

SIMPLIFYING INTELLIGENCE

VERBACENTRE

KOMMLABS

Is it possible to monitor all communication of Targets and provide Intercepts in real time from anywhere in a country?

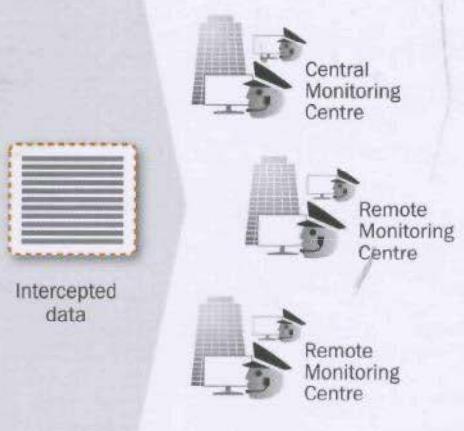
VerbaCENTRE can be deployed as a countrywide solution to provide real time access to Targets' communications regardless of the network used



VerbaCENTRE Highlights

- Unified solution for all Circuit Switched and Packet Switched communication Networks
- Scalable distributed architecture provides Central Monitoring Centres and Remote Monitoring Centres for countrywide deployment
- Electronic Dossier provides extended target information, including Associates, Bank Accounts, Travel Records, Motor Vehicles, Digital Information including Fingerprints, Photos and Videos etc.
- Seamless integration with ReveaLINX for data mining and interactive visual link analysis
- GIS location tracking displays real time location of targets and geo-fencing etc.
- Advanced Speech capability, such as Speaker ID, Language Recognition and Gender Identification
- Unique Vocal Risk Classification detects cognitive and emotional stress in voice calls and flags them
- Compliant to Global Standards like ETSI, CALEA, SORM and country specific standards
- Open Architecture, built using non-proprietary COTS (Commercial-off-the-shelf) hardware and open client-server architecture

VerbaCENTRE Workflow



VerbaCENTRE is a unified monitoring centre solution, that enables LEAs to intercept and monitor Voice, SMS, Fax and Internet communications.

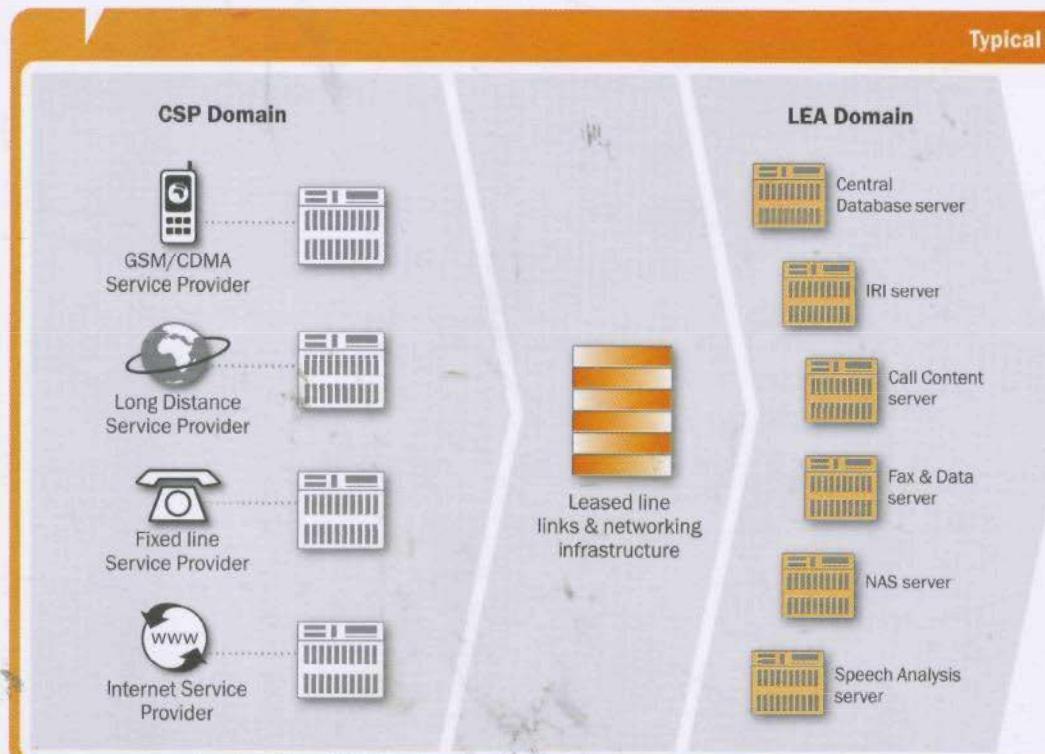
VerbaCENTRE offers a comprehensive solution which covers all aspects of interception and monitoring - Target provisioning, IRI and Content Collection, Analysis and Archival.

VerbaCENTRE supports all networks including Wire-line (PSTN), Wireless (GSM, CDMA, UMTS and EVDO), VoIP and Internet. VerbaCENTRE supports all communication

applications such as Voice, Fax, SMS, Internet (E-mail, IM, Webmail, Chat and VoIP etc). Irrespective of the application or network type, VerbaCENTRE provides all the intercepted information in a unified manner via a user-friendly graphical user interface.

In addition to the intercepts, VerbaCENTRE also provides for the compilation of digital dossiers which contain extended information such as associates, bank accounts, travel records, vehicle details and digitised information including fingerprints, photos and videos etc. for each

Typical VerbaCENTRE Installation



Case and Target, thereby providing a complete picture of the targets and their activities.

Powerful GUI for Monitoring Centre

VerbaCENTRE software has been designed and evolved to fulfill the needs of LEAs worldwide:

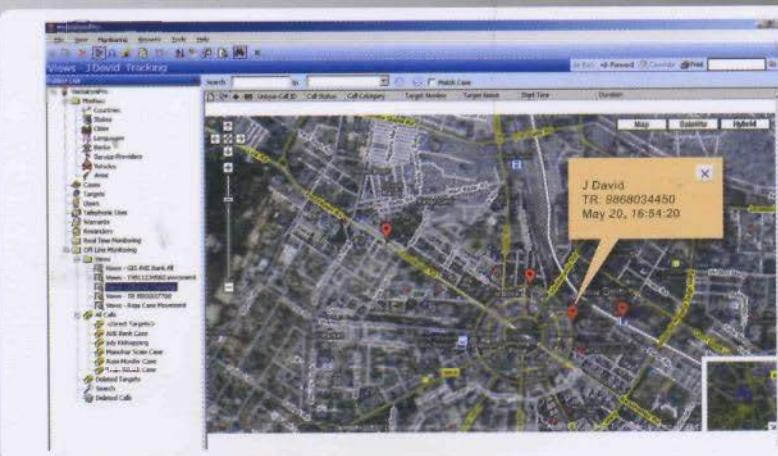
- Target provisioning

- Warrant, Case, Target and User Management with multi-level password protection
- Real time viewing and listening to intercepted sessions
- Advanced search options including query builder tools
- Unified view of Voice, Fax, SMS and Internet sessions
- Comprehensive MIS reports

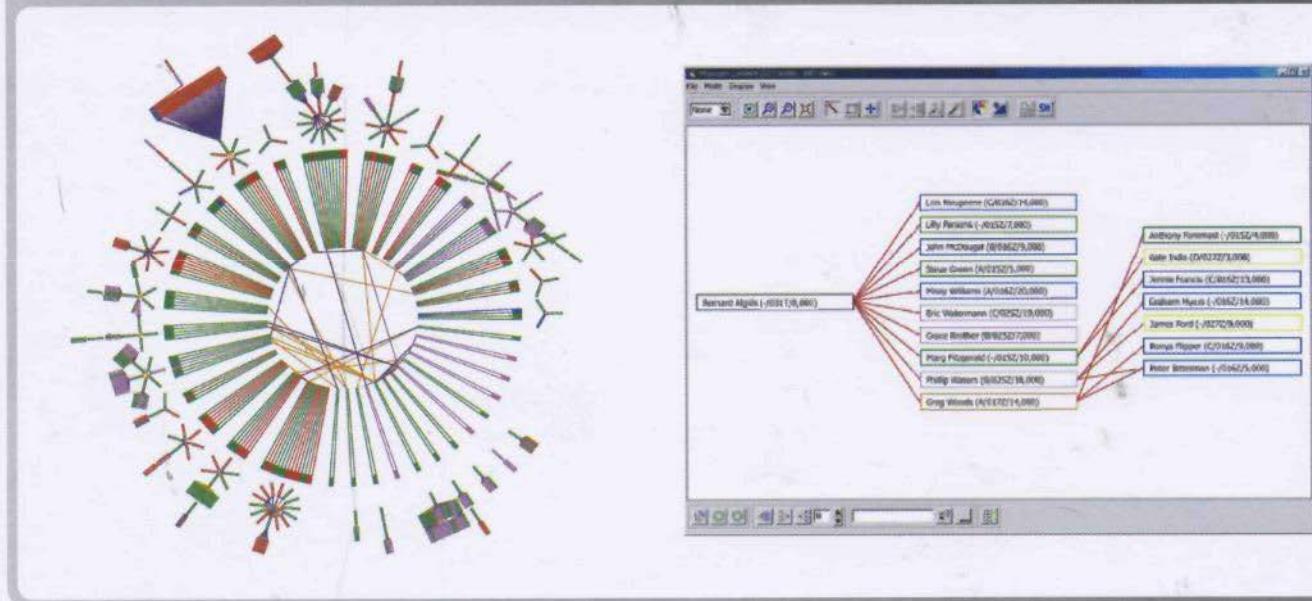
Main Operator Interface

Main Operator Interface												
Search		Results										
Criteria		Results										
Vehicle	ID	Unique Call ID	Call Status	Call Category	Target Number	Target Name	Start Time	Duration	Calling Number	Called Number	Call ID A	Call ID B
Arms	61	01	Important	919838180175	Amit Sen	01/15/08 12:57:45 PM	00:00:19	919838180175	919838180175	3543370000		
Targets	62	01	Important	919838180175	Amit Sen	01/15/08 01:00:44 PM	00:00:45	919838180175	919838180175	3543370000		
Users	63	01	Important	919838180175	Amit Sen	01/15/08 01:13:20 PM	00:00:03	919838180175	919838180175	3543370000		
Telephonic User	64	01	Personal	1125667990	Fax Target	01/15/08 01:15:30 PM	00:00:01	1125667990	1124108769	1124108769	3543370000	
Warrants	65	01	Important	919838180175	Amit Sen	01/15/08 01:20:01 PM	00:00:19	919838180175	919838180175	3543370000		
Reminders	66	01	Important	919838180175	Amit Sen	01/15/08 01:20:21 PM	00:00:29	919838180175	919838180175	3543370000		
Real Time Monitoring	67	01	Important	919838180175	Amit Sen	01/15/08 01:21:00 PM	00:00:19	919838180175	919838180175	3543370000		
Off Line Monitoring	68	01	Important	919838180175	Amit Sen	01/15/08 01:21:50 PM	00:00:32	919838180175	919838180175	3543370000		
Deleted Targets	69	01	Important	919838180175	Amit Sen	01/15/08 01:22:29 PM	00:00:32	919838180175	919838180175	3543370000		
Deleted Cases	70	01	Personal	919838180175	Amit Sen	01/15/08 01:22:37 PM	00:00:03	919838180175	919838180175	3543370000		
Deleted User	71	01	Important	919838180175	Amit Sen	01/15/08 01:23:44 PM	00:00:32	919838180175	919838180175	3543370000		
Deleted Reminders	72	01	Important	919838180175	Amit Sen	01/15/08 01:27:50 PM	00:00:13	919838180175	919838180175	3543370000		
Deleted Warrants	73	01	Important	919838180175	Amit Sen	01/15/08 02:30:30 PM	00:01:00	919838180175	919838180175	3543370000		
Deleted Targets	74	01	Important	919838180175	Amit Sen	01/15/08 02:46:37 PM	00:01:07	919838180175	919838180175	3543370000		
Deleted Cases	75	01	Important	919838180175	Amit Sen	01/15/08 02:54:15 PM	00:01:07	919838180175	919838180175	3543370000		
Deleted User	76	01	Important	919838180175	Amit Sen	01/15/08 03:00:30 PM	00:01:00	919838180175	919838180175	3543370000		
Deleted Reminders	77	01	Important	919838180175	Amit Sen	01/15/08 03:15:30 PM	00:01:00	919838180175	919838180175	3543370000		
Deleted Warrants	78	01	Important	919838180175	Amit Sen	01/15/08 03:21:01 PM	00:01:14	919838180175	919838180175	3543370000		
Deleted Targets	79	01	Important	919838180175	Amit Sen	01/15/08 03:36:47 PM	00:01:37	919838180175	919838180175	3543370000		
Deleted Cases	80	01	Important	919838180175	Amit Sen	01/15/08 04:23:44 PM	00:01:32	919838180175	919838180175	3543370000		
Deleted User	81	01	Important	919838180175	Amit Sen	01/15/08 04:27:50 PM	00:01:23	919838180175	919838180175	3543370000		
Deleted Reminders	82	01	Important	919838180175	Amit Sen	01/15/08 04:50:39 PM	00:00:27	919838180175	919838180175	3543370000		
Deleted Warrants	83	01	Important	919838180175	Amit Sen	01/15/08 05:51:11 PM	00:00:18	919838180175	919838180175	3543370000		
Deleted Targets	84	01	Important	919838180175	Amit Sen	01/15/08 05:53:17 PM	00:00:10	919838180175	919838180175	3543370000		
Deleted Cases	85	01	Important	919838180175	Amit Sen	01/15/08 05:54:00 PM	00:00:29	919838180175	919838180175	3543370000		
Deleted User	86	01	Important	919838180175	Amit Sen	01/15/08 06:00:21 PM	00:00:28	919838180175	919838180175	3543370000		
Deleted Reminders	87	01	Important	919838180175	Amit Sen	01/15/08 06:04:24 PM	00:00:18	919838180175	919838180175	3543370000		
Deleted Warrants	88	01	Important	919838180175	Amit Sen	01/15/08 06:42:14 PM	00:00:10	919838180175	919838180175	3543370000		
Deleted Targets	89	01	Important	919838180175	Amit Sen	01/15/08 06:51:11 PM	00:00:18	919838180175	919838180175	3543370000		
Deleted Cases	90	01	Important	919838180175	Amit Sen	01/15/08 06:53:17 PM	00:00:10	919838180175	919838180175	3543370000		
Deleted User	91	01	Important	919838180175	Amit Sen	01/15/08 06:54:00 PM	00:00:29	919838180175	919838180175	3543370000		
Deleted Reminders	92	01	Important	919838180175	Amit Sen	01/15/08 06:56:52 PM	00:00:18	919838180175	919838180175	3543370000		

GIS Tracking



Visual Link Analysis

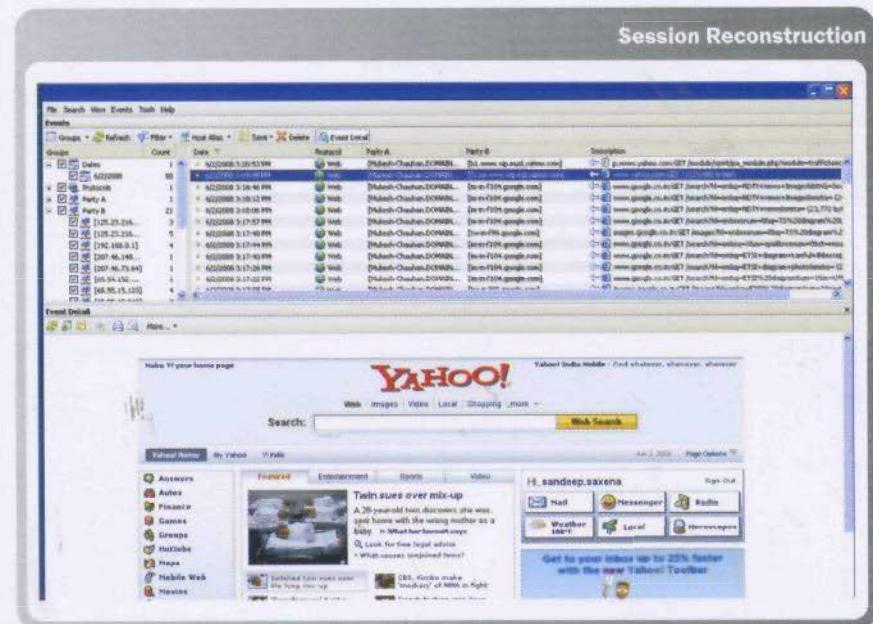


Advanced Tools

- Link Analysis – Visually trace hidden links amongst targets and their calling patterns from million of records
- GIS Tracking and plotting of Mobile targets
- Indexing and Text Search of all the textual content e.g. E-mail, chat sessions etc.
- Speech Analysis tools – Language Independent Speaker ID, Language Identification and Gender Detection
- Vocal Risk Classification detects cognitive and emotional stress of speakers. An adaptive learning engine creates signatures based on conversations marked by Users. The system automatically highlights conversations with similar emotional signatures.
- Security - Biometric Fingerprint identification for system users

Open and Scalable Architecture

VerbaCENTRE is built around open client-server architecture using a



high speed Ethernet backbone to support multiple multi-city locations and scale up to thousands of concurrent sessions.

The system is completely modular in architecture and expansion can be carried out easily by just adding appropriate hardware and software components. The system also offers expandable storage upto

several Petabytes for backup and archival purposes.

Global Standards Compliance

VerbaCENTRE complies fully with ETSI, CALEA and SORM standards for Lawful Interception. The system can further be customized to comply with the country-specific regulations.

KOMMLABS

In the last 15 years, the advent of new communication technologies has dramatically altered the way in which we communicate. Mobile phones and the internet have made it exceedingly convenient for us to communicate. Unfortunately, the same technology has made it extremely easy for terrorists and criminals to covertly exchange information at anytime and from anywhere. The sheer number of options for voice and text communication poses a serious challenge to intelligence and law enforcement agencies.

Kommlabs helps Intelligence, Law Enforcement and Communication Service Providers meet this challenge by **Simplifying Intelligence** by not just collecting and collating the intercepts in real time, but more importantly by providing the analytical capability to extract intelligence from vast stores of current and archived data. Kommlabs provides a comprehensive suite of Interception and Analytical Solutions for virtually every communication network to support and safeguard the security of every country.

Kommlabs is privately held and thus better placed to maintain the confidentiality about their customer's projects. Kommlabs being young and agile, provides innovative solutions, rapid project implementation and excellent post sales support.

Kommlabs was established in 1995 as Voxtron Dezign Lab Pvt. Ltd. and has substantial experience in implementing complex countrywide interception solutions in heterogeneous environments.

ABBREVIATIONS

3DES	Triple Data Encryption Standard	L2TP	Layer 2 Tunneling Protocol
AOL	America On Line	LAN	Local Area Network
ATM	Asynchronous Transmission Mode	LEA	Law Enforcement Agencies
CALEA	Communications Assistance for Law Enforcement Act	LEMF	Law Enforcement Monitoring Facility
CAS	Channel Associated Signaling	Mbps	Million bits per seconds
CC	Content of Communication	MEGACO	Media Gateway Control Protocol
CCS	Common Channel Signaling	MGCP	Media Gateway Control Protocol
CDMA	Code Division Multiple Access	MIME	Multipurpose Internet Mail Extensions
CDR	Call Detail Record	MIS	Management Information System
CIC	Circuit Identification Code	MSN	Microsoft Network
COTS	Commercial off-the-shelf	NAS	Network Attached Storage
CSI	Subscriber Identity	NEBS	Network Equipment Building Standards
CSP	Communication Service Provider	NGN	Next Generation Network
CSV	Comma Separated Values	NNTP	Network News Transport Protocol
DDPI	Deep Deep Packet Inspection	OCR	Optical Character Recognition
DHCP	Dynamic Host Control Protocol	OPC	Originating Point Code
DNS	Domain Name	P2P	Peer 2 Peer
DPC	Destination Point Code	POP3	Post Office Protocol3
DSL	Digital Subscriber Line	POS	Packet Over SONET
DVD	Digital Video Disk	PPPoE	Point to Point Protocol over Ethernet
EDGE	Enhanced Data rates for GSM Evolution	PRI ISDN	Primary Rate Interface ISDN
ETSI	European Telecommunications Standards Institute	PSTN	Public Switched Telephone Network
EVOO	Evolution-Data Optimized	PTT	Push to Talk
FTP	File Transfer Protocol	RTP	Realtime Transport Protocol
GIS	Geographic Information System	RTSP	Real Time Streaming Protocol
GPRS	General Packet Radio Service	SAN	Storage Area Network
GSM	Global System for Mobile Communications	SIP	Session Initiation Protocol
GTP	GSM Tunneling Protocol	SMS	Short Message Service
HI	Handover Interface	SMTP	Simple Mail Transfer Protocol
HSDPA	High Speed Downlink Packet Access	SORM	System of Operative Investigative Activities
HTTP	Hypertext Transfer Protocol	SS7	Signaling System Number 7
IM	Instant Messenger	TCP	Transmission Control Protocol
IMAP4	Internet Messaging Access Protocol 4	TDM	Time Division Multiplexing
IP	Internet Protocol	TSI	Transmission Subscriber Identity
IPDRs	Internet Protocol Detail Record	UDP	User Datagram Protocol
IPLC	International Private Leased Circuit	UMB	Ultra Mobile Broadband
IPSEC	Internet Protocol Security	UMTS	Universal Mobile Telecommunications System
IRC	Internet Relay Chat	VoIP	Voice over Internet Protocol
IRI	Intercept Related Information	WAN	Wide Area Network
ISP	Internet Service Provider	WMP	Windows Media Player

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