Director’s Comments

To The Proud PMEL Community,

I had many topics that I had previously identified to consider for this newsletter but won’t be touching on any of them as events have dictated the topics of the day.

COVID-19 (C-19) has complicated how we get the job done and has increased our concern for the safety of our family and friends. As we entered these challenging times, our primary objectives at AFMETCAL have been to 1) exercise RNI to make the necessary workload adjustments as PMELs weathered fluctuations in available personnel; 2) to ensure the viability of the AFPSL in meeting the needs of the PMELs—to provide the needed assistance or act in backup if necessary; and 3) to timely execute our standards buys to ensure equipment availability. And then do this while keeping everyone safe and ready to meet the needs of our AF.

I remember getting stationed overseas only to find myself involved in a foreign conflict. Many of you similarly arrived overseas to find yourself involved fighting a different fight in C-19. Many of you likely had just started education endeavors, perhaps starting a family, or maybe got orders and now your plans have been dramatically changed or at least disrupted to some extent. Each of you are heroes for finding a way to make it work, adapting to our difficult environment, and keeping the AF mission in the forefront. We in AFMETCAL may assist in redirecting the work but the work is still being done by one of you, maybe in a different location than intended but by one of you finding a way to be successful in these most difficult circumstances. How can one not be hugely proud of being a part of this calibration community.

Protests have recently joined C-19 in shaping our daily lives in response to the tragic death of George Floyd. It is highly likely that a city you hold dear or have association with has been affected by this circumstance. Having been a youth in Detroit in the 1960s, I became aware of the existence of this sort of racial divide. Now my family has resided in Minneapolis over the past couple years so this dynamic has arisen again a full 50+ years later. My early experiences led me to participate and lead diversity programs over my years in the AF.

(Continued on page 3)
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Editorial Policy Statement: The AFMETCAL Quarterly Newsletter is the AFMETCAL Director’s forum to share insights into policy and emerging trends, personnel news, technical and other information of interest to the Air Force metrology community at large. Newsletter articles cover many topics: technical issues; clarifications of policies/procedures; process improvements; and items of general interest about Air Force metrology community members.

Submissions: We encourage readers to submit articles for the following categories: From the Bench (technical), About People (field personnel news), News & Notes (general information). Submissions should be in Microsoft Word, Times New Roman 12 font, accompanied whenever possible by digital photos in JPEG format. Native photo file sizes less than 2MB per image are preferred. Photos must be accompanied with caption information which fully identifies all individuals depicted, including rank, title or office, and event. Note that all text and photo submissions are subject to editing for content, cropping and/or size. All submissions that are technical in nature are reviewed by the AFMETCAL Engineering Branch for accuracy and appropriateness. Publication of any submission, regardless of subject matter, will be approved by the AFMETCAL Division and submission does not guarantee publication. All submissions are reviewed for compliance with Privacy Act, FDO, STINFO, OPSEC and other information security requirements as applicable.

How to Make a Submission: The AFMETCAL Newsletter editor transmits quarterly calls for inputs through the PMEL MAJCOM Functional Managers and other significant metrology program POCs to the respective PMEL managers and/or program functional offices. Normal submissions are in response to these data calls. Authors should submit their article inputs via e-mail through their respective chain of command to the AFMETCAL Newsletter editor. Authors may submit inputs out of cycle, but should use the same channels for those submissions. Deadline for submissions is the 15th of the month prior to the scheduled quarterly newsletter publication (publication months are March, July and November). Do not submit copyrighted material.

Director, Air Force Metrology & Calibration Program
Mr. Carl F. Unholz
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but the scope of the recent events and the associated anger is a clear indicator that we still have work to do in bringing people together.

I am very encouraged that after three nights of unrest, Minneapolis followed with a week of multi-racial peaceful protests with many young people being involved. This shared expression is a coming together that did not occur in Detroit those 50 years ago in my experience and I find a welcome sign of movement in the right direction.

Over the past year, I’ve learned to appreciate the calibration community for the family that it clearly is. You’re highly specialized in the work you perform, a work that sets you apart as you must possess a mastery and in-depth level of understanding of highly technical principles. This is what binds you in your ability to perform such a vital function on behalf of our nation’s defense. Let’s ensure that bond has us respecting our differences and valuing each other as we welcome anyone capable and willing to take on the intellectual demands of being a calibrator.

This newsletter marks a year since my having joined the team at AFMETCAL. I’ve acquired an awe for all of you in this community for the precision you are able to create on behalf of our AF and you achieve it despite hurricanes, floods, pandemics, or whatever is thrown your way. This newsletter also finds us saying farewell to two major metrology figures I’ve grown to admire in Tom Carpenter and Bob Nappier. Yes, they’ve ensured that capable people will step up to fill the gap but we must recognize their iconic contributions and their friendship that has been so core to the advancement of our community for the past several decades. They are now part of that proud heritage that lives on in each of you while you strengthen Air Force readiness! All the best to you our departing faithful servants!

CARL F. UNHOLZ
Director, Air Force Metrology & Calibration Program, AFLCMC/WNM

Chief’s Corner

Getting to “Yes”

Throughout my career in the Air Force I have heard many leaders make the statement “How do we get to yes?” I have often asked myself how do I “get to yes” when issues or request come up. I also find myself asking “what is yes?” Is it just blindly giving whatever is requested? Is it a demand that automatically becomes a standard? With the issues we have dealt with across the AFSC recently and the onset of the COVID-19 pandemic, how we “get to yes” is very important. Unfortunately, most of the time it is never as simple as just saying yes; if it was it would not rise up to the levels that it does.

One thing to consider when determining how we “get to yes” is that do we really look at what yes is or what yes should be? Do we think “yes” is just what is being requested of us without negotiation or policy factors? Do the people asking for “yes” understand the impacts that come with that? The questions can go on and on but you get the point. The biggest question that we really need to ask is what I can do, legally, morally, and within our authority, to get to “yes.” As an example, my wife says that she wants us to be rich. Based on the initial request, “yes” is making us rich. While I have many ways to do this from robbing a bank and counterfeiting money to investing my money or designing the next fidget spinner, only some of those options fall under the legal, moral,
and within my authority. Another factor I did not even ask is what my wife’s definition of rich is? That too could be as simple as roof over our heads and food on the table or as extravagant as being featured on Lifestyles of the Rich and Famous. Is she aware of what my capabilities and the possible impacts of my actions to make us rich are? These are all things that have to be worked out in order to “get to yes”.

While we all deal with getting to “yes” at home, we also deal with getting to “yes” every day in our PMELs. A customer brings in a priority aircraft test set saying it is malfunctioning and they need it back. “Yes” at this point is to give them a serviceable aircraft test set. Without discussion we pull our SME off of any other task and tell them to work it. The SME comes back and says the unit is out of tolerance at a function. If they can accept a redline, we can get it back to them. While that would technically get to “yes”, is that the “yes” they need. Most of the time we know what “yes” is because it is in the TOs and K-Pros. Do they understand the impacts of the redline to their mission. Did we align or even repair the unit or are we jumping to the redline because it is a priority? Do we understand what they need of this function? These are actions and questions that are our responsibility to seek out to ensure the customer understands the “yes” they are getting.

In the COVID-19 environment, dealing with calibration extensions and getting to “yes” is a huge undertaking and a huge responsibility for the MFMs. They are determining if an un-calibrated piece of equipment can stay in use. I know they have had as many as 50 requests in a single day or have received blanket waiver request. The urge to “get to yes” in order to meet the mission is tremendous and each of the MFMs work their butts off trying to “get to yes”. They do this by understanding what “yes” means to the customer and negotiating based on policy and capability. They look at the legal, moral and authority they have to “get to yes”. Even with all of this, sometimes yes is not possible, and when “yes” is not possible it is usually because it was not an option from the start.

Recently I published a letter and the MFMs published a brochure in order to help you and your PMELs “get to yes” when it comes to the requirements levied by our policy. We did this because our policy requirements are critical to the operation of PMELs, the calibration network, and the missions of the customers we support. The risk of not meeting these requirements was too great when we still had the available capability to meet requirements or clarify what they were. While it is not always easy to do so, in the long run we are better for it. We purposely set the left and right of policy with room in between because not every mission will be able to be comply if we did not.

In closing I want to thank every one of you for the hard work and dedication you have put into working through this COVID-19 pandemic. While we are coming out of the pandemic, we now will be dealing with the after effects of increased backlog, more priorities, and training. I have faith that each of you will be able to “get to yes” and meet our mission.

MICHAEL D. KILGORE, CMSgt, USAF
Chief, Laboratory Certification Branch
PMEL Career Field Manager
News and Notes

Evaluators’ Perspective

*Feedback System Update*

We have been listening to the field in regards to the challenges and limitations of the current feedback system. The current feedback system is only available for a laboratory to use within 45 days from the start date of an assessment. However, it also includes questions regarding the entire AFMETCAL program as a whole (Engineering, Technical Applications, TOs, etc.) and is the only formal feedback avenue available. While this may be an adequate amount of time for a laboratory evaluation survey, it does not provide an avenue to submit routine feedback or ideas on the AFMETCAL program outside of this window.

The proposed solution was to develop two separate surveys that will be available at any time. One will be specific to evaluations and the other will be for the AFMETCAL program. We have developed these separate tools using the Interactive Customer Evaluation (ICE) system and are currently in the process of finalizing the two products. They should be going live in the coming months and we will push out a notification as soon as they are available. We look forward to hearing your feedback and continuing to improve our program together!

CHAD B. BROWN, SMSgt, USAF
AF Metrology Evaluation Team Superintendent

2021 PMEL World Wide Workshop XVII

Once again, AFMETCAL plans to host the 2021 PMEL World Wide Workshop (WWW) in Heath, Ohio. We are planning this event for the week of June 21-25, but a more refined schedule will be developed and released prior to the event. We have spoken with and are considering several venues, but have not made a final decision.

The PMEL WWW has proven to be an excellent forum for the Air Force and foreign metrology communities to exchange technical information, promote innovative ideas, learn of new technologies, and to stay abreast of current field issues. We believe the face-to-face interactions and information exchanges between AFMETCAL personnel and our Air Force metrology customers from all over the world is beneficial to our calibration community and a contributor to our mission successes.

We welcome all input to the topics you would like to see covered during the workshop. We will be soliciting those inputs later this year through the MFM’s, so please start thinking!

As a reminder, get those travel projections and budget forecasts in now for this major event. We hope to see you at the 2021 PMEL WWW XVII!

Rob Wright
PMEL WWW Coordinator
AFMETCAL Plans & Analysis
News and Notes (continued)

NextGen Notes

NextGen RF/Microwave Microsoft Teams meeting for PMEL community
AFMETCAL hosted a virtual open house via Microsoft Teams for the PMEL community on May 15th, 2020. There were 19-21 participants as some attendees had issues with internet and were in and out at times. Future meetings will be held with less attendees to combat potential technical limitations. The format was an AFMETCAL introduction and presentation of the progress and plans for the RF/Microwave side of NextGen followed by a Q&A with the PMEL attendees. Topics addressed included upcoming Microwave Measurement Receiver (MMR) and Signal Source Analyzer (SSA) procurement, flatness generator implementation, 9640A replacement, frequency response preamp calibration deviation and future NextGen plans. Additionally, the transition to CPIN NextGen was discussed and with field help, we can make this happen now that there is awareness.

Flatness Generator
The Flatness Generator is a new substitution technique for spectrum analyzer frequency response calibrations and is now available to use in NextGen. It has been designed for use specifically in place of the aging 9610A/9640A. This first release uses the 9500B Oscilloscope Calibrator with the 9560 Leveling Head, as well as the Rohde & Schwarz SMA100A for generating flatness up to 3 GHz at this time. The Flatness Generator technique is a method that charts the flatness of the previously mentioned PMEL TMDE and turns them into a flatness generator. This is accomplished by creating and storing a file that tracks the amplitude settings needed from the generator for a given range of frequencies. After the file is generated, the settings can be recalled by NextGen which allows the generator to have very flat frequency response. Within the NextGen release is a User’s Manual, TAR Calculator and Uncertainty Analysis.

Calibration Deviation
For those who calibrate spectrum analyzers and aren’t aware, there are calibration deviations “Use PS or FreqRespPreampPS” available on some spectrum analyzers that allows the use of 8487D, 8485D, E4413A or E4412A power sensors depending on frequency range of the TI. This eliminates the 20 dB attenuator that is typically used during the frequency response preamp setup. By eliminating the 20 dB attenuator, the TAR is significantly improved and can be verified in the TAR calculator, found in frequency response sheet of the Equipment Requirements spreadsheet.

Computer Program Identification Number (CPIN) version
Another reminder of the NextGen Technical Order (TO) to CPIN migration. In order to stay current with TO policy, NextGen will be converting from a TO to a CPIN. This process will take place over several release cycles. This means that some procedures will remain in 33K10-4-2-10 and some will be migrated to the CPIN, which is 85M-NEXTGEN-U001-00 for USAF PMELs and TBD for FMS PMELs. Labs will need to be on ID for both the TO and the CPIN until which time all procedures have been migrated from TO to CPIN. The NextGen TO version and NextGen CPIN version will not have any of the same modules, so you will need both to cover all NextGen procedures. It is recommended to get on ID for the CPIN now, rather than wait until it is needed to calibrate an item to avoid any downtime.

The TO version of NextGen will continue to be used as it is currently. The CPIN version of NextGen will be called out in a “WA-1” TO when it is to be used for automated calibrations. Since the WA-1 TO and NextGen TO and NextGen CPIN will all need to stay in sync, we anticipate it could take several release cycles to get all modules transferred from TO to CPIN. We plan to continue to release every 2 months as we do now. There are various reasons for the partial migration as opposed to all at once, but the main one is that we would have to put all updates on hold until the entire re-write effort is complete.

(Continued on page 7)
The CPIN version will have additional features, most notably is PXI support which also adds the benefit of improved cyber security. The underlying changes affect other parts of NextGen as well. NextGen is undergoing a driver system overhaul due to the CPIN version change. A driver is the code for an individual instrument that is used to control it. All drivers are being replaced with new ones that are compatible with the CPIN version of NextGen. Therefore, all CPIN version NextGen calibrations will need to be tested to make sure the new drivers work properly with our procedures.

Being that AFMETCAL only has a small fraction of the equipment that we support in NextGen here in our test lab, we will need to ask for help. This help will come in the form of Beta testing. We are working to get a CPIN Beta version ready onto our SharePoint Beta testing site. For this testing, we mostly just need to know if everything is still working. The specifications, tables and calibration procedures aren’t changing, but the drivers are vital to the program operating correctly and producing good calibrations. Anyone who is willing to test the CPIN version please do so and mark them off on the spreadsheet, also located on the SharePoint. SharePoint LINK: https://usaf.dps.mil/teams/12535/default.aspx. Both the NextGen CPIN and TO versions can be installed side-by-side on the same computer.

In summary, the virtual open house was a good experience. The PMEL members communicated questions, concerns and constraints that AFMETCAL would otherwise not have been aware of. AFMETCAL explained limitations we face because of cyber concerns, policy, and software limitations or otherwise that the PMEL community may not have been aware of. This created a sense of understanding and synergy. PMEL members expressed sincere appreciation of the event and stated that they look forward to future similar events. The next virtual open house will be scheduled soon to include PMEL members that were placed on the waitlist for the RF/Microwave discussion. Further NextGen Teams meetings will be held for DC/LO topics.

Marc McCaslin
AFMETCAL Electrical Engineering, AFLCMC/WNME
News and Notes (continued)

Leaking ADTS-415F Hose Information

It was brought to AFMETCAL’s attention that new ADTS-415F hoses are leaking, causing many PMELs to annotate a limitation that the hoses were not leak checked. After research and communication with the manufacturer of the ADTS-415F units (Custom Manufacturing & Engineering - CME), the manufacturer of the hoses (Continental), and the ADTS program office, it was concluded that the fittings were changed on the hoses which resulted in them leaking. Although this issue plagued many of the PMELs, from reports the general workaround for the customers was to utilize TTU205J hoses when the item was in use. Although not an ideal solution, this workaround did temporarily prevent an impact to Air Force readiness.

Figure 1: ADTS-415F Hoses and Power Cords

Please see the following information provided by CME’s Senior Systems Engineer Rick Silva regarding the possible combination of fittings and hoses that could result in a deficient hose. Also note the troubleshooting techniques to decipher if the hose is leaking and the steps that should be taken to resolve the issue.

(Continued on page 9)
“The Continental new production red hoses with the brass ferrules will leak. Continental's original red hose with the crimped fitting does not leak. Blue hoses with the brass ferrule may leak. They will leak at vacuum not at pressure. If you do a standard leak test with the ADTS-415F fittings capped off and it passes with some value, then add only the red hose and it fails leak test you have a leaky red hose which should be one with a rough feel to it and a brass ferrule. Then test the blue hose separately and if it passes regardless of fitting, you have a good blue hose. If it fails it probably has a brass ferrule on the fitting. You can test it at vacuum by going to 35,000 ft at 50 knots. The new red hose material regardless of the fitting will leak. The blue hose may leak depending on how well crimped the ferrule is.”

CME has expressed that they will replace any red hose with brass ferrule tested or not. They have requested PMELs test the blue hoses with the brass ferrule prior to sending a request, but they will replace those hoses as well once unsatisfactory results are proven. Labs encountering this problem are to directly contact CME via the contact information below.

Rick Silva  
CME: Sr Systems Engineer  
Phone Number & Extension: 727-548-0522 x1765  
Email: rsilva@custom-mfg-eng.com

CME will ship directly to whomever sends them a request, including international bases. One must supply the following information when contacting CME for replacement hoses.

1. Quantity  
2. Color  
3. Shipping Address  
4. Statement saying the hoses have been tested and failed leak check (Blue Hoses Only).

If one: 1) does not receive a response from CME in regards to their replacement hose request, 2) CME states they will not replace the hoses, or 3) a lab continues to encounter this issue at a high volume after receiving replacement hoses, please notify AFMETCAL and the ADTS program office via the contact information below.

Adam Motsinger  
AFMETCAL

Marvin Stewart  
ADTS Program Office

Note: All of the instructions on what to do if a lab is in possession of faulty hoses can also be referenced in an AFCAV Note under the ADTS-415F listing.
AFMETCAL has developed and accepted an environmental monitoring unit (EMU) that will be replacing the Fluke DewK 1620. The system utilizes a Raspberry Pi computer, 7-inch touchscreen display, and a USB temperature & humidity sensor from Vaisala. The probe calibration coefficients are stored on the probe and can be adjusted with the EMU station.

All software has been developed in-house by AFMETCAL and will continue to be updated. This is very beneficial as it will allow features and improvements to be added in the future as feedback is collected. There are a number of features that are planned to be added as soon as possible that were not able to make it into the first version.

The contract has been awarded to Advanced Integration, LLC. (ADVINT). ADVINT will be packaging and shipping the individual components to each PMEL. The assembly and initial software installation will be PMEL responsibility. AFMETCAL will publish assembly and installation instructions.

Deliveries will begin in the following weeks for all PMELs excluding Air National Guard PMELs. When funding is available from ANG PMELs, their EMUs will be delivered at that time.

Kaleb Reed
AFMETCAL Mechanical Engineering
AFMLCMC/WNMM
AFMETCAL Acquisitions (continued)

Dial Indicator Calibrator Upgrade (20M-512A/B-DI)

PMELs utilizing the Optimar 100 Dial Indicator Calibrator will begin receiving a much needed upgrade to the ICM 100 IP in 4th quarter FY2020 at a rate of one to three per month. The current Dial Indicator Calibrators are aged and are no longer supported by the OEM. The upgraded Dial Indicator Calibrator will allow for fully automated testing of dial indicators, dial comparators, test indicators, and digital indicators via image processing & recognition software. Dial indicators are widely used throughout the USAF to support tooling and fixtures that are used to support the maintenance of various aircraft engines and associated aircraft engine components. The fully automated setup will increase performance as well as reduce man hours. Considering PMELs perform over a total of 25,000 indicator calibrations every year, any time saved for each calibrations adds up greatly across all PMELs. By upgrading the current fielded Optimar 100 dial indicators to the ICM 100 IP, considerable cost savings will be achieved versus buying completely brand new calibrators with the same capability. In addition, 15 high workload PMELs will receive an upgrade with a camera and lens based system to automatically read mechanical dial faced indicators. On-site installation and training will also be provided for these high workload PMELs.

Richard Thompson
AFMETCAL Mechanical Engineering Branch
AFLCMC/WNMM
Acceptance testing has been completed for the new Oxygen Clean Pressure Calibrator. This new system is a simple direct comparison of TI and Standard with a Hand Pump for pressure/vacuum generation. Because this is oxygen clean, the pump has a supply port for clean dry Nitrogen use. The new calibrator will replace the existing King Nutronics 3461-1-104. The system uses new Additel Digital gauges (P/N: ADT681 Series) as the standard with pressures up to 3000 psi. After all calibrators have been delivered, a new note code will be created for those PMELs with capability to perform oxygen clean pressure gauge calibrations. The K100 End Item P/N is ADT920-N-OCPPC. Approximately 28 PMELs will receive the calibrator and distribution is set to begin in FY20 at a rate of one to three per month.
AFMETCAL Acquisitions (continued)

Acceptance and Delivery of New PMEL Humidity Generators from RH Systems

AFMETCAL has awarded a contract to RH Systems for a humidity generator. The Generator is P/N: CGS-240 WUC: WHLFD and it will replace the Thunder Scientific 2500 Humidity Generator. It will have at least the same ±0.5 % RH accuracy from 10 % RH to 95 % RH. It is being procured because of the aging design, calibration interval, and supportability of the Thunder 2500. The CGS-240 utilizes the same two-pressure two-temperature method of generating humidity as the Thunder 2500S. It has temperature probes and pressure transducers that require calibration.

The CGS-240 has passed acceptance testing and every PMEL will be receiving at least one. Deliveries to the PMELs will begin in the following weeks and will continue over the next four years.

Kaleb Reed
AFMETCAL Mechanical Engineering
AFMLCMC/WNMM
AFMETCAL Personnel News

Evaluation Team Welcomes MSgt Jonathan Jones and MSgt Christopher Holloway

The Evaluation Team welcomed MSgt Jonathan Jones in February. Accompanying MSgt Jones is his wife Lydia and children Samuel, Nicole and Jason. He was born in Suwon, South Korea, but calls Peru, IN home. MSgt Jones brings a high degree of technical ability to the team including three years of quality management experience. During his 18 year Air Force career, MSgt Jones has been stationed at Kadena AB, Aviano AB, Ramstein AB, Osan AB and Langley AFB.

The Evaluation Team also welcomed MSgt Christopher Holloway in March. Accompanying MSgt Holloway is his wife Brandi and children Jacob, Riley, Lucas and Victoria. MSgt Holloway is from Opelika, AL and brings a high degree of technical ability to the team including five years of quality experience. During his 12 year Air Force career, MSgt Holloway has been stationed at Little Rock AFB, Kunsan AB, Ramstein AB, and Nellis AFB.

The Evaluation Team is happy to have both MSgt Jones and MSgt Holloway on board and look forward to their positive contributions. We wish Jonathan, Chris and their families the best as they settle into the Heath community.

DAVID A. VALDEZ, MSgt, USAF
AF Metrology Lead Evaluator

Evaluation Team Bids Farewell to MSgt Gerald Johnson

MSgt Gerald Johnson departs the Evaluation Team after 3 years and some change to begin his new adventure as the Kunsan PMEL Flight Chief. During his tenure as Lead Evaluator, he accumulated 190 days TDY and evaluated 27 PMELs. MSgt Johnson’s exceptional understanding of the Air Force Inspection System and technical knowledge proved invaluable. We wish Gerald and his Family the very best as he leads the Wolfpack in Kunsan AB, South Korea. His attention to detail and drive to improve the PMEL community will be missed here at AFMETCAL.

DAVID A. VALDEZ, MSgt, USAF
AF Metrology Lead Evaluator
AFMETCAL Personnel News (continued)

New Metrology Technical Expert!

With the retirement of Tom Carpenter, Mr. Jeremy Latsko will relinquish his command of the Mechanical Engineering Branch and take Tom’s place as AFMETCAL’s Metrology Tech. Expert. Jeremy is well known for his previous service as Branch Chief of the Mechanical Engineering Branch and has over 17 years of experience and a Master’s Degree in Business Administration from The Ohio State University (OSU). Jeremy is also Acquisition Professional Development Program Level III certified and has completed Air War College (AWC). Good luck Jeremy in your new role of responsibility.

John M. (Fed) Federanko
Chief Engineer, AFMETCAL Division, AFLCMC/WNM

Pictured at right: Jeremy Latsko

New Technical Applications Chief!

With the retirement of Mr. Melvin (Bob) Cleland, Mr. Salvatore (Sam) Capra was promoted in February to the position of Technical Applications Branch Chief. Sam is well known for his previous service as a Technical Lead in the Electrical Engineering Branch and has over 18 years of experience and a Master’s Degree in Computer Science from the Air Force Institute of Technology (AFIT). Sam is also Acquisition Professional Development Program Level III certified and has completed Air Command and Staff College (ACSC). Good luck Sam in your new role of responsibility.

John M. (Fed) Federanko
Chief Engineer, AFMETCAL Division, AFLCMC/WNM

Pictured at left: Sam Capra

New Mechanical Engineering Branch Chief

With the retirement of Mr. Thomas (Tom) Carpenter, Mr Jeremy Latsko has moved into Tom’s role as AFMETCAL’s new Metrology Technical Expert. This opened up the promotion of Mr. Larry Cotton to the position of Mechanical Engineering Branch Chief. Larry has over 14 years of engineering experience and a Master’s Degree in Systems Engineering from the Air Force Institute of Technology (AFIT). Larry is Acquisition Professional Development Program Level II certified and has completed Air Command and Staff College (ACSC). Good luck Larry in your new role of responsibility.

John M. (Fed) Federanko
Chief Engineer, AFMETCAL Division, AFLCMC/WNM

Pictured above: Larry Cotton
AFMETCAL Personnel News (continued)

James “JT” Moore Joins AFMETCAL as Deputy Director

AFMETCAL welcomed James “JT” Moore to our team on May 11th. He comes to us from the Air Force Lifecycle Management Center where he served as an Operational Research Analyst. JT has supported a variety of acquisition programs across the center since 2012. He is also a member of the USAF Reserves and currently serves as the Mobilization Assistant to the Warner-Robins ALC Commander. From February 2016 through September 2019 he was on active duty status at Wright-Patterson AFB. During this time he served as the Deputy Director for the Mobility and Training Aircraft Directorate overseeing the execution of the AFPEO/Mobility portfolio. Most recently he served as the Deputy Director for the Agile Combat Support Directorate overseeing the execution of the AFPEO/ACS portfolio. JT is a native of Columbus Ohio and a graduate of the Ohio State University. He joins us as the AFMETCAL Deputy Director.

Mechanical Engineering Branch Welcomes New Engineers

The Mechanical Engineering branch welcomed Anthony Gaughan in June. Anthony is a recent graduate of The Ohio State University with a B.S. in Aerospace Engineering. Anthony is a Palace Acquire (PAQ) intern and he will return to school after a year of on-the-job training to obtain a Master’s degree. The PAQ program is a great program that allows us to plan for future manning by overlapping new engineers and engineers with upcoming planned retirements. He is working on a training plan with a focus on the Torque, Liquid Flow, Gas Flow and Air Velocity measurement areas. He is a Pittsburgh area native and is an avid sports fan who enjoys golfing in his spare time and rooting for the Steelers.

We also welcomed Michael Martinez to the branch in June. Michael is also a recent graduate of The Ohio State University with a B.S. in Biological Engineering. Michael is working on a training plan which will be focused on the Physical/Dimensional measurement area. He is a native of Austin, Texas and also has previous enlisted Air Force experience where he spent nearly seven years as a Pharmacy Technician. He enjoys fishing in his spare time, but he mostly enjoys spending time with his wife and two sons.

We are pleased to have both Anthony and Michael join us at AFMETCAL.

Larry D. Cotton
Mechanical Engineering Branch Chief, AFLCMC/WNMM
AFMETCAL Personnel News (continued)

Melissa Kauffman Joins Electrical Engineering Branch

Melissa is joining the Electrical Engineering Branch at AFMETCAL. She is a recent graduate of Ohio University in Athens, OH with a Master of Science Degree in Bio-Medical Engineering. Melissa is currently training in the RF/Microwave Frequency and Electro-Optics/Photonics measurement areas and will be shadowing senior TCMs Thomas Jenkins, Jennifer Landry, and Allan Long; as well as receiving training at the AFPSL. In her spare time she enjoys hiking, playing piano, baking, and cheering for THE Ohio State Buckeyes. Welcome to AFMETCAL Melissa!

Jim Bohus
Electrical Engineering Branch Chief, AFLCMC/WNME

Computers Branch Welcomes Quentin White

The AFMETCAL Computers Branch would like to welcome Quentin White to our Data Center Team! Quentin comes to us by way of DoD in Columbus Ohio. Quentin brings a wealth of IT knowledge to AFMETCAL, having served in the Air Force, Air National Guard and various State and DoD agencies. He will be part of our Data Center Team which is responsible for ensuring MetWeb and other AFMETCAL systems are secure and provide maximum availability. I have no doubt Quentin will be a valued member of the AFMETCAL team, welcome aboard!

Scott Brockway
Computer Branch Chief, AFLCMC/WNMC

AFMETCAL Welcomes Back Our Summer Hire Alyssa Lambert

AFMETCAL is glad to welcome back our summer hire Alyssa for her second year of working with us. Alyssa is now a rising sophomore in OSU’s Mechanical Engineering program. A local resident of Heath, OH, she enjoys the restaurants and activities in Columbus while OSU is in session. While on campus, she is in the Environment and Natural Resources Scholars program at OSU as well as on the Morrill Tower Green Team. In her spare time, she enjoys taking walks, spending time with her friends and watching movies.

This summer Alyssa will work with Dr. Watson on authoring the Life Cycle Sustainment Plan and Configuration Control process management documents for AFMETCAL. She will also gain exposure to our organization’s engineering disciplines so that she can gain experience in her chosen field of study. We are delighted to have her as part of our AFMETCAL family again this summer!

Dr. Jill Watson
AFMETCAL Logistics Chief
AFLCMC/WNML
AFMETCAL Personnel News (continued)

Bob Severance Retires at AFMETCAL

AFMETCAL Plans & Analysis bid farewell to our co-worker and friend, Bob Severance who retired effective 3 Jan 2020. Following an enlistment in the U.S. Marine Corps and some time working with local law enforcement, Bob started his career at the Newark Air Force Station in Security in the early 1980s. Bob eventually moved over to Metrology and greatly enhanced AFMETCAL’s customer support through the years. Among his numerous duties, Bob organized and ran the last three PMEL Worldwide Workshops. We wish Bob and his wife Chris many happy years of retirement.

Lee Wood
AFMETCAL Plans & Analysis
AFLCMC/WMMP

Evaluation Team Member Continues Tradition of Excellence

MSgt David Valdez was selected as the American Society for Quality (ASQ) 2020 Quality Technician of the Year Award (Columbus Division) and was featured in ASQ’s May Quality Progress Magazine. In addition, he was selected as the Inspection Division’s 2020 “Dr. C. L. Carter” International Inspector of the Year Award, which will be presented at an ASQ conference later this year. MSgt Valdez was also named as the 2019 Agile Combat Support SNCO of the Year award earlier this year. We are extremely proud of Dave’s accomplishments and the excellence he brings to the team!

CHAD B. BROWN, SMSgt, USAF
AF Metrology Evaluation Team Superintendent
Farewell-Mr. Tom Carpenter Retires

Mr. Thomas E. Carpenter (or just Tom) has retired from the Air Force after a stellar 37 year career. Tom began his federal service career in April 1983 at AFMETCAL as a Field Engineer conducting dimensional calibrations in support of the Precision Equipment Measurement Laboratories (PMELs). Tom was a member of the American Society of Mechanical Engineers Dimensional Writing Standards Committee (ASME B89) and was instrumental in developing the ASME standards on Coordinate Measurement Machines, Traceability of Dimensional Measurements, General Principles and Definitions of Dimensional Measurements, and over 50 other measurement and test standards. Tom was probably best known in the Metrology World however for his booming voice, professional attitude, and deep and well versed knowledge of everything measurement and calibration related. Tom now begins his new journey as boat owner, fisherman, and honored patriot. Tom will be greatly missed.

John M. (Fed) Federanko
Chief Engineer, AFMETCAL Division, AFLCMC/WNM

Thomas E. Carpenter

The Man, the Mission, the Legend

• 37 Years advancing the field of Metrology
• Started at Newark Air Station in 1983 as GS-0830-07
• Culminated career as Chief Engineer for AF’s entire calibration program
• Extensive contributions at National and International level through JTCG and NIST
• Prominent in shared technology advancements with Army, Navy, and Marines
• Member of American society of Mechanical Engineers since 1988
• Man behind many written standards leading to ASME Consensus Committee membership
• Recognized expert as part of International Standards Organization (ISO) Geometric Product Specifications
• No stranger to Inertial Guidance Systems or court proceedings as expert witness
• Distinction of being AFPSL supervisor before BRAC actions
• Frequent consumer of Thai cuisine
• Frequently bragging about Cathy who is the love of his life
• AFMETCAL’s jolliest member with his infectious laughter
• Been known to leave his boat and come ashore for reasons other than work
• True friend to all

Mr. Carl Unholz, AFMETCAL Director
AFMETCAL Personnel News (continued)

Bob Nappier Retires at AFMETCAL

As the old saying goes: “All good things must come to an end”; this will be the last newsletter with me as the editor, as I retire effective 30 June 2020.

I must say it has been one hell of a ride. I have had the good fortune of great assignments/jobs over my military and civilian PMEL/metrology careers that have included the following: Lowry AFB, CO (1972-73/student); Tyndall AFB, FL (1973-75/technician); Misawa AB, Japan (1975-77/technician); Clark AB, Philippines (1978-83/technician-QA-section supervisor); Torrejon AB, Spain (1983-89/technician-QA supervisor-section supervisor); Newark AFB, OH (1989-94/military evaluator); Wright-Patterson AFB, OH (1994-98/AFMC PMEL Functional Manager); Wright-Patterson AFB, OH (1998-2000/Raytheon PMEL contractor-QA Lead); Kettering, OH (2000-01/ACLASS Accreditation Manager); and AFMETCAL/COATC (2001-20/civilian evaluator-TO 00-20-14 TCM-Advisory Group/PIWG/PAMS CCB Secretary-PMEL Facility POC-Medical Equipment Liaison-Repair Network Manager, Newsletter Editor, among others). All of the experiences and jobs were great, but I must confess my 9 years as an AFMETCAL military/civilian evaluator was the best job I ever had; I highly recommend it to any up and coming young MSgts!

I didn’t get to where I am on my merits alone; there were a lot of great friends/mentors who helped guide and shape my career. I will not attempt to list them all here at the risk of omitting someone; they know who they are. I also learned a lot from many of you that I crossed paths with over the years.

The Air Force Metrology Community (consisting of AFMETCAL, MAJCOM Functional Managers, PMELs [military, civil service, contractor], Metrology Calibration Flights, Schoolhouse, PAMS Office) is probably the most tightly-knit maintenance community in the Air Force. AFMETCAL exists solely to provide the PMELs with the policy, technical guidance and equipment for them to perform their critical Air Force missions in direct support to the warfighter. I am sure this will continue into the future-especially under the guidance of current AFMETCAL leadership.

Speaking of leadership, I am happy to announce that Mr. Lee Wood was recently selected to assume the position as Supervisory Program Analyst for the Plans and Analysis Section; there is no one more deserving than Lee. I refer to Lee as the “kinder/gentler” Bob Nappier, although some have also called him the “new and improved” Bob. Both have a ring of truth. Lee and I have worked together closely for many years. He will be taking over some of my former duties or assigning them to folks who will work under his supervision. I am confident he and his team will continue to provide the outstanding support you have come to expect from AFMETCAL.

Here’s hoping that we meet again at a future PMEL World Wide Workshop/Conference. Until then, good luck to all of you in your future endeavors and efforts in support of the PMEL customer! I will always be proud to consider myself a member of the AFMETCAL Team!
Some of the articles to look for in the next edition:

- Comments from the AFMETCAL Director
- Words of Wisdom from the Chief of the Laboratory Certification Branch
- News & Notes from AFMETCAL, the AFPSL and PMELs in the field
- Interesting articles From the Benches of PMELs throughout the world
- And much, much more!

Submissions: We encourage readers to submit articles for the following categories: From the Bench (technical), About People (field personnel news), News & Notes (general information). Submissions should be in Microsoft Word, Times New Roman 12 font, accompanied whenever possible by digital photos in JPEG format. Native photo file sizes less than 2MB per image are preferred. Photos must be accompanied with caption information which fully identifies all individuals depicted, including rank, title or office, and event. Note that all text and photo submissions are subject to editing for content, cropping and/or size. All submissions that are technical in nature are reviewed by the AFMETCAL Engineering Branch for accuracy and appropriateness. Publication of any submission, regardless of subject matter, will be approved by the AFMETCAL Division and submission does not guarantee publication. All submissions are reviewed for compliance with Privacy Act, FDO, STINFO, OPSEC and other information security requirements as applicable.

How to Make a Submission: The AFMETCAL Newsletter editor transmits quarterly calls for inputs through the PMEL MAJCOM Functional Managers and other significant metrology program POCs to the respective PMEL managers and/or program functional offices. Normal submissions are in response to these data calls. Authors should submit their article inputs via e-mail through their respective chain of command to the AFMETCAL Newsletter editor. Authors may submit inputs out of cycle, but should use the same channels for those submissions. Deadline for submissions is the 15th of the month prior to the scheduled quarterly newsletter publication (publication months are March, July and November). Do not submit copyrighted material.