

Army network modernization efforts spearheaded by new Cross-Functional Teams

By **DAVID VERGUN**
Army News Service

WASHINGTON — Network modernization is one of the Army's top priorities, as it is an essential component of the mission command and control.

As such, the Army stood up two Cross-Functional Teams to pursue the network modernization goal. Those teams are the Command, Control, Communications, Intelligence Cross-Functional Team, and the Assured Position, Navigation and Timing Cross-Functional Team.

Those CFTs will work to ensure the network is "reliable on the move in any environment," stated Secretary of the Army Dr. Mark T. Esper in written remarks provided to a House Armed Services Committee hearing on the fiscal year 2019 budget request, March 20.

"The network should incorporate electronic warfare; resilient, secure, and interoperable hardware; software and information systems; assured position, navigation, and timing; and low signature," he added.

C3I strategy

Maj. Gen. Peter Gallagher, director of the C3I CFT, said the current Army network is not where it needs to be. It is far too complex, with multiple systems, and it is too fragile to counter electronic warfare attacks from a peer adversary.

The network, he said, should be easy to use and should provide survivability from cyberattacks. That network, he continued, should be easily accessible within all Army formations and to joint, interagency and coalition partners.

Another highly important aspect of the Army network, Gallagher said, is that it must be expeditionary, and able to be set up and taken down at a tactical operation center in a matter of minutes.

Network components must also be standardized and modular so that new technologies in the future, irrespective of manufacturer, can be incorporated into existing systems in a "plug and play" fashion, Gallagher said.

Modernizing the Army network so that it meets those standards is the responsibility of Gallagher's C3I CFT.

Col. Brad Hilton, chief of staff of the C3I CFT, described it as "a very small group working with a large supporting cast."

That supporting cast includes representatives of the Army's requirements, acquisition, and sustainment communities, experts in cybersecurity and radio wave spectrum analysts, program managers, industry experts and network professionals from the other military services.

The C3I CFT, Hilton said, is focused narrowly on solving specific problems across the larger Army network. The Army's new network modernization strate-



U.S. ARMY PHOTO BY AMY WALKER, PEO C3T

The Army conducts a network demonstration at Fort Bliss, Texas. The Army is pursuing network modernization through Cross-Functional Teams.

gy, he said, is using a "halt, fix, pivot" strategy to do that.

What that means, he said, is that the Army intends to halt programs that are not addressing emerging technologies and future threats, fix programs necessary to fulfill the most critical operational needs, and pivot to a more rapid "find-try-adapt-buy" acquisition strategy.

"Find and try" means that the Army will use operational units to experiment with potential technologies in the field. "Adapt and buy" means the Army will then buy and adapt the best of the solutions, he said, adding that "adapt and buy" is done by program executive office partners.

Before diving into a problem, Hilton said, the CFT also reaches out to industry and joint partners to look for existing "proven solutions or emerging capabilities they may have, so we don't reinvent the wheel."

The C3I CFT also hosts regular industry day events to solicit ideas that might tie in with network solutions.

APNT strategy

Soldiers rely on GPS to navigate, just as ordinary people often do when driving their cars. However, if there is no GPS signal or if it is blocked, that's a problem.

The APNT CFT is focused, in part, on finding assistances to GPS, so Soldiers can continue to "shoot, move and communicate effectively, and maintain situational awareness," said William Nelson, APNT CFT director.

Nelson divided the research his CFT is responsible for into two categories, APNT for dismounted Soldiers and APNT for mounted Soldiers, as in ground vehicles or aircraft.

The mounted APNT "will fuse GPS data with navigation technology ... distributed via a network on a platform, replacing the need for multiple GPS devices in a single platform," he said.

A promising way to assist GPS is by using "pseudolites," or pseudo-satellites, which are ground-based or flown in aircraft instead of flying in space like normal satellites. They transmit signals similar to those produced by GPS, he said.

"Pseudolite transmitters deliver a high-

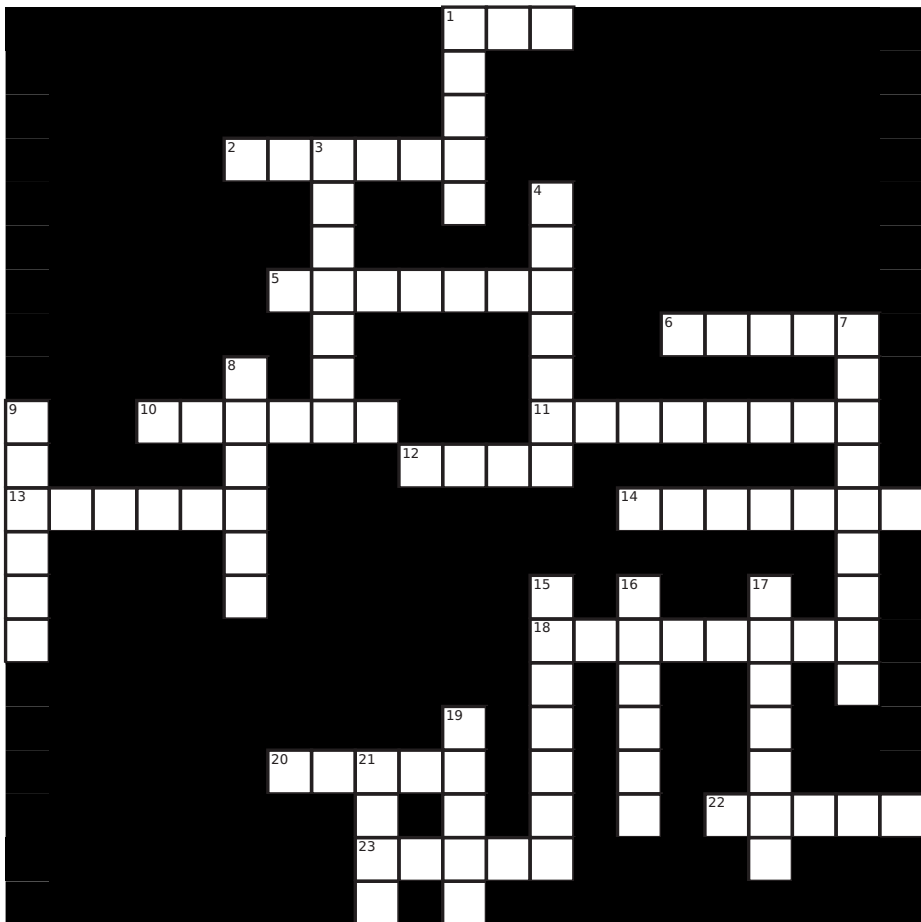
power signal that is more difficult to interfere with. The increased signal power improves a GPS receiver's ability to acquire and track PNT information, providing a protected area for the warfighter to operate," he said.

For dismounted Soldiers, the team is working on an improved GPS receiver as well as developing multiple situational awareness sensors for assisting GPS, he said.

Also, software solutions to prevent jamming for both mounted and dismounted APNT are being evaluated, he added.

Work on the mounted APNT capability is being accelerated and will be developed first, he said. It will be employed on a number of long-range precision fires platforms.

(Editor's note: This is one of six articles covering the Army's six modernization priorities. Those priorities are long-range precision fires, a next-generation combat vehicle, future vertical lift platforms, a mobile and expeditionary Army network, air and missile defense capabilities, and Soldier lethality.)



THE APG CROSSWORD

Play ball!

March 29 marks Major League Baseball's opening day. Step up to the plate and see if you can complete this week's crossword of living members of the Baseball Hall of Fame, with clues coming from their official plaques. Last names only.

By **JON BLEIWEIS**
APG News

Across

1. With a steady hand and unwavering loyalty, managed teams to 15 first place finishes — 14 in a 15-year span — including five National League pennants and the 1995 World Series title. Inducted in 2014.
2. Twelfth player to reach elite 3,000-hit plateau. Inducted in 1980.
5. At 6-feet, 10-inches, a towering and

intimidating lefthander whose crackling fastball and devastating slider paralyzed hitters for more than two decades. Inducted in 2015.

6. Revolutionized defensive play at shortstop with his acrobatic fielding and artistic turning of double plays. His congenial personality, consummate professionalism and trademark back flip made "The Wizard" a fan favorite. Inducted in 2002.

10. Set all-time records with 4 no-hitters in 4 years, capped by 1965 perfect game. Inducted in 1972.

11. First to be chosen Most Valuable Player in both the American and National leagues. Set records by hitting homers in 32 different parks and with a pair of grand-slamers in successive innings in 1970. Inducted in 1982.

12. "The Say Hey Kid." One of baseball's most colorful and exciting stars. Excelled in all phases of the game. Inducted in 1979.

13. High-kicking, smooth-throwing symbol of Baltimore's six championship teams of 1960s, 70s and 80s. Inducted in 1990.

14. A five-tool center fielder whose sweet swing and winning smile made him a dominant force and fan favorite, particularly in the Pacific Northwest. Inducted in 2016.

18. Topped league in steals his first nine season, beginning stolen base renaissance. A.L. Rookie of the Year in 1956. Inducted in 1984.

20. A beacon of serenity and stature in the dugout, won 2,326 games, fifth-most all-time, managing in five decades. Inducted in 2014.

22. A clutch performer throughout an illustrious 23-year career, he tormented the opposition with his ability to consistently drive in runs. Inducted in 2000.

23. Hit 755 home runs in 23-year career to become majors' all-time homer king. Inducted in 1982.

9. Arrived at the ballpark every day with a burning desire to perform at his highest level. Dedication and work ethic resulted in a record 2,632 consecutive games. Inducted in 2007.

15. "Mr. October." Exciting performer who played for 11 division winners and found special success in World Series spotlight. Inducted in 1993.

16. One of game's most consistent, composed and celebrated starting pitchers. Preparation, command and study of batters made him part scientist, part artist, winning four straight Cy Young Awards. Inducted in 2014.

17. Top left-handed home run hitter in National League history with 521. Teamed with Willie Mays for awesome 1-2 punch in Giants' lineup. Inducted in 1986.

19. Achieved pitchers' magic numbers with 314 wins and 3,534 strikeouts, playing mind games with hitters through array of rituals on mound was part of his arsenal. Inducted in 1991.

21. A fierce competitor and one of baseball's most intimidating figures on the pitching mound for four decades. Inducted in 1999.

Down

1. Batting wizard who lined, chopped and bunted his way to 3,053 hits and seven batting titles. Used variety of relaxed, crouched batting stances to hit over .300 15 consecutive seasons. Inducted in 1991.

3. Managed Dodgers with an impenetrable passion, claiming to "bleed Dodger blue." Inducted in 1997.

4. Career epitomized emergence of modern-day relief ace, as he approached legendary status with consistent excellence coming out of the bullpen. Inducted in 1992.

7. Faster than a speeding bullet, scored more runs and stole more bases than any player in history. Inducted in 2009.

8. A powerful and productive switch-hitter whose consistency over 21 seasons led to 3,255 hits, 560 doubles, 504 home runs, 5,397 total bases and 1,917 RBI. Inducted in 2003.

Think you solved last week's puzzle?

Check out the solution below

Solution to the March 22 puzzle

