Case Study:
Social Computing in the United States Air Force

Situational Analysis

In late January of 2008, the Air Force's Air Education and Training Command leaders released a report titled *On Learning: The Future of Air Force Education and Training.* The vision was to create technology solutions that would foster continuous, on-demand learning and increase Air Force members' access to information, knowledge, and lessons learned. The goal: foster organizational learning by making everyone a content creator; creating a collaborative environment where users could share best practices, innovations, and learning opportunities. The Air Force believed that a transformational shift from education and training to learning and the learner would be critical to its success in a rapidly changing world. To do this, the Air Force needed social computing.

The following example hints at just how important a social computing and learning solution can actually be. In February of 2008, only one month after the Air Force's leaders issued the recommendation for transforming learning, a B-2 stealth bomber accident occurred. It was discovered that a certain technique, not widely known, might have prevented this tragedy. In short, a lack of communication of critical information was a contributing factor to this very costly incident. Had the Air Force been using a social computing solution to easily share information across the organization, it's possible the accident could have been prevented - saving the American taxpayer over $1.4 billion.

Case Study Highlights

Organization:
The United States Air Force

Industry:
Public Sector – Government/Dept of Defense

Situational Analysis:
The Air Force sought to change the way it learns and leads in the 21st Century

Solution:
Communities of Practice built with Tomoye

Results:
Improved learning, knowledge sharing, and collaboration

Solution

Enter Air University, the intellectual and leadership center of the Air Force. In 2005, Air University started a small, student-led research project in social computing to connect its squadron commanders. Could this pilot be extended across the Air Force enterprise? Could prototype Web 2.0 and Web 3.0 technologies encourage colleague interaction to transform the learning environment? Could social computing be used to encourage social learning, and avoid other potentially dangerous, expensive incidents in the future? The answer was a resounding, "Yes!"
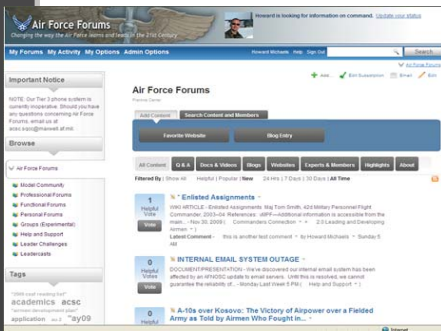
In July 2009, Air University implemented a NewsGator-powered platform consisting of numerous forums with many advanced social features. Today, there are seven hallmark communities of practice. These professional forums, built with Tomoye, include:

- **Commanders Connection**: a social networking and learning forum for Air Force Squadron Commanders
- **The Field Grade Officer Network**: a teaching forum for mid-grade officers integrating Flash-based courseware with powerful questions and answers for global, asynchronous learning
- **Flightleader.Net and "The Bar"**: professional forums focused on helping junior officers learn about the profession of arms and effectively operating in today's complex environment
- **ProReadingNet**: a forum for generating discussion and recommendations around books, journals, and articles
- **LeaderChallenge**: a forum to develop critical thinking and decision making skills through global discussion of case studies and vignettes
- **LeaderCast**: a forum focused on social media with video sharing and rating technology much like YouTube

Highlighted Features

Below is an overview of the social features and tools that all of the communities of practice include:
- **Powerful Questions & Answers**: community members' questions and answers become part of a permanent archive for future reference. Even as a user types a question, the platform suggests possible answers from previously answered questions.
- **Documents & Videos**: content created and shared by members for others to benefit from.
- **Blogs**: personal publishing within the enterprise, where users can read community-related blogs or start their own.

- **Wikis:** tools that enable community members to easily create, edit, and maintain shared content.
- **Social Bookmarks:** links to websites of interest, and automatic indexing of the content of those websites for powerful searches.
- **Identification of Experts:** all content is indexed and rated making it easy to find the right expert and to identify a community member's skills and strengths.
- **Social Knowledge Features:** community members can tag content for easier discovery and rate it for its usefulness, thereby improving knowledge sharing.
- **Social Profiles:** just as with LinkedIn or Facebook, users can describe themselves, post contact information, and post a picture to encourage networking.
- **Content Discovery:** the system automatically provides users with content recommendations based on their behaviors and actions taken within the forums.
- **Microblogging/Status Updates:** people can post short status updates within a community of practice, or respond to others' status updates.

Through professional networking and social learning, the Air Force is changing the way it learns and leads in the 21st Century - one student at a time.

To exemplify how these features work within the NewsGator-powered solution, meet Major Howard Michaels - a newly-pinned Air Force major who has just been assigned to his first command, a remote base in Greenland. Here's the problem: Major Michaels hasn't yet had the opportunity to attend the Air Force in-residence college for commanders. Also, because of timing, he won't be able to take the Air Force training course for commanders. Bottom line: Major Michaels is set to take his first command position and leadership role, and he needs to access the expertise and support of fellow commanders.

That's not a problem, though, because one of the Air Force's communities of practice is the Commanders Connection. Major Michaels heads there virtually in order to prepare for his command tour. This community is designed as a social learning and professional network specifically for Air Force commanders, new and old. It is full of content that Major Michaels needs to know, contributed by experienced Commanders currently in the field.

To prepare for his tour in Greenland, Major Michaels signs up for an account and fills out his profile. It is extremely easy to get started and get connected to other Air Force leaders around the world. He then finds a link to a virtual version of the exact same course he wasn't able to take in residence. While studying the wiki-based course materials, he realizes he has some questions. So he uses the "Ask a Question" feature to post a query. Before he even submits the question, the system recommends responses. He doesn't find quite what he needs, so he continues to ask the field.

A few days later he receives an email explaining that his question has been answered by multiple commanders. While this notification is delivered by email, it's viewable, in context, within the forum. The answers represent shared, tacit knowledge that all people in the forum can now view. Not only were the answers he received extremely helpful for his training, they are also permanently archived in the forum, ready to help somebody else who may have a similar question.

Major Michaels completes the virtual course, receives active advice from other commanders, and now feels prepared to take off on his first command – all through the power of the Air Force's social networking and professional learning system.

Benefits/Conclusion

With the above example, one can clearly see the usefulness of the Air Force's NewsGator-powered social networking and learning solution. The expertise discovery and knowledge sharing benefits of the system are readily apparent. Its value to learning and information sharing in the Air Force cannot be overstated: if such a solution had been in place several years ago, the $1.4 billion crash of the B-2 stealth bomber might have been prevented.

The communities of practice that make up the Air Force's social computing platform have dramatically changed how the entire organization, from new recruits to commanders, learns and shares knowledge within its ranks. The power of such a system is clearly evident in its use of artificial intelligence to suggest answers to questions before they are asked or to suggest content based on users' prior activities within communities. In short, NewsGator-powered technology has produced a collaborative environment for people within the Air Force to share best practices, innovations, and learning opportunities, and has been instrumental in fostering the transformational shift from education and training to learning and the learner, which the Air Force believes is critical to its success in the Twenty-first Century.