



# CHiLD RESCUE COALITION

CRC Forensic Tool Business Plan  
Presented for Consideration

SBA InnovateHER Challenge

mindwarehouse™

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This document contains confidential and proprietary information belonging to Child Rescue Coalition, Inc. the producers of CRC Forensic Tool, Automated Data Recovery of Deleted Child Exploitation Files on Offender Hard Drives and Storage Devices

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## 1. Executive Summary

Child Rescue Coalition's mission is to protect children. We provide criminal leads to law enforcement to help stop child predators around the world and rescue children in harm's way. At the core of our partnerships with law enforcement, forensic science, and prosecutorial resource is leading edge technology that identifies, monitors, and ranks online criminal behavior. We have trained over 7,200 investigators in all 50 states and 57 countries around the world who rely on our data to rescue children from abusive situations.

As in the case of a local gymnastics coach recently arrested for child pornography, our data helps unmask offenders working among children. He has subsequently been charged with the sexual battery of a four year-old girl.

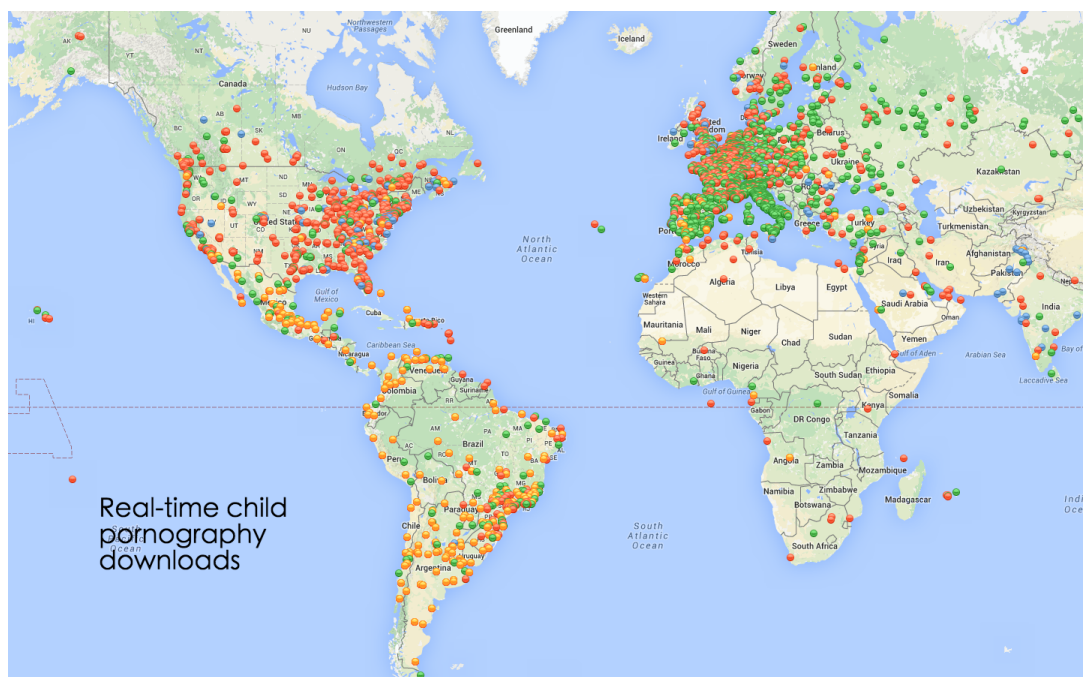
***In the last three years we can directly attribute over 6,000 arrests and the direct rescue of more than 1,000 children from abuse.***

Countless more children are now safe from harm.

We are world-renowned for our work in child exploitation.



Twenty-four hours a day, there are millions of individuals around the world downloading child pornography. They are our neighbors, our friends, our children's pediatricians, our children's teachers. They do not fit the stereotype; they are flying under law enforcement's radar, and they have our children in their sights. These are not registered sex offenders, and even the most extensive background check does not disclose their online criminal behavior. Our children are vulnerable.





Our devotion to children originates with our leader Carly Yoost. She is a rare example. She is a dynamic entrepreneur driven by the urgency of making a difference. Both a new mother and the President of Child Rescue Coalition, she is brilliant and fearless and uncompromising in her pursuit to transform the world into a safer place for our children. Her calling is to make all children significant.

To ensure sustainability she has defined several strategic initiatives to broaden our revenue portfolio. The monetization of a Forensic Tool for law enforcement will ensure our long-term focus on the protection of children and prevention of abuse.

### 1.1 CRC Forensic Tool

***In April 2015, Child Rescue Coalition embarked on harnessing its proven technology to address one of the most pressing problems in the field of child abuse prevention: the identification of deleted child pornography files on hard drives seized in the course of criminal investigations into child sexual abuse.***

- The process: CRC will interface with child abuse libraries of known imagery, generate and index all of these files into billions of scannable pieces.
- The tool: These pieces constitute unique file-identifiers, which will provide the capability for investigators to scan devices for those billions of fractional components of child pornography files.
- Any of the *millions* of known child abuse imagery files will be identifiable from the deleted files of a suspects device in an *automated* way.

Because of the data we have collected, our partnership with law enforcement, and our large data analytic capabilities, we are uniquely qualified to be the only provider for this tool today.

The CRC Forensic Tool addresses the needs of law enforcement investigators conducting child exploitation forensic analysis. It is a large niche market. The number of investigators working these cases, just in the US, and just within law enforcement, represents approximately 15,000 customers. Furthermore, the tool could be modified for use for broader application, offering a very large and lucrative long-term financial horizon.

We are confident this product will have immediate widespread adoption among our existing network of system users. On our current system platform, we have over 7,200 officers using our system across 57 countries and all 50 US States. We have also piqued the interest of high-level agency leaders globally with whom we have relationships.

Organizationally, our challenge is in the marketing and distribution of this revolutionary tool once we launch to production. We have devoted a portion of our operational resource to the research, design, development, testing, beta trials, and production launch. And we could

certainly market this directly leveraging our existing law enforcement relationships. But we do not want any child left in an abusive situation if it can be helped. The more investigators using this tool means more children will be rescued. We would significantly benefit from near-term support for public relations, marketing and distribution, and legal fees associated with establishing the appropriate financial structure and pursuing a method patent.

## 2. The Problem, The Bad Guys, and The Explosion of Digital Evidence

Twenty-four hours a day there are millions of individuals around the world downloading child pornography. At Child Rescue Coalition, we collect 30-50 million records daily of child abuse imagery being viewed online.

**Online offenders are also hands-on offenders.** Prosecutors often cite the Butner Study, which reflects that 85% of online offenders have already committed hands-on sexual abuse of children. In a large meta-analysis across multiple studies 'Contact Sexual Offending by Men With Online Sexual Offenses' the best-case scenario is that one in two or 50% of online offenders have already committed a contact sexual offense.

Imagine the scenario of a typical child exploitation case. The computer examiner discovers a folder in the file structure of a suspect's hard drive containing homemade child pornographic images of the suspect molesting a preteen girl. Imagine the forensic analysis does not take place until a year after the computer's seizure during the execution of a search warrant at a suspect's residence. Finally, imagine that the images are of a neighbor and that there was insufficient evidence to establish probable cause for the suspect's arrest before examining the hard drive. In this scenario automated tools to accelerate the computer forensic examination could have prevented the victim from being abused for another year.

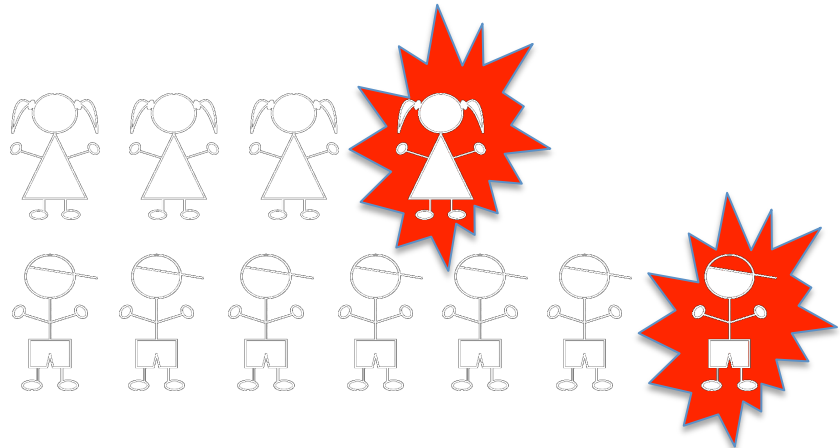
Child sexual abuse is one of the largest threats to the health, safety, and wellbeing of children. According to the U.S. Department of Justice 300,000 children in the U.S. are sexually abused each year and more than half of them are under the age of 12. **82% of all juvenile victims are female.**

Research conducted by the American Psychological Association in 2014 suggest that 1 in 6 boys and 1 in 4 girls are sexually abused before they reach 18.

Our focus at Child Rescue Coalition is on detecting individuals who are viewing obscene imagery of prepubescent children.

From the data we collect, imagery of infants being abused is common. As Internet technology becomes more advanced, pervasive, and accessible, the use of that technology for the exploitation of children has increased dramatically.

The most active and devious users frequently delete their offending files in an effort to avoid detection and apprehension.



The burdensome process of identifying deleted files greatly hinders the criminal prosecution of Internet child abusers and sometimes prevents it altogether. This is one of the greatest challenges in effectively prosecuting the most organized and prolific—i.e., the most dangerous abusers of children, often sophisticated enough to cover their tracks by deleting offending files. The difficulty of the computer forensic investigations is the primary source of delay in investigations, which makes it essentially impossible to accurately and comprehensively search the entirety of an abuser's hard drive. These obstacles all work to significantly hinder – and often entirely prevent – the full and effective investigation and prosecution of Internet crimes against children. This allows technologically savvy abusers to exploit more children.

In fact, for *any* computer forensic process involving analysis of digital information for use as evidence in civil, criminal or administrative cases, the time for change is long overdue. Every law enforcement investigator benefits from quick turnaround of digital forensic evidence related to their criminal cases—from photos, videos, email, social media and Internet usage to audio and documents. Each day that a computer or mobile device sits in a forensic backlog waiting to be processed is one more day that a criminal remains on the street, and a child is left vulnerable to continued abuse.

### 3. The Challenge

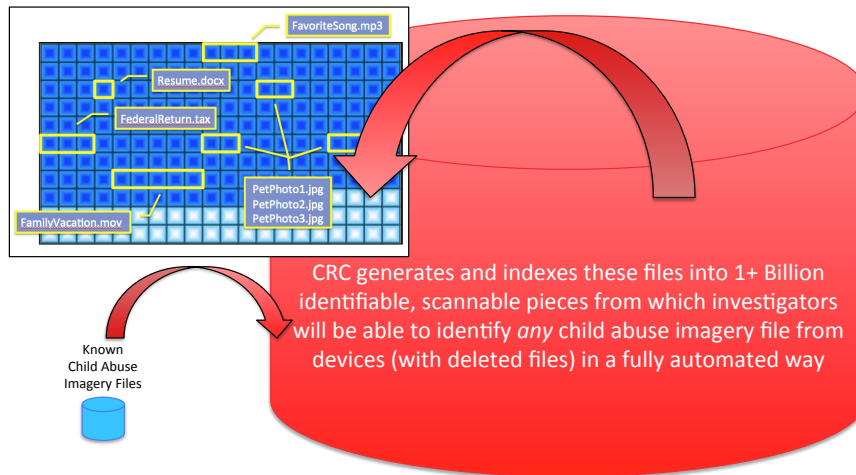
Launching this Tool commercially seems straightforward in many ways. We know there is a significant market for the product. We have a strong relationship with the base of law enforcement investigators using our current technology. We are also a trusted entity within law enforcement circles; in fact we can confidently say we are world-renowned for our work in child exploitation. However we have not travelled this path before. Effective customer acquisition, marketing strategy, pricing strategy, distribution, and PR are all resources we do not have. We want to be smart, strategic, efficient, and financially successful so that we can continue to protect more children. We would benefit from your resource and guidance.

### 4. The Solution

Over the last four months, in collaboration with global law enforcement partners and leveraging their respective image libraries, CRC has developed the prototype for this new and revolutionary forensic Tool. The prototype was presented to an audience of law enforcement investigators from all over the world at the annual Crimes Against Children Conference on August 10, 2015 in Dallas. The response was enthusiastic. Our Tool will change the landscape of computer forensics by automating the process of identifying large volumes of deleted child abuse imagery files. The CRC Forensic tool is scheduled to launch to production by the end of the first quarter 2016.



## Secret Sauce Differentiation



Our forensic Tool will provide comprehensive, automated, search and recovery, which will be both efficient and productive. It will be truly revolutionary and extremely attractive to law enforcement and to the commercial marketplace.

CRC's Forensic Tool will afford greater protection to children by affording efficiency in obtaining probable cause, sufficient evidence, and speedier prosecutions of child predators. A successful forensic examination of a suspect's hard drive - the restoration and identification of previously undetectable deleted computer files containing images of children being abused will help get more child abusers off the street.

## 5. The Market

Cybercrime initially emerged as a threat to computer users and businesses; it is now impacting entire nations. Internet usage continues to rise and so does the threat. "The Internet is the crime scene of the 21<sup>st</sup> century" (as written in the Wall Street Journal), is an apt description of our current environment. As nefarious uses of technology increase, so does the demand for fighting this new platform for criminal activity. Need we say hacker? While this trend is bad news for consumers, industry operators have reaped the benefits as the number and complexity of cyber crimes have increased. This leaves digital forensic service providers to find the digital trail.

According to new market reports, computer or digital forensics was a \$2B market in 2014, with a CAGR of 12.5%. It is a broad market, encompassing tools for addressing data security breaches to copyright piracy to online child exploitation. But, it is clearly a burgeoning growth market.

Notwithstanding the traditionally slow adoption rate of technology within the law enforcement sector, we are well positioned to directly deliver this product to our existing system user base of more than 7,000 law enforcement investigators working in child exploitation. These investigators represent the customers who need this Tool the most. We are providing a targeted solution for the single largest pain point in law enforcement investigations today.

According to Luc Beirens, Superintendent of the Federal Computer Crime Unit (FCCU) in Belgium, ***"the number of seized computers is a multitude of the number that was seized ten years ago. Every person that we search probably owns a desktop computer, a laptop, an iPad,***

***and a smart phone and in addition you may see a pile of external hard disks. All those systems need to be investigated.”***

It is simply not possible to manage the sheer volume of digital evidence in criminal cases. The backlog of caseloads from law enforcement agencies worldwide has grown from weeks to months to in some cases years. Digital forensic specialists cannot be trained fast enough. Further, the number of specialists required to analyze the mountains of digital evidence in common crimes is far greater than the specialists that are available. Any tool that can offer a more efficient approach, saves time, and improves outcomes is desperately needed.

Computer forensic products on the market today that provide recovery of deleted hard drive files are limited to searches for a small number of files and for those files that are small in size. These products do this by identifying ‘header values’. For that type of search, they work very well. When our investigator is scanning a hard drive, he is looking for a large number of files that are large in size. He is looking for millions of possible child abuse videos on record. The available tools simply do not work. Ours will.

Sizing the market segment within computer forensics for our product is based on customers as there is no clear segment currently defined. Criminal investigations of online child predators are pursued largely through 61 taskforces across the country funded by the Department of Justice. Internet Crimes Against Children or ICAC Taskforces include thousands of jurisdictionally specific law enforcement agencies. Investigators and forensic examiners within each agency vary in number e.g., Homeland Security, one member agency, has perhaps a thousand or more investigators as it has 200 US offices and more than 70 offices overseas. Small local law enforcement agencies may only have 2 or 3 investigators. Assuming 50 member agencies per ICAC Taskforce, and 5 investigators per agency, there are 15,250 potential customers for our project right now. This is expected to grow with the demand for this type of investigator resource within law enforcement. Further validation of our approximation of potential customers with significant future demand comes from two additional sources. There is no question there is a strong base of potential customers for this Tool with significant growth potential.

- More than 12,000 local police departments were operating in the United States during 2013. *Source: Bureau of Justice Statistics* <http://www.bjs.gov/index.cfm?ty=tp&tid=71>
- In the 2012-2013 edition of the *Occupational Outlook Handbook*, the U.S. Bureau of Labor Statistics reports that forensic scientist careers are expected to increase by 19 percent by the year 2020, which is an average rate of growth.
- Further, the *US Department of Labor Bureau of Labor Statistics* lists the number of jobs for forensic science technicians in 2012 as 12,900. Employment of forensic science technicians is projected to grow 6 percent from 2012 to 2022. Competition for jobs will be strong because of substantial interest in forensic science. <http://www.bls.gov/ooh/life-physical-and-social-science/forensic-science-technicians.htm>

## **6. The Competition**

CRC is singularly equipped to build and implement this tool for a host of reasons. All of these factors combined eliminate any immediate competitive threat. These factors include:

- Our 12 billion record database of child abuse imagery file values collected over the last decade



- Respect accorded to us and extensive global law enforcement relationships
- Our relationship with a global child abuse imagery database partner, already established
- Our technical (world-renowned) expertise and experience working in the field of child exploitation.

Other companies may have some of the above, but only CRC has all of the required capabilities to build this tool and take it to market.

Automated forensic search capability for deleted data files on computer hard drives and storage devices is limited to headers searches and has been for the last 15 years. This is the only real automation capability for searching deleted data files. Header searches for deleted data *files* are most effective when you are searching for small files. Small files may exist inside of one cluster or, at worst, a few clusters. Movie files, which comprise the vast majority of child pornography files, are much larger and, therefore, the likelihood of fragmentation, which exists in all operating systems, is much greater. It is this defragmentation that derails the ability to effectively locate deleted files in anything other than a manual way.

A product generated out of a non-profit, with which law enforcement is already familiar, also has a better likelihood of commercial success. Our expertise in child exploitation coupled with our law enforcement relationships in that same space gives us a strong competitive edge. All of the other forensic tools on the market are generic; ours is specific to child exploitation. Lastly, our ability to index and manage massive numbers of records distinguishes our tool and is a requirement for this technology to exist.

The following list the forensic products currently available within law enforcement and the commercial sector:

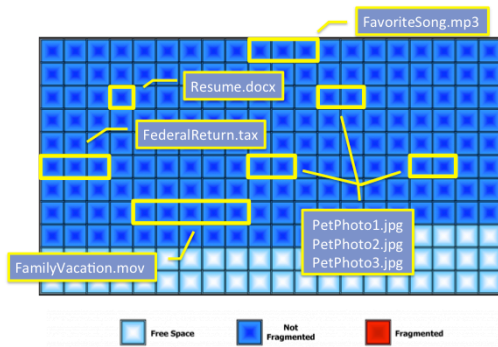
- 21 Popular Computer Forensics Tools: <http://resources.infosecinstitute.com/computer-forensics-tools/>
- Overview of available tools for forensic investigators: <http://forensicswiki.org/wiki/Tools>
- National Institute of Standards and Technology, US Department of Commerce Computer Forensics Tool Catalog: [http://toolcatalog.nist.gov/populated\\_taxonomy/index.php?all\\_tools=refine&ff\\_id=22&1%5B%D=any&5%5B%D=any&2%5B%D=any&4%5B%D=any&6%5B%D=1&3%5B%D=any](http://toolcatalog.nist.gov/populated_taxonomy/index.php?all_tools=refine&ff_id=22&1%5B%D=any&5%5B%D=any&2%5B%D=any&4%5B%D=any&6%5B%D=1&3%5B%D=any)

## 6.1 More on Competitive Distinction from Header Search Functionality

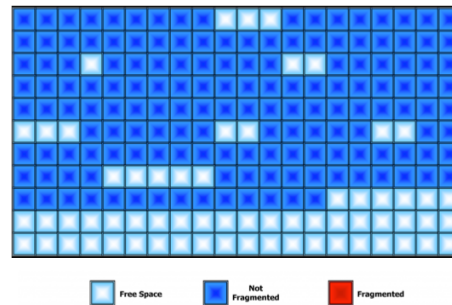
Magnet Forensics IEF, EnCase, FTK, and others, are forensic products for law enforcement. These tools look through hard drives searching for file headers. This allows investigators to extract and export contiguous clusters. This process and these tools are effective when the number of files being searched is limited and file size is small.

The current process: Searching for deleted child abuse video files on a hard drive, investigators find a header, extract a small number of contiguous clusters, and export them to see if they can “play” the media. If they can, they will search for additional contiguous clusters, extract, export, attempt to play, and do this over and over again. With each video file representing hundreds of thousands of fragmented clusters, they are lucky to find a handful of incriminating files, if any at all.

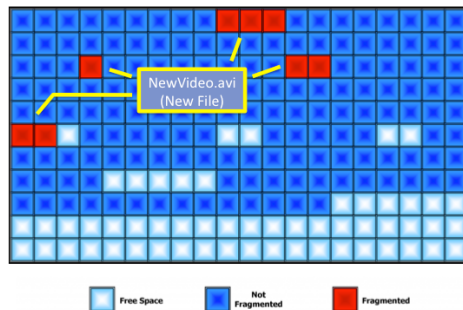
### 1. Typical Hard Drive File Allocation



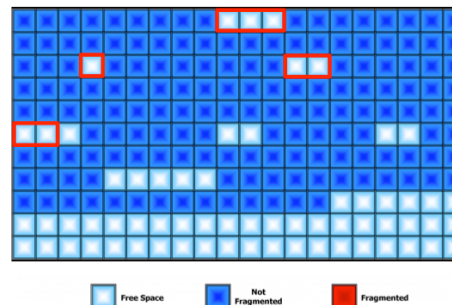
### 2. Files Deleted from Hard Drive



### 3. New Files Added to Hard Drive



### 4. Deleted Fragmented Clusters



The figures above help explain the current process but grossly oversimplify the magnitude of the problem. Our Tool provides recovery of *any* of the *millions* of possible deleted obscene child imagery files on record in an *automated* way. The Tool provides the capability to scan across billions of records, allowing for comprehensive, automated search and recovery, which is both efficient and productive.

## 7. Intellectual Property

CRC intends to pursue a business method patent for this project. The series of steps for performing automated search of deleted files to retrieve the files, combined with the technique to efficiently integrate extremely large datasets, constitutes intellectual property. Patent protection will discourage the development of similar technologies, as well as provide legal recourse in the event the process is duplicated and monetized.

We will be seeking a method or “process” patent through the US Patent and Trademark Office (USPTO) documenting the series of steps required to achieve stated outcomes. In light of a recent US Supreme Court decision (Alice Corp. v. CLS Bank Intl.) we have reviewed the USPTO guidelines relating to “Abstract Ideas” and strongly believe this process to be patent-eligible. The process steps are not hypothetical, but clearly articulable and require significantly more than simple mathematical calculation and comparison. For these reasons we believe it satisfies the Abstract Idea exception and will ultimately be approved by the USPTO.

The timeline for patent approval is lengthy, and as such we are investigating provisional patent status. We have been in preliminary discussion with local patent attorneys and initial patent searches reflect there is no other product like ours.

## 8. Business Validation

The success of the Forensic Tool Project will be evaluated at several stages during the course of its development. During the initial design and software coding process, CRC will test the efficiency and effectiveness of its hash value assignment methodology internally using a comparable group of innocuous files, such as mp3s or video files. Specifically, the hash value assignment methodology will be evaluated using the following objectively verifiable criteria: (1) speed, (2) efficiency, (3) cost effectiveness, (4) data storage capacity demand, and (5) accuracy.

After the methodology is proven effective, the program will be deployed to label the data clusters obtained from our partnering image libraries. At that time, selected law enforcement agency partners in South Florida jurisdictions will field test the program and the user interface to confirm that it performs up to expectations in real-life situations. CRC will evaluate the forensic Tool using objectively verifiable criteria such as (1) speed, (2) efficiency, and (3) accuracy, and will also collect practical feedback from law enforcement officials concerning additional features and other improvements that would enhance the Tool's usability and effectiveness in the field. Because of CRC's strong relationships in this area, CRC will be able to gather results from the initial field testing almost immediately after the tool's deployment.

During its lifecycle the proposed forensic Tool will be evaluated by CRC officers and technology experts, law enforcement officials using the forensic Tool in the field, and prosecutors using evidence gathered with the assistance of the forensic Tool in the courtroom. As use of the forensic Tool becomes more widespread, CRC also expects to receive constructive feedback from other child welfare organizations that may be familiar with the success of the project, leading to deeper and more productive partnerships with those organizations.

In its initial stages, CRC will be developing and perfecting its software. The success of the project will be tested and evaluated by CRC technology experts and other CRC officers knowledgeable about the specific needs and logistical concerns of law enforcement officials likely to use the forensic Tool. Once the Tool is ready for deployment in the field, CRC will use its partnerships with law enforcement officials in Palm Beach County and other South Florida jurisdictions to undertake limited testing of the Tool's performance in real-life law enforcement investigations. Using data and feedback collected during these field tests, CRC will confirm that the Tool's performance is consistent with CRC's expectations and the needs of law enforcement officials. CRC will make any adjustments necessary to conform to those requirements. When the Tool is ready for nationwide deployment, CRC will continue to actively solicit feedback from law enforcement officials and prosecutors charged with using the evidence collected in court.

Once CRC makes any necessary adjustments, the forensic Tool will be made available on a nationwide basis for use by qualified law enforcement officials.

CRC is constantly engaged in improving its forensic solutions. Based on insights from law enforcement. CRC has added numerous additional features to its existing forensic technology. This is designed to make the technology an even more productive asset in the effort to prevent child sexual abuse. CRC expects to do the same with the proposed forensic Tool.

## 9. Management Team

Carly Asher Yoost, President  
Bill Wiltse, EVP  
Jose Garcia Fernandez, VP of Technology  
Colleen Lockwood, VP of Advancement  
Nancy Wilcox, VP of Finance

### Advisors:

John Walsh, Host of America's Most Wanted and The Hunt  
George J. Taylor, Esq., Board Member, The Salah Foundation  
Bob Birdsong, CEO, OK Generators, Validate  
John Kemp, CEO, Compustaff  
Joseph Russo, Executive Director, Palm Beach Technology Association  
Armando Escalante, EVP, TransUnion  
Kate Grangard, CFO, The Gehring Group  
Jen Klaassens, Jen Klaassens Consulting  
Dennis Nicewander, Assistant State Attorney, 17<sup>th</sup> Judicial Court, Broward County  
Greg Schiller, Assistant State Attorney, SVU-Sexual Predator Unit, State Attorney's Office, Palm Beach County  
Adam Levine, Special Agent, Homeland Security  
Glen Pounder, National Crime Agency

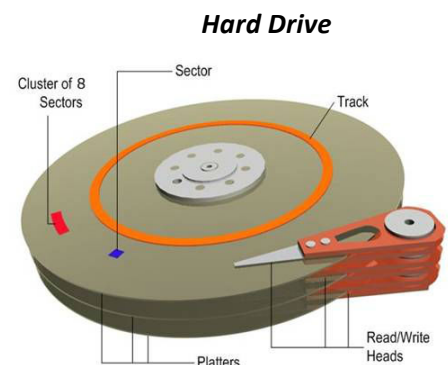
## 10. CRC Forensic Tool Product Description and Components

Since the inception of the magnetic hard disks in 1956, manufacturers designated a minimum storage unit for any data recorded to a drive. This unit, referred to as a "sector," consists of 512 characters or "bytes." As hard drive sizes have increased over time, the minimum storage unit has also increased and is now referred to as a "cluster." The most common cluster size among conventional file systems is 4096 bytes (or 8 sectors).

Determining which unit size to use for our forensic tool is of critical importance.

Sector-based searching provides increased granularity, allowing investigators to better locate missing/deleted images, but also increases the overall database size required to store the necessary hash values. Cluster-based searching reduces the amount of time required to scan a drive along with minimum system requirements, but will increase the probability of missing part of a file that has been partially overwritten.

For example: A video file for which we are searching is 5 minutes long and 10 MB in size. The 10 MB is spread out over the hard drive in random pieces. In a sector view this file would be comprised of 20,480 distinct pieces; each of which would require a unique hash value stored in our master database. Cluster view would require storage of one eighth of that total, or 2560 unique hash values, thereby reducing the database impact overall.



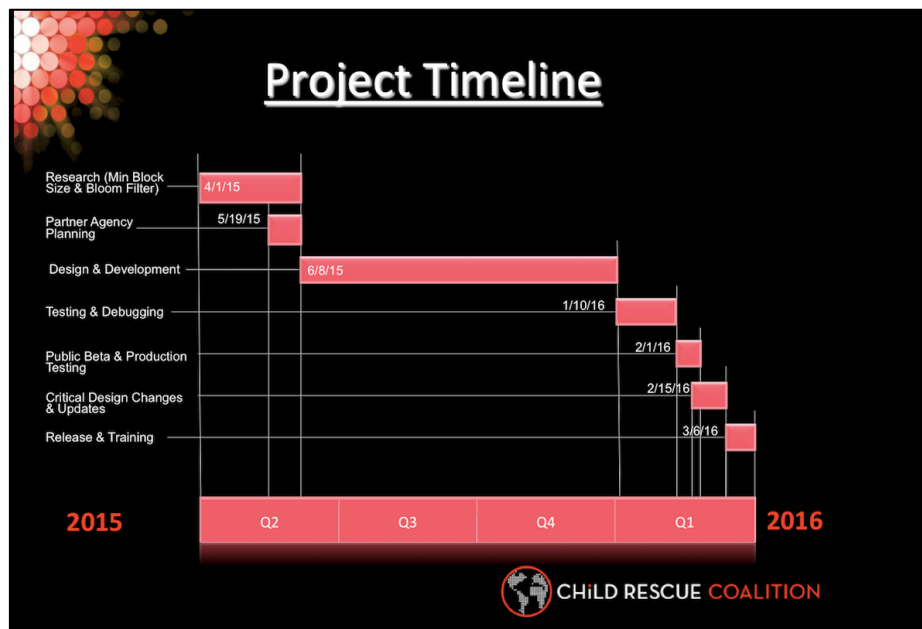
Hash values are the unique representation of the contents of a sector or cluster and allow us to know definitively when a piece of a known child abuse file has been located. Although there are many types of hashing algorithms, we are evaluating several to find the optimal balance of accuracy and speed of calculation. This decision must be made prior to the creation of our master database.

We are developing a hash-generation program for one or more partner organizations that will calculate the required hash values when run against their library of known child abuse imagery. The resulting database will likely be hundreds of gigabytes in size. Discussions are ongoing to determine the most efficient mode of delivery.

A preliminary prototype of a scanning application has been developed which successfully locates file pieces using a small database of pre-calculated known image hashes. This prototype will be the core on which the final application will be built.

## 11. Development Timeline

Per our project plan, our first three months have been devoted to researching the optimum minimum unit size and building a small prototype of a scanning/hashing tool. Our EVP Bill Wiltse presented the prototype of this tool at the Dallas Crimes Against Children Conference on August 10th. We are already recruiting investigators for beta testing and will continue to do so. Design and development takes us through the end of the year. Testing and deployment will be complete by the end of the 1<sup>st</sup> quarter 2016.



## 12. Revenue Model

CRC Forensic Tool Revenue Model

Assumptions:					
	2016	2017	2018	2019	2020
Total employed forensic technicians:	16,286	17,263	18,299	19,397	20,561
* Source: Bureau of Labor Statistics: Forensic Scientist Technician 2012 jobs total = 12,900, CAGR 6%					
* Total ICAC Investigators assumption: 61 taskforces, 50 member agencies per, 5 investigators at each agency					
Penetration assumptions					
Worse case	1%	4%	7%	10%	13%
Most likely	3%	7%	12%	17%	22%
Best case	6%	10%	20%	40%	80%
Customers					
Worse case	163	691	1,281	1,940	2,673
Most likely	489	1,208	2,196	3,297	4,523
Best case	977	1,726	3,660	7,759	16,449
Annual Licensing Pricing Assumptions:					
		Distribution of Market Assumption			
Agencies < 99 employees = \$500		93%			
Agencies 100 to < 499 employees = \$1,000		6%			
Agencies 500 to > 1000 employees = \$2,000		1%			
* Source: Census of State and Local Law Enforcement Agencies, 2008, US Department of Justice					
Annual Maintenance & Support Pricing Assumption:		Flat rate:	\$	400	

### REVENUE

<b>License Revenue:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Worse case	\$ 88,433	\$ 374,955	\$ 695,541	\$ 1,053,248	\$ 1,451,376
Most likely	\$ 265,298	\$ 656,171	\$ 1,192,356	\$ 1,790,521	\$ 2,456,174
Best case	\$ 530,596	\$ 937,387	\$ 1,987,260	\$ 4,212,992	\$ 8,931,542

<b>Maintenance &amp; Support Revenue:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Worse case	\$ 65,144	\$ 276,210	\$ 512,369	\$ 775,873	\$ 1,069,153
Most likely	\$ 195,431	\$ 483,367	\$ 878,347	\$ 1,318,984	\$ 1,809,336
Best case	\$ 390,863	\$ 690,524	\$ 1,463,912	\$ 3,103,493	\$ 6,579,405

<b>Total Revenue:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Worse case	\$ 153,577	\$ 651,165	\$ 1,207,910	\$ 1,829,121	\$ 2,520,529
Most likely	\$ 460,730	\$ 1,139,538	\$ 2,070,703	\$ 3,109,506	\$ 4,265,510
Best case	\$ 921,459	\$ 1,627,911	\$ 3,451,172	\$ 7,316,484	\$ 15,510,947

Three revenue scenarios are provided based on projected number of employed forensic technicians (note figure is US only). The 'most likely' scenario represents realistic assumptions of the Tool's adoption rate based on anecdotal evidence and knowledge of the market. 'Worse case' and 'Best case' projections are shown to provide a broader range of upper and lower potential revenue streams.

Law enforcement agency distribution by size is sourced from the latest data available from the US Department of Justice Office of Justice Programs Bureau of Justice Statistics Census of State and Local Law Enforcement Agencies, 2008.

## 13. Pricing

Pricing strategy incorporates both pricing goals and assumed customer price thresholds. Price points are not locked down. Potential customer value assessment is difficult to quantify as this is a new innovation. Therefore, predicting what customers will pay is based on examination of the pricing levels of prominent forensic tools currently in the marketplace. Comparing us to them is not apples to apples; however, it is the best basis for comparison at the moment. Magnet Forensics charges \$1,549 for their Internet Evidence Finder (IEF) License – a tool for searching Internet artifacts and an annual maintenance and support fee of \$400. EnCase is another popular multi-purpose forensic platform with tools for several areas of the digital forensic process. Licensing fees for their products range from a basic license fee of \$995 to \$2,676.76 for EnCase® Forensic V7 Electronic License. Additional maintenance and renewal fees vary by product.

For modeling purposes, we have assumed an annual subscription price of \$900 to include licensing and maintenance. We look forward to further researching price elasticity with our beta-users to determine optimal pricing levels.

## 14. Sales and Marketing

Early marketing of the Tool will rely on established law enforcement relationships. There are currently 7,200 trained, sworn law enforcement investigators licenses on our current system. Several attractive 'Go To Market' strategies are available to us (see below). A fully articulated marketing plan is being developed. It will comprehensively define our targeted marketing strategy and product packaging and messaging, public relations, and distribution methodology. We will be working over the next 12 months to generate awareness organically and through high profile conferences. We will further cultivate interest, support, and endorsements from industry analysts, subject matter experts, and agency leaders.

### 14.1 Go To Market Strategy Options

Marketing and selling strategy choices are nascent; therefore price points for this product by agency segment are not final. Since there are several approaches and tactics at our disposal, and we are likely to take a hybrid approach after testing out a subset of the approaches summarized below.

- *Top-down Approach:* "Sell" through the largest law enforcement and federal government agencies. This is, in theory, the most efficient approach – the fewest number of sales calls for the greatest revenue. Drawbacks: Getting into the pipeline of US government budgeting/appropriation/funding processes, both at state and federal levels, involves typically lengthy sales cycles, which are administratively intensive and would likely requiring lobbying resource to achieve meaningful results. The very large law enforcement agencies in the US – e.g., Homeland Security, FBI are at least in part funded by federal money.
- *Bottoms-up Approach: small agency purchase – or by individual investigator:* We did not mention this earlier, but another 'unofficial' distribution channel is through our system instructors all over the world. They train and certify law enforcement for CRC's system



today in classes of ten students per instructor, over a three-day period. There are 100 of them globally. They would be very well equipped to help us get the word out about this new capability. Drawbacks: Cautionary approach is required to avoid conflict of interest between non-profit and new commercial offering.

- *ICAC Taskforce Approach:* We work closely with the ICAC Taskforces and the investigators on the ICAC Taskforces which represent our “sweet spot” customers. Individually, investigators will want to buy this Tool. Drawbacks: Buying decisions at the taskforce-wide (commander) level may require amendments to the federal budget.
- *International Agency Approach:* We have already received funding from a few national law enforcement agencies for adding feature/functionality requested by them for CRC’s current system. We have close working relationships with agencies that are currently conducting national-level operations using our current technology. We anticipate a favorable response to the introduction of this tool for use within these agencies, whose vendor procurement and buying decisions have historically been far less hampered by bureaucracy than we have experienced with US domestic agencies of equivalent size. Drawbacks: None that are known.
- *Selling Through/Partnering with a respected forensic tool company already established in the market:* This is a logical approach; partner selection, branding and contractual specifics of the relationship have yet to be defined. Drawbacks: There is vulnerability of intellectual property prior to patent approval and loss of brand equity. Revenue-sharing diminishment of total revenue potential is offset by the goal of broader and more accelerated market adoption rate.

## 14.2 Building Awareness and Support

The need for this type of product is well established while our footprint in law enforcement is broad. Our existing software development relies on law enforcement feedback from all over the world. We have heard and in some cases, personally witnessed the impact of forensic delays. It is not unreasonable to assume that once we announce this product more broadly, there will be significant interest. We communicate with over 7,200 licensed law enforcement investigators through our system. We have relationships with ICAC Taskforce Commanders, Sheriff and local law enforcement agencies, statewide agencies (e.g., FDLE), and national agencies (e.g., Homeland Security, National Crime Agency, Royal Canadian Mounted Police, Europol, Interpol, Ameripol, and many others.) We also work closely with prosecutors at State Attorney Offices here and abroad.

We will pursue a hybrid approach of connecting with both individual investigators to build a grassroots awareness, as well as agency leadership. We will announce product availability and pricing through these channels.

We would either sponsor or be a speaker (or both) at targeted industry conferences.

Targeted publication in relevant news outlets and industry magazines will be developed in partnership with contracted PR support. Association membership fees, and peer-reviewed publication costs may be incurred. Influencer support will be pursued both on and offline. Detailed tactics will be further defined.

## 16. Financial Plan

### Financial Statement Projections 2016 - 2020

<b>Total Revenue:</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Worse case	\$ 153,577	\$ 651,165	\$ 1,207,910	\$ 1,829,121	\$ 2,520,529
Most likely	\$ 460,730	\$ 1,139,538	\$ 2,070,703	\$ 3,109,506	\$ 4,265,510
Best case	\$ 921,459	\$ 1,627,911	\$ 3,451,172	\$ 7,316,484	\$ 15,510,947

#### EXPENSES

	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Staffing</b>	Base Salary    Loaded Salaries				
Program Lead	\$ 125,000	\$ 200,000	\$ 210,000	\$ 220,500	\$ 231,525
Business Analyst	\$ 70,000    \$ 105,000	\$ 110,250	\$ 110,250	\$ 110,250	\$ 110,250
IT Support	\$ 80,000    \$ 120,000	\$ 126,000	\$ 132,300	\$ 138,915	\$ 145,861
2 Programmers	\$ 180,000	\$ 270,000	\$ 283,500	\$ 297,675	\$ 312,559
Administrative	\$ 50,000	\$ 75,000	\$ 78,750	\$ 82,688	\$ 86,822
* Base salaries loaded 50% for benefits and overhead, 5% salary increase annually					
* Assume in-house staff handles the bulk of the workload through 2016					
<b>Travel</b>	\$ 50,000	\$ 50,000	\$ 50,000	\$ 25,000	\$ 25,000
<b>Marketing and promotion</b>	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000
<b>Web Training Development</b>	\$ 25,000				
<b>Supplies</b>	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
* Assumes drop off in travel as agency licensing contracts are established globally; remaining travel for industry conferences					
* Web-based training model to be implemented in year 1. Outyear support covered by IT Support staff.					
* Marketing and promotion may be lower if partnership with commercial forensic company is developed					
<b>Total Expenses:</b>	<b>\$ 360,000</b>	<b>\$ 891,250</b>	<b>\$ 924,800</b>	<b>\$ 935,028</b>	<b>\$ 972,016</b>

<b>EBITA</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Worse case	\$ (206,423)	\$ (240,085)	\$ 283,110	\$ 894,094	\$ 1,548,513
Most likely	\$ 100,730	\$ 248,288	\$ 1,145,903	\$ 2,174,478	\$ 3,293,494
Best case	\$ 561,459	\$ 736,661	\$ 2,526,372	\$ 6,381,457	\$ 14,538,931

There are no capital requirements we are aware of; we will utilize existing server cluster resource. We realize there may be depreciation expense that is not reflected but we anticipate it to be nominal.

## 17. Conclusion

The launch of the CRC Forensic Tool will allow our already successful organization to expand into new areas. Our sustainability rests on our ability to pursue new market opportunities and we expect this to be the first of many.

The launch of the Forensic Tool gives us the capability to broaden our footprint in law enforcement in a synergistic manner. We are able to easily leverage all of the resource and expertise currently at-hand for significant financial benefit.

Best of all, we will have greater power to improve the safety of children while transforming a painful forensic process.

We offer, along with our unique market position, a number of positives, including:

- Close alignment with the target customer segment in a significant market
- Lengthy competitive barriers to entry
- Growth opportunities beyond the current niche focus in child exploitation
- Strong operational and leadership resource

A plan is just a plan without implementation and we need YOU. It is an exciting ground floor opportunity with nominal start-up costs. We look forward to working with SBA, MindWarehouse and our advisor community to create a win-win partnership for our community. We look forward to a long-term relationship. Our combined energies will leave an indelible and positive global imprint.