<u>**OPEN SOURCE SOLUTIONS SYMPOSIUM**</u>
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Good afternoon. It's been an interesting year since we last met. Robert's initial efforts have been successful in keeping attention and momentum on this very important aspect of information flow.

Although the title of my part on the program is billed as "The Intelligence Community and the Open Source Information Challenge," it would be unfair for you or me to think I could speak for that Community now that I've been out of it for more than a year. Additionally, you had that information from Paul Wallner this morning. So in the spirit of fulfilling your expectations for this niche in the program, I'm going to address my experiences with open source collection, exploitation, analysis, and dissemination from both the government and industry side. Being the last speaker of the day, I'll be very sensitive to both your posturing in your chairs and the clock!

My experience in the government, both with the military and the civilian side of the Intelligence Community, leads me to believe that open sources make a significant yet low cost contribution to fulfilling the requirements of the customers that they are serving. However, for open sources to be useful they must be <u>accurate</u>, <u>timely</u>, and <u>credible</u>. Those are the criteria by which we must judge the usefulness. Underlying that premise is the challenge that open sources must be readily accessible and catalogued.

GOVERNMENT EXPERIENCE

Let me start with my government experience. As an Air Force intelligence officer, I worked from the bottom as an analyst, staff officer, commander of the largest intelligence Wing, and held senior positions in joint, Air Force, White House, and Community organizations. Throughout that career I was challenged to balance the information contained in

open sources with that which came through official, classified channels. By the way, I liked Paul Wallner's definition of intelligence this morning, "Intelligence is information on national security issues that happens to be classified." As a generalization I would say that open sources are most helpful in indications and warning, and as encyclopedic background.

Sometimes I'm amazed that people think open source exploitation is something new because of all the recent attention it's getting. As I think back to the days I began my intelligence analyst duties in the '60s by starting at the Watch Center of the Strategic Air Command (SAC), I'm reminded of its use even then. For some of you who are too young to remember that period, and those of you who don't have military experience, let me set that stage.

This was a central period of the Cold War, SAC aircraft and missiles and Navy submarines, were on alert around the world and on patrol in the air and under the sea. My job was as the junior officer on a three-person watch team; the other two people were a senior watch officer and a non-commissioned officer. It was our job to read and sort all classified traffic that came in through the night or day in order to alert operations to impending events or threats. When I say sort, remember I'm talking about paper--no computer help in those days. I would have really appreciated a way to send traffic electronically, but the "pigeon holes" had to satisfy. In addition, the working environment was extremely noisy as the teletypes printed from each of the servicing collection nodes. And around the corner of a standing partition was the sanity check--an open source input from Associated Press, United Press International, and Reuters Overseas News Service! It was in that environment that I was first exposed to the importance of open sources. I would like to quickly add a nod to Mr. Hall from Jane's that, yes, the Jane's "bibles" were near at hand at all times.

By the way, for those of you of the former KGB, we paid attention to the tone and tenor of both Red

Star and TASS, but we did view them with a little skepticism with respect to accuracy and credibility!

Let me switch now to a different time, and a more senior position for me. As the Assistant Chief of Staff for Intelligence (ACS/I) in the Air Force, in layman's language--the head of Air Force intelligence, I was keenly aware of the importance of open sources.

My normal routine consisted of reading the intelligence traffic from the previous night, identifying items that might be of interest to the Chief of Staff, and reviewing the briefing presentation to him based on those selected items. Sounds very straight-forward doesn't it? NOT!

In today's environment, the first information that reaches a policymaker, reaches him or her through open sources: the radio, TV, or print--on their way to work, in the office, over breakfast. In any case, they already have a perception of what has happened in the world, and in many cases have seen pictures of the event before the intelligence officer gets to them. So, in relation to one of the criteria I mentioned earlier--timeliness-- the intelligence officer is often reacting to something the policymaker has heard, seen, or perceived. However, what the intelligence officer brings is a perspective of accuracy and credibility. His thorough research and comparative analysis using all-source intelligence, is value-added credibility. Again, I want to concur with the Open Source Coordinator this morning who said, "It (open source) cannot replace the unique capabilities of the other collection processes, which truly provide the Intelligence Community with its competitive edge over other informations services."

In the situation I found myself in as the ACS/I, I decided I could not force the policymakers and operators to wait for the information I could bring. I had to capitalize on the situation as it existed. In other words, don't try to change their routine or preferred way of taking in data, but try to add value.

One of the stock phrases you often hear from an intelligence officer when asked about some open source

information is that he or she cannot "confirm or deny." In the Pentagon, the most read single document is the Early Bird, a compilation of the radio, TV, and print media usually from the last 24-hours. It is on the desk of nearly everyone over the rank of Colonel or Navy Captain. That, in fact, becomes the source of intelligence! To add value to this timely input, I decided I needed to add credibility and accuracy. So, I did the unthinkable--I confirmed or denied what was in the Early Bird.

Each week I identified one of my analysts as the "chirper" His or her responsibility was to arrive at o'dark-thirty, get a copy of the Early Bird, and annotate it from classified sources to confirm or deny items. After my review, this "chirped" and classified version of the Early Bird was disseminated to the principle members of the Air Staff. This allowed us to add value to something the principles were already reading, and concentrate our briefing efforts on in-depth analysis of specific needs.

As an aside, one of the things I used to tell young analysts was that they should not be defensive about their customers getting information from other sources, such as CNN. CNN, which has become the unofficial, official source of information is a great intelligence tip-off. With the limited budget and resources available to the Intelligence Community, we need to take advantage of any other collection channel that is timely, fairly credible, and mostly accurate; and in my opinion, CNN fills that niche. I certainly kept CNN on the screen in my office almost continuously, and I can remember numerous times picking up my hot-line to ask the Crisis Center if they had seen any traffic on some fast-breaking event, and in many cases, the CNN tip-off was our first indication. Open sources are valuable!

There are many more instances of the value of open sources I could refer to from my government experience, but let me switch now to my current responsibility in the defense industry.

INDUSTRY

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I am a Senior Vice-president and General Manager at BDM, Federal, a professional and technical services company here in the Washington area. My functional market is the Intelligence Community from which I came. Like most of my competitors around the beltway, I was looking for ways to provide a service and become a partner as the Intelligence Community placed more emphasis on open source collection and analysis.

Our beginning was coincident with Robert's first symposium last year. As I have told Robert privately, we owe our opportunity to this forum. The second day of the symposium last year, after our presentation, we received a call from a government contracting officer asking about our capabilities. From that phone call, we have established a growing part of our business unit with a primary focus on open source support. Robert, this is not a commercial, but an indication of our gratitude to you for bringing all these practitioners and users together.

Let me share with you some of our experiences as lessons-learned thus far in doing open source exploitation for classified customers.

Although you're hearing a lot here at this symposium about the quality and quantity of open source databases, we can tell you that when you're trying to apply open source data to a specific problem, it's not all on-line. There's still much good data out there that has not been digitized, and you have to access it the old-fashioned way--in the libraries and archives. Next, you soon discover that no one library has a complete collection, not even the U.S. Library of Congress. You find various collections: some have only old material, some have a set beginning date that ignores earlier material, and some collections have gaps for whatever reason.

Once the data is acquired it must be processed. The method of processing must be consistent with the database of the sponsor. Compatibility of hardware and software must be recognized and rectified from the very outset. Even a relatively small research task can generate thousands of data points that need to be analyzed. Working closely with hardware and software

vendors to insure that the project is not limited or delayed by poor choices in computer use or purchases is a requirement. Information systems must be capable of expanding to meet the growing data demands and staff expansion if that becomes necessary. Without close management of an open source project expansion can be limited, staff enthusiasm evaporate, and project costs can soar and become non-competitive.

Acquisition of materials for the program is never ending. Even after moving on to different tasks, maintaining the currency of the databases is important to the future of the project and may require additional purchases.

Attendance at regional trade conventions and exhibition around the world are required to find new and more complete information sources. Although trade shows are oriented toward sales, they are sources for new and different technologies as well as updates for older, installed equipment and facilities.

We have also found that you must anticipate the language qualifications you will need to do research in a particular field. You must have someone on the team with the necessary language qualifications for translation, or you must employ bilingual researchers in the country of interest. Some materials are available only in foreign sources. Whatever the language a little stroking is a common language. In one case in which we had requested a visit to a foreign corporate library, the request was denied. However, our linguist picked up the telephone to inquire about altrnative sources, and finding that he and the librarian who had turned down the request shared an interest in jazz, reversed the decision and had a very productive visit--and dinner in a local jazz club. In fact, our researcher was flooded with data that was unique to the study.

Attention to the make-up of the team is also important with respect to experience because the strength of open source data--its plentifulness--is also its weakness--it is conflicting. Experienced analysts and researchers are a necessity to make

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judgments in resolving data, and we are back once again to the criterion of <u>accuracy.</u>

There are many, and you will hear some of them here, that say low cost open source data can take the place of high cost intelligence collection and analysis. There may be some truth to that <u>if</u> you don't need to deal with military operations that need very timely, accurate, and credible intelligence that prevents putting soldiers, sailors, and airman in harm's way. As an example, open source data may very well tell you there's an installation in a certain place; when it was built, by whom, when it was last renovated, and even the name and address including the postal code of the present occupant. What open source data has a hard time with is the make-up of the occupying force, the state of their training, the effect of recent damage, the number and state of the vehicles entering and exiting a denied area, etc. That's really the rub--a denied area. That denial can be physical, electronic, or by deception. In any case, open source data can rarely be timely, accurate, or credible in this scenario. So, we have found that the client must be very specific with his requirements, and we must not promise more than we can deliver.

Data output is a difficult problem and must be addressed at the very inception of the open source work. There are some formatting distinctions when performing open source collection, analysis, and production for a classified client. First, the document must be rigorously footnoted which requires an interactive database to sort, cross-reference, and collate all entries using the same source. Second, the customer wants the data not only in hard copy, but on a disc so that he can manipulate it after it is delivered. Third, and this may surprise you, but not all data is requested in high tech output. We've had specific requests for hand-annotated maps on standard maps and charts. We've gotten a corps of Krayola Kids that are experts at this old-fashioned production capability!

CONCLUSION

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Well, I see that it's getting near the time to close, so let me just summarize by saying whether you're on the government side of the house or the industry side, open sources are important and here to stay. Fora such as these are necessary to bring practitioners and users together to better understand the strengths and weaknesses, the opportunities and limitations, and the absolute requirements for timeliness, accuracy, and credibility. Open source collection and production can never replace the requirement for classified collection and production capabilities, but the synergism between the two will make everyone's job easier and more cost effective.

Robert, thank you for asking me back again this year, and may each of you have a successful new exploitation year!

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