



Creating a Common Operating Picture in Crisis

Paratroopers conduct maintenance on a CH-47 Chinook. U.S. Army photo by SSG Catessa Palone.

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On August 1, 2024, the 4th Combat Aviation Brigade (4th CAB) suffered significant damage to multiple aircraft across all four flight battalions during a severe weather event. This damage resulted in thousands of lines of parts required for repairs using means of repairs, including evacuating some aircraft for depot-level repairs. The incident highlighted the importance of efficient communication and information management in response to unexpected events. In this article, we explain how 4th CAB used the software application, Griffin, and its Artificial intelligence (AI) Daily Status Report (DSR) capability, specifically the Task Force (TF) creation tool, to automate reports and streamline information requirements without burdening units with excessive reporting requirements.

"4 CAB was able to seamlessly track its damaged aircraft using Griffin's ability to flexibly configure aviation maintenance reporting capabilities. Griffin provided near real time visibility of recovery efforts at every echelon from the flight company to FORSCOM HQ [Army Forces Command Headquarters] with no additional products required. The flexibility Griffin demonstrated realizes benefits of data

driven organizations and the value of the enterprise [sic] aggregated backend and warfighter optimized frontend interface it offers" M. Andre (personal communication, November 20, 2022).

WHAT IS GRIFFIN?

"Griffin is an aviation maintenance management application that uses AI/ML [machine learning] algorithms to predict maintenance needs and logistical requirements for Army Aviation assets" (Fairfield et al., 2024). Griffin is a powerful software application designed to support unit operations and is typically used for daily reporting of each individual aircraft status, phase calendars, phase flows, and bank time. Additional features include a phase calendar, flight hour report, component analysis, and TF creation tool. It was this TF tool that 4th CAB leveraged to create a tailored solution that met specific needs in response to the severe weather event.

MAXIMIZING THE USE OF AVAILABLE SYSTEMS

Creating a TF using the DSR capability of Griffin streamlines information

requirements without burdening units with extra reporting requirements. It allows units to continue regular operations while fulfilling reporting requirements, provides commanders with relevant information, and enables real-time review of readiness information across the Enterprise. Deliberately choosing to incorporate the Griffin DSR used the already existing process for maintenance reporting to seamlessly provide updates, targeting a specific fleet of aircraft across mission design series (MDS) in near real time.

Firstly, for years, the Army utilized a DSR to understand the status of individual aircraft. Historically, it was tracked manually via paper reports, eventually giving way to Excel sheets and portable document format, or PDF files. Recently, the new system developed by the Army AI Integration Center, or AI2C, team developed a way to pull the information directly from Aircraft Notebook (ACN) updates through the Global Combat Support System-Army (GCSS-Army).¹ Griffin DSR capability integrates seamlessly into existing workflows. Units update information through their standard ACN daily updates, eliminating extra reporting as these data are already a daily requirement for aviation units. Higher HQ can analyze and review information without requiring subordinates to generate additional products, reducing the administrative burden on units.

Secondly, through creating a TF in Griffin, commanders can use the same daily report they are familiar with to see specific aircraft without having to conduct aircraft transfers. This feature enables commanders to focus on the specific aircraft or units that require attention, while still maintaining a comprehensive view of the entire operation. Normally, this type of organization is created to support deployments as a mixed MDS TF. Through the feature in Griffin, units can now generate the same concept for aircraft going to combat training centers or even pending transfer to another unit.

Thirdly, Griffin is visible to anyone with an account, enabling simultaneous analysis across echelons. This means that

¹ "Aircraft Notebook is the system of record for recording rotary wing aviation statuses. Global Combat Support System-Army is the system of record for providing information about movement or repair parts" (Campbell, 2023).

commanders at various levels can access and review information in real time, without impacting the data for subordinate units. Griffin provides a method for reporting readiness that requires no additional product generation from a subordinate unit, allowing them to focus on daily activities. This feature enables a more agile and responsive organization where information is readily available to support decision-making, while allowing maintainers to focus on keeping aircraft in the air. Tied to TF creation, easy access to view readiness across organizations means that unit's receiving aircraft, or even non-aviation HQs, can easily view the readiness of aircraft supporting their missions.

COMPARING PREVIOUS EVENTS

It's worth noting that this is not a unique incident; severe weather occasionally impacts aircraft across the Army. The use of Griffin and other tools has made a significant difference in regeneration efforts. Through coincidence, the current 4 CAB Brigade Aviation Maintenance Officer (BAMO), CW5 Todd Misurelli, served as the BAMO of 1 CAB when severe weather damaged aircraft in June 2022 and arrived on ground weeks before severe weather damaged significantly more 4 CAB aircraft. During a personal interview in December 2024, CW5 Misurelli highlighted that the three major differences in regeneration efforts were the use of an Operational Planning Team (OPT), Griffin reporting, and recent migration for aviation parts ordering through GCSS-Army. The OPT, held at the FORSCOM level, included all echelons and supporting HQs and ensured shared understanding and expectation management among entities. To create a common operating picture, units used the Griffin DSR for real-time status updates and TF capabilities, streamlining the regeneration process. The ACN system, integrated with GCSS-A, enabled efficient tracking of parts required and available, allowing for detailed products and easy sharing of

information across the Army Aviation Enterprise. Notably, 1 CAB did not have access to these tools during their recovery process, highlighting the importance of these systems in regeneration efforts, requiring significant workload to create, share, and track progress.

WAY FORWARD

Griffin is being actively developed by the AI2C, where the team is helping the Army to transform in contact by working closely with units across the Army to deliver AI solutions at speed. Based on the success of 4 CAB's use of Griffin,



we recommend that other units explore the potential of this capability to support their operations. Specifically, we suggest:

1. Using the DSR capability to streamline information updates and reduce administrative burdens on units. This specifically focuses energy on understanding the information communicated in the report vs. spending limited staff energy creating complex reporting tools to communicate the same information already available in new ways.
2. Creating TFs to focus on specific aircraft or units without impacting property transactions or maintenance alignment. Strictly an administrative tool, this allows a unit to focus on

specific aircraft based on priority or resource availability vs. property book alignment. The equipment is not even required to report through the same ACN but can aggregate at whichever level desired. Aircraft can be added, removed, or incorporated into multiple TFs at the same time.

3. Leveraging the real-time review and analysis capabilities of Griffin to support decision-making and improve overall readiness. As long as the information is connected and reporting, all echelons will have access to the most up-to-date information available from the unit and will not require frequent data inquiries to lower echelons for updates if units update their data routinely.

Through adopting these best practices, units can improve their ability to respond to unexpected events and maintain a high level of readiness, ultimately supporting the success of their missions.

In response to the severe weather event, the innovative way 4th CAB used the Griffin DSR capability, specifically the TF creation tool, demonstrated the power of streamlining information requirements. By leveraging this capability, 4th CAB created a tailored solution that met its specific needs without burdening units with extra reporting requirements. Through enabling seamless information updates, providing focused insights, and supporting real-time review and analysis, Griffin can help organizations respond more effectively to unexpected events and improve overall readiness.

Biographies:

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References:

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