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THE OPENFOX® SEX OFFENDER REGISTRY 2.0

Product Guide © 2018

The OpenFox® Product Suite

Proven Progress. Proven Protection



SEX OFFENDER REGISTRY 2.0

Computer Projects of Illinois, Inc. (CPI), with its headquarters in Bolingbrook, Illinois, is a privately held corporation and an acknowledged leader in information-sharing software systems for the law enforcement and criminal justice community.

CPI is the only information sharing solutions provider that focuses solely on the unique needs of professionals in the law enforcement, and criminal justice fields. Simply, CPI products act as conduits that allow information to flow easily between various systems such as NCIC and NLETS.

Because of CPI's focus, nearly half of all law enforcement users within the U.S. (including federal, state and local agencies) rely on our comprehensive and proven OpenFox[®] suite of information sharing products.



Overview

Convicted sex offenders are some of the most closely tracked and monitored individuals in the country. Consequently, information on sex offenders is housed in a myriad of locations, including municipalities, counties, state databases, the national sex offender registry, and the Web. Keeping information current and accurate among all these stakeholders is a Herculean task.

The OpenFox^(R) Sex Offender Registry 2.0 dramatically reduces the need for making multiple entries across varied platforms. This means less opportunity for error and fewer work force hours for data entry. Ultimately, better information means better protection from sex crimes and safer communities.

The OpenFox[®] SOR 2.0 solution is CJIS and SORNA compliant out of the box and easily configurable to meet the terms of any agency, county, state, or national level standards.

SOR 2.0 was designed & developed with careful focus on 4 main goals: Reliability, the NCIC Data Model, Optimum Performance, and Transparency. Achieving each of these 4 goals during development along with the introduction of CPI's own patent-pending technology has resulted in the emergence of a superior COTS product that realizes the same elite quality, trust, and standards as our other market-leading products offered in the OpenFox[®] Product Suite.



Reliability

After Addressing customer feedback regarding our previous SOR solution, reliability became critical to the success of SOR 2.0. One key factor that guarantees reliability is that any new entries or changes to offender records are made easily and saved dependably without compromising other actions within the system such as searches & NCIC synchronization. This includes the assurance that NCIC syncing works smoothly & efficiently throughout the entire solution. Another important factor of reliability is the system is built to handle any NCIC sync errors gracefully.

Impact of errors are localized. The system continues to operate as unrelated portions of the solution are not affected.

Users are clearly notified when any errors occur and admins can **access real-time reports** of system error conditions.

Reliability builds trust and trust builds customer confidence that allows users to focus on their tasks without apprehension or ambiguity.

NCIC Data Model

In order to deliver the promise of reliability, we decided to base our data model precisely on the NCIC's data model. As a result, the SOR 2.0 offers dependable record saving and syncing to NCIC functionality right out of the box.

This type of design also allows the base product to be implemented quickly. The base design and functionality allows CPI to simply layer customer-specific functionality on top.

Notice how the tabs in the following picture have been broken down into groups of related information that appears within the NCIC Sex Offender File.

Current Clients:

Air Force Office of Special Investigations Alabama Law Enforcement Agency Arizona Department of Public Safety Arkansas Crime Information Center Hawaii Criminal Justice Data Center Idaho State Police **Illinois State Police Indiana State Police** Iowa Department of Public Safety Kansas Bureau of Investigation **Kentucky State Police Maine State Police** Massachusetts Criminal History System Board Maryland Department of Public Safety Michigan State Police **Mississippi Justice Information Center** Missouri State Highway Patrol Montana Department of Justice **New Hampshire State Police** New Mexico Department of Public Safety North Dakota Dept of Emergency Services **Ohio Department of Public Safety Ohio Attorney General Oklahoma Department of Public Safety** Oklahoma State Bureau of Investigation Philadelphia Police Department **Rhode Island State Police Rhode Island Attorney General** South Dakota Bureau of IT Texas Department of Public Safety US Army Criminal Investigative Division **US Department of Justice US Immigration & Customs Enforcement US National Central Bureau US Naval Criminal Investigative Services US Postal Inspection Service Vermont Department of Public Safety Virginia State Police** West Virginia State Police Wisconsin Bureau of Criminal Investigation Wyoming Division of Criminal Investigation





Base	Suppl	emental	Interne	et/Phone	Address	Employmen	t Edu	cation	Conviction	Vehicles	Watercraft	Images	Notes
Demog	raphics-												
* Last I	Name				*	First Name				Mido	lle Name		Suffix
TEST					Т	EN							
* Date	of Birth	* Sex		* Race			* Heigh	t *Weig	ght				
201010	10	M = Male	•	W = White		-	510	300					
* Hair C	Color		* =	ye Color	Soc	ial Security #	Skin Tone	•					
BUIE	Blue		- 81	II = Blue	_		_	_	-	_	_	_	_

The tabs shown above can be configured. SOR 2.0 gives the customer many different options for how they organize data. Customers have the option during the design phase to configure their look and feel of the user interface to match their business rules and preferences.

Optimum Performance

As another major design goal, optimum performance, enables the OpenFox^{\mathbb{R}} SOR 2.0 to operate quickly, securely, and efficiently. Here are some of the major components that ensure top performance levels:

- Interfaces
 - Direct TCP/IP (FoxTalk) and rotored connections
 - Faster & more reliable than the Insert & Poll Database model
- JSON
 - Front-end and Fennec Broker exchange messages in JSON
 - Reduces the bytes sent through the Switch, over the wire, and stored in Archive
- Parallel Processing
 - Distinct processing channels for: searches, record maintenance, NCIC syncing and image / binary asset processing.
 - If necessary, searches are queued. Small jobs are processed while long searches run in the background. For example, when a record is saved, the NCIC syncs keep running smoothly.



As a component of the OpenFox[®] Desktop environment, the OpenFox[®] SOR 2.0 utilizes RSA BSAFE Crypto-J JCE software module for FIPS 140-2 compliance.





- Queuing / Throttling
 - Searches and NCIC syncs are queued
 - Throttling the syncs & searches ensures the system won't be overwhelmed
- Caching
 - Works similarly to web browsers and images
 - Less load on server, bandwidth, etc. means faster performance for users
 - GUI caches offender images
 - Fennec Broker caches frequently requested offender records and data
 - Quickly load an offender you just modified

Transparency

Transparency simply builds trust. It is not enough to have a reliable and performant system. Users will only trust a system if they can see & understand exactly what it's doing at any given time. A few factors that help $OpenFox^{(R)}$ SOR 2.0 to achieve suitable transparency include:

- Accurate Progress bars show users real-time processing status
- **Search screen** shows if a user's search is queued and the queue position

OR Admin Tools User Session Window Tools Help	🫸 <u>M</u> odule:
Sor Search	_ = ×
ctions	
Search Options Clear Previous Results Remember Last Search Queue Position	
Match ALL of the following	O Match ANY of the following
	•
Q Last Name ▼ is like ▼ %TEST	
Ģ First Name ▼ is ▼ ONE	
⊖ FBI# ▼ is ▼	
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the sor Search	۵: ۵



Nlets is the premiere interstate justice and public safety network in the nation for the exchange of law enforcement-, criminal justice-, and public safety-related information. To accomplish this, the Nlets system provides unrivalled reliability based on a network built to endure threats without impacting performance.



• Search results - Quick Visual indicators: Padlock- if the record is locked including the time stamp & by whom, a Red Flag- if the record has any unresolved errors, and a Green Refresh Symbol- indicates an NCIC sync is processing(see below)

• Error visibility

- Users receive immediate feedback (pop-ups & flags)
- Feedback is detailed to pinpoint the problem



• Transparency into the NCIC Sync

• See which messages will be sent, which are in process, and which are completed by clicking Sync Detail Button

	🔕 NCIC Syn	NCIC Sync Detail										
	Actions											
	This window will auto refresh every 30 seconds.											
NCIC Sync	Name TEST, SEVEN Date of Birth 20070707 Sync Record Status ACTIVE											
Datail Scroon	Field T 🛦	MFC	Action	Status	Time	Data Sent to NCIC						
Delali Scieen	BASE		ADD_OFFENDER	COMPLETE	20180615 16:27:41	NAM/TEST, SEVEN.OCA/OCATEST7.SEX/M.RAC/W						
	BASE	SXP	MODIFY_FIELD	COMPLETE	20180615 16:27:41	SXP/N						
	BASE	POB	MODIFY_FIELD	ACTIVE	20180615 16:27:41	POB/IL						
	BASE	DNA	MODIFY FIELD	PENDING	20180615 16:27:41	DNA/N.DLO/						
	BASE	ROV	MODIFY FIELD	PENDING	20180615 16:27:41	ROV/CS.AOV/22.SOV/M						

• Admins can configure system notifications on subjects like new records, NCIC errors, locked records, sync notifications, total record count, etc. (see screen shot below)

System Health Preferences	
Notification Options Sound Settings	
These options affect the behavior of	the sex offender registry notification system.
Error Notifications	Sync Notifications
Receive a notification when a new	Receive a notification when the
NCIC error has occurred in the SOR system.	NCIC sync process may be delayed.
Error Notifications	Sync Notifications
Search Notifications	Lock Notifications
Receive a notification when	Receive a notification when the total number
the search process may be delayed.	of locked records exceeds the threshold.
Search Notifications	✓ Lock Notifications Threshold 30
Total Records Notifications	
Receive a notification when there is a new sex offender record entered into the system.	
Total Records Notifications	



nexTEST is the proven market lead in State/NCIC Certification testing and training. It is a full LMS system that can train and track all of your State/NCIC certifications. The software is used across the nation and has been in production for over 15 years.

The easy-to-use interface is intuitive, built for easy access from your browsers, and provides for multiple levels of access for Users, TAC's, ATAC's and State Administrators.





• **System health window** provides a broad view of key application areas. Admins can monitor the system & quickly jump into records that may require attention. In the screen shot below, the Error Flag is selected.

System Health Vindow	System	Health									
	Actions										
	This window will auto refresh every 30 seconds.										
		2	Record								
	10	2	NCIC Records with Error 2 Total NCIC Errors								
	0	0	Sync Total								
		0	Active Searches								
		12	Total Sex Offender Records								
	-										
		NCIC ERRORS									
	Record II	D Date of E	te of Birth Error Message▲			age 🛦	Time Elapsed				
	11	20101010		ADD_OFFENDER-BASE	[Switch edit	error for field CRR]	2 days				
	3	20020202		ADD_OFFENDER-BASE	[Switch edit	error for field ORD]	1 hour				
	-										
	•	<u>⊉R</u> efresh		View Selected Erro		N Unlock	Close				

Current SOR Customers:

Colorado Bureau of Investigation Idaho State Police Iowa Department of Public Safety Missouri State Highway Patrol Rhode Island State Police Virginia State Police

Architecture



Graphical User Interface

- •Connects to switch via FoxTalk®
- •Regular record maintenance
- •Loading records, saving changes, etc.
- caches image data from BSTORE
- •Once an image is loaded GUI does not load it again

Message Switch

- •Routes transactions between GUI & FB-SOR in JSON format
- •Routes transactions between FB-SOR & NCIC in NCIC format
- •Routes image transactions directly between GUI & BSTORE

NLETS & CJIS Audited







Fennec Broker-SOR

- •Connects to switch via FoxTalk®
- •Holds application logic
- •Supports offender record caching
- •Retrieves & saves data within the SOR Database-data store only

Fennec Broker-BSTORE

- A completely separate data path for all image handling guarantees no impact on record maintenance, searches, or NCIC syncs
- •Separate interface on message switch
- •Maintains its own data store and caching
- •Image data is not stored in FB-SOR or in SOR-DB

Search Queue

- •If necessary, searches are queued
- •Searches utilize a separate pathway to ensure there is no interference with regular record maintenance

NCIC Sync - CPI's Patent-Pending Technology



Decoupled processing for NCIC Sync & Record Saves

SAVING A RECORD: Offender data is completely validated when executing a save. If there are errors, the system notifies the user via pop-up window containing errors including correction details. If data is valid, it is saved to DB – process complete.

SYNCING TO NCIC - (independent of saving):

NCIC syncs are queued. Only *x* (Configurable) records syncing at once



The Biometrics Institute was founded in July 2001 responding to an industry need for an independent and impartial international forum for the sharing of knowledge and information about biometrics and to provide best-practice guidance around the responsible use of biometrics.

It acts as a facilitator in the growth of the industry, delivering quality service, whilst promoting the responsible use of biometrics.





All validated data is synced with NCIC. The sync occurs in the background, therefore the GUI is available to work on other records.

Asynchronous updates & notifications are sent to the user, so there is no need to wait for a sync to complete.

The sync process validates the data before sending to NCIC. Because a record must be saved before it is synced, the data is automatically validated multiple times.

The screen shot below shows the user can either save the record & continue to work or save the data & sync subsequently:

Sex Offender D	etail	maon	Teers T	Telb				
Actions Accessibi	lity <u>S</u> ort Det	ails <u>V</u> iew C	olumns					
9 🕜 🕘 🥝	-	🔶 🧼	<u>ه</u> ۲	📕 🎅 Record Count:	10		Quick Search:	
Notes	Last	▲ First		DOB	SID #	FB	1#	NIC #
	TEST	NINE	2	20090909			X760	440137
۳	TEST	TEN	2	20101010				
	TEST	ONE	2	20010101				
۳	TEST	тwo	2	20020202				
	TEST	THREE	2	20030303				
	TEET	EUIB	-	20040404				
Address Emp	loyment E	ducatio	1 Con	viction Vehicles W	/atercraft Im	ages Notes		
Base	_		S	upplemental			nternet/Phone	
Aliases				Dates of Birth So	ars, Marks, Tatto	oos		
Last	First	Middle	Suffix	Dates of Birth	Base	5	мт	
ONE EX	EXAM			19800404	~	TAT L ARM = Tatto	L ARM = Tattoo on Arm, left	
Save	Record completed			×		TAT R ARM = Tatte	oo on Arm, right	мом
	Record Sav To Sync w Oł	ved Locally ith NCIC cl (- Sync La	ick the "s ter Syn	Sync with NCIC" Button	>			
(G Lock			" "		NCIC Sync	🚯 View Svr	nc Detail

Features

Search Options

- **Clear Previous Results** remove the current results displayed within details window.
- **Remember Last Search** remember the last search run -Includes if you sign on from a different terminal or machine failure.
 - -Both are user preferences.
- **Queue position box** searches are queued (if necessary*) so vital functionalities within the system are not compromised.

*Virtually all search results are delivered immediately

• **Robust Configurable Searches** - Choose criteria from a list of configurable fields. Add criteria & dynamic search conditions. Enter key words & filters in a search value field.

CPI OpenFox[®] Product Suite:

Message Switch Information Broker Sex Offender Registry (SOR) Criminal History Records Application (CCH) **CJIS Messenger Workstation High Availability** Configurator **Operator Aid** Software as a Service (SaaS) Mobile Messenger CLAW - smartphone/tablet application iRap - Internet Record Access Portal **Hotfile Application Archive Retrieval Online Validation Application Proxy Server** nexText - CJIS Certification & Security training





Base Record Indicator

For supplemental information, the user can simply indicate which value they need synced with NCIC as the base value. Simply check the box next to the field set to select it as the base value. This automatically de-selects the previous base value and moves the selected to the top of the list. (*see below*)

Base	SMT	Description		
	TAT L ARM = Tattoo on Arm, left	ROSE		
	TAT R ARM = Tattoo on Arm, right	МОМ		
∽	TAT BACK = Tattoo on Back	EAGLE		

Move To History

Most agencies require that offender information, such as an address, be stored in the system as an historical archive. This is achieved by clicking the Move to History check box. The system will then remove the address from NCIC and load the information within the history section of the screen. *(see below)*

Base	Supplement	al Interr	net/Phone	Address	Employme	ent Ed	ucation	Co	nviction	Vehicles	Watercra	aft Images
urrent	Address											
Base	e History	Start Dat	te End Dat	te	Туре	SNU	Directi	on 1	Prefix	Stree	et Name	Suffix
×)	20150603		01 = Res	idence (Las 1	23	N			MAIN	S	r
	4	20140601	20180601	01 = Res	idence (Las 4	56	S			ELM	S	r 🔤
e Act	tive Addresses E	ditor				_	_	_	_			
Actions	5							_				
Active	Addresses											
1 * Add 01 = 1	2 ress Type Residence (Last H	(nown) 🔻	* Start Date 20150603	End Date 20180601		Base Rec	ord 🗹 Ma	ailing	Move	to History	0	
Street	t Number Directi	on 1 Prefix		Street Nan	ne				Suffix	Direction 2	Unit Designa	tor Unit Numb
123	N 🔻		-	MAIN					ST 🔻	–	-	
* City			* Sta	ate				*c	ounty		*Zip (Code
BOLI	NGBROOK		IL =	Illinois			•	WIL	.L		60440	
Recor	d Management-											
	-											

Image Handling

A local encrypted caching mechanism has been built into the software. When loading a record, images are not downloaded until they are needed. (Triggered by Image Tab or printing a record) This means less data passes through the switch, so response times are very fast, & the GUI remains accessible.





The IJIS Institute, a 501(c)(3) nonprofit corporation, represents industry's leading companies who provide products and services to local, state, tribal, and federal agencies for justice, public safety and homeland security information exchange and technology initiatives.

The IJIS Institute was founded in 2001 as the Integrated Justice Information Systems Institute as a result of the U.S. Department of Justice's interest in raising private sector participation in the advancement of national initiatives affecting justice and public safety, and more recently homeland security.





Printing Records

The default print behavior employs a technology called Jasper Reports. A robust reporting tool that is highly configurable. This also provides us with the ability to create rich displays that include in-line imaging.

Draft Functionality

SOR 2.0 enables users to save temporary changes to a record prior to promoting the changes to the NCIC. The Draft Functionality performs virtually the same as your basic email draft component. The user can create a new record with minimal information and save it as a draft. All draft changes are conveniently highlighted in a different color.





Interested in a hosted solution? Contact us now to find out more about OpenFox[®] Software as a Service: (888) 353-4095 • Sales@openfox.com



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