Testimony of

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before the

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Good morning Mr. Chairman, Ranking Member Turner, and distinguished members of the Subcommittee. Thank you for the opportunity to appear before you today to share a little about NGA's mission and priorities in the space domain.

NGA's Mission and Strategic Context

NGA, with our approximately 15,000 employees, is the nation's primary provider of geospatial-intelligence, or GEOINT, which is the use of imagery and geospatial information to describe and depict features, activities, and locations on and *about* the Earth. We help users visualize what is happening at a particular place, at a particular time.

NGA and our predecessor organizations have a long history of supporting our Nation's space activities. And, as an organization reliant upon airborne and satellite imagery, we have always made a priority of being aware of activities in space and near-space.

We've arrived at an historic inflection point for our agency, the GEOINT community, and our nation. A great power competition has reemerged as the central challenge to our shared prosperity and security, while at the same time technology and commercial changes are redefining GEOINT. Today, the barrier to entry into space is lower, and the price of admission is cheaper. The resultant proliferation demands a greater emphasis on space domain awareness.

Now, more than ever, that awareness—and how to respond to it—have been on the forefront of both the National Defense Strategy and NGA's own Strategy 2025. Last year, we rolled out the Moonshot Initiative at NGA, a whole-of-Agency effort to maintain and expand our GEOINT advantage, in all realms—including space.

At NGA, our efforts are spurred by the same sense of urgency that spurred the stand-up of U.S. Space Command. Namely, that Earth's orbit is no longer a benign environment, and the threat to U.S. national security interests from foreign space powers is real and growing. Our adversaries are not standing still, and neither is NGA.

The NGA Moonshot is intended to take all the capabilities that we know we need to develop in order to maintain GEOINT superiority—our mission imperatives—and shorten the timeline it takes to complete them. Our customers rely on us to "show the way"— literally, to get them from point A to point B, help illuminate options, inform decisions, and carry out actions with precision. To make decision advantage a reality, we've developed a four pillar strategy based on people, partnerships, and preparation for the missions of today and tomorrow.

People

NGA's workforce has been thriving in the space domain for decades. In fact, we helped map the moon for the NASA moon landings in the 1960s and '70s.

To maintain a competitive edge, we're increasing our investments in developing our tradecraft and preparing a purpose-built workforce for the space domain. And to fully support our people, it's necessary to train our officers to do many things that dovetail with NGA's modernization initiatives including big data management and analysis, and growing our artificial intelligence/machine learning expertise.

As a first step, we are looking at aligning training for space GEOINT professionals into a single curriculum for both NGA and military analysts. We have agreed informally with U.S. Space Force to co-develop curricula and cross-train our people. NGA is also creating GEOINT space domain-specific courses available through the NGA College. Starting this year, the first course will be available to GEOINT users both inside and outside of NGA.

Furthermore, we are discussing a military career path modeled on the SIGINT world, in which military analysts attend a series of schools and assignments in their service, USSPACECOM, and NGA to fully develop expertise. Over time, this will provide a cadre of experts who can execute the warfighter and IC requirements, and train and mentor the next generation of space GEOINT professionals.

Partnerships

NGA continues to strengthen our strategic partnerships, while building new relationships within the U.S. government, with industry, and with our Allied partners. As a combat support agency and an element of the Intelligence Community, NGA is diligently working to integrate GEOINT across DoD and the IC, so decision makers will have the best available information.

Within the space domain, NRO is our lead partner in advancing space GEOINT capabilities, including new commercial sources. Notably, our partnership with the U.S. Space Force is deepening every day through info sharing and collaboration. As space is a new warfighting domain, we are working with our partners to eliminate duplication of effort and create efficiencies.

We also maintain NGA embedded personnel through our NGA Support Teams, or NSTs, at DIA headquarters, the National Air and Space Intelligence Center in Ohio, and the Missile and Space Intelligence Center in Alabama. Similarly, in 2019, NGA established a USSPACECOM NST, as we have with each of the Combatant Commands and uniformed services. We are continuing to grow the NST as USSPACECOM becomes fully operationally capable.

Mission Today: Support to USSPACECOM

Space is vitally important to NGA's mission. It is the environment in which the sensors that provide most of our data operate. We recognize that our adversaries and peer competitors have the means to deny us that resource, which would be catastrophic to U.S. operations in all domains, from seabed to space.

NGA extends the same level of commitment to our warfighters in space. And, the recently established USSPACECOM NST has brought NGA's unique capabilities to the Command, and has a significant operational intelligence production capability—from unclassified to Compartmented Access Programs/Special Access Programs—directly embedded.

In fact, USSPACECOM does not maintain a separate GEOINT capability. Our NST's analysis division is dual-hatted as the Director of Geospatial Intelligence within the Command's organizational structure, and already accounts for half of all USSPACECOM's intelligence production. The NST also brings functional management authorities that the Command can leverage, as well as a reach-back capability into everything else NGA does.

In recent years, we've streamlined our analytic resources within NGA into a Space "Line of Business" and we've realigned agency resources to manage space collections within our Source directorate. We're also working with USSPACECOM to develop domain-specific collection orchestration and visualization tools.

Mission Tomorrow: Assured Positioning, Navigation, Timing and Targeting

Both terrestrially and in space, one of the most critical missions that NGA performs for the nation is assured positioning, navigation, timing and targeting, or what we call Assured PNT and Targeting. Assured PNT and Targeting and the geomatics that underpin it are the foundation for *our* foundation. Everything that depends on knowing exactly where and when something is on or around the Earth uses this unique form of GEOINT.

NGA is the global leader in providing the geo-sciences that enable the accuracy and precision of not only DoD weapons systems and Safety of Navigation efforts, but also economic and civil applications that use capabilities like GPS and precision timing. Assured PNT and Targeting is a mission imperative for us and as such, NGA plans to invest significant resources to ensure the integrity and resiliency of these capabilities.

In particular, NGA is modernizing our existing tools and systems, revitalizing our infrastructure, and recruiting and training the next generation of geomatics experts. We're also partnering with government, industry, and academia to better collect, transport, and process newly available large volumes of geodetic data, in areas such as Global Navigation Satellite Systems, elevation products, and more. Moreover—with the increased commercialization of space, and the recognition of space as a warfighting domain—NGA is postured to expand existing reference frames for Earth and the space around it.

Safety of Navigation

Finally, I would like to thank this committee for its support of NGA's Safety of Navigation mission—particularly its aeronautical and geomatics missions. The *Fiscal Year 2021 National Defense Authorization Act* included language to modernize NGA's authorities

and address the shift from paper to a digitally focused production and dissemination of legacy hardcopy products, and modern datasets, modeling and secure electronic delivery to support electronic-based navigation in the air, land, sea and space domains.

More importantly, the provision recognized a long-standing truth that GEOINT includes activities “on or about” the Earth vice “on” the Earth to better capture NGA's aeronautical and geomatics responsibilities supporting assured positioning, navigation and timing, and space activities.

Conclusion

NGA has reacted aggressively to support space and is making progress in the domain. We’re “right sizing” for combat in, throughout, and from the Space Domain to deter, protect, and defeat our adversaries in space.

Thank you, and I look forward to answering your questions.