



***OKLAHOMA STATE  
BUREAU  
OF  
INVESTIGATION***

***Information Technology Services Division***

***Criminal History System Upgrade  
Funded by General Revenue Funds***

***BUSINESS PLAN***

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## ***EXECUTIVE SUMMARY***

The Oklahoma State Bureau of Investigation (OSBI) is the state repository for criminal history information. The agency provides criminal history information to local, state, and federal law enforcement agencies for enforcement purposes, as well as the public for licensing and employment needs. In calendar year 2008, a total of 1,251,404 transactions were conducted by the CCH system. Of that number, in excess of 700,000 transactions were for law enforcement purposes only. The remainder of the inquiries came from the private sector and from those used by law enforcement in their internal processing.

The OSBI CCH repository is a complex system-of-systems made up of three major components. This system was procured and customized to fit OSBI's business needs in 1992, and became fully operational in 1994. Prior to 1994, the OSBI criminal history repository was based on a manual fingerprint process, which routinely took seven to ten days to complete, beginning with the arrest and ending with the name being hosted on the OLETS network. This delay was unacceptable for efficient law enforcement purposes.

The CCH system was completely redesigned and developed as part of the bureau's Automated Fingerprint Identification System (AFIS). For the first time all relevant data bases were migrated into a secure OSBI data center. The new system broke all national performance benchmarks and was the first integrated AFIS in the nation. With the implementation of this system, the processing time dropped from seven to ten days to an instantaneous availability of arrest information.

The primary component of the system is the CCH message switch that acts as message processor maintaining interfaces with OLETS, NLETS, FBI's Triple I (III) and NCIC. The second component is the CCH RMS (records management system) that hosts all of the criminal history records and the civilian licensing related records in a relational database containing in excess of 1.2 million individual records. The third component is a set of application programs that maintain critical system-to-system interfaces while processing all of the criminal and civil data collected by law enforcement in Oklahoma. The system also plays a major role by supporting the 38 live-scan devices deployed throughout the state. These devices provide for the electronic capture of arrest demographic information, fingerprints, palm prints, and facial images collected in a paperless booking process.

Since 1994 there have been several enhancements to assist the system in maintaining quality reporting, however, it has far exceeded the life expectation of this type system. The software language is now obsolete and the systems hardware has been out of production for over seven years. The OSBI IT Services Division has effectively maintained this complex system thereby

extending its longevity with minimum operational expense resulting in an operational return on investment that is exemplary.

With the rapid advent of technology, computer companies have moved to newer and better products making patches and fixes to the old system increasingly difficult to find and implement. If there is a problem with the system, few people remain who are familiar with the architecture of the old system. Hardware, if available at all, would be either used or refurbished. In short, this system is antiquated and further attempts to upgrade to today's standards are simply non-productive and cost prohibitive.

### ***BUSINESS CASE:***

The CCH system is a mission critical system maintained by the OSBI that provides both the law enforcement community and the public with criminal history data linked to fingerprints insuring true identity of the record holder. This system operates on a 24/7 basis handling over a million transactions per year.

In the wake of September 11, 2001, the OSBI has undertaken many technical projects designed to enhance our state's technical capabilities to fight crime and terrorism. These systems focused on information sharing and development of actionable intelligence designed to solve cross jurisdictional crimes and fight terrorism. The computerized criminal history system plays a critical role in providing a complete and accurate criminal history picture used by the law enforcement community. The repository also supplies data to two major information sharing initiatives (OASIS and OKLeX) directly related to the safety of Oklahomans and national homeland security.

The current system has been operating nonstop for over eight years with some components continually running 24/7 for over 14 years. The system WILL fail, and could do so at any time. The operational and financial impact of such an event would be catastrophic. While it is impossible to predict all the ramifications of such a failure, the following brief impact statement will provide some indication of the dire nature of this threat.

### ***OPERATIONAL IMPACT:***

Complex structures such as the CCH system are specifically engineered layers of systems that require a great deal of planning and development to successfully implement. These systems must be designed to avoid any significant loss of services or disruption to public safety. A project of this magnitude could easily take between 12-15 months to effectively plan and implement if funds were immediately available upon failure (which is not the case). If this system is allowed to fail, the following are a few of the major operational impacts.

- Law enforcement would not be able to verify conceal carry licenses online.

- Law enforcement would not be able to run automated checks to verify true identity via fingerprints.
- SDA licenses would have to be manually processed making it impossible to issue conceal carry licenses within the statutory time frame.
- National Instant Check (NICS) firearm purchase transaction queries submitted via FBI's Triple I (III) would fail in Oklahoma thereby extending the waiting period for those purchasing firearms resulting in a dramatic impact on retail outlets and citizens.
- Health care workers, day care workers, teachers, law enforcement officers, attorneys, and dozens of other job applicants would not be able to obtain statutorily mandated criminal history record checks electronically thereby creating lengthy bottlenecks and adversely affecting both applicants and employers.\*
- Background checks of government appointed officials would not be completed in a timely manner.
- Commercial record check processing businesses such as Select Force and Accufax would not be able to conduct business as they currently do.
- Manpower would be drained from other agency essential tasks to assist in the manual operations that would be needed to maintain even minimal services, thereby, adversely impacting other critical operations.
- Cost of emergency repairs would be significantly higher than replacement under normal circumstances.
- DHS adoption services would be delayed due to an inability to conduct fingerprint based criminal record checks.
- DA's and Judges would experience significant delays in receiving criminal history records for adjudication purposes.
- OSBI would need to hire additional FTE to manually process records until the system could be replaced.
- OSBI no longer stores hard copy fingerprints, therefore, fingerprint data would have to be extracted from electronic systems and rap sheets assembled manually. This manual operation would be expensive, time consuming, and ineffective.

\* See Attachment 1

- OSBI would no longer be able to generate data downloads for the public, academia, the Legislature, and other private entities that use CCH data for grant purposes and other statistical public safety measures.
- Federal law enforcement agencies would not be able to process their critical investigations without searching our statewide database. For example, FBI, IRS and Federal Marshals currently flag files in our systems to aid in the apprehension of wanted fugitives.
- OSBI would violate FBI's Triple I (III) and NFF status by not having a system capable of participating in these national processes.
- Access to OLETS, NLETS, FBI's Triple I (III) and NCIC systems would not be available, thereby, severely limiting access to national databases for investigative purposes.

**FINANCIAL IMPACT:**

When this mission critical system fails, the loss of OSBI fee-based revenues would amount to millions of dollars with catastrophic effects on every branch of bureau operations including investigations and laboratory services. This would occur at a time when local agencies are likely to be most in need of our services.

The following is a summary of the financial impact that would be felt during the months needed for development and implementation of a new system.

| <b>FY 2009 Projected Revenue Impact</b> |                                                  |                |               |
|-----------------------------------------|--------------------------------------------------|----------------|---------------|
| #                                       | Description                                      | Revenue Impact | Comments      |
| 1                                       | Name based criminal history record checks        | \$ 4,540,500   |               |
| 2                                       | Fingerprint based criminal history record checks | \$ 757,950     |               |
| 3                                       | Monthly revenue loss                             | \$ 441,537     | 18 month max* |
| 4                                       | SDA License fees                                 | \$1,961,290    |               |
| 5                                       | Record expungements                              | \$ 82,500      |               |

\* If taken for the maximum time of 18 months, the impact will be \$ 7,947,666 without adding SDA license fees and expungements.

The FY 2009 projected revenue from criminal history name searches is \$4,540,500. For all fingerprint based criminal history searches it is \$757,950. The combined amount of \$5,298,450 represents 65.1% of total OSBI General Revolving Fund 200 revenue (net of Federal Grant reimbursements). Average monthly revenue from these two funding sources is \$441,537. If, due to a catastrophic failure of the AFIS/CCH system, we lost 100% of our capacity to produce name-based and fingerprint-based criminal history records, our loss of revenue would average \$441,537 per month.

If the AFIS/CCH system failed, the time needed to obtain funding, develop, and implement the system could easily exceed 18 months with a potential revenue loss of \$7,947,666 during this time. Additionally, it would impact the revolving fund revenue from SDA licenses fees and record expungement fees. Current estimated annual revenue from SDA licenses is \$1,961,290 and for record expungements is \$82,500. These revenue sources coupled with fingerprint and name-based searches comprise approximately 20% of our total annual operating budget. The impact upon operations would be disastrous requiring extraordinary measures to sustain regular services and complete the mission of the agency regarding these critical functions.

## ***MISSION/GOALS/OBJECTIVES***

**OSBI Mission Statement:** The mission of every OSBI member is to insure the safety and security of the citizens of Oklahoma.

**Goal:** After receiving Legislative approval, it is the goal of the OSBI to upgrade the agency's Computerized Criminal History Repository, by utilizing effective IT plans that minimize operational disruption.

**Objectives:** The objectives of upgrading the OSBI's Computerized Criminal History Repository system are to:

- Procure a modern java based highly configurable message switch to replace the current old switch;
- Extract and migrate the current CCH database and associated programs to modern Java based web centric applications and an Oracle database;
- Migrate/rewrite as needed all the XML based AFIS interface applications while improving the current message queuing technology;
- Replace the current server and disk technology with modern highly scalable redundant server, dedicated storage technology.

The success level of meeting the objectives of this plan will be measured via the following Key Performance Measures (KPM).

1. By implementing a web centric solution, the number of IT resources needed to maintain the system shall be reduced by 40%.
2. XML based rap sheets will be supported on all rap sheet requests. By applying style sheets, customer experience will improve by 15%.
3. By utilizing a modern database the system will be better prepared for e-commerce implementation.

## ***IMPLEMENTATION DESCRIPTION***

The OSBI Information Technology Services Division has demonstrated experience of designing and implementing such complex systems. Through combined experience of over 75 years, we are prepared to write the complex technical specifications required for such systems and effectively implement a computer-based solution that will bring the best return on investment with enhanced technical benefits to our customers.

The following table summarizes the financial budget required to procure and implement a custom modern Computerized Criminal History Repository that will exceed the functional, performance, and availability of the current system.

### **FINANCE PLAN**

| <b>Database Migration and Consulting Cost:</b> |                                                                                    |     |                      |                                                                                              |
|------------------------------------------------|------------------------------------------------------------------------------------|-----|----------------------|----------------------------------------------------------------------------------------------|
| Item                                           | Description                                                                        | Qty | Cost                 | Comments                                                                                     |
| 1                                              | Migration from RDB to Oracle enterprise 11G.                                       | 1   | \$ 0                 | Covered by OSBI IT                                                                           |
| <b>Equipment and Services:</b>                 |                                                                                    |     |                      |                                                                                              |
| Item                                           | Description                                                                        | Qty | Cost                 | Comments                                                                                     |
| 1                                              | CCH message switch upgrade with full support for XML exchanges and J2EE framework. | 1   | \$ 828,000           | To act as the main information exchange between internal and external systems                |
| 2                                              | CCH Database software configured as a redundant cluster                            | 1   | \$ 175,000           | Oracle Enterprise License set in a redundant cluster                                         |
| 3                                              | CCH RMS software customized to meet OSBI needs                                     | 1   | \$ 587,000           | Web-based data entry and process application. Full web services SOA architecture integration |
| 4                                              | Hardware & Integration Cost                                                        | 1   | \$ 280,000           | Estimate does not include peripheral equipment like barcode printers, etc.                   |
| <b>Total Estimated Cost</b>                    |                                                                                    |     | <b>*\$ 1,870,000</b> |                                                                                              |

\*Cost includes first year maintenance of hardware and database maintenance

### **ASSUMPTIONS**

The facts and trends surrounding this project are:

A. The CCH system: Will fail due to old age, it is only a matter of when. Replacing the system under emergency conditions would be far more expensive than a planned upgrade. Service to our customers in Oklahoma and around the nation would be completely disrupted. Years of exceptional work in building a system that has been the envy of many states and a pattern for success would be destroyed dropping our national status immeasurably.

B. National Trend: Even before the September 11, 2001 attacks on the World Trade Center and the Pentagon, law enforcement agencies across the nation, including the OSBI, were strengthening their intelligence gathering capabilities. However, the need for such action was highlighted after the terrorist attacks hit home. Due to the mobility of our population and the advances in technology, criminals, including terrorists, are no longer isolated in one area. Access to the

Internet has allowed many of these criminals to organize in a way that is threatening to the United States and its citizens. However, this same technology allows law enforcement to better identify and counteract the activity of these criminals. Systems like the OSBI's CCH are essential to such effort by providing the effective and reliable sources of criminal identification and tracking.

C. State Trend: Since the recent terrorist attacks on our country, we have been constantly expanding our capability to effectively combat crime by using advanced technology. The implementation of several computerized information sharing initiatives such as OASIS and OKLeX have had a statewide impact on gathering critical information relating to criminal activity and intelligence. These projects come with a significant overhead on operations such as training and assessment of effectiveness, but the benefits of such systems far outweigh the overhead.

On a daily basis Oklahoma's leaders, such as the Governor and the Legislature, are facing the issue of crime in Oklahoma. These leaders often look to the OSBI to provide an accurate assessment of criminal activity in the state so appropriate action can be taken to ensure the safety of all Oklahomans.

At both the state and national level there is an increasing reliance on accurate and timely criminal reports and intelligence information to help protect citizens, prevent criminal activity, and enhance the safety of law enforcement officers. The Oklahoma State Bureau of Investigation needs to be a catalyst and a key player in addressing this growing area of concern to help bring law enforcement in Oklahoma into the cutting age of advanced technology.

Catastrophic failures of main repositories like the OSBI's CCH system and the aftershock effect of such occurrences would have irrecoverable public safety and economic issues that Oklahoma and its citizens cannot afford.

## **GLOSSARY OF TERMS**

|       |                                                        |
|-------|--------------------------------------------------------|
| AFIS  | Automated Fingerprint Identification System            |
| IAFIS | Integrated Automated Fingerprint Identification System |
| OASIS | Oklahoma Automated Secured Information Sharing Project |
| OKLeX | Oklahoma Law Enforcement Information Exchange          |
| NLETS | National Law Enforcement Telecommunication System      |
| OLETS | Oklahoma Law Enforcement Telecommunication System      |
| NCIC  | National Crime Information Center                      |
| III   | Interstate Identification Index                        |
| ADRS  | Arrest Disposition Reporting System                    |
| NFF   | National Fingerprint File                              |
| SDA   | Self Defense Act                                       |

Appendix 1

| Industries Requiring Background Investigations per Statute                    |            |                   |                                                |
|-------------------------------------------------------------------------------|------------|-------------------|------------------------------------------------|
| Request Purposes                                                              | Name-Based | Fingerprint-Based | Statute                                        |
| Adoption                                                                      |            | X                 | Title 10 OS § 7209A - 7505.5                   |
| Board of Nursing - students/graduates                                         | X          | X                 | Title 59 OS § 567.5 - 567.6                    |
| Childcare Facilities and Volunteers                                           | X          |                   | Title 10 OS § 404.1                            |
| Community Service Providers & Medicaid Personal Care Services                 | X          |                   | Title 56 OS § 1025.1                           |
| Corporation Commission                                                        |            | X                 | Title 17 OS § 701                              |
| Department of Education Employment                                            | X          | X                 | Title 70 OS § 6-107                            |
| Department of Health - Alarm and Locksmith                                    |            | X                 | Title 59 OS § 1800.7 - 1800.8, 1800.13; 1800.1 |
| Foster Care                                                                   |            | X                 | Title 10 OS § 7209A - 7505.5                   |
| Horse Racing Commission - Horse Racing employees// Gaming Employees           |            | X                 | Title 3A OS § 203.3, 204.2E                    |
| Housing Authorities - Applicants for Housing                                  |            | X                 | 1996 Pub L 104-120                             |
| Insurance Commission - Bail Bondsmen and Runners                              |            | X                 | Title 59 OS § 1305                             |
| Law Enforcement - CLEET                                                       |            | X                 | Title 70 OS § 3311                             |
| Liquefied Petroleum Gas - Investigators                                       |            | X                 | Title 52 OS § 420.2                            |
| Nursing Home Employees                                                        | X          |                   | Title 63 OS § 1-1950.1 - 1-1950.8              |
| Office of Juvenile Affairs - Employees                                        | X          | X                 | Title 10 OS § 404.1                            |
| OK Board of Bar Examiners - Bar Admission Applicants                          |            | X                 | Title 5 OS § 12                                |
| OK Veterinary Board - Animal Euthanasia Tech                                  |            | X                 | Title 59 OS § 698.7                            |
| Oklahoma Teacher Licensure                                                    | X          | X                 | Title 70 OS § 6-190.B6                         |
| Persons authorized to access and review National Criminal History Information |            | X                 | Title 74 OS § 150.9                            |
| Precious Metal and Gem Dealers / Pawnbrokers                                  |            | X                 | Title 59 OS § 1524                             |
| Private Prisons / Jail Administrators                                         |            | X                 | Title 70 OS § 3311                             |
| Real Estate Commission - Realtors seeking licensure                           |            | X                 | Title 59 OS § 858-307.4                        |
| Self Defense Act                                                              |            | X                 | Title 21 OS § 1290-12                          |
| Security Guards / Private Investigators                                       |            | X                 | Title 59 OS § 1750.5 - 1750.6                  |