

DEVELOPING A PROCESS

Providing a Lessons Learned Storage Facility and a Collaborative Problem-Solving Environment for USASMDC/ARSTRAT

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As we focus our attention on governance development and security issues, and we look at one particular country or region; we find Knowledge Management is at the core of modern day effective governance. Thus Knowledge Management impacts governmental agencies and their relationships with each other.

The current situation: U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT), like most governmental organizations, has an information management challenge. What needs to be done is the development of a Knowledge Management system that can store historical information for the future reference of its members. The After Action Review Lessons Learned Program is a realistic solution that will actually answer this need and go a few steps further. This program is outlined in this paper and is currently being implemented by the organization.

What is Knowledge Management? According to <http://www.datajar.com>, "Knowledge Management is the process responsible for gathering, analyzing, storing and sharing knowledge and information within an organization." The primary purpose of Knowledge Management is to improve organizational and individual efficiency by reducing the need to rediscover knowledge.

How do we take tacit knowledge and explicit knowledge from individuals of an organization and make it easily available to other members of the organization? More so, how do we get those members of the organization to use the documented Lessons Learned of the organization on a reoccurring and frequent basis?

The challenge is, once we build it, how do we get people to use it?

- Earn "buy in" from members of the organization by:
 - Gaining confidence of members of the organization that the information in the program is relevant, credible and current.
 - Demonstrating to the majority of the people of the organization the ease of use of this new technology.
- Ensure the need of the leadership is met by the design and functionality of the program.
- Pass the "tipping point" (Gladwell, 2003) where most members of the organization see the real value in the use of this product and then incorporate it into their daily activities.

History and Background

USASMDC/ARSTRAT is an organization that participates in military exercises on a recurring basis. These exercises are conducted literally all over the world in many different environments and are expensive to plan and execute. The information gained by these experiences needs to be captured and held available for dialog by members of the command (Patterson, Oct '08). If this information is captured in a significantly improved process, the political and social implications are huge. USASMDC/ARSTRAT has a personal military turnover rate of about 33 percent each year. The leadership of the organization has found that there needs to be a formal documentation process that captures Observations, After Action Reviews and Lessons Learned

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“This program provides the ability to share information outside and inside the formal boundaries of an organization.”

from the organization's exercise experiences in order to keep this information from leaving with the individual. The original design of After Action Lessons Learned Program was to capture this information in a searchable database. The program goes several steps beyond that by providing a collaborative environment for problem solving. It also provides a searchable database that extends throughout Department of Defense and other important governmental organizations such as the Department of State and the Department of Agriculture. In the future, the program will strive to provide reach back to the terabyte of information located with the Center for Army Lessons Learned, other wise known as CALL.

Developmental Issues

Because of the nature of USASMDC/ARSTRAT subject areas, After Action Lessons Learned Program must reside in a classified, secure domain. This is accomplished by designing and using the program in SIPR – the Secret Internet Protocol Router – environment. The program must also be able to link into its higher headquarters in order to post shared observations, After Action Review findings and Lessons Learned in an environment that can be referenced and discussed by adjacent, higher and lower levels of the organization. The Joint Lessons Learned Information System application is the resident application inside the After Action Lessons Learned Program. It is designed to be the application that will be shared with all Department of Defense, Department of State and Department of Agriculture.

Effective Knowledge Management

Effective Knowledge Management is critical to this organization specifically. If we can use Joint Lessons Learned Information Systems to communicate After Action Reviews and Lessons Learned with our higher headquarters, other four star headquarters and perhaps expand that information sharing with the Department of State, we could demonstrate better information sharing between government organizations.

External Consequences

External consequences are consequences that affect other nations' sovereignty, governance capacity and national security. Most, if not all the military exercises USASMDC/ARSTRAT participates in are conducted with close friends of the United States. This Knowledge Management system is designed to be used in collaboration with our country's friends and close allies.

Thus the After Action Lessons Learned Program could improve our efficiency and our ability to share information in collaboration with other countries. Appropriate information sharing is a critical attribute of multinational operations (Friedman, 2006, pg 283).

Possible Solutions

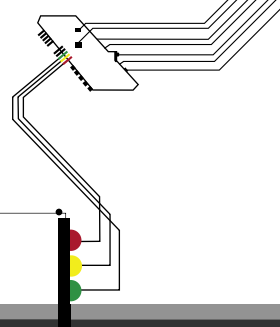
If USASMDC/ARSTRAT can organize a process to capture our Observations, After Action Reviews and Lessons Learned, then we will stand firmly on the shoulders of the information gained. This will bring the organization to the next level of tacit knowledge understanding and functionality.

Feasibility

Yes we can. The current political, social, economic and environmental constraints actually provide a fertile environment for this program to grow. The challenge is making the program self sustainable within the organization itself. This involves creating a functional, efficient program and then getting “buy in” for a majority of the members of the command. This is crossing the “tipping point” in which a majority of the members of the organization see and use this program as functionally beneficial to themselves and the organization as a whole. This is the beginning of the program's self sustainability. It will be the king pin of bringing this program into the organization. Change comes slowly to organizations. Sometimes there is great resistance to change especially when it involves new technology and new ways of looking at information. But in truth, this program is affordable, (it will cost our organization no money). The technology is available at no cost to our organization. Politically, our higher headquarters is already participating in Joint Lesson Learned Information Systems. If, on a larger scale, we in Department of Defense can show better collaboration and information sharing across the board and even with the Department of State, then the program will make a tremendous positive impact.

Overcoming Implementation Barriers

As described in the previous paragraph, implementation of this program is the biggest challenge. This is a new technology. It involves new rules of information management. It is a new way of looking at information. This program provides the ability to share information outside and inside the formal boundaries of an organization. If this program is proven functional, it could be used by other countries and perhaps the rest of the world



“Technology enables decision making,
but it does not make the decision.”

– BG Kurt S. Story
Deputy Commanding General,
U.S. Army Space and Missile Defense Command
/Army Forces Strategic Command

to establish greater appropriate information sharing between governmental organizations. If we can accurately share information with other countries, we may reduce global and governmental security risks.

Is it a program or a process? Webster defines the word “program” as “a plan or system under which action may be taken toward a goal.” “Process,” on the other hand, is defined as “a series of actions or operations conducing to an end; especially: a continuous operation or treatment especially in manufacture.” The continuous action of this dynamic process is problem solving in a collaborative environment. Therefore, it is both a process and a program.

Part of Knowledge Management is taking tacit knowledge and changing it into explicit knowledge. That is, capturing what is undocumented knowledge that may be part of the organization culture or in a member’s head and then documenting it into something like a database. Much of day to day problems are solved and stored in tacit knowledge of an individual and in the organization’s unwritten culture. With approximately 33 percent of a military organization changing over every year, much of this tacit knowledge is at risk of being lost to USASMDC/ARSTRAT. The program’s design is to capture this knowledge through a dynamic, collaborative documentation process.

With the Joint Lessons Learned Information System, (the resident technology application in the program) we can now easily document the tacit knowledge gained through the collaborative problem solving process with a secure blog. This makes information easily retrievable and thus then shared with other individuals of the organization. When we have individuals actively participating in the process, we will have brought the individual and the organization to a higher level of learning and functionality.

Solving or mitigating the problems of large organizations requires the collaborative processing power of many members of the organization. This can be done through an organized six step process:

Step 1

Defining the problem is not as easy as it sounds. First the symptom(s) of an observation needs to be acknowledged as the attributes of a potentially solvable problem.

Step 2

Once the major symptoms of the problem are observed, they must be organized in a way that causes the real problem to be identified. The problem is now identified and defined.

Step 3

Next, possible courses of action can identified in a collaborative environment. The Department of Defense calls this the After Action Review (IC 25-25, Sept ’93, pg 1.). The review is composed of subject matter experts who discuss and validate the definition of the problem and then come up with viable courses of action. Specifically, the program uses the same After Action Review format outlined by the National Training Center Observer Controller Handbook and in accordance with Training Circular 20-25.

Step 4

Each of these courses of action are then tested inside the environment in which the problem was first found. The courses of action that pass the test are now considered to be validated.

Step 5

The program is designed not only to document this problem solving process, but also to serve as a repository for sharing Lessons Learned.

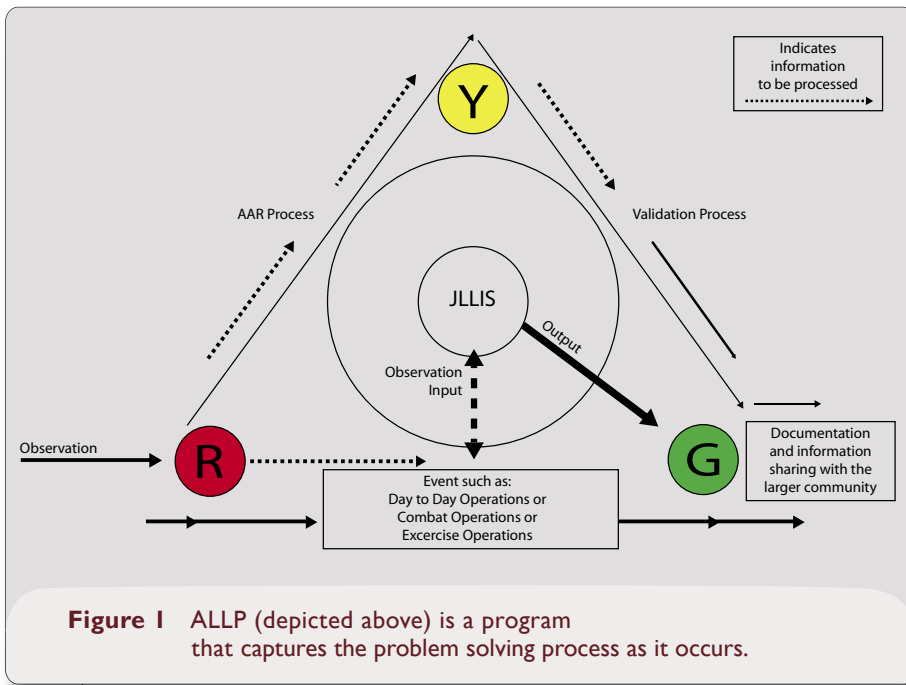


Figure 1 ALLP (depicted above) is a program that captures the problem solving process as it occurs.

ALLP aides in the problem solving process through a collaborative, secure dialog in the form of a blog in the JLLIS application. JLLIS has the capacity to hold this information in a secure environment indefinitely.

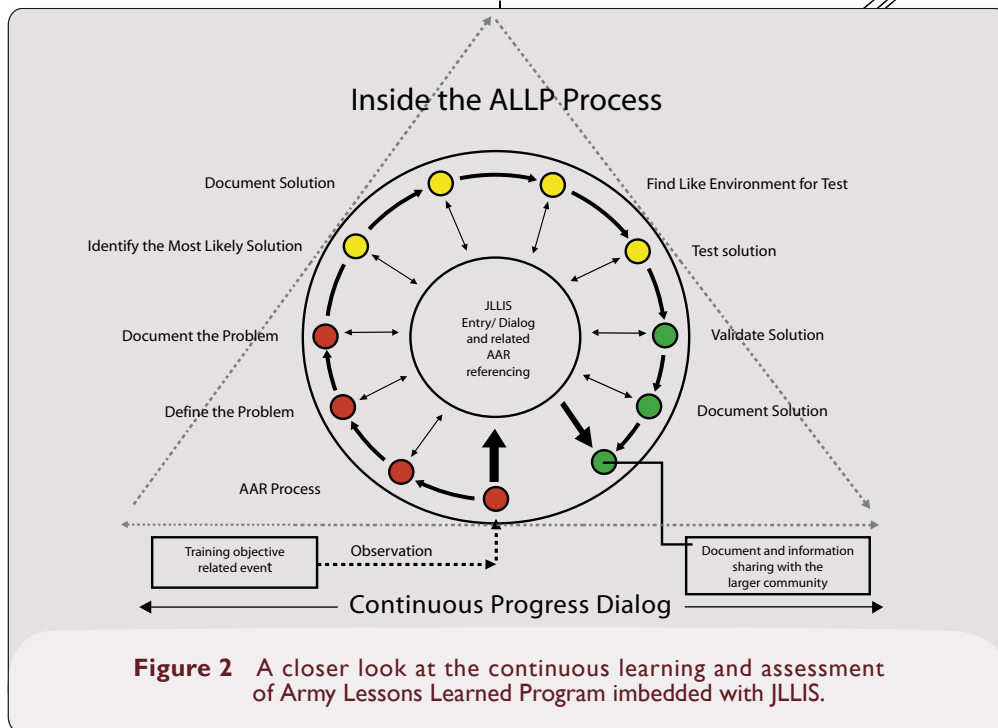
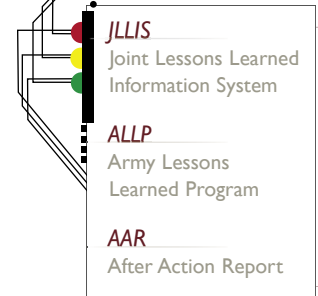


Figure 2 A closer look at the continuous learning and assessment of Army Lessons Learned Program imbedded with JLLIS.

JLLIS is the Joint Lessons Learned Information System application that provides such an environment. Its beauty is its simplicity. At its most basic form, it has a contextual search engine and a collaborative blog under each observation entered. This system resides in the classified Department of Defense environment called Secret Internet Protocol Router.

- DRRS**
Defense Readiness Reporting System
- JTMS**
Joint Training Information Management System
- JLLIS**
Joint Lessons Learned Information System
- CALL**
Center for Army Lessons Learned

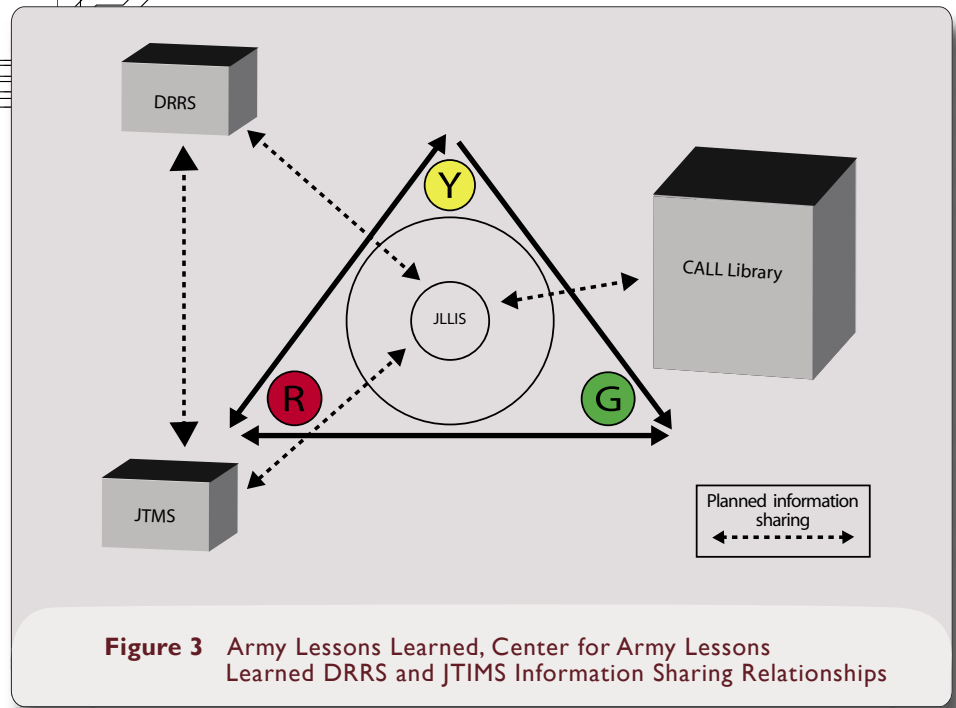


Figure 3 Army Lessons Learned, Center for Army Lessons Learned DRRS and JTMS Information Sharing Relationships

■ With all of its benefits, JLLIS is only an application. As BG Kurt Story stated in the Summer Issue of the Army Space Journal, “Technology enables decision making, but it does not make the decision.”

Step 6

Reference this problem/solution documentation when similar problems are found. This referenced information allows members to draw solutions from the documented Lessons Learned. Joint Lessons Learned Information System is as relevant as the information entered into it. Thus, a process tailored to the unit needs must be incorporated for its use. After Action Lessons Learned Program is the process that tailors Joint Lessons Learned Information System to the needs of USASMDC/ARSTRAT.

Conclusion

This paper provides a glimpse of how After Action Lessons Learned Program uses a collaborative, real time, secure environment to capture and document the problem solving process in the spirit of building the Knowledge Management of USASMDC/ARSTRAT. In the future, it will be used in collaboration with the Defense Readiness Reporting System and the Joint Information Management System to both improve unit assessment and unit training planning. The program is a collaborative Knowledge Management system that can be used at the organization and individual level. It introduces a process and a technological application to form a tool that documents and

builds collaborative solutions from tacit and explicit knowledge. In the future it will link the Center for Army Lessons Learned as a library to take advantage of the terabyte of information that resides in at the center. There will also be a link with the Joint Doctrine Education Information System. Embedded in After Action Lessons Learned Program is a process and a technological application to facilitate current observations in a collaborative environment to define the problem definition, build the After Action Review process and capture the documenting of Lessons Learned in an easily searchable database.

After Action Lessons Learned Program is a program and a process that provides the right Knowledge Management for USASMDC/ARSTRAT of which Joint Lessons Learned Information System is the resident technical application. The program’s future is to draw together the terabyte of information available from the Center of Army Lessons Learned and also incorporates information sharing between itself, Joint Information Management System and Defense Readiness Reporting System. The program coordinates After Action Reviews as outlined in the National Training Center’s Observation Controller Handbook and in accordance with Army Training Circular 20-25. ⚠

KEY CONCEPTS

After Action Lessons Learned Program

A knowledge management tool that incorporates a problem solving process with a technological application called Joint Lessons Learned Information System.

After Action Review

An After Action Review is a process by which subject matter experts examine an observation taken during a military exercise, combat or day to day operations. These people attempt to isolate the observation into what the problem is and then come up with courses of action to correct the problem and its symptoms.

Course of Action Validation Process

Courses of Action that are evaluated in the same environment the problem or symptom of the problem was observed.

Defense Readiness and Reporting System

The Defense Readiness and Reporting System is a technology application used throughout Department of Defense to assess and report unit readiness.

Explicit Knowledge

Knowledge that has been or can be articulated, codified and shared in certain media. It can be readily transmitted to others. Most common forms of explicit knowledge are manuals and documents.

Joint Lessons Learned Information System

Joint Lessons Learned Information System is a technology application that resides in a secure environment (SIPR). Joint Lessons Learned Information System incorporates a database with a contextual search engine, a blog and an ability to hold information in a specific format indefinitely. Joint Lessons Learned Information System is in the Initial Operational Capability phase. This technology is being designed for use with Department of Defense assets, Department of State and Department of Agriculture

Joint Training Information System

A technology application resident in Secret Internet Protocol Router that is used throughout Department of Defense to plan and deconflict large scale military exercises.

Knowledge

”Categorized or sorted data with sorting carried out based on some implicit or explicit relationships.” (Klingner and Sabet 2005, pg 200.)

Knowledge Management

Knowledge Management is the creation, capture, and use of records, databases, and other information-including uncategorized perceptions – to achieve organizational objectives. (Klingner and Sabet 2005, pg 201.)

Lessons Learned

Lessons Learned is the documented product of the problem-solving process in which an observation is seen in the light of a symptom of a solvable problem. The symptom is traced back to its cause and this cause is clearly defined and documented as a problem. The problem is then taken through the After Action Review process where possible courses of action are assigned to solve the problem.

Observation

An anomaly during an exercise, combat or day to day operations in which things do not go as planned in a negative or positive way, the cause of which are optimally investigated, documented and later planned for.

Tacit Knowledge

Knowledge which is only known by an individual and that is difficult to communicate to the rest of an organization.

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Figures for publication

Figure 1

After Action Lessons Learned Program is a program that captures the problem solving inside the After Action Lessons Learned Program Process

Figure 2

A closer look at the continuous learning and assessment of After Action Lessons Learned Program imbedded with Joint Lessons Learned Information System.

Figure 3

The Joint Lessons Learned Information System application also resides on Network Internet Protocol Router and Focal Point.

About the Author

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