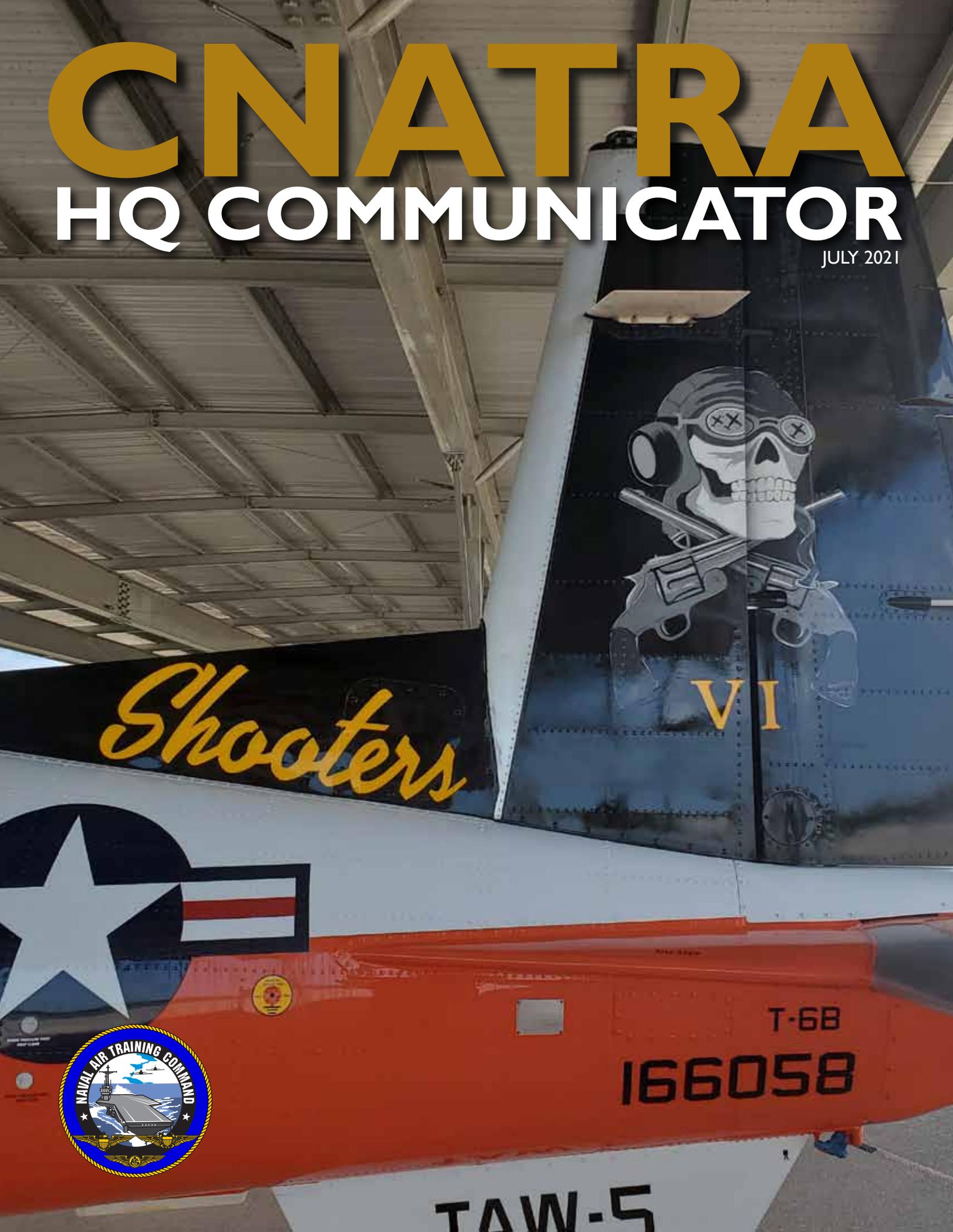


CNATRA

HQ COMMUNICATOR

JULY 2021



TAW-5

/MISSION BRIEF

To safely train the world's finest combat quality aviation professionals, delivering them at the right time, in the right numbers, and at the right cost to a naval force that is where it matters, when it matters.

/WE ARE TEAM CNATRA

- We are "all in" for the mission
- We are professionals dedicated to improving ourselves, our team, and the naval services
- We lead with integrity, moral courage, and discipline
- We are accountable to the nation, our service, each other, and our families
- Integrity is our foundation

/ADMIRAL'S SUGGESTION BOX

Got a suggestion? There are several ways to submit your suggestions to Rear Adm. Westendorff or COS:

1. Go to: <https://adss.navy.mil/applications/00sb.aspx>
2. Visit www.cnatra.navy.mil and click on "Contact" then "Contact Us" to find a link to the suggestion box.
3. Use the link on the SharePoint portal.
4. Use the suggestion box at the quarterdeck.

/ON THE COVER

MILTON, Florida -- A T-6B Texan II aircraft assigned to the "Shooters" of Training Squadron (VT) 6 has its tail custom painted as part of CNATRA's showbird program instilling pride across the squadron and Training Air Wing 5. *Courtesy photo.*

/COMMAND INFO

CNATRA:	RDML Robert Westendorff
COS:	CAPT Scott Starkey
CDO:	Various (361) 537-7243
CMEO:	LT Michelle Tucker (361) 438-7846
DAPA:	LT Rick Robley (361) 961-5217
HR:	Vanessa Finney (361) 532-1058
Ombudsman:	Anne Owens (361) 533-2200
SAPR POC:	LT Rick Robley (361) 961-5217
SAFETY/ORM:	Dave Watson (361) 961-1162
SARC:	Pat Capitan (361) 523-3580
SECURITY MGR:	James Pitts (361) 961-2186
DoD Safe Helpline:	(877) 995-5247

/JULY IN NAVAL AVIATION HISTORY

July 1, 1911: Designer Glenn Curtiss makes the first flight in the Navys first aircraft, Curtiss A 1, at Lake Keuka, NY, and prepares Lt. Theodore G. Ellyson, the first Naval Aviator, for his two A 1 solo flights.

July 2, 1926: The Distinguished Flying Cross is authorized by Congress. The first Naval Aviator to receive the Distinguished Flying Cross is Lt. Cmdr. Richard E. Byrd for his flight to the North Pole on May 9, 1926.

July 10, 2007: A U.S. Marine Corps V-22 Osprey lands on the British light aircraft carrier HMS Illustrious (R 06) during test exercises. This landing is the first time the vertical-takeoff-and-landing tilt-rotor had operated from the deck of a foreign warship.

July 11, 1953: Marine Maj. John F. Bolt, during the Korean War, becomes the first jet ace in Marine Corps history when he shoots down his 5th and 6th MIG 15 while leading a four plane (F 86) flight in an attack on four MIG's east of Sinui-Ju.

July 12, 1990: Cmdr. Rosemary B. Mariner becomes the first woman to command an operational aviation squadron, Tactical Electronic Warfare Squadron 34 (VAQ 34). She is one of the first women to become qualified as a Naval Aviator in 1974 and one of the first women to fly light attack aircraft. Mariner attained the rank of Captain before retiring in 1997.

July 16, 1957: An F8U IP Crusader (Bu#144608), piloted by Maj. John H. Glenn, Jr., USMC, breaks the transcontinental speed record by crossing the country from Los Alamitos, Calif., to Floyd Bennett Field, N.Y., in 3 hours and 22 min., 50.05 sec. for an average speed of 723.517 mph. This is the first upper atmosphere supersonic flight from the West Coast to the East Coast.

July 18, 1966: Gemini 10 is launched with Lt. Cmdr. John L. Young as command pilot and Michael Collins is the pilot. The mission entails 43 orbits at an altitude of 412.2 nautical miles and lasts two days, 22 hours, and 46 minutes.

July 20, 1969: Former Navy pilot Neil Armstrong is the first man to set foot on the moon, saying "That's one small step for (a) man, one giant leap for mankind." Armstrong is Commander of Apollo 11, which during its 8 day mission lands on the Sea of Tranquility. Michael Collins is the Command Module Pilot and Edwin Buzz E. Aldrin Jr., is the Lunar Module Pilot

July 21, 1946: In the first U.S. test of adaptability of jet aircraft to shipboard operations, an XFD 1 Phantom piloted by Lt. Cmdr. James Davidson makes landings and takeoffs without catapults from USS Franklin D. Roosevelt (CVB 42).

July 26, 1954: Two AD Skyraiders of Air Group 5 from USS Philippine Sea (CVA 47) are attacked by two Chinese (LA 7) aircraft while the Skyraiders are searching for survivors of Cathay Pacific airline, which was shot down three days prior off Hainan Island. Returning fire, the Skyraiders splash both attackers.

July 29, 1967: On the flight deck of USS Forrestal (CVA 59), a Zuni 5 rocket accidentally fires from a (F 4B) Phantom II aircraft into a parked and armed (A 4E) Skyhawk, setting off a series of explosions that kill 134 of her crew and injure 161 crewmembers.



Navy receives first TH-73A helicopter

By Naval Air Systems Command

PHILADELPHIA -- The first operational TH-73A helicopter was presented to the U.S. Navy June 10 during a ceremony at the AugustaWestland Philadelphia Corporation (Leonardo) plant in Philadelphia.

“The TH-73A will be instrumental in providing higher fidelity training to our future rotary-wing and tilt-rotor aviators for the Navy, Marine Corps, and Coast Guard,” said Vice Adm. Kenneth Whitesell, Commander, Naval Air Forces. “The cutting-edge technology and advanced avionics with the Advanced Helicopter Training System (AHTS) will enable a more seamless transition from the training aircraft to fleet aircraft, this in turn allows more focus on high-end warfighting development and training.”

Eventually, the Navy will have 130 TH-73A helicopters total, with deliveries continuing through 2024. The new helicopters will meet the capability and capacity gaps of the aging TH-57 Sea Ranger training platform.

The TH-73As are fully Federal Aviation Administration (FAA) certified prior to delivery, thus bringing a ready-made solution that will transition the TH-57 platforms out of service by 2025. The TH-57 is scheduled to begin shutdown in fiscal year 2022.

“This delivery signifies a new era for Naval Aviation training,” said Chief of Naval Air Training Rear Adm. Robert Westendorff. “By using current cockpit technologies and a new training curriculum, the TH-73A will improve pilot training and skills, and ensure rotary wing aviators are produced more efficiently at a higher quality and are ready to meet the fleet’s challenges.”

In addition to new helicopters, the full AHTS includes aircrew training



PHILADELPHIA Commander, Naval Air Forces Vice Adm. Kenneth Whitesell accepts the keys to the first operational TH-73A helicopter from Bill Hunt, chief executive officer of Leonardo Helicopters in the U.S., during the first delivery ceremony at Augusta Westland Philadelphia Corporation (Leonardo) facility in Philadelphia, June 10. *Courtesy photo.*

services that provide availability on new simulators, a modernized curriculum and a new contractor logistics support contract for the maintenance and flight line support requirements of the new helicopter.

Using the first TH-73A, the team will train the cadre of instructor pilots and validate the modernized curriculum efforts, which is a requirement prior to training student naval aviators with the new curriculum in the new system. The helicopters will ensure the Navy has capacity to train several hundred aviation students per year for Chief of Naval Air Training (CNATRA) at Naval Air Station (NAS) Whiting Field in Milton, Florida.

The AHTS accounts for the training needs of all of the fleet replacement squadrons, thus students will be highly trained and fully capable of succeeding, regardless of which platform they select.

“The combined government and contractor team set new standards to meet much needed requirements in the fleet,” said Capt. Holly Shoger, Undergraduate Flight Training Systems Program (PMA-273) program manager. “We are proud to develop and provide these new capabilities that will improve pilot training for many years to come.”

The aircraft is scheduled to arrive at NAS Whiting Field following initial Department of Defense inspections. A total of 32 TH-73As are scheduled for delivery to the U.S. Navy this calendar year and 130 total over the contract period. The new TH-73s will be housed in a temporary hangar at NAS Whiting Field with construction to begin in 2023 on a new helicopter maintenance hangar.

The PMA-273 at Naval Air Systems Command in Patuxent River, Maryland, oversees the AHTS and TH-73A programs. 

N4/Det. Whiting Field

Art on naval aircraft has a long history beginning in WWI when aircrews and maintenance crews would paint the nose and other portions of the aircraft to represent the uniqueness of the squadron or mission they were assigned. The practice of painting unique squadron art expanded greatly during WWII and is considered the real beginning of the practice on a widespread basis. Since then, the U.S. Navy has continued the tradition of creating artistic designs on aircraft (now mostly on the tail section) to represent the pride that Sailors and Marines have in their Squadron.

Last year, an effort began with approval from CNATRA to implement the "Show Bird" program and personnel at NAS Whiting Field have been working hard to make the program a reality. The process starts with soliciting designs from squadrons and ensuring those designs are fully approved by leadership. After approval, coordination between the CNATRA Det., Class Desk, CNATRA N4 and contracting officers takes place and the design is submitted to the aircraft maintenance contractor. After the contractor responds with a quote and it is approved and funded, the process of painting the aircraft can begin. The painting of the TH-57's took place at the Depot level rework facility in Andalusia, Alabama, using DynCorp depot level artisans and the T-6 was painted at Fleet Readiness Center Southeast at NAS Jacksonville, Florida, by Shayne Meder from FlyGirl Painter. Photo on the cover. 



MILTON, Fla. Main photo: Helicopter Training (HT) 8's showbird. Left: HT-18's showbird. *Courtesy photo.*

CNATRA Det. Whiting Field welcomed two new staff members to the team this Quarter.

Jill Barnes is our new Industrial Property Management Specialist (IPMS) for the Advanced Helicopter Training System (AHTS) program for the TH-57 and new TH-73. She brings a wealth of experience and knowledge, having served eight years as a Navy Aircraft Support Equipment Specialist and over nine years as a federal employee with Defense Logistics Agency. A subject matter expert who is always positive and willing to help, we are grateful that Jill is a team member.

Steven (Chris) Brightwell is our new Industrial Specialist (IS) for the Advanced helicopter Training System (AHTS) program for the TH-57 and new TH-73. He recently completed all of his requirements to be a Contracting Officer's Representative (COR) for our new AHTS contract. Having retired as a Navy Chief Aviation Administrationman and worked in the civilian aerospace maintenance sector, Chris is exceptionally qualified, knowledgeable and an invaluable member to the team. 🐞



Jill Barnes and Chris Brightwell at CNATRA Det. Whiting Field.

CNATRA N4 Lines of Effort

With COVID-19 travel restrictions beginning to relax and face-to-face conferences starting up after a 15 month hiatus, CNATRA N43 personnel, Al Swain, Carlos Garcia and Senior Analyst, Shannon Gillaspia traveled to Patuxent River, Maryland, June 21-25 to attend the Individual Material Readiness Listing (IMRL) / Support Equipment meeting. With over 52 personnel in attendance from seven different commands, NAVAIR codes and contractors, this was the first in-depth work group collaboration effort covering key functional areas for all CNATRA platforms.

Some of the key areas addressed were short falls and solution development in the NAVAIR Metrology and

Calibration Program, the TH-73 Transition and the Broad Arrow Process that reports AIMD systems and equipment degradations. The meeting also addressed the critical areas of PMA-260 Support Equipment Procurement Guidance, Phased Replacement Plan for aging support equipment, replenishment of Peculiar Support Equipment deficits for all platforms, the forecasted installation of a secondary HCT-12 at T-45 sites, and the Depot Support Equipment Review and Support Plan. The results of this meeting have firmly set the conditions and paved the way forward for future support equipment and the associated support infrastructure for CNATRA aircraft.

To say this conference was a success is an understatement. Several commands and contractors in attendance have passed their congratulations on the productive effort by all; "Great teamwork and communication!" Bravo Zulu! 🐞

N6/

Steer Clear of Fake Login Pages

For cybercriminals, stealing your login information can be just as valuable as stealing your bank account information. If they gain access to your email and password, they may find clues in your account that they can use to create highly targeted phishing attacks against you, your organization, or your family. Once the hackers have your login information, the hackers can even sell it for payment.

How Does It Work?

A popular method used to steal your credentials is to use fake login pages to capture your login details. These types of attacks usually start with a phishing email that directs you to use a link in the email to “log in to your account”. The emails are usually authentic-looking and present a seemingly-normal request. If you click this link, you’re brought to a login page that looks almost identical to the one you’re used to but is actually a fake page. Once you’ve entered your email and password on the fake page, you may be redirected to the real website—leaving you unaware that your login credentials were stolen.

How Do I Spot a Fake Page?

As the first line of defense, always navigate to your account’s login page by typing the web address in your browser, or using a bookmark that you’ve saved—rather than clicking through links in an email.

Also, be aware of the following tips to help you identify fake web pages:

- Pay attention to the address bar. To be on the safe side, make sure the website starts with `https://` before entering any personal information.
- Check the domain name. Make sure that the website that you are on is correctly spelled and not mimicking a well-known brand or company.
- Watch for poor grammar and spelling. An excess of spelling, punctuation, capitalization, and grammar mistakes can indicate that the website was put together fairly quickly with no regard for professionalism.
- Look for reliable contact information. If you can find another way to contact the brand or company, reach out to them to confirm the email is real.
- Walk away from deals that are too good to be true. Some retailers will discount older merchandise but if the latest item is also heavily discounted, walk away. It’s probably too good to be true! 🚫

Over \$4.2 billion officially lost to cybercrime in 2020

The Federal Bureau of Investigation has published its annual report on cybercrime affecting victims in the U.S., noting a record number of complaints and financial losses in 2020 compared to the previous year.

The Internet Crime Complaint Center (IC3) received last year 791,790 complaints - up by 69% from 2019 - of suspected internet crime causing more than \$4 billion in losses. While most complaints were for phishing, non-payment/non-delivery scams, and extortion, about half of the losses are accounted by business email compromise (BEC), romance and confidence scams, and investment fraud.

According to the IC3 report, BEC or email account compromise (EAC) scams recorded 19,369 complaints in 2020, which is 19% less than last year. However, this type of cybercrime alone caused \$1.8 billion in losses, up from \$1.7 billion in 2019.

BEC scams are carried out by compromising business email accounts and to modify transaction details so that funds are transferred to a bank account controlled by the attacker. A trend observed in 2020 was the use of identity theft and converting funds to cryptocurrency. In these cases, an initial victim (extortion, tech support, romance scam) provided their ID to the fraudster. BEC scammers would use the ID to open bank accounts and receive BEC funds that would be quickly converted to cryptocurrency to lose track of the money.

Since 2018, the FBI has a Recovery Asset Team (RAT) specialized in freezing accounts used for unauthorized BEC transfers and recovering money that can still be tracked. Last year, RAT was able to freeze and recover a little over 82% from almost \$463 million in losses reported in 1,303 incidents. One case involved an illegal wire transfer of \$60 million from a victim company in St. Louis to a bank account in Hong Kong controlled by the fraudsters.

One type of cybercrime that is grossly misrepresented in FBI’s annual report is ransomware, with 2,474 complaints and adjusted losses of more than \$29.1 million. Although the figures are small, they represent an increase compared to 2019, when IC3 received 2,047 complaints and the losses were above \$8.9 million.

Ransomware is a multi-billion cybercriminal business that has not stopped growing, with some actors’ demands averaging upward of \$1 million. In just five months, the Netwalker ransomware gang made \$25 million from paying victims last year. One of its affiliates, charged in the U.S., is believed to have made more than \$27 million from this activity.

Other ransomware operations - Maze, Conti, Egregor, REvil, Ryuk, Doppel Paymer - were responsible for a larger number of attacks last year and higher profits. These gangs target big-revenue companies that would stand to lose more from downtime or data leaks than from paying the ransom.

Many of these attacks remain unreported to avoid legal complications.

Looking at the raw figures in FBI's Internet Crime Complaint Center latest report, cybercrime has recorded a significant growth in 2020, both in terms of filed complaints and money lost by victims in the U.S.

See chart to right. 🇺🇸

America world's sole cyber superpower, ten years ahead of China

The United States is comfortably the world's most powerful nation when measured on "cyber capabilities that make the greatest difference to national power," according to The International Institute for Strategic Studies.

The institute recently published a document titled "*Cyber Capabilities and National Power: A Net Assessment*" that covered 15 nations and considered the following criteria:

- Strategy and doctrine
- Governance, command and control
- Core cyber intelligence capability
- Cyber empowerment and dependence
- Cyber security and resilience
- Global leadership in cyberspace affairs
- Offensive cyber capability

The two-year research effort saw the institute examine 15 nations and define three tiers of capability. America was ranked the sole Tier-One Nation, meaning it possesses "world-leading strengths in all the categories in the methodology". The report says America's "capability for offensive cyber operations is probably more developed than that of any other country, although its full potential remains largely undemonstrated."

An interesting observation given the recent Colonial Pipeline ransomware incident is that "The US has moved more effectively than any other country to defend its critical national infrastructure in cyberspace". That opinion is tempered with the observation that the United States "recognizes that the task is extremely difficult and that major weaknesses remain."

Australia, Canada, China, France, Israel, Russia, and the UK were rated Tier-Two nations, meaning they possess "world-leading strengths in some of the categories."



A few observations on each from the institute's report:

Australia's capability stems from its membership of the Five Eyes alliance, and while it has shown it has offensive capabilities it needs "to make dramatically greater investments in cyber-related tertiary education and carve out a more viable sovereign cyber capability;"

Canada benefits from a strong domestic tech industry and is very good at building alliances that enhance its capacities, but has unproven offensive capabilities;

China has weak defenses and under-developed policies to protect key infrastructure but proven offensive capabilities. Rated as most likely challenger to the United States;

France walks a line between working with allies to enhance its capabilities and relying on its own tech that, while decent, may not be as capable but does have the benefit of creating fewer dependencies;

Israel has impressive policy frameworks, and not only possesses offensive capabilities but is willing to use them "in a wide range of circumstances;"

Russia has proven it can conduct information warfare and is trying to strengthen its tech industry and therefore its capabilities, but its underperforming economy makes it hard to realize that ambition. Trails America and China in terms of "developing the most sophisticated offensive military cyber tool;"

United Kingdom derives strength from its many alliances and has conducted offensive cyber-ops since the early 2000s. But a lack of talent, inability to match the scale of investments made by China and the United States, and small industrial base mean it can manage risks but not export tech

to the world.

Tier-Three nations are defined as possessing “strengths or potential strengths in some of the categories but significant weaknesses in others.”

Two nations often identified with offensive operations — North Korea and Iran — are named in Tier Three.

Iran earned its place because, while it invests in cyber to both counter internal dissent with surveillance and act against external enemies, it has a small talent pool and sanctions restrict its access to the best security tools.

North Korea was labelled opportunistic and lacking in organized cyber-security efforts, but nonetheless effective despite using basic tactics. However, its defensive stance is sub-par.

India was assumed to focus most of its attention on Pakistan, but to have great potential if it can harness industry and government efforts. Malaysia won praise as an early mover and has the alliances and will to ascend a tier. Vietnam has

NMCI troubleshooting

NMCI troubleshooting works through trouble tickets.

There are 3 ways to submit a ticket:

- Call 1-866-THE-NMCI (843-6624)
- Email ServiceDesk_Navy@navy.mil
- Go to <https://servman/sm/ess.do> Once you are at the website, click “Submit an Interaction” under “Miscellaneous” on the left column.

NMCI prioritizes work efforts based on trouble-tickets - if there are multiple users having NMCI network issues please have all parties involved submit a ticket. The more tickets NMCI receives, the more attention is given to the problem.

ambition and proven offensive capability, but policy is not well-aligned to realize its will and skill.

Indonesia also made the list on the grounds that it has built good alliances and is building capacity. 🚢

Royal Navy Visits Training Air Wing I

MERIDIAN, Miss. -- Royal Navy Capt. Jamieson Stride, Pentagon OPNAV N98 United Kingdom liaison officer, met with leadership and personnel at Training Air Wing I, Naval Air Station Meridian, June 10. Currently, three Royal Navy student naval aviators are enrolled in strike training as part of our International Military Student program.

“The Royal Navy places great value in the close partnership we share with the U.S. Navy and its personnel,” Stride said. “The training our pilots receive here is nothing short of outstanding and serves to further interoperability between our two navies.” 🚢





N7/Training News

Mission: To plan, analyze, design, implement, evaluate, and maintain the training that safely delivers the world's finest combat-quality aviation professionals.



From the ACOS

Greetings from N7...Last month I had the chance to lead a focus group discussion at the 3rd Annual Military Aviation & Air Dominance Summit. The summit provides members within the Military Aviation community, Acquisitions Authorities, academia, industry, and others. This was an outstanding opportunity to engage in a 'Town-Hall' style discussion on the strategic initiatives and operational goals being prioritized across the Joint Force to ensure air dominance. It focused on how the Military Services are leveraging emerging technologies to make aircraft more agile, networked & lethal across large-scale combat operations. As you can imagine, they all were eager to hear all our exciting efforts to move CNATRA training from the industrial age to the information age. That discussion prompted me to think that this is a good time to provide you all an update as to where our efforts are with Naval Aviation Training Next (NATN). The update follows.

NATN is an umbrella of programs designed to bring CNATRA training from the industrial to the information age in training, including Project Avenger (T-6 Primary Training), Hellcat T-6B Strike Intermediate, and Corsair T-45. Despite technology and policy challenges, projects are progressing on timeline.

Avenger Round 1: We are studying the After Action Report. The initial review lends credence to the detachment concept, deep repetition (facilitated by VR devices), and competency based approach. Students are achieving syllabus milestones in fewer sorties. We are looking to replicate and build upon Round 1 successes. The team has incorporated lessons learned into Round 2.

Avenger Round 2: Master Curriculum Guide - Document signed Friday 23 Apr 21. The course is expected to take approximately 22 weeks (May 21 to Oct 21). Starting 30 Apr 21, iPads were issued to Round 2 students to begin their self-led study leading into the Avenger course. Classroom start for Round 2 was 17 May 21.

Hellcat:T-6B Strike Intermediate Syllabus. SNAs selecting Strike from Avenger Phase 2 as well as SNAs from the legacy Primary syllabus will begin Hellcat (Oct 21). The Flight Training Instruction (FTI) is nearly complete. Phases of training include:AOA landing patterns, 2-plane formation, 4-plane-formation, and tactical formation.

Maneuver and courseware development for the 4-6 week syllabus is ongoing and expected to be complete prior to Jul 21. IP cadre training, utilizing Avenger IPs, will take place between Jun and Aug 21.

Corsair: T-45 Strike Syllabus integrating Avenger concepts. Estimated transition Fall 2021 for TW-2 and Spring 2022 for TW-1. The team briefed me on the lines of effort regarding syllabus development, infrastructure, personnel/training, and operations. Bat Cell is currently being stood up at TW-2 utilizing VR devices on loan from TW-4. This Cell will continue to develop and refine the VR portion of Corsair syllabus, offering a lower-cost capability to introduce and refine procedures prior to flight events. TW-1 and TW-2 have both identified Corsair OICs who are coordinating efforts toward courseware and syllabus development as well as the operational management of the syllabus. Space allocation, infrastructure layout, and courseware content is in work.

You can see that our efforts will eventually impact every student and instructor in CNATRA and therefore all of Naval Aviation. Thank you CNATRA for leaning forward. This has and will continue to be a group effort...N1, N3, N4, N6, N7, N8, our Squadrons, TRAWING, NAVAIR, PMA-205/273, N98, NAWCTSD, the JAIC, and many others are all involved and integral to the success of these programs. We are confident the results will be a more competent pilot/flight officer that navigates through training in shorter amount of time and at a lower cost.

Press On...FDR sends.

Instructional Systems Design in the NATRACOM

FLIGHT INSTRUCTOR STANDARDIZATION AND TRAINING PROGRAM

A key component to flight training is standardization. CNATRA address Instructor Standardization through the Flight Instructor Standardization and Training (FIST) Program which is detailed in CNATRINST 3710.13J. The FIST program establishes the policies and requirements of the Chief of Naval Air Training and is applicable to all Naval Air Training Command (NATRACOM) activities engaged in the flight training of Student Naval Aviators (SNA) and Student Naval Flight Officers (SNFO). The scope of the NATRACOM mission requires a dynamic standardization program to ensure safe and effective training.

The Responsibilities for different aspects of the program are outlined below:

Chief of Naval Air Training. Develop, implement, and manage flight training curricula and flight training instructions which are responsive to fleet requirements.

CNATRA Training Officer (N7). Oversee quality of instructor and student training across the NATRACOM. Schedule and conduct Training Air Wing (TRAWING) standardization inspections per the policies and requirements.

CNATRA Aviation Training and Standardization Officer (N71). Monitor and coordinate the CNATRA FIST program and direct the efforts of the CNATRA Pipeline Training Officers as necessary to enhance FIST program effectiveness. Because the N71 is CNATRA's Chief Standardization Officer, N71 should be "S" qualified in all stages of training to the maximum extent possible. N71's standardization qualifications and designation letters shall be signed by the TRAWING Commander of the supporting wing and shall be in effect across the T/M/S at all TRAWINGS in CNATRA. This will not alleviate the N71 from completing local area requirements (i.e., course rules lecture and exam).

CNATRA Pipeline Training Officers (PTO). CNATRA PTO billets are key positions requiring fleet and NATRACOM experienced Naval Aviators (NA) and Naval Flight Officers (NFO) assigned to the CNATRA staff under the direction of N7. PTOs serve as the Chief Standardization Instructors for their particular pipeline. CNATRA recognizes the PTO as the principal curriculum expert for that phase of training. PTO standardization qualifications and designation letters are to be signed by the TRAWING Commander of the supporting wing and shall be in effect across the T/M/S at all TRAWINGS within NATRACOM. This will not alleviate the PTO from completing local area requirements (i.e., course rules lecture and exam). Given the nature of the position, PTOs should be "S" qualified in all stages of training to the maximum extent possible. Each PTO will routinely fly with TRAWING and squadron standardization instructors. CNATRA PTOs are authorized to schedule a standardization check, Naval Air Training and Operating Procedures Standardization (NATOPS) check, or other instructional event for which they are qualified, with any TRAWING, squadron, or contract instructor within their phase of training at any time to ensure standardized instruction and adherence to all training curriculum requirements. The CNATRA PTOs shall assist CNATRA N71 in monitoring the FIST program to ensure an effective and viable program, and shall manage the CNATRA standardization program for their respective training phase according to the following staff codes, billet titles, and associated aircraft:

CODE BILLET TITLE AIRCRAFT/DEVICE

- N711 T-45 NFO PTO T-45C
- N712 MCS NFO PTO T-6A, MCS
- N713 Advanced Multi-engine PTO T-44C
- Multi-engine E-2/C-2 PTO
- Advanced Tiltrotor PTO
- N714 Advanced Rotary PTO TH-57B/C
- Intermediate Tiltrotor PTO TH-57B/C
- N715 Intermediate Jet PTO T-45C
- Advanced Strike PTO T-45C
- Advanced E-2/C-2 PTO T-45C
- N716 Primary PTO T-6B
- N718 Instrument Flight PTO Various
- NASC Liaison and NIFE PTO

Fundamentals of Learning: Categorization:

Optimizing Memory Encoding. Brains are categorizing machines (pattern recognition) – we develop “concepts” or mental representations of categories of things. Organization and categorization of information affects encoding and retrieval, e.g. Is the information getting stored correctly? Are the neural wiring connections and associations accurate and appropriate (patterns recognized, identified, or formed)?

Some Encoding techniques include: Mnemonics – connects new information to old through use of visual/audio cues; Chunking – organizing parts of objects into meaningful wholes (e.g., words)

State-dependent learning – remembering information based on state at time of encoding; and

Sleep imperative for memory consolidation. Consolidation is the stabilization of a memory trace after initial acquisition

Categorization is the process through which ideas and objects are recognized, differentiated, classified, and understood. The word “categorization” implies that objects are sorted into categories, usually for some specific purpose. This process is vital to cognition. Our minds are not capable of treating every object as unique; otherwise, we would experience too great a cognitive load to be able to process the world around us. Therefore, our minds develop “concepts,” or mental representations of categories of objects. Categorization is fundamental in language, prediction, inference, decision-making, and all kinds of environmental interaction.

There are many theories of how the mind categorizes objects and ideas. However, over the history of cognitive science and psychology, three general approaches to categorization have been named.

Classical Categorization

This type of categorization dates back to the classical period in Greece. Plato introduced the approach of grouping objects based on their similar properties in his Socratic dialogues; Aristotle further explored this approach in one of his treatises by analyzing the differences between classes and objects. Aristotle also applied the classical categorization scheme in his approach to the classification of living beings (which uses the technique of applying successive narrowing questions: Is it an animal or vegetable? How many feet does it have? Does it have fur or feathers? Can it fly?) establishing the basis for natural taxonomy. According to the classical view, categories should be clearly defined, mutually exclusive, and collectively exhaustive. This way, any entity of the given classification universe belongs unequivocally to one, and only one, of the proposed categories. Most modern forms of categorization do not have such a cut-and-dry system.

Conceptual Clustering

Conceptual clustering is a modern variation of the classical approach, and derives from attempts to explain how knowledge is represented. In this approach, concepts are generated by first formulating their conceptual descriptions and then classifying the entities according to the descriptions. So for example, under conceptual clustering, your mind has the idea that the cluster DOG has the description “animal, furry, four-legged, energetic.” Then, when you encounter an object that fits this description, you classify that object as being a dog. Conceptual clustering brings up the idea of necessary and sufficient conditions. For instance, for something to be classified as DOG, it is necessary for it to meet the conditions “animal, furry, four-legged, energetic.” But those conditions are not sufficient; other objects can meet those conditions and still not be a dog. Different clusters have different requirements, and objects have different levels of fitness for different clusters. This comes up in fuzzy sets.

Fuzzy Sets

Conceptual clustering is closely related to fuzzy-set theory, in which objects may belong to one or more concepts, in varying degrees of fitness. Our example of the class DOG is a fuzzy set. Perhaps “fox” belongs to this cluster (animal, furry, four-legged, energetic), but not with the same degree of fitness that “wolf” does. Different objects can fit a cluster better than others; fuzzy-set theory is not binary, so it is not always clear whether **an object belongs to a cluster or not.**

Prototype Theory

Categorization can also be viewed as the process of grouping things based on prototypes. The concept of “necessary and sufficient conditions” usually doesn’t work in the messy boundaries of the natural world. Prototype theory is a different way of classifying objects. Essentially, a person has

a “prototype” for what an object is; so a person’s prototype for DOG may be a mental image of a dog they knew as a child. Their prototype would be their mental idea of a “typical dog.” They would classify objects as being dogs or not based on how closely they matched their prototype. Different people have different prototypes for the same kind of object, depending on their experiences. Prototype theory is not binary; instead it uses graded membership. Under prototype theory, an object can be kind of a dog, and one animal can be more like a dog than another. There are different levels of membership in the category DOG, and those levels are on a hierarchy. Studies have shown that categories at the middle level are perceptually and conceptually the most salient. This means that the category DOG elicits the richest imaging and jumps most easily to mind, relative to GOLDEN RETRIEVER (lower-level hierarchy) and to ANIMAL (higher-level hierarchy).

Optimizing Encoding through Organization

Not all information is encoded equally well. Think again about hitting “Save” on a computer file. Did you save it into the right folder? Was the file complete when you saved it? Will you be able to find it later? The process of encoding memories in the brain can be optimized in a variety of ways, including mnemonics, chunking, and state-dependent learning.

Mnemonics: sometimes simply called mnemonics devices, are one way to help encode simple material into memory. A mnemonic is any organization technique that can be used to help remember something. One example is a peg-word system, in which the person “pegs” or associates the items to be remembered with other easy-to-remember items. An example of this is “King Phillip Came Over For Good Soup,” a peg-word sentence for remembering the order of taxonomic categories in biology that uses the same initial letters as the words to be remembered: kingdom, phylum, class, order, family, genus, species. Another type of mnemonic is an acronym, in which a person shortens a list of words to their initial letters to reduce their memory load.

Chunking: the process of organizing parts of objects into meaningful wholes. The whole is then remembered as a unit instead of individual parts. Examples of chunking include remembering phone numbers (a series of individual numbers separated by dashes) or words (a series of individual letters).

State-Dependent Learning: when a person remembers information based on the state of mind (or mood) they are in when they learn it. Retrieval cues are a large part of state-dependent learning. For example, if a person listened to a particular song while learning certain concepts, playing that song is likely to cue up the concepts learned. Smells, sounds, or place of learning can also be part of state-dependent learning.

Memory Consolidation: a category of processes that stabilize a memory trace after its initial acquisition. Like encoding, consolidation influences whether the memory of an event is accessible after the fact. However, encoding is more influenced by attention and conscious effort to remember things, while the processes involved in consolidation tend to be unconscious and happen at the cellular or neurological level. Generally, encoding takes focus, while consolidation is more of a biological process. Consolidation even happens while we sleep.

Sleep and Memory: research indicates that sleep is of paramount importance for the brain to consolidate information into accessible memories. While we sleep, the brain analyzes, categorizes, and discards recent memories. One useful memory-enhancement technique is to use an audio recording of the information you want to remember and play it while you are trying to go to sleep. Once you are actually in the first stage of sleep, there is no learning occurring because it is hard to consolidate memories during sleep (which is one reason why we tend to forget most of our dreams). However, the things you hear on the recording just before you fall asleep are more likely to be retained because of your relaxed and focused state of mind.

Semantic Neighborhoods:

Huth, A.H., Nishimoto, S., Vu, A.T., & Gallant, J.T. (2012). A continuous semantic space describes the representation of thousands of object and action categories across the human brain. *Neuron*, 76, 1210-1224. 🐘

Fair Winds and Following Seas **Ruth Patterson, Administrative Specialist**

This month we say goodbye to an exceptional civil servant and colleague, Mrs. Ruth Patterson. Ruth is a native of Corpus Christi, Texas, and is part of a large family...11



children (six girls and five boys). She is married to Ronnie (Ron) Patterson of Somerset, Ohio, and is a U.S. Air Force (USAF) veteran. They have four children, two sons, Domonic (Army vet) and Joseph (USMC vet) and two daughters, Jennifer and Jacqueline, and proud grandparents of five.

She enlisted in the USAF to support and defend her nation, state, and family. She attended basic training at Lackland AFB, and Administrative Specialist training at Biloxi, MS. She completed 13½ years of

honorable service, with tours at Dyess AFB, Texas; Okinawa, Japan; Minot AFB, North Dakota and Dallas Military Entrance Processing Station (MEPS). Six months after departing active duty, she missed the military way of life and reenlisted, joining the USAF Reserves. She was approached by the legal team to join them and was selected for cross-training to become a paralegal. Ruth deployed to Al-Udeid Air Base, in Doha, Qatar, during Operation Iraqi Freedom. While deployed she assisted numerous military members with the myriad of legal issues that deployed members are faced with. She served during multiple operations including Operations Desert Shield, Desert Storm, Enduring Freedom, and Iraqi Freedom. After a highly successful career, Master Sgt Patterson retired in 2006 to her home in Corpus Christi. Ruth is a decorated veteran and the recipient of the Air Force Meritorious Service Medal, AF Commendation Medal w/3 clusters, AF Achievement Medal w/1 cluster, and National Defense Service Medal.

Ruth served as a paralegal for Nueces County Courthouse, working with domestic violence victims. In October 2010, she joined the Department of Navy as a civil servant. She served Training Air Wing 4, VT-27, as a secretary, before joining the Chief of Naval Air Training (CNATRA) as the Administrative Specialist of the Training and Standardization Department in 2015. CNATRA trains every student pilot and flight officer in the Navy before they can become top guns in the fleet. Ruth's contributions to that mission have been significant and noteworthy.

Ruth has been an integral part of bringing people together for birthdays, luncheons, fundraisers, creating teamwork, comradery, and fellowship. Another special take away for Ruth are the many Navy traditions she's learned along the way and that made a significant impact on her time here. Ruth has received a number of awards and accolades as a civil servant, to include the VT-27 Civilian of the Quarter, VT-27 Civilian of the Year, and the CNATRA Civilian of the Quarter.

Ruth embodies the spirit of a "servant's heart." She has dedicated her entire adult life to service. She is always helping others, exemplified by her legal work with deployed service members and at home in Texas with domestic violence cases. Ruth retired from Federal Service on June 30 and will embark on a "Follow Your Dream" journey. We want her to know that she will always be part of the N7 and CNATRA family, and that wherever her journey takes her we hope she carries fond memories of her time in CNATRA with her. 🐘



EARTH DAY CLEAN UP 2021

Our community. Our responsibility.