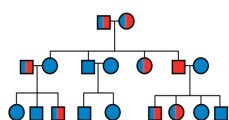


Contrata™ - DNA Familial Search

Product Brief



Contrata is a DNA Familial Search system developed in a partnership between the Denver Crime Lab and DRC Computer. The Denver Crime Lab is recognized worldwide as a leader in DNA familial search techniques including a comprehensive search system. DRC have enhanced this system by significantly expanding the possible search range with sub-second response time. DRC has further added the Security First SecureParser™ technology to provide highly secure communications and storage of suspect and enrolled DNA profiles.



- Proven, most advanced DNA Familial Search system – Denver Crime Lab
- Web based private cloud system
- Very high performance using DRC Accelium™ Accelerators
- Highly secure using Security First SecureParser™
- Linux environment
- Interpol and CMF 3.2 XML compliant

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Background. Familial DNA searching is a valuable investigative tool used in the United States and the United Kingdom to derive forensic DNA-based intelligence to assist in criminal investigations. It has the potential to significantly leverage DNA profiles in terrorist databases to detect siblings and parent-child relatives. DNA samples recovered from the battlefield can be searched against DNA databases with known and unknown source profiles allowing derivation of probabilistic reconstruction of familial pedigrees and possibly identification of unknown subjects.

Solution. Contrata™ is a state of the art DNA familial search system. The system allows millions of comparisons between DNA profiles, resulting in familial or exact matches to be derived in seconds over an encrypted and secure data environment. This system can be deployed over the Internet within a secure environment.

Users can perform one to one searches, one to many, or many to many searches within seconds. One million searches can be completed in less than one second. The system can be configured to derive DNA marker allele frequency data effectively tuning the system to any target population. Graphical outputs are customizable for rapid evaluation of large amounts of data

Search Customization:

- Choose between traditional likelihood ratio calculations or Expected Match Ratio/Expected Kinship Ratio-EMR/EKR.
- Derive allele frequencies from offender/regional populations.
- Select marker allele frequencies based on a specific region or potential suspect information.
- Change result threshold values to reduce false positive results.
- Supports all PCR Loci available in commercial kits

Standards Compliant. Profiles to be searched can be exported from CODIS or other known DNA profile formats and uploaded to the system using Interpol or CMF3.2 XML format.

Very low latency. Incoming DNA profiles can be analyzed in realtime with subsecond response times.

Massive scalability. Contrata analyzers scale to enable millions of searches to be conducted simultaneously.

Ultra-low energy consumption. Each Contrata server with 4 DNA search engines requires less than 400 watts of power.

User friendly. Web style interface with intuitive navigation means short learning curve and ease of use.

Cloud ready. Contrata analyzers can be cloud based.

Secure. Contrata includes the Security First SecureParser™ technology providing highly secure transmission and storage of DNA profiles.

Collaboration and Support from the Denver District Attorney's office, the National Institute of Justice and the National Forensic Science and Technology Center.

The Denver Crime Lab

The Lab is a recognized leader in forensic science and has established a reputation for its innovative approach to DNA Familial Search. The Lab has been awarded several prestigious grants from the National Institute of Justice.

DRC Computer Corp.

With over 200 man-years of experience in developing low latency, high capacity solutions DRC has a unique talent in big data applications. The DRC coprocessors are coded to run complex algorithms and routines orders of magnitude faster than the same routines executing in software on a standard server

Security First Corp.

DRC's parent company, Security First Corporation, is a recognized leader in highly secure systems

Made in America

DRC is a US based company with all staff US citizens, and all its engineering and manufacturing conducted in the US.