



IJIS Institute

JUSTICE REFERENCE ARCHITECTURE (JRA) SERVICES DESCRIPTION PROJECT

FINAL REPORT

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1 PURPOSE

This report represents the *Justice Reference Architecture Services Project Final Report*, which serves to document the project overview, outcomes, challenges, and lessons learned. The project was funded by the Bureau of Justice Assistance (BJA) of the Office of Justice Programs (OJP) in the U.S. Department of Justice (DOJ).

NOTE: As a part of Global's (Global Justice Information Sharing Initiative) effort to support information sharing activities that span jurisdictional boundaries within and outside of criminal justice, the Justice Reference Architecture (JRA) was rebranded in 2011 to the Global Reference Architecture (GRA). This change does not introduce any significant technical modifications to the architecture; rather, it is intended to provide a more inclusive, service-oriented model that will meet the broader needs of justice, public safety, homeland security, health and human services, and additional stakeholders.

Since this rebranding occurred during this project, this report contains references to *both* "GRA" and "JRA."

2 ACKNOWLEDGEMENTS

This report, and the many work products generated from the GRA Project, would not exist without the full support of the Bureau of Justice Assistance. The continuing leadership and guidance of BJA are key elements to the success of this project, from which public safety and public safety dispatch centers across the United States will derive benefits.

The IJIS Institute is grateful for the active participation and support of its member companies and their professional representatives, as well as the many practitioners who devote time and share their invaluable expertise for projects such as these. Specifically, the IJIS Institute acknowledges the individuals and their host private firms or public agencies listed in [Section 6 – Project Management Methodology](#) for their commitment to the work and success of the GRA Project. The IJIS Institute is also very appreciative of the incredible partnership with the National Center for State Courts (NCSC), SEARCH (The National Consortium for Justice Information and Statistics), and the Institute for Intergovernmental Research (IIR) and is thankful for the support and assistance provided by their very talented staff. We would also like to specifically thank Jim Harris, Jim Douglas, Iveta Topalova, and Collin Evans for their exceptional efforts on this project.

3 BACKGROUND

Solving interoperability challenges continues to be a significant problem and a high priority for the justice and public safety community. There are approximately 100,000 justice agencies that have the critical need to share information across their various information systems, and this variety creates multiple layers of interoperability problems because of differences in hardware, software, networks, and business rules for data exchange.

On September 29, 2004, the Global Advisory Committee (GAC) unanimously adopted Service-Oriented Architecture (SOA) and the recommendations in the report titled *A Framework for Justice Information Sharing: Service-Oriented Architecture (SOA)*. Global's approval was based on the understanding that SOA is an approach that is most likely to result in an infrastructure that will support its vision of how information should be shared among the justice community (JRA Specification Working Draft v1.4, Feb. 14, 2007).

The Global Infrastructure/Standards Working Group (GISWG), in a collaborative effort with the OJP, and the DOJ published the *Global Justice Reference Architecture (JRA) Specification Working Draft V 1.4* on February 14, 2007. The document provides a description of the important concepts in justice information sharing architecture and the relationships between those concepts. The Global JRA also identifies, at a high level, the kinds of "components" (e.g. software systems, hardware infrastructure, policies, practices, intersystem connections, etc.) necessary to bring those concepts to life in the justice context. The Global JRA is not specific enough to govern the implementation of any individual software system; rather, it is a framework for guiding implementations in general, with the aim of standardizing or harmonizing certain key aspects of those implementations to support reusability or interoperability (JRA Specification Working Draft v1.4, Feb. 14, 2007).

Based on the success of JRA efforts, the BJA funded the 'Justice Reference Architecture (JRA) Service Description Project' as a collaborative effort between the NCSC, SEARCH and the IJIS institute. Two related grants were awarded:

- BJA/IJIS Cooperative Agreement 2007-RG-CX-K019; and, the
- BJA/NCSC Cooperative Agreement 2007-DD-BX-K166.

The JRA Service Description Project scope included the establishment and operation of the Services Task Team (STT), support staff, and *ad hoc* work groups as necessary, which developed service description documents based on the *Service Specification and Service Identification and Design Guideline* developed by the GISWG Services Committee, and completed by the STT.

The IJIS Institute was responsible for project management of the subcontractor development share of the project, and the IJIS Institute, SEARCH and NCSC were jointly responsible for project initiation, establishing a project management office (PMO), and project infrastructure (i.e. management and communications resources). The IJIS Institute provided the channel for interaction with industry, including the procurement of expert resources to develop target services descriptions working in conjunction with SEARCH and NCSC to define the requirements and skill set needed by the expert resources. The IJIS Institute request for proposals (RFP) methodology was utilized for the procurement of all industry services to ensure fair and open competition for the work. The development portion of the IJIS Institute scope was provided by the IJIS Institute subcontractors.

4 PROJECT SPONSOR

U.S. DOJ's Bureau of Justice Assistance

The Bureau of Justice Assistance (BJA) is a component of the [Office of Justice Programs, U.S. Department of Justice](#), which also includes the [Bureau of Justice Statistics](#), the [National Institute of Justice](#), the [Office of Juvenile Justice and Delinquency Prevention](#), the [Office for Victims of Crime](#), the [Community Capacity Development Office](#), and the [Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking](#).

BJA supports law enforcement, courts, corrections, treatment, victim services, technology, and prevention initiatives that strengthen the nation's criminal justice system. BJA provides leadership, services, and funding to America's communities by:

- Emphasizing local control;
- Building relationships in the field;
- Provide training and technical assistance in support of efforts to prevent crime, drug abuse, and violence at the national, state and local levels;
- Developing collaborations and partnerships;
- Promoting capacity building through planning;
- Streamlining the administration of grants;
- Increasing training and technical assistance;
- Creating accountability of projects;
- Encouraging innovation; and,
- Communicating the value of justice efforts to decision makers at every level.

BJA has three primary components: policy, programs and planning.

- 1) The *Policy Office* provides national leadership in criminal justice policy, training and technical assistance to further the administration of justice. It also acts as a liaison to national organizations that partner with BJA to set policy and to help disseminate information on best and promising practices.
- 2) The *Programs Office* coordinates and administers all state and local grant programs and acts as BJA's direct line of communication to states, territories and tribal governments by providing assistance and coordinating resources.
- 3) The *Planning Office* coordinates the planning, communications and budget formulation and execution, provides overall BJA-wide coordination, and supports streamlining efforts.

Visit the BJA website at: <http://www.ojp.usdoj.gov/BJA>.

5 PROJECT OVERVIEW AND BENEFITS

The Global Reference Architecture’s mission is to: “enhance justice and public safety through a service-oriented approach to information sharing. We accomplish this mission by providing a reference architecture with guidance for identifying, defining, implementing, and governing services.” The GRA is an information exchange solution designed to cut 80 percent of implementation time and costs for state and local justice agencies through reuse of established promising practices in IT architecture and design.

Efforts to develop a reusable information sharing solution specific to the justice domain began in the GISWG STT, with leadership from Thomas Clarke and James Douglas. Today, the STT serves two functions:

- 1) The creation of new reference service specifications to provide the opportunity for reuse in the field; and,
- 2) Review of GRA implementations that have the potential for reuse by other agencies.

Additionally, the STT recently identified the most critical information exchange priorities for the national justice community through the input of representatives across the justice domain, publishing the results in the *Priorities Definition Workshop Summary Report*.

This project aimed at supporting the STT’s efforts by producing several service specification packages (SSP) focused on improving information sharing for the public safety and fusion center domains. The following primary deliverables were produced by this project:

- Service Specification Packages
 - Fingerprint Information (FPI)
 - Inmate Release Information (IRI)
 - Request For Information (RFI)
 - Submit Suspicious Activity – SAR IEPD (SSA-SAR)
 - Submit Suspicious Activity – Field Interview Report (SSA-FIR)
 - Terrorist Screening Center (TSC) Encounter Info (TSCEI)
- IJIS Institute’s Springboard Policy and Technical Governance Support
- Global Info Sharing Standards Support
- Integrating GRA with PM-ISE (Program Manager-Information Sharing Environment) Support
- GRA Registry Facilitation by the National Information Sharing Standard (NISS) Help Desk
- Outreach Efforts
- Final Report (*this document*)

5.1 Deliverables

The chart of deliverables below includes the description of, the intended purpose for, and the anticipated benefits of each deliverable.

FIGURE 1. CHART OF DELIVERABLES

Deliverable or Activity Name	Deliverable Description	Purpose / Anticipated Benefit	Results
Fingerprint Information (FPI) SSP	The FPI provides positive identification or verification based on the submission of fingerprint information. The service receives one or more fingerprint images and returns a biometrically-based response, which facilitates the	To provide positive identification or verification of the physical identity of an individual based on biometric information. Events such as an arrest, custodial intake, booking, arrangement, inmate transfer, etc. are	Service specification created and posted on OJP’s GRA website.

Deliverable or Activity Name	Deliverable Description	Purpose / Anticipated Benefit	Results
	<p>determination of the physical identity of an individual. <i>Identification</i> is defined as the capability to compare a biometric object against a biometric information repository for a biometric match. <i>Verification</i> is defined as the capability to compare a biometric object and a biometrically-based identifier against a biometric information repository for a biometric match. In many cases, in addition to the biometric object and the biometrically-based identifier, additional information is submitted to the service to allow for search optimization. This information could be personal demographic information or geographic location information.</p>	<p>typical instances where positive identification or verification is required.</p> <p>Domains that are expected to receive direct benefit from this deliverable include law enforcement, corrections and fusion centers.</p>	
<p>Inmate Release Information (IRI) SSP</p>	<p>This IRI service will allow fusion centers to request summary or detailed information regarding inmate release from a partnering corrections organization. Partnering corrections organizations can also send summary or detailed event information to fusion centers for an event related to Inmate release activities based on previous subscription. If summary information is received as a result of a request or an event, the fusion center analysts can send a request for detailed information related to the response or the event. This service allows fusion centers to select the level of detail they wish to receive from partnering corrections organizations. While performing a query, or when receiving notification of an event, fusion centers can request summary inmate release information or can opt to receive detailed inmate release information.</p>	<p>To provide fusion centers and Information Analysis Centers (IACs) with inmate release information from corrections organizations.</p> <p>Domains that are expected to receive direct benefit from this deliverable include corrections and fusion centers.</p>	<p>Service specification created and posted on OJP's GRA website.</p>
<p>Request For Information (RFI) SSP</p>	<p>The RFI service will provide fusion centers with the capability to send requests to, and receive requested information from, other fusion centers. The information response can be comprised of both structured and unstructured information. The RFI can be related to a person, a place, an event, or an object. The fusion center analyst can select if s/he would like to</p>	<p>To allow fusion center and IACs analysts to send requests and to receive information from partnering fusion centers.</p> <p>Domains that are expected to receive direct benefit from this deliverable include law enforcement and fusion centers.</p>	<p>Service specification created and posted on OJP's GRA website.</p>

Deliverable or Activity Name	Deliverable Description	Purpose / Anticipated Benefit	Results
	receive detailed information regarding the person, place, event, or object, or if s/he would simply like a response indicating that the partnering fusion center has information regarding the queried person, place, event, or object.		
Submit Suspicious Activity – Field Interview Report (SSA-FIR) SSP	Law enforcement and public safety agencies will use this service to electronically submit information related to suspicious activity to fusion centers. The information related to suspicious activity will be in the format used by the law enforcement and public safety agencies to collect and store this information (e.g. Field Interview Report, Incident Report, Arrest Report, Accident Report, etc.). This service uses the Field Interview Report IEPD.	To allow law enforcement and public safety agencies to submit information related to suspicious activity to fusion centers and/or IACs. Domains that are expected to receive direct benefit from this deliverable include law enforcement and fusion centers.	Service specification created and posted on OJP’s GRA website.
Submit Suspicious Activity – SAR IEPD (SSA-SAR) SSP	Law enforcement and public safety agencies will use this service to electronically submit information related to suspicious activity to fusion centers. The information related to suspicious activity will be in the format used by the law enforcement and public safety agencies to collect and store this information (e.g. Field Interview Report, Incident Report, Arrest Report, Accident Report, etc.). This service uses the SAR IEPD.	To allow law enforcement and public safety agencies to submit information related to suspicious activity to fusion centers and/or IACs. Domains that are expected to receive direct benefit from this deliverable include law enforcement and fusion centers.	Service specification created and posted on OJP’s GRA website.
Terrorist Screening Center (TSC) Encounter Info (TSCEI) SSP	This service will be used by State or U.S. Government Territory Designated Fusion Centers to receive information regarding positive encounters from TSC. The encounter information received by State or U.S. Government Territory Designated Fusion Centers will be limited to positive encounters resulting from the hits by local law enforcement agencies on an extract of the Terrorist Watchlist. The extract of the Terrorist Watchlist used to identify law enforcement hits is the Known or Suspected Terrorist File (KST) maintained by the National Crime Information Center (NCIC). The service will also be used by TSC to send any changes of status or updates related to positive encounter Information to the State or U.S. Government Designated	To provide positive encounter information and updates to State or U.S. Government Territory Designated Fusion Centers. Domains that are expected to receive direct benefit from this deliverable include the TSC, law enforcement and fusion centers.	Service specification created and posted on OJP’s GRA website.

Deliverable or Activity Name	Deliverable Description	Purpose / Anticipated Benefit	Results
	Fusion Centers.		
IJIS Institute’s Springboard Policy and Technical Governance Support	Springboard, a Consensus Standards Cooperative, is an IJIS Institute standards-based interoperability program designed to help advance information sharing associated with the justice, public safety and homeland security operational environments. Through this program, the IJIS Institute will work with sponsor organizations to provide an environment to industry for the testing and evaluation of relevant information sharing and interoperability standards for use by government and industry.	To support policy and governance integration between the Global Governance Task Team and the IJIS Institute Springboard consensus standards cooperative. Facilitation of a Springboard “Standards Focus Group” convening experts from government, industry, and relevant standards development organizations. Domains that are expected to receive direct benefit from this deliverable include the public safety, justice, and homeland security.	A Springboard Governance Council has been convened as of June 2011 and has been actively providing planning and communication oversight to the program.
General Support for Global Info Sharing Standards	General support to Global information sharing standards and technology issues.	To support Global’s efforts advances information sharing and interoperability for the public safety, justice and homeland security domains.	Representatives from the Springboard program have been included as part of the new Global Standards Council (GSC). The GSC and Springboard are actively working together to assure a well harmonized path from standards development to deployment.
General Support for Integrating GRA with PM-ISE	General support of efforts to integrate the GRA with PM-ISE architectures and programs.	To integrate Global’s GRA effort with PM-ISE architectures and programs advances information sharing and interoperability for the public safety, justice, homeland security, and intelligence domains.	The PM-ISE has been included in the Springboard Governance Committee to ensure an effective integration of PM-ISE and GRA compatibility.
GRA Registry Facilitation by the NISS Help Desk	Enhancement of the GRA Registry Facilities of the NISS Help Desk and Knowledge Center.	The GRA Registry will provide a central location to store and to make available to both practitioners and industry the published GRA-conformant service specifications. The Registry advances information sharing and interoperability.	The GRA Registry is operational and includes the reference SSPs completed by the SST.
Final Report (this document)	This report serves to document the project overview, outcomes, challenges, and lessons learned.	This report serves to document the project overview, outcomes, challenges, and lessons learned.	Completed and provided to BJA and posted on the IJIS Institute website.

6 PROJECT METHODOLOGY

The IJIS Institute was awarded the project management and oversight responsibility for this particular project; however, it is important to note that, in regards to the service specifications development, the majority of the project's effort, this project operated in conjunction with other GRA efforts conducted by NCSC, SEARCH and IIR.

6.1 Service Specification Development

The services developed under this project were selected by the STT based on the results of the Global SST's 2009-2010 Priorities Definition Workshop held in Salt Lake City, Utah in October 2009.

Each service specification development effort had the same methodology (high-level):

- 1) Assemble a SME team;
- 2) Conduct a 2½ day modeling workshop;
- 3) Develop the service specification artifacts;
- 4) Review with the SME group;
- 5) Modify as necessary;
- 6) Provide for a final review by the STT;
- 7) Modify as necessary; and,
- 8) Publish the reference service.

The subject matter expert (SME) team consisted of a group of 12-15 practitioners, assembled by NCSC, SEARCH, IIR, and the IJIS institute, based on the individual's background, experience, and current and past positions within government. Their primary efforts included modeling the service at the workshop, and providing feedback on the draft artifacts.

Each of the modeling workshops were held in different locations in the United States:

FIGURE 2. MODELING WORKSHOP SCHEDULE

Service Focus Area	Location	Dates
Person Information	Washington, DC	Dec 8-10, 2010
Charging Information	San Antonio, Texas	Feb 1-3, 2011
Justice-Human Services	San Diego, California	Mar 29-31, 2011

These work sessions focused on the business aspects of the service. In addition to the SME group for each service, other participants included the project management (PM) team, which included staff from NCSC, SEARCH, IIR, and the IJIS Institute, the subcontractors, and a BJA representative.

The post-workshop development was conducted off-site by the subcontractor. As artifacts were drafted, they would be provided to the PM team for review. Some feedback/modification occurred here. Then, as the artifacts were ready for SME review, the PM team would provide the materials to them and set up a conference call.

The SMEs reviewed the artifacts, typically in sets—description documents first then, later on, the full package, which included the technical artifacts—and provided both redline and verbal feedback on the conference call. The subcontractor would take this feedback and modify the artifacts as appropriate, and then the cycle would repeat as necessary (*i.e.* modify/review/modify).

Once the SME group and PM team were content with the draft SSP, it would be sent to the STT for review. Modifications were made based on STT Feedback as needed, and then the draft SSP would be published on the GRA page of the OJP website. Towards the end of the project, they were also uploaded to the GRA Registry, primarily as a test of the new registry.

Each SSP consists of numerous artifacts, some required, some optional. The table below summarizes the most common artifacts. The optional artifacts are included based on their perceived benefit to the specific service.

FIGURE 3. COMMON ARTIFACTS

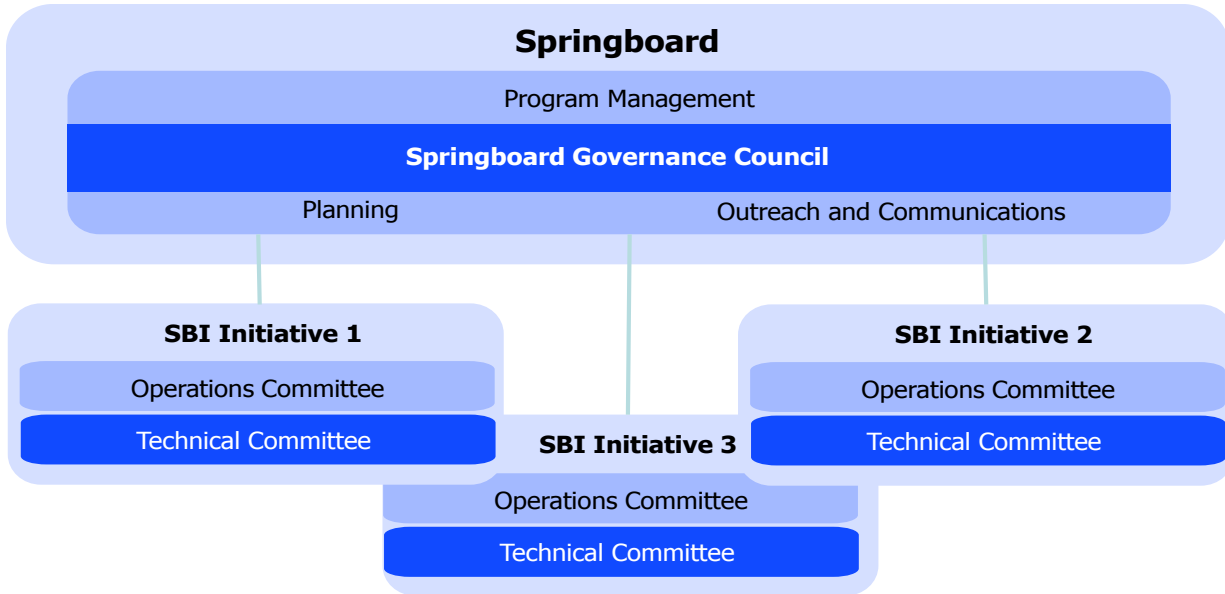
Artifact	Description	Required (R) Optional (O)
Service Documents		
Metadata	All metadata registered with the service.	R
Catalog	List of artifacts in the service package that is machine-readable; in an open, portable format; and, browser displayable.	R
Catalog	A human readable version of the entire SSD.	R
Service Description Document (SDD)	Designed as a template for developing a service description.	R
Service Interface Description Document	Designed as a template for developing a Service Interface Description.	R
Information Model Documents		
Information Exchange Package Documentation (IEPD)	All artifacts associated with the IEPD in a self-contained zip file.	R
IEPD schemas	All schemas defined as part of the IEPD and usually located in the schema folder of the IEPD.	R
IEPD samples	Samples defined as part of the IEPD and usually located in the sample folder of the IEPD.	R
Exchange Context Model	The exchange context model as defined by the National Information Exchange Model (NIEM) in standard open format (e.g. xmi, vsd, zargo) and standard open graphic (e.g. jpg, gif, pdf, etc.) that is likely a Unified Modeling Language (UML) model.	O
Various		
Service Change Log	Record of cumulative changes from previous service versions. The initial service entry simply records its creation date.	R
Service Change Log by Interface	Record of cumulative changes from previous service interface versions. The initial service interface entry simply records its creation date.	R
Usage Guide	Explains how a consumer would use the service. The usage guide would show typical binding and requests.	R
Exceptions and Fault Documents	This guide would also include any information necessary to handle exceptions or faults generated by the service.	R
Memoranda of Understanding (MOU) Documents	Memorandums of understanding among participating agencies. The service provider may require each consumer to sign a MOU before the consumption process can begin in production.	O
Service Level Agreement (SLA) Documents	This needs to match Global SLA documents/templates.	O
Service Requirements Document	Captures the complete software requirements for the system, or a portion of the system.	O
Requirements Traceability	A table used to trace project life cycle activities and work products to the project requirements. The matrix establishes a thread that traces requirements from identification through implementation.	O

Artifact	Description	Required (R) Optional (O)
Detailed Design Document	Brings all of the models together in one document that satisfies the requirements.	O
Business Process Analysis	Defines the business process model and requirements that support/define this service.	O
Business Process Model	This is the actual document that describes the business process model for the web service. In many cases, this can be used to import/export the process model for the service.	O
Use Case Specification	The use case specification contains information regarding the use case model of the service. This information could be part of the SDD or included in a separate specification document referenced by the SDD. The use case specification document contains use case diagrams and use case scenarios.	O
Use Case Diagrams	Use case diagram in standard open format and standard graphic, likely UML.	O
Project Charter	A document that contains the project overview, scope, objectives, constraints, sponsors, and participants. This document is useful to gain a general understanding of the project/effort used to create this service.	O
Test Cases	This document describes the specific functions and objectives for exercising the producer's service. Specific actions are identified and measured against expected testing results and outcomes.	O
Testing Results Report	Description and results of validation and conformance testing performed — may include testing output or products.	O
Asset Cost	Document that identifies the cost for building the service package necessary to support the business capabilities. The asset cost is not cumulative (from version to version); rather, this documents the costs associated with this particular service package.	O
Web Service Description Language (WSDL)	The WSDL file for the service being implemented.	R
Sample Simple Object Access Protocol (SOAP) Request(s)	Sample web service requests for this service which utilizes one of the actions defined for the service.	O
Sample SOAP Reply(s)	Sample web service reply which corresponds to the web service request.	O
ebXML		
Electronic Business using eXtensible Markup Language (ebXML)	The ebXML schemas files for the service being implemented.	R
Sample ebXML Request(s)	Sample ebXML requests for this service that utilizes one of the actions defined for the service.	O
Sample ebXML Reply(s)	Sample ebXML reply message that corresponds to the ebXML request.	O
Security and Privacy Information		
Security and Privacy Documentation	This document would identify the security and privacy necessary for accessing and handling the information provided by the service.	R
Global Federated Identity and Privilege Management (GFIPM) Metadata	This is the GFIPM Metadata Schema and the respective sample XML that is used to authorize access to the service.	O
Access Control Policy Maps	This would identify all security federations and networks that this service is secured and available for use.	O
eXtensible Access Control Markup Language (XACML)	The XACML representation of the security policy necessary for accessing this service.	O

6.2 Springboard Support

The policy and governance integration between the Springboard program and the GSC was established through the creation of a Springboard Governance Council comprised of experts from government, industry and relevant standards development organizations. The Springboard Governance Council has been convened as the oversight board for Springboard standards initiatives to ensure comprehensive governance and management of the Springboard program. The IJIS Institute has designed an organization that includes a program governance level, as well as a project management level to address specific Standards-Based Interoperability (SBI) initiatives.

FIGURE 4. SPRINGBOARD



This project also supplied support to Springboard by providing for staff time, several webinars and a face-to-face meeting:

- March 29, 2011 – Conference Call/Webinar – 19 attendees
- April 5, 2011 – Conference Call/Webinar – ~12 attendees
- June 7-8, 2011 – Springboard Technical Working Group meeting in Ashburn, VA – ~25 attendees
- July 11, 2011 – Conference Call/Webinar – ~5 attendees

6.3 Global Information Sharing Support

This goal has been achieved by including liaison positions on the GSC and the Springboard Governance Council to ensure harmonization of the policy and process interactions affecting the development and deployment of national information sharing and interoperability standards affecting the justice, public safety and homeland security domains (*i.e.* GRA, GFIPM, NIEM, LEXS).

6.4 Support to PM-ISE’s GRA Efforts

The PM-ISE is represented on the Springboard Governance Council, as well as the Springboard “Planning” committee. PM-ISE representatives are involved in all aspects of Springboard activities, and Springboard and GSC representatives actively participate in PM-ISE initiatives involving global standards products (*i.e.* NIEM UML Profile development).

6.5 GRA Registry Facilitation

The GRA Registry was supported by this project and is on a path to providing a valuable resource to the Global community. This project provided much needed support to address an early implementation server up-time issue. The server now appears stable. The support included staff time and a conference call on August 16, 2011 for ~5 attendees.

6.6 Final Project Report

This report was written by the IJIS Institute Project Manager at the conclusion of the above deliverables, reviewed by the IJIS Institute management staff, and then edited. Once this process was complete, it was provided to BJA for their comments and/or approval.

6.7 Key Participants

FIGURE 5. KEY PARTICIPANTS - SERVICE SPECIFICATION DEVELOPMENT

Name	Title	Organization
Scott Parker	Program Manager	IJIS Institute
Thomas Clarke	Vice President, Research and Technology	NCSC
James (Jim) Douglas	Justice Information Systems Specialist Chairman	SEARCH
James (Jim) Harris	Senior Court Technology Associate	NCSC
Iveta Topalova	Subcontractor	Analysts International Corporation
Collin Evans	Subcontractor	Analysts International Corporation

FIGURE 6. KEY PARTICIPANTS - SPRINGBOARD SUPPORT, GLOBAL INFORMATION SHARING STANDARDS SUPPORT, SUPPORT FOR INTEGRATING GRA WITH PM-ISE, AND GRA REGISTRY FACILITATION

Name	Title	Organization
Steve Ambrosini	Director of Operations	IJIS Institute
Ashwini Jarral	Assistant Director, Technical Services	IJIS Institute
Iveta Topalova	Architect	Microsoft Corporation
Vijay Mehra	Program Manager	Information Sharing Environment
Chris Traver	Senior Policy Advisor	Bureau of Justice Assistance
David Usery	Founder & CEO	URL Integration

7 LESSONS LEARNED / PROMISING PRACTICES

This project was one of the first federally-funded attempts to bring the larger public safety first responder community together to address information sharing and data interoperability issues. As expected, the project produced a number of lessons learned and/or promising practices regarding what worked and what did not work.

- The combination of practitioners—emergency communications, law enforcement, fire service, EMS, emergency management, and transportation—and public safety-focused industry representatives resulted in:
 - A positive, collaborative work environment where all participants shared a common goal of improving information sharing among the larger first responder community;
 - The opportunity to focus the spotlight on perceived barriers and eliminate preconceived ideas about the various domains, practices, and standards in use;
 - The opportunity to learn about, understand, and appreciate the operational differences, similarities, and challenges of each discipline;
 - An effective, cross-discipline opportunity to address common information sharing issues; and,
 - An acknowledgment of a willingness to explore and adopt standards across disciplines to achieve effective information sharing.
- The project further reinforced, defined and enhanced the principles established within the DHS Interoperability Continuum, particularly with regard to the data segment of the technology lane.
- The project validated the importance of cross-discipline pollination of data governance to achieve effective information/intelligence sharing and collection.
- The majority of the work of this project was accomplished remotely via regular conference calls and email. As the project progressed, web conferencing was used to review documents, rather than having members follow along on their own copy during a conference call. This seemed to result in less miscommunication, increased efficiency, productivity, and greater enthusiasm for the effort.
- Although expectations regarding the level of effort had been set for steering committee members, a number of members had other commitments that prevented their full participation—therefore, it is recommended that, in future efforts, committee members pledge to “pass the baton” to a qualified alternate representative if the commitment level cannot be achieved by the primary representative.

8 RECOMMENDATIONS FOR FUTURE EFFORTS

In addition to the lessons learned in this project, the following considerations are recommended for future efforts in information sharing and data interoperability.

Develop GRA Training Program

Efforts to provide training on Global information sharing initiatives have, to date, been limited to NIEM and the creation of IEPDs. While these were an important first step, the advent of the GRA and the standardization of the SSPs provided in the Service Specification Guideline (SSG), and the realization that a competed SSP provides implementers with an 80 percent solution, necessitates the development and offering of GRA training for industry and practitioners. The envisioned training would include an executive overview, business artifacts module, and a technical artifacts module.

9 APPENDICES

9.1 APPENDIX A – Additional Resources

9.1.1 GRA

Global Reference Architecture – <http://it.ojp.gov/default.aspx?area=nationalInitiatives&page=1015>

9.1.2 NIEM

National Information Exchange Model – <http://www.niem.gov>

9.1.3 NISS Help Desk

National Information Sharing Standards Help Desk – <http://www.it.ojp.gov/NISS/helpdesk/>

The NISS Help Desk and Knowledge Base are hosted by the U.S. DOJ, in partnership with the IJIS Institute. The NISS Help Desk assists users in finding answers to technical questions regarding the content, principles, and best practices for using the Global Justice XML Data Model (GJXDM) and the National Information Exchange Model (NIEM). More than a conventional help desk, the NISS Help Desk contains a significant knowledge base that users can access online, and then submit unanswered questions via the web or telephone.

9.1.4 IJIS Institute

IJIS Institute – <http://www.ijis.org>

The IJIS Institute has been awarded a grant from the U.S. Department of Justice (DOJ), Office of Justice Programs (OJP), Bureau of Justice Assistance (BJA) to provide Technology Assistance (TA) to state and local jurisdictions to assist with the planning and implementation of information-sharing projects in the justice and public safety domains.

The goal of the grant is to leverage the expertise and experience of private sector information technology firms and to provide objective and cost-effective technology recommendations and assistance to decision-makers and project stakeholders. The TA provided by the IJIS Institute is built on a foundation of reviewing and participating in technical and strategic planning endeavors. A review of the technical artifacts—such as system architecture, data modeling, and data messaging documents—follows. Finally, the IJIS Institute provides assistance with specific technology questions or problems. Additionally, the IJIS Institute provides in-depth education on key information sharing technologies such as: XML, GJXDM, NIEM, and SOA.

The course offerings fall into three categories—executive, standard, and custom.

- *Executive* courses provide a brief overview of the information sharing technologies that help executives make strategic decisions.
- *Standard* courses, oriented toward developers and technical managers, are fully developed for general use and are ready to deliver at any time.
- *Custom* courses are developed from scratch or existing course content is tailored to meet the unique objectives of each requesting agency.

9.2 APPENDIX B – Acronyms and Abbreviations

Acronym or Abbreviation	Definition
BJA	Bureau of Justice Assistance
DHS	Department of Homeland Security
DOJ	U.S. Department of Justice
ebXML	Electronic Business using eXtensible Markup Language
FPI	Fingerprint Information
GAC	Global Advisory Committee
GFIPM	Global Federated Identity and Privilege Management
GISWG	Global Infrastructure/Standards Working Group
GJXDM	Global Justice XML Data Model
Global	Global Justice Information Sharing Initiative
GRA	Global Reference Architecture
GSC	Global Standards Council
IAC	Information Analysis Centers
IEPD	Information Exchange Package Documentation
IIR	Institute for Intergovernmental Research
IRI	Inmate Release Information
JRA	Justice Reference Architecture
KST	Known or Suspected Terrorist file
MOU	Memoranda of Understanding
NCIC	National Crime Information Center
NCSC	National Center for State Courts
NIEM	National Information Exchange Model
NISS	National Information Sharing Standard
OJP	Office of Justice Programs
PM-ISE	Program Manager-Information Sharing Environment
PMO	Project Management Office
RFI	Request For Information
RFP	Request For Proposals
SBI	Standards-Based Interoperability
SEARCH	The National Consortium for Justice Information and Statistics
SLA	Service Level Agreement
SME	Subject Matter Expert
SOA	Service-Oriented Architecture
SOAP	Simple Object Access Protocol
SSA-FIR	Submit Suspicious Activity – Field Interview Report
SSA-SAR	Submit Suspicious Activity – SAR IEPD
SSG	Service Specification Guideline
SSP	Service Specification Packages
STT	Services Task Team
TA	Technology Assistance
TSCEI	Terrorist Screening Center Encounter Info
UML	Unified Modeling Language
WSDL	Web Service Description Language
XACML	eXtensible Access Control Markup Language