers of CDRs, provision of watch dog facility to monitor the IMEI numbers are really one of the best options provided. The newly introduced option provided to obtain SDR is very useful one. However, while analysis the tower data, some ODBC error appears and the entire application shuts down.

At present the CDRs obtained from service providers do not contain tower data; the same in turn is being charged with VLOOKUP option in MS Excel. By incorporating the tower dis of all service providers in your application, if automated updation to change the Cell ID to name of the tower is provided, it would be another golden feature to C5 CDR Analyzer.

**H.S REVANNA IPS**  
Deputy Commissioner of Police North Division, Bangalore City.





# Our Clients


C5 CDR Analyzer is successfully installed and enthusiastically used by the elite LEAs of India and overseas.








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