

# DECISIVE POINT

The USAWC Press Podcast Companion Series

## Podcast Transcript

COL Thomas W. Spahr

### “*Raven Sentry*: Employing AI for Indications and Warnings in Afghanistan”

US Army Colonel Thomas W. Spahr discusses the development and implementation of the AI model, *Raven Sentry*, to predict attacks on Afghan centers using unclassified data sources. He highlights the need for innovative solutions in Afghanistan as coalition presence waned. The success of *Raven Sentry* emphasizes the importance of leadership, collaboration with the commercial sector, and utilizing unclassified information for predictive intelligence. This experience showcases the potential of AI as a tool to enhance decision-making processes in intelligence analysis, stressing the value of human expertise alongside technological advancements.

E-mail [usarmy.carlisle.awc.mbx.parameters@army.mil](mailto:usarmy.carlisle.awc.mbx.parameters@army.mil) to give feedback on this podcast or the genesis article.

**Keywords: artificial intelligence, Afghanistan, military intelligence, innovation, culture**

#### Episode Transcript

##### Stephanie Crider (Host)

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The views and opinions expressed in this podcast are those of the guests and are not necessarily those of the Department of the Army, the US Army War College, or any other agency of the US government.

I'm in the studio with US Army Colonel Thomas W. Spahr, PhD. Spahr is the author of "[Raven Sentry: Employing AI for Indications and Warnings in Afghanistan](#)." You can find it in the Summer 2024 issue of *Parameters*. Spahr is the chair of the Department of Military Strategy, Planning, and Operations at the US Army War College and was the chief of staff of the Resolute Support J-2 in Afghanistan from July 2019 to July 2020.

Welcome to Decisive Point, Tom.

##### Thomas W. Spahr

Thank you for having me, Stephanie.

##### Host

So, let's talk about your article. I'm going to set it up a little bit here. It's late 2019 in Afghanistan, and the Resolute Support team is trying to maintain awareness but has fewer intelligence resources than it previously did. So, they developed *Raven Sentry*, an AI model that used unclassified data sources to predict future attacks on Afghan district and provincial centers.

Before we get into the specifics about *Raven Sentry*, which I'm really excited about, let's talk about the problem the Resolute Support team was trying to solve and how the team realized AI could help. What challenges did the team face?

##### Spahr

Well, first, Stephanie, thanks again for having me. I really think it's important that we capture the lessons and share them in our professional journals and podcasts across the Army and the Joint Force. Throughout the process of developing

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## DECISIVE POINT PODCAST – EPISODE TRANSCRIPT

COL Thomas W. Spahr

### *“Raven Sentry: Employing AI for Indications and Warnings in Afghanistan”*

*Raven Sentry*, I witnessed valuable lessons and believe that this case study and others like it can help leaders understand the potential of artificial intelligence and the challenges of employing it.

Like you said, from 2019 to 2020, I was the chief of staff of the US and Coalition Intelligence Directorate in Kabul, and I had the opportunity to play a part in this development. To your question, the problem we were facing was that the coalition presence was rapidly drawing down, and we noticed that our historic sources of intelligence (whether it be humans out there collecting through source operations, overhead aircraft, and government satellites), they were starting to go away—or to be retasked, rather—to higher missions. So, we had to find a way to maintain our situational awareness.

#### **Host**

Was there an “aha” moment when the team realized AI might be the answer?

#### **Spahr**

I would say there were several. We had a unique group of analysts and leaders in the intelligence staff made up of soldiers, sailors, airmen, and representatives from across the Intelligence Community.

The original idea, kind of the “aha” moment, came from one or two of our analysts and then was encouraged by several leaders in the task force and from the Intelligence Community. I jumped on the concept because I thought it had merit and because I was in a position where I could influence the allocation of the time and resources within the directorate. I had also recently graduated from the Army War College, where I completed a study on how the commercial sector employs artificial intelligence, and I felt that the conditions were right for testing an AI for intelligence in Afghanistan at the time.

So, while our historical classified sources—as I mentioned, the human collectors, the overhead imagery collectors, or the signal collectors—they were disappearing. We also noticed an opportunity presented by the increased number of commercial satellites and the availability of news reports on the Internet, the proliferation of social media postings, and messaging apps that just had a massive membership—[these provided] a lot of information, a lot of data that could be exploited. We also had the advantage of years of experience in theater and examples of how adversaries conducted attacks. For instance, I was on my fourth deployment to Afghanistan as an intelligence officer. One of our analysts had worked with Lester Grau, the famous scholar who had studied the Russians in Afghanistan during the 1980s. And what they did was they built templates of how the enemy attacks targets like provincial and district centers.

Insurgents had attacked many of the government centers we were focused on over the last 40 years of war in Afghanistan. So, we could study those attacks and trace the insurgents’ activities to key routes, locations (say, mosques or local [residences] where they formed up before an attack) and our environmental conditions. Now, we also use the algorithm to consider environmental factors.

Historically, insurgents attack on certain days of the year or holidays, for example, or during certain weather and illumination conditions. The Taliban are ultimately human. They don’t like to operate when it’s cold and rainy, so the chances were less then. These environmental factors, they were less critical, but they could increase the threshold of the likelihood for an attack within the algorithm. We were really teaching the machine to do good predictive analysis. Many times, these attacks were in the exact same locations during the exact same calendar period with almost identical weapons to what they attacked the Russians [with] in the 1980s or the previous 18 years of when the US was in the country. The beauty of the AI is that it continued to update that template. The machine would learn as it absorbed more data.

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## ***“Raven Sentry: Employing AI for Indications and Warnings in Afghanistan”***

### **Host**

How did *Raven Sentry* actually come to fruition?

### **Spahr**

I would credit the unique blend of people and circumstances.

As I said, we had several analysts from the Intelligence Community who had been working with AI systems at their home agencies before they came over to the RS headquarter, or the Resolute Support, headquarters in Kabul. As I mentioned already, I had been studying artificial intelligence in the commercial sector and was in the right position to influence that. Perhaps most importantly, though, we had great leaders like General Scott Miller and General Chris Donahue, who were willing to dedicate resources to experimentation.

We also had a sense of urgency as the drawdown was happening rapidly during this time, and we needed to find innovative ways to remain aware of the environment we were operating in. To narrow the scope of the problem, because it was a big problem, we focused on provincial and district headquarter attacks. These were really important because of the effect a successful Taliban or ISIS-K attack would have on a provincial or district headquarters on the information environment. Even if the insurgents only took over a government center for a very short period of time, it would be all over the press and the Internet and make the Afghan government really look bad. It [would] look like they were incapable of defending themselves or the Afghan people.

So, as we started to test the system, it became clear that this could be useful in making our analysts more efficient and that the unclassified sources of information were available and could be helpful. Unclassified was necessary because what we produced was ultimately going to the Afghans who would act upon it, and none of them had clearances. It also made it easier to work with our allies, who also didn't have clearances, just by lowering the threshold of what we could talk about. We could share with them completely.

I want to be clear, though. The AI was not making direct operational decisions. Rather, it was focusing the analysts' attention. Essentially, it was saying, "I've been trained to look for regions for risk of aggression, and you should focus your energy here." But the human was central, and the AI was really—it was like a cognitive aid or a cognitive appendage, we'd sometimes call it.

### **Host**

Tell me about the lessons that the team learned from this experience.

### **Spahr**

The most important, I would say, is that leadership and command culture matter when developing these systems. It wouldn't have happened if leaders hadn't recognized the potential, prioritized resources, and tolerated early frustrations and slowdowns. We chose early on to consolidate this effort within our special operations headquarters because we recognized that the culture was more analogous to a startup business where experimentation was encouraged and failure was tolerated. Second, to develop the algorithm, we quickly concluded we needed help from the experts in the commercial sector. The military just can't keep up with innovations in artificial intelligence in business and academia today. So, we needed to partner with these experts to gain access to the latest technologies. What we did is we worked through Defense Innovation Units, or DIUs, to find a partner company and quickly secured a contract to employ several individuals to work with our analysts on the development of this algorithm, then test it, and then to continue to update it as the environment changed, which it invariably does in combat. Most critical, though, was that partnership between the military experts and the civilian technologists. Finally, we validated that commercially produced, unclassified information can yield predictive intelligence. It's something we knew already,

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but we really validated it using an algorithm. And, it's essential when you're working with foreign partners. And we've really further evolved this today in the war in Ukraine, where intelligence developed from unclassified, commercially produced collectors is significant to the Ukrainian war effort.

### Host

Do you have any concluding thoughts you'd like to share?

### Spahr

It isn't easy to write about intelligence topics because of classification, and I am very sensitive to that. But I also want to encourage intelligence leaders, operators, and analysts across the Joint Force and the Intelligence Community to do the hard work to publish in the unclassified environment, where these lessons can be shared and discussed widely. The readership—it's just so much broader than on our classified networks. And, this will speed the sharing of lessons, the learning, and then the subsequent growth of our capabilities if we can share at the unclassified level.

I also just want to take a minute to thank the analysts who helped me develop the system, and with this article, really. They did the hard work on developing the system, but they also were helpful to me as I was researching and trying to remember the information for the article. And [I'd like to thank] the senior leaders who encouraged me along the way. It was really a team effort the whole way through.

### Host

Listeners, you can find the article at [press.armywarcollege.edu/parameters](https://press.armywarcollege.edu/parameters). Look for volume 54, issue 2.

For more Army War College podcasts, check out [Conversations on Strategy](#), [SSI Live](#), [CLSC Dialogues](#), and [A Better Peace](#).

Tom, thank you so much for making time for this today.

### Spahr

Thank you, Stephanie.

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