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Dark Hammer

Brian David Johnson

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DARK HAMMER

Written by Brian David Johnson • Creative Direction: Sandy Winkelman Illustration: Matt Haley • Brought to you by the Army Cyber Institute at West Point





BUILDING A BETTER, STRONGER AND MORE SECURE FUTURE FOR OUR ARMED FORCES

Science Fiction Prototypes are science fiction stories based on future trends, technologies, economics, and cultural change. The story you are about to read is based on threatcasting research from the Army Cyber Institute at West Point and Arizona State University's Threatcasting Lab. Our story does not shy away from a dystopian vision of tomorrow. Exploring these dark regions inspires us to build a better, stronger, and more secure future for our Armed Forces.

We re-defined how the Army operated after Vietnam to fight the Cold War. We shifted from Cold War thinking to more than a decade of counterinsurgency operations. Maybe it is time to redefine how we fight the next generation of adversaries — both on the ground, in the air, and in cyberspace.

Cyber and Electronic Warfare effects must become just another option that a commander can employ to meet their objectives. Our adversaries think like this. Our adversaries are embracing change. Our adversaries are evolving. What happens if we are left behind?

Lt. Col. Natalie Vanatta

Academy Professor

U.S. Army Cyber Institute

DARK HAMMER

Our science fiction prototype will take us to the year 2027. Things have gone from bad to worse on the Han Chiu Peninsula. Karta is under attack. While the east of the city falls quickly, the U.S. and West Han Chiu forces hold their ground on the west banks of the Tan River. The combined ground forces must hold back the onslaught.

Reinforcements will not make it in time. The fight is about to begin ... With no option but to battle it out on the ground, casualties are sure to be high.

There is another hope.

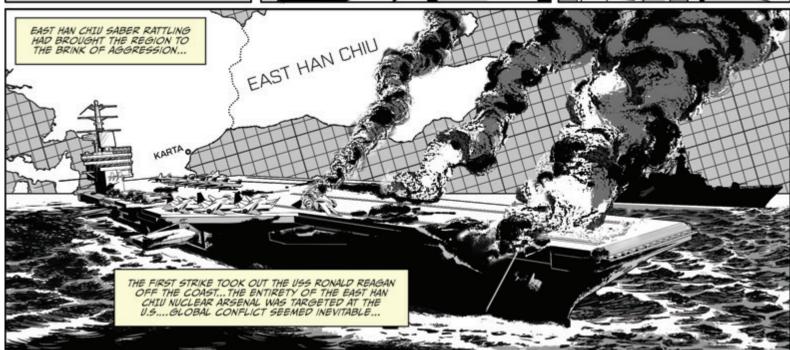
The Dark Hammer... a cyber offensive capability that might turn the tables and win the day.

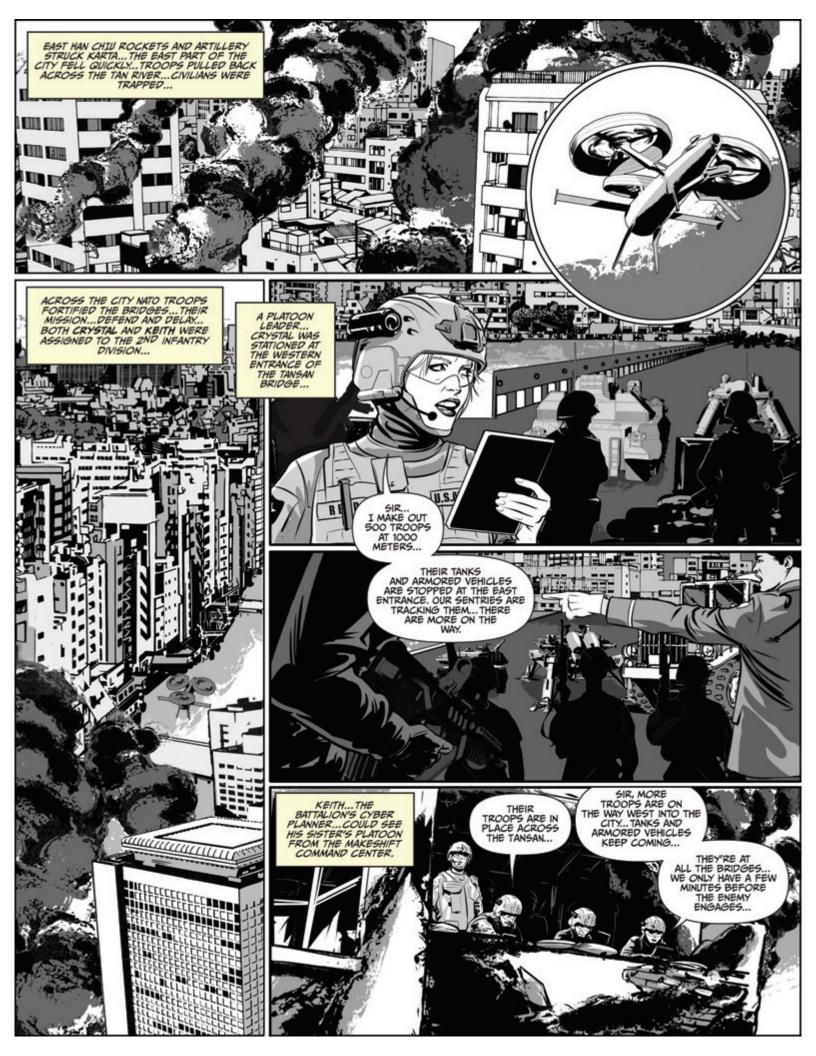


















THE DARK HAMMER...A CAPABILITY DEVELOPED TO BURROW INTO E.H.C. MILITARY NETWORKS...POISED FOR WHEN IT IS NEEDED MOST... DISRUPTING COMMUNICATIONS, TURNING THEIR OWN ARTILLERY AGAINST THEMSELVES, AND DESTROYING THEIR AUTONOMOUS FORCES. $\begin{smallmatrix} 0 & 0 & 1 & 0 & 1 & 0 & 1 & 0 & 1 \\ 0 & 1 & 0 & 1 & 0 & 1 & 1 & 0 & 1 \\ 1 & 0 & 1 & 1 & 0 & 1 & 0 & 1 & 0 \\ \end{smallmatrix}$







"Bytes travel farther and faster than bullets. In the near future, they will be just as deadly."

> Dr. George Cybenko Dartmouth College

AFTERWORD

In battle, a ground commander might employ multiple effects, both lethal and non-lethal. While the authorization to use weapons like a mortar lies with a lower level commander, like a squad or platoon leader, others, like a Hellfire missile, might lie with decision-makers up the chain of command. Cyber is designed in a similar manner. It is a scalable, non-lethal effect that, if used properly, can set battlefield conditions for the commander to pursue their objectives.

What supported Lt. Reed's push through the enemy lines? First, we had cyber capabilities developed to support the ground scheme of maneuver. Second, we had a secure, actively defended network to ensure that the enemy could not have a similar effect on our troops in contact. Third, our forces successfully operated simultaneously in multiple contested domains—in the air, on the ground, and in cyber.

How do we ensure that these three factors will be commonplace on the battlefield? Not only do we need to think about what capabilities our forces will need, but also the authorities they should have.

We need to educate the force about how technical capabilities can support the fight. How do we tackle cyber literacy in our formations?

We need to think about how everyday actions we take in garrison can affect our defensive posture. How should we rethink our plays and game plan to change the culture and mindset of our forces?

