

highTECH

www.eta-i.org

NEWS

Job-Ready Day One

INSIDE

SkillsUSA: Champions at Work, Job-Ready Day One

Technicians in Pollution Control

ETA Certification Maintenance FAQs

ETA Board and Award Nominations

What's All This Prank Stuff, Anyway?



"I am ready to work, I am ready for this job and I am ready for this challenge."

Stuart Pearce

Telecommunications Cabling Championships at SkillsUSA Sponsored by ETA



2018 Telcom Champions (from left):

Steven Casimir, Hunter Casteel, Jacob McGonigle, Donovan Tames, Gavin Ginn, and Mason Brown.



ETA International recently sponsored the Telecommunications Cabling Championships for the 16th year in a row at the 54th annual SkillsUSA National Leadership and Skills Conference in Louisville, KY. The competitions showcase the best career and technical education students in the nation with this year's theme: Champions at Work - Job-Ready Day One. ETA International continues to sponsor the National Telecommunications Cabling Championship at SkillsUSA to reward students for excellence, to involve industry in directly evaluating student performance, and to keep training relevant to employers' needs. The Telcom Cabling Championship is unique to SkillsUSA and utilizes many of the competencies and hands-on skills that comprise ETA's Data Cabling Installer (DCI) and Customer Service Specialist (CSS) certifications.

The Telcom Cabling contestants are high school and post-secondary students interested in voice and data network cabling and installation who excelled at their local and state competitions. ETA applauds the six contestants who took home gold, silver and bronze medals!

Secondary: Gold – Donovan Tames, Blackstone Valley RVTHS, Upton MA; Silver – Mason Brown, Paso Robles High School, Paso Robles CA; Bronze – Hunter Casteel, Dennis Technical Education Center, Boise ID.

Post-Secondary: Gold – Jacob McGonigle, Tennessee College of Applied Tech-Crossville, Crossville TN; Silver – Gavin Ginn, North Central Kansas Tech College, Beloit KS; Bronze –

Steven Casimir, Orange Technical College - Mid-Florida Campus, Orlando FL.

Contestants demonstrate skills in fiber and copper cable termination, proper connectorization, pulling and mounting cable, patch panel installation and termination,

installing jacks, cable testing and troubleshooting, and providing customer service. Both copper and fiber optics cable are represented and the contest stresses safety in all activities. Industry indicates 80 percent of the problems in computer networks, security systems installations and others are caused by cabling connector issues and not computers, servers, switches, etc. This competition tests to worldwide industry standards related to cabling for data and voice connections, physical and logical networks and signal transmission.

The contests are planned by the Skills Technical Committee and designed to test the aptitude needed for successful entry-level performance in the field. The National Education Team and the Technical Team from industry developed the Telcom Cabling Championship's content, built and set up the rotation areas as well as conducted both the orientation and competition. All contests are run with the help of industry, trade associations, and labor organizations, while test competencies are set by industry.

National technical and educational committees for Telecommunications Cabling Championship: Co-Technical Chairs Teresa Maher, CSS, ETA International (IN) and Bill Phelps, Dymo, (WA); Dede Starnes, Corning Optical Communications (NC); Richard Darnell, retired (UT); and Brandon Crump and Jeff Swaringen, both with Stanly Community College (NC). ETA gives special thanks to the Telecommunications Cabling Championship judges: Jim Steele, CETma, Amatrol (IN); Wayne Rager, Bland Technologies (KY); Bryan Little and Mark Damiter, both with Corning Optical Communications (NC); Richard Booth, Empire High School (AZ); and Paul Neukam, FOSP, SiteWise Systems (IN).

Including the judges, supporters and contributors to the Telcom Cabling Championship come from departments of public instruction, community colleges, proprietary training groups, and companies such as ETA, Dymo, Corning Optical Communications, CWA, Panduit, Fluke Networks, Cisco, Greenlee Tools, IDEAL Tools, International Wireless Communications Expo (IWCE), Kobalt Tools, Light Brigade, Keysight Technologies, Southwire, Milwaukee Tools, Wiley Publishing, Bland Technologies, Klein Tools, and BISCO. A special thank you goes to Joe Maher, CSM, DVE, for doing all the heavy lifting.//

Features

2 SkillsUSA: CHAMPIONS AT WORK, JOB-READY DAY ONE

The SkillsUSA Championships are competitive events showcasing the best career and technical education students in the nation. Contests begin locally and continue through the state and national levels. The philosophy of the Championships is to reward students for excellence, to involve industry in directly evaluating student performance and to keep training relevant to employers' needs. ETA International is a proud sponsor of the National Telecommunications Cabling Championship for the 16th year in a row at SkillsUSA National Leadership and Skills Conference!

8 ETA BOARD AND AWARD NOMINATIONS

ETA is now accepting nominations for the ETA Officers 2019-20 two-year terms and Annual Awards for this past year. Please submit your nominations by October 1, 2018. The new ETA officers will be inducted and award winners recognized during ETA's Education Forum co-located with IWCE Expo, March 4-8, 2019 in Las Vegas.

9 TECHNICIANS IN POLLUTION CONTROL

Pollution control of industrial gases and waste water is very important to environmental protection. Pollution Control equipment has advanced electronic systems that call for expert technicians in this field. Electronics technicians who want to specialize in pollution control for industry should have a solid background in industrial control circuits and systems.

20 ETA CERTIFICATION MAINTENANCE FAQS

Certification Maintenance is ETA's way of complying with ISO's 17024 recertification standards and with ETA's accreditation through the International Certification Accreditation Council (ICAC). ETA answers some of the most commonly asked questions about certification maintenance, such as: Do different certifications have different requirements?, What is Continuing Education and does my on-the-job experience qualify?, I have multiple certifications. Do I need to submit multiple payments?, and more.

22 WHAT'S ALL THIS PRANK STUFF, ANYHOW?

Who says engineers don't have a sense of humor? Remember the WOM, inspired partly by the Umac 606 phantasatron? The DEAD diode? The "SCROM" scratchable read-only memory? The list goes on. Many of the early analog electronic greats were inveterate pranksters. Sometimes the prank made the papers.

ETA® Staff

CEO Emeritus
Richard Glass, CETsr

President
Teresa Maher, CSS

Vice President
Bryan Allen, CSM, CSS

Marketing & Event Coordinator
High Tech News Editor
Michele Lawson, CSS
editor@eta-i.org

Financial Director
Cindy Reed, CSS

Director of CET Testing
Lynda Shute, CSS

Database & Processing Coordinator
Tracy Bunch-Hall, CSS, MCP

Research & Development Coordinator
David Weaver, CSS

Research & Development Support
Edward Kirkpatrick, PV11

Maintenance and Membership Coordinator
Tracy Montgomery, CSS

Certification Administrator Coordinator
Joseph Maher, CSM, DVE

Staff Support
Delores Andrews

High Tech News is published by
Electronics Technicians Association International, Inc.
5 Depot Street, Greencastle IN 46135
Phone: (800) 288-3824 / (765) 653-8262 Fax: (765) 653-4287
Web Site: www.eta-i.org E-Mail: eta@eta-i.org
Publication # ISSN 1092-9592

The views expressed in this publication are those of the author(s)
and do not necessarily reflect the views of ETA International

ETA Board of Directors

Chairman
Ira Wiesenfeld, CETms
Dallas, TX

Vice Chairman
John Baldwin, CETsr
Faribault, MN

Secretary
Christopher Miller, CETsr
Towanda, IL

Treasurer
Tommy Bonner, PhD
Heidelberg, MS

Communications Chair
Shane Morris, CETma, CETms
Buckley, WA

Communications S/T
Rich Agard, RESlma
Philadelphia, PA

Education Chair
Doug Hubert, EdD, CET
Norton, OH

Education S/T
Joe Goudy, CETsr
Fairfield, IA

Certified Technician Chair
Judy Hill, CETsr
Oak Harbor, WA

Certified Technician S/T
John Zielinski, CETma
Lackawanna, NY

Shop Division Chair
Kim Bozman, CSS
Salisbury, MD

Shop Division S/T
Roderic Taylor, CET
Birmingham, AL

Cabling Chair
Paul Neukam, FOT-OSP
Huntingburg, IN

Cabling S/T
Sean Sheedy, FOT-OSP
Meridian, ID

Renewable Energy Chair
Jay Warmke, PV11, SW11
Philo, OH

International Division Chair
Johannes Bakkeren, CESma, CESms
Brampton, ON, Canada

Student Chapter Relations Dir.
Sherrie Ferguson
Norfolk, VA



10 NEW ETA CERTIFIED TECHNICIANS

ON THE COVER: ETA applauds the six contestants who took home gold, silver and bronze medals from the SkillsUSA Telecommunications Cabling Championship! Telcom Champions (from left): Steven Casimir, Gavin Ginn, Donovan Tames, Hunter Casteel, Mason Brown, and Jacob McGonigle.

Photo credit - Dede Starnes, Telcom contest technical committee.



National Association of Tower Erectors

www.natehome.com

605-882-5865 | 888-882-5865 (U.S.)



Light Brigade Announces New Training Course for Field Testing



Light Brigade, a leader in fiber optics training for over 30 years, recently introduced a new hands-on training course for providing a deeper understanding of fiber optic testing and troubleshooting best practices. The new OTDR and Testing Deep Dive Workshop is a 2-day intensive course that will provide students with the knowledge and skills needed to achieve testing expertise in the field.

“We developed this course in response to student requests to spend more time on OTDR operation and field troubleshooting”

explained Lee Kellett, general manager of Light Brigade. “We’re excited to help installers and technicians gain the critical testing skills they need to be more effective in the field.”

Basic testing and fiber optic knowledge or previous training is a prerequisite for those taking this more advanced course. Light Brigade provides ‘vendor agnostic’ training, so various manufacturers’ equipment is used in this class, and students are encouraged to bring their own equipment.

Classes are coming up in Atlanta, Denver and Seattle. For more information about this course and other Light Brigade training, visit www.lightbrigade.com and www.learn.lightbrigade.com.

Present Your Communications Industry Insights at Education Forum!



ETA is seeking electronics and communications professionals with new ideas and practical solutions to the challenges facing today’s communications industry to submit

a proposal for session presentation at Education Forum 2019 (EF19). Co-locating with the International Wireless Communications Expo (IWCE) gives EF19 attendees the opportunity to network with over 7,000 industry professionals and more than 400 exhibitors in the communications technology industry.

Current topics of interest for the EF19@IWCE audience include: Multimedia Voice over IP, Satellite Systems Installation, RADAR, Small Cells and DAS, Land Mobile Radio, Digital Mobile Radio, Passive Intermodulation, RF Interference Mitigation, Telecommunications, Towers & Wireless Sites, Next-Generation Networks, Public Safety Topics, Wireless & more, including: 5G; Cybersecurity; Smart Grid, Smart Cities and IoT; Microwave, mmWave, LiFi, LIDAR, Unmanned Aerial Vehicles, Basic Electronics, and more.

ETA International is looking for dynamic speakers with great stories and insights about what’s new and relevant in the world of communications technology, especially those which provide case studies and innovative solutions for communications challenges.

EF19@IWCE has opportunities for people passionate about wireless communications and the electronics industry at the Las

Vegas Convention Center, occurring March 4-8, 2019 to be a guest speaker and present ideas that will promote the development of knowledgeable and skilled communications professionals. Present to a diverse group of attentive industry professionals, including government/military; public safety (law enforcement, fire service, emergency medical & 911); utility; transportation and business enterprise.

Benefits of presenting a session at EF19@IWCE include free admission to the exhibit hall with access to all short courses, professional exposure speaking before hundreds of industry peers, and extensive publicity. The EF19@IWCE conference promotes each presentation to its attendees through a vast promotional campaign, an opportunity to contribute to ETA’s bi-monthly publication *High Tech News*, and a great chance to network with peers and to view the latest products.

Industry gurus with timely and relevant ideas wanting to share future-thinking insights, research, trends and educational topics that are driving the communications technology industry are encouraged to submit session topic proposals. The deadline to submit is August 31, 2018. Sessions will be presented Wednesday & Thursday, March 6 & 7, 2019. To review the guidelines and submit your proposal(s), visit https://www.eta-i.org/education_forum_call_for_presentations_form.html. Contact Michele Lawson, CSS, at ETA for more information at 800-288-3824 or mlawson@eta-i.org.



Larry Johnson

Fiber Chronicles

Fiber Terminology and Geometries

We use terms to designate the size of fibers all the time without thought to how these terms and definitions evolved. In this column I'll address many of these and how we use these today.

Let's start with step-index (SI) fibers which have a glass core used to transmit the optical signal and have a higher index of refraction than the surrounding glass cladding with its lower index of refraction. Step-index fibers are easy to manufacture and are available in two basic types; single-mode (SI-SMF) and multimode (SI-MMF). Dr. Charles Kao laid out the optical requirements that a practical fiber must meet in order to be useful in communications. His paper titled "Dielectric-Fibre Surface Waveguides for Optical Frequencies" published by the IEE (pre IEEE) in 1966 would win him the Nobel Physics Prize in 2009. His research and work were based on the development of a single-mode fiber (SMF) using the helium neon laser which lased at 632.8 nm. This wavelength would require that the core be approximately 4 microns in diameter. He also identified several goals for optical fibers including the attenuation benchmark of less than 20 dB/km. This was extreme when considering that optical fiber attenuation at the time was 1,000 dB/km. In addition, he also identified the term and spelling of single-mode with the hyphen in his paper.



Charles Kao interview with then-President of Light Brigade Larry Johnson.

It was thought that the solution might lie in a single-mode waveguide for light. But this led to a number of serious practical problems. First, a single-mode fiber core would have to be extremely small to transmit only a single-mode however, the cladding could be as thick as needed to make for easy handling while still maintaining flexibility. Donald Keck, who was part of the fiber development team with Robert Mauer and Peter Schultz at Corning Glass, produced the first optical fiber to meet Kao's attenuation goal in 1970.

The second type of step-index fiber is the multimode fiber (MMF) which was available at the time and had been used since the 1950s for use in endoscopes for medical applications. This fiber could have a core up to 1,000 microns and was very effective at coupling light from a laser as well. Large core fibers are great for illumination but poor for bandwidth as the larger the core size the lower the bandwidth is due to modal dispersion. Modal dispersion occurs when multiple modes (paths of light) are transmitted through a fiber with each mode taking longer paths therefore stretching the transmitted pulse. The detriment of using a larger core is that hundreds to thousands of modes can be transmitted. The large core fibers of the time were unsuitable for communication purposes over even short distances due to their large optical dispersion.

Thankfully the Japanese tackled the problem of getting light into a fiber. The concern was that the extreme small core size of single-mode fibers made it impossible for the average technician to work with fibers. In 1968, Shojiro Kawakami along with the optical research team at Tohoku University developed the graded-index fiber where refractive index gently tapers from high to low as you go from the center of the core to the cladding. Because light travels faster in lower index materials, the light in the high index axial center of the fiber's core will lag behind the light traveling near the cladding, where the refractive index is lower. This offsets the delay suffered by the higher order modes from having to travel a greater distance. Although complete

compensation was impossible, careful tailoring of the refractive index gradient allowed pulse spreading to be reduced by a factor of 1000.



The optics staff at Kohoku University who invented Graded-Index Multimode Fibers.

In the 1970s due to the short life expectancy of the laser the use of the Light Emitting Diode (LED) coupled to the Graded Index-multimode fiber (GI-MMF) would be the dominant fiber type installed until the 1980s when single-mode fiber could be manufactured and terminated. As the newer 1300 nm lasers had a longer life this also required that the core size increase to nine microns which was a huge mechanical benefit for coupling laser diodes and for splicing and terminations. Today GI-MMF fibers are used internationally in lower speed and shorter distances and are standardized by the IEC as OM 1, OM 2, OM 3, OM 4 & OM 5 fibers. Of these OM 3, OM 4 and OM 5 have been optimized for use with laser diodes.

What about fiber geometries?

During the early lab years of fiber optics, fiber geometries were not as important as lowering the fiber's attenuation. As Donald Keck told me in an interview, "It must have been the '73-74 timeframe where fiber diameter became an issue. By that time, (John MacChesney's) MCVD work had gone on at AT&T. And for some reason or other, AT&T hit on 55/110 as the diameter (of an MMF). All along, Corning had been drawing their fibers

with a O.D. of 125 microns. In Donald Keck's words "You might ask why? We weren't using the metric system. You'd sit there with a micrometer, and you'd measure the diameter of the fibers that came off the draw. I'd draw the fiber and we'd sit down at the micrometer and measure the diameter of the fiber. Well, if we drew it at two mils—roughly 50 microns—the fiber would wind up, because of the high humidity, just wrapping itself on the drawing tractors of the drawing rig that were pulling it out of the furnace. We were wrapping the fiber on a big cardboard drum, probably 15-inches in diameter. And we found if we wrapped it around that drum, we could draw the fiber initially, even if it was ten mils or roughly 250 microns in diameter. So, ten mils, two mils—well, five is about in the middle. Five mils converted to metric system is 125 microns. So, we standardized on 125 microns at Corning. That's how that diameter came about. Eventually, 125 became the industry standard, as it is today". The 62.5 micron core measurement came about as it was half of the 125 micron cladding diameter.

50 Microns	– 2 Mils (millimeter) or approximately 1/1000th of an inch.
62.5 Microns	– 2.5 Mils
125 Microns	– 5 Mils
250 Microns	– 10 Mils

Because with SMF the core size is dependent upon the wavelength a 1300/1310 nm laser would require a nine-micron core which became the standard for "standard" single-mode fibers.

With these terms and geometries established, the fiber optic revolution would transition from the lab to the inside and outside plants. Terminating connectors and splicing fibers in the OSP could now be standardized and up until the late 1980s a myriad of new proprietary connector types evolved. Which is another story.....

The interviews with John MacChesney, Donald Keck and Charles Kao occurred between 2001 and the present.

If you have questions, comments or experiences you would like to share I would love to hear from you. WWW.Fiberstory.com or E-mail Fiberstory@gmail.com //

ABOUT THE AUTHOR Larry Johnson started his career in fiber optics in 1977, coinciding with North America's first fiber optic installation. As a Fiber Optic Specialist for Tektronix, he was part of the team that developed the first field OTDR. In 1986, he founded the Light Brigade to provide worldwide non-vendor specific training. He has researched and written 20 fiber optic courses and contributed to multiple ETA International fiber optic certification competencies and exams, including the Fiber Optic Installer (FOI), which he led as Charter Chairman for the Fiber Optics Committee in 1997. Johnson continues to serve on the ETA Fiber Optics Committee and works closely with the Fiber Broadband Association and the Utility Telecom Council's Technology Committees. He is also a guest columnist for ISE magazine writing a monthly column on fiber optics.

FiberStory was founded by Johnson in 2008 to archive the history of fiber optics, including interviews with many of fibers inventors, such as Nobel Prize winner Charles Kao. Leaving Light Brigade in March 2018, he expanded the FiberStory mission to writing articles, coordinating special events, speaking at conferences, writing industry certifications and representing the fiber industry for various organizations.

To share ideas, questions or comments, please email: Fiberstory@gmail.com or visit: www.Fiber-Story.com.

Attention ETA Members, we are now accepting nominations for the following:



2018 Technician of the Year
2018 Educator of the Year
2019-20 ETA Officers

Officers and Award Winners will be announced in the January/February issue of the *High Tech News*. New ETA Board of Directors will be inducted at the ETA Education Forum/IWCE Expo, March 4-8, 2019 in Las Vegas, Nevada.

The completed form can be mailed or faxed to ETA Headquarters or submitted electronically at: <https://www.surveymonkey.com/r/nominations19-20>

Please send, email or fax form to:
 ETA International
 5 Depot Street
 Greencastle, IN 46135
 Phone: 800.288.3824
 Fax: 765.653.4287
eta@eta-i.org

Submission Deadline: October 1, 2018

Nominations For 2018 ETA TECHNICIAN and EDUCATOR of the YEAR

TECHNICIAN of the Year Nominee: _____

Employer: _____

Contact Info(phone/email): _____

EDUCATOR of the Year Nominee: _____

School: _____

Contact Info(phone/email): _____

Reasons you feel this nominee should be considered for ETA's highest award must be attached or emailed to: eta@eta-i.org.

Nominations for the 2019-20 ETA Board

Chairman _____ John Baldwin, CETsr *(Automatically moves up from the Vice Chairman position)*

Vice Chairman _____ Shop Owner Div S/T _____

Secretary _____ Comm Div Chair _____

Treasurer _____ Comm Div S/T _____

Educ Div Chair _____ Dir Chap Relations _____

Educ Div S/T _____ Cabling Chair _____

Cert Tech Div Chair _____ Cabling Div S/T _____

Cert Tech Div S/T _____ Renewable Energy Chair _____

Shop Owner Div Chair _____ International Division Chair _____

*Board of Masters Chair _____

**Only CET Masters may nominate for this position.*

Submitted By

Your Name: _____ Your E-Mail: _____

Your Phone: _____

Signature: _____

Technicians in Pollution Control

by Glen Spielbauer

Pollution control of industrial gases and waste water is very important to environmental protection. Pollution Control equipment has advanced electronic systems that call for expert technicians in this field.

The following descriptions are from several online tutorial websites on the subject, including Wikipedia:

- Scrubber systems are a group of air pollution control devices that remove particulates and gases from industrial exhaust that are harmful to the environment.
- A wet scrubber is used for cleaning air, fuel, gas or other gases of various pollutants and dust particles by contact of target material with a scrubbing solution, which may simply be water (for dust) or solutions of reagents that specifically target certain compounds.
- They can remove gases like hydrochloric acid or ammonia.
- Dry scrubbing does not saturate the flue gas stream with moisture.
- Therefore, dry scrubbers generally do not have stack steam plume or wastewater disposal requirements. This method is used to remove acid gases primarily from combustion sources or to remove odor and corrosive gases from wastewater in treatment plants. Activated alumina with specific added materials is used to remove gases such as hydrogen sulfide, which has the well-known “rotten egg” smell.
- Adsorber materials (with the letter d), such as activated carbon, can remove chemicals from industrial exhaust gas. Adsorption is when a material to be removed adheres or sticks only to the surface of another material. The adsorber material has to be replaced after the surface is complete and cannot take on more undesired material.
- An electrostatic precipitator (ESP) is sometimes used. It removes fine dust and smoke particles from a flowing gas with an electrostatic charge with only a little impeding of the gas flow.
- Thermal oxidizers are also used to destroy hazardous air pollutants and volatile organic compounds from industrial air streams with high temperature combustion. Pollutants are chemically oxidized to form water and carbon dioxide. The temperature is set more than 650 °C (1,202 °F). If a catalyst is used, the temperature range may be lower to save on energy cost.

- Pollution control equipment can come with a color touch screen for human operator settings, programmable logic controller (PLC) control, variable frequency drive (VFD) for motor control, Ethernet communication, and File Transfer Protocol (FTP) to a remote computer.

Electronics — Key to Operation

Advanced electronics is the key to the proper operation of all types of pollution control equipment. To control the temperature, gas or water flow, and sequence timing, there are pumps, valves, motors, and electronic sensors - all driven and monitored with PLC or computer control with sequence software. Also included are variable frequency drive (VFD) modules for intelligent motor speed and timing control.

There are many two-year community and state technical colleges with associate degrees and certificate programs in environmental and pollution control technologies. While some people from these programs work for industry, the topics generally cover monitoring air or water pollutants with hand-held or stationary equipment, rather than “in-line” automatic control in industrial plants. Most people from these programs are in consulting firms or government agencies.

Electronics technicians who want to specialize in pollution control for industry should have a solid background in industrial control circuits and systems. The electronics for process monitoring in industrial manufacturing and processes (such as petroleum refining) are very similar to the electronics in pollution control. Taking a few courses or completing a certification in environmental science or pollution control technology would help the industrial electronics technician to apply electronics knowledge to pollution control equipment.

As pollution monitoring and control becomes as high-tech and automated as industrial processes, this is an important career field for electronics technicians.

<https://www.pollutionsystems.com/wet-scrubbers.html>

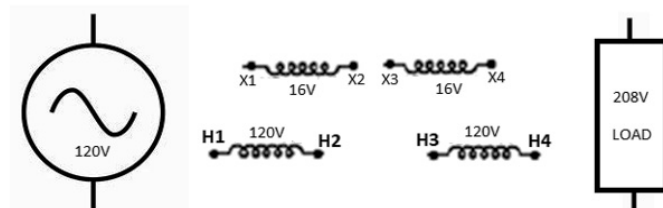
<http://www.envsrv.com/controls.htm>

<https://www.pollutionequipmentnews.com/>

BUCK & BOOST

***Puzzle answer
on page 19***

**Wire the circuit so that the 120V source can supply
208V to the load**



NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between June 1 and July 31, 2018 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
ARINC Installer (AFI)				
AFI210291	Paul Carne	AVOptics Ltd	Geoff Proudley	Yeovil Somerset
AFI210292	Graham Embleton	AVOptics Ltd	Geoff Proudley	Yeovil Somerset
AFI210290	Paul Greenway	AVOptics Ltd	Geoff Proudley	Yeovil Somerset
AFI210293	Neil Kippax	AVOptics Ltd	Geoff Proudley	Yeovil Somerset

Avionics (AVN)				
AVN209010	Edward Sartin	F Co 1-160th Soar	Mickael Cruz	Fl Campbell KY

Associate Certified Electronics Specialist (CESa)				
ASTc209674	Stephen McConnell	ETA International	Jose N Talens	Edmonton AB
ASTc209672	Brian Noble	ETA International	Jose N Talens	Edmonton AB
ASTc209675	Alex Phiasackhoua	ETA International	Jose N Talens	Edmonton AB

Certified Electronics Technician (CET)				
IND209971	Robert Araujo	Veterans Assembled electronics	John W Young	Framingham MA
IND210309	Christopher Barclay	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
CS2209234	Michael Bath	Rollover	ETA International	Greencastle IN
IND209889	Sheldon Bingham	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
IND209055	Albert Cardona	Veterans Assembled electronics	John W Young	Framingham MA
ESNT209579	Leng Chea	Advanced Technology Center	Robert C Stover	Virginia Beach VA
IND210241	Daniel Clark	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
IND209751	Ray Colon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
IND209677	Aida Dejesus	Veterans Assembled electronics	Clyde J Dolly	6/25/18
AVN209420	Dennis Donovan	373 Training Squadron	Richard W Authement	Little Rock AFB
IND209197	Lorenzo Hanna	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
IND209351	Wayne Heckman	Veterans Assembled electronics	John W Young	Framingham MA
NST210031	Darrell Hornsby	Rollover	ETA International	Greencastle IN
IND209890	William Hose	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
IND210347	Alshun Huston	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
NST209139	Mohammad Karim	Huntington Business School	Ronald P Milione	Huntington Station NY
WNT209009	Mohammad Karim	Huntington Business School	Ronald P Milione	Huntington Station NY
T1LV209503	Mohammad Karim	Motorola Solutions	Ronnie A Abdul	Long Island City NY
IND210316	Keith Laird	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
IND209140	Ronald Marshall	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
IND209483	Evans Martin	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
T1LV210503	Tim Mastrogiannakos	Motorola Solutions	Ronnie A Abdul	Long Island City NY
IND209144	Jimmy McCracken	Veterans Assembled electronics	Harry L Adams	Concord NC
IND209302	Rose Parker	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
IND210168	Michael Payne	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
IND209781	Jean Caleb Phanord	Veterans Assembled electronics	John W Young	Framingham MA
IND210311	Jonathan Ramirez	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
IND210315	M Ruiz-Aponte	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
RAO209864	Stephen Sikorski	Rollover	ETA International	Greencastle IN
DAS210056	Michael Smith	Motorola Solutions	Ronnie A Abdul	Long Island City NY
IND209885	Bradley Sweeney	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
AVN209422	Chhayng Ung	373 Training Squadron	Richard W Authement II	Little Rock AFB
DAS210508	Michael Van Winkle	Upgrade	ETA International	Greencastle IN

Master Certified Electronics Technician

The following technicians completed their Master level certification. In addition to the Associate level certification, one must successfully obtain six other ETA certifications, with no more than two originating from the same specialized category in order to qualify. Congratulations!

Cert Number	Name	Location
US210032	Darrell Hornsby	Phoenix AZ
US209504	Mohammad Karim	Bronx NY
US210180	Michael Smith	Wheatley Heights NY

Associate CET Hands-On Assessment

The following technicians completed their optional hands-on practical assessment for the Associate Certified Electronics Technician. Congratulations!

Cert Number	Name	Location
AHOA210192	M Ruiz-Aponte	Melbourne FL
AHOA210217	Brandon Aver	Melbourne FL
AHOA209784	James Hamilton	Melbourne FL
AHOA209761	William Hose	Hartford CT
AHOA210216	Donald Nicholson	Melbourne FL
AHOA209780	Michael Payne	Melbourne FL
AHOA209482	Jean Caleb Phanord	Framingham MA
AHOA210215	Michael Qualls	Melbourne FL
AHOA210218	Paul Stovall	Melbourne FL
AHOA209697	Bradley Sweeney	Hartford CT

Associate Certified Electronics Technician (CETa)				
AST209621	Phillip Abad	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST210320	Idris Abdulmalik	Associated Technical College	Arnulfo C Runas	Long Beach CA
AST209465	Jonathan Allbright	B & C Communications	Cynda C Simmons	Columbus OH
AST209887	Robert Araujo	Upgrade	ETA International	Greencastle IN

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
AST209067	Ricardo Arbis	Hunter Business School	Ronald P Milione	Huntington Station NY
AST209079	Trevor Asher	Indian Hills Community College	James J Goudy	Ottumwa IA
AST210050	Mitchell Atkins	Pittsburgh Technical Institute	James M Mueller	Oakdale PA
AST209362	Micheal Backus	Minot Education Center	Justin N Gillespie	Minot AFB ND
AST209175	Griffin Balan	Maplewood Career Center	Ted J Karam	Ravenna OH
AST210123	Marcus Banoub	Nida Corp	Kevin Gulliver	Louisville KY
AST209464	Sam Barber	ETA International	Lawrence W Stark	Berkeley MO
AST210172	Christopher Barclay	Upgrade	ETA International	Bellevue FL
AST210272	Stephan Berry	SCI Laurel Highlands	Harry J Hoffman	Somerset PA
AST209749	Sheldon Bingham	Upgrade	ETA International	Greencastle IN
AST209606	Evan Blatus	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST210163	Jamal Bouajaj	Nida Corp	Kevin Gulliver	Louisville KY
AST210138	Benjamin Bowman	Nida Corp	Kevin Gulliver	Louisville KY
AST210104	Spencer Brocksmith	Nida Corp	Kevin Gulliver	Louisville KY
AST209071	Travis Bruno-Erck	Indian Hills Community College	James J Goudy	Ottumwa IA
AST208953	Joshua Burgher	Troy Public Library	Christine Filippelli	Troy NY
AST209035	Kevin Cardozo	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
AST209488	Jose Cisneros	Centinela SP	Alejandro Diaz	Imperial CA
AST210240	Daniel Clark	Upgrade	ETA International	Greencastle IN
AST209293	Ray Colon	Upgrade	ETA International	Greencastle IN
AST210157	Samuel Costenbader	Nida Corp	Kevin Gulliver	Louisville KY
AST209467	Timothy Damiano	YTI Career Institute	Walt Bilous	York PA
AST209466	Kyrsten Daniels	YTI Career Institute	Walt Bilous	York PA
AST209658	Scott Davis	ITI Technical College	Allen Spiewak	Baton Rouge LA
AST209480	Aida Dejesus	Upgrade	ETA International	Greencastle IN
AST209073	Reece Denniston	Indian Hills Community College	James J Goudy	Ottumwa IA
AST209418	Donald Dignam	Motorola Solutions	Wesley A Pellum	Gilbert AZ
AST209419	Dennis Donovan	373 Training Squadron	Richard W Authement	Little Rock AFB
AST209474	Darius Dowling	YTI Career Institute	Walt Bilous	Glen Rock PA
AST209052	Ryan Escate-Correa	Franklin Co Career & Tech Center	Shawn Eckenrode	Harrisburg PA
AST209471	Erin Eshleman	YTI Career Institute	Walt Bilous	York PA
AST210121	Joseph Ferguson	Nida Corp	Kevin Gulliver	Louisville KY
AST209187	Robert Fowler	Maplewood Career Center	Ted J Karam	Ravenna OH
AST210231	Ronald Giffin	Greater Altoona Career & Tech Ctr	Scott Dalby	Altoona PA
AST209183	Zachery Grant	Maple Career Center	Ted J Karam	Ravenna OH
AST209054	Lorenzo Hanna	Upgrade	ETA International	Greencastle IN
AST209077	Billy Haynes	Indian Hills Community College	James J Goudy	Ottumwa IA
AST209138	Daniel Headlee	University TN Chattanooga	Tonya Botts	Chattanooga TN
AST209120	Wayne Heckman	Upgrade	ETA International	Greencastle IN
AST209169	Erik Heidinger	Maplewood Career Center	Ted J Karam	Ravenna OH
AST209469	Zachary Hoerner	YTI Career Institute	Walt Bilous	York PA
AST210295	Alshun Huston	Upgrade	ETA International	Greencastle IN
AST208952	Christopher Irvin	Troy Public Library	Christine Filippelli	Troy NY
AST209476	Marcelo Jang	OEMTD	Robert E Evans	Fl Gordon GA
AST210322	Reginald Jennings	Associated Technical College	Arnulfo C Runas	Long Beach CA
AST210160	Jordan Johnson	Nida Corp	Kevin Gulliver	Louisville KY
AST210151	Yusef Khalil	Nida Corp	Kevin Gulliver	Louisville KY
AST209310	Lensey King	Center Point High School	Roderic P Taylor	Center Point AL
AST210106	Ryan Knepe	Nida Corp	Kevin Gulliver	Louisville KY
AST210303	Justin Koch	University of Arkansas	John Martini	Fl Smith AR
AST209347	Hayden Kudela	Minot Education Center	Justin N Gillespie	Minot AFB ND
AST209240	Alex Kulac	Minot Education Center	Justin Gillespie	Minot AFB ND
AST209764	Keith Laird	Veterans Assembled electronics	Robert C Berlin	Orlando FL
AST209185	Gaige Ludwig	Maplewood Career Center	Ted J Karam	Ravenna OH
AST209081	Austin Major	Indian Hills Community College	James J Goudy	Ottumwa IA
AST209608	Cole Mandeville	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST210113	Lawbert Mankie	Nida Corp	Kevin Gulliver	Louisville KY
AST210030	John Marchand	B & C Communications	Cynda C Simmons	Akron OH
AST209313	Jeremie Marshall	Center Point High School	Roderic P Taylor	Center Point AL
AST209023	Ronald Marshall	Upgrade	ETA International	Greencastle IN
AST209295	Evans Martin	Upgrade	ETA International	Greencastle IN
AST209063	Jimmy McCracken	Upgrade	ETA International	Greencastle IN
AST210522	Jeremy McCray	Upgrade	ETA International	Orlando FL
AST208768	Joseph McCuen	Salt Lake Community College	Gilbert Ulibarri Jr	Salt Lake City UT
AST210136	Brayden Meduna	Nida Corp	Kevin Gulliver	Louisville KY
AST209618	Kenrady Mom	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST209619	Tyler Nhan	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST209929	Donald Nicholson	Upgrade	ETA International	Greencastle IN
AST209473	Michael Oyola	YTI Career Institute	Walt Bilous	York PA
AST209075	Austin Palmer	Indian Hills Community College	James J Goudy	Ottumwa IA
AST209170	Samuel Panczak	Maplewood Career Center	Ted J Karam	Ravenna OH
AST209021	Rose Parker	Upgrade	ETA International	Greencastle IN
AST209604	Visoth Pen	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST208951	Stephen Plekan	Troy Public Library	Christine Filippelli	Troy NY
AST209617	Lauren Porter	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST209630	Jonathan Ramirez	Upgrade	ETA International	Greencastle IN
AST209068	Dylan Richey	Indian Hills Community College	James J Goudy	Ottumwa IA
AST209590	Juan Romero	Centinela SP	Alejandro Diaz	Imperial CA
AST209472	Noah Russell	YTI Career Institute	Walt Bilous	York PA
AST209613	Alejandro Santana	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST209773	Warren Saunders	American Marine Training Centers	Yvette S Stairrett	Sequim WA
AST209753	Aaron Schooley	University of Alaska Fairbanks	Patty White	Fairbanks AK
AST209777	Dana Scott	Upgrade	ETA International	Greencastle IN
AST209477	Stephen Sikorski	OEMTD	Robert E Evans	Fl Gordon GA
AST209605	Aria Siriouthay	Greater Lowell Technical HS	Robert L Rondeau	Tyngsboro MA
AST210229	Calin Spohn	Greater Altoona Career & Tech Ctr	Scott Dalby	Altoona PA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
AST209069	Samantha Stephens	Indian Hills Community College	James J Goudy	Ottumwa IA
AST210052	Austin Stephon	Pittsburgh Technical Institute	James M Mueller	Oakdale PA
AST209647	Derrick Tabron	Weaver Academy	Jeffrey F Gates	Greensboro NC
AST209686	James Tiller	Floyd Co Library	Jonathan Campbell	Prestonsburg KY
AST210524	Luis Torres-Pacheco	Upgrade	ETA International	Orlando FL
AST209589	Adrian Toscano	Centinela SP	Alejandro Atilano	Imperial CA
AST210119	Tyler Tucker	Nida Corp	Kevin Gulliver	Louisville KY
AST209423	Chhaya Ung	373 Training Squadron	Richard W Authement II	Little Rock AFB
AST209478	Enrique Valenzuela	OEMTD	Robert E Evans	FT Gordon GA
AST209171	Jacob Weaver	Maplewood Career Center	Ted J Karam	Ravenna OH
AST209168	Jake Webb	University of TN Testing Center	Tonya Botts	Chattanooga TN
AST209312	Harold White	Center Point High School	Roderic P Taylor	Center Point AL
AST210002	Kenneth White	Upgrade	ETA International	Greencastle IN
AST208949	Dennis Wilfred	Norfolk State University	John H Spurlin	Virginia Beach VA

Senior Certified Electronics Technician (CETs)

SETESNT209759	Leng Chea	Upgrade	ETA International	Greencastle IN
SETWCM209524	Fred Craycraft	Rolover	ETA International	Greencastle IN
SETCS209024	Tony Denaro	Veterans Assembled electronics	Derek T Abrassart-White	Hartford CT
SETDAS210538	Jacob Guringo	Dane Brockmiller Consulting	Dane R Brockmiller	Eureka MO
SETIND209930	James Hamilton	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
SETWCM210411	James Hamilton	Rolover	ETA International	Greencastle IN
SETCS209017	Patrick Howes	Veterans Assembled electronics	Tony J Denaro	Hartford CT
SETDAS210537	Andrew Johns	Dane Brockmiller Consulting	Dane R Brockmiller	Eureka MO
SETIND210189	Donald Nicholson	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
SETWCM210533	Donald Nicholson	Rolover	ETA International	Greencastle IN
SETCS209700	Jesse Olson	Motorola Solutions	Ronnie A Abdool	Brooklyn NY

Certified Service Manager (CSM)

CSM209121	Kenneth Davis	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
CSM209147	Daniel Pearson	Veterans Assembled electronics	Francisco A Sablan	Leesburg FL

Customer Service Specialist (CSS)

CSS209807	Tyronne Abraham	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210080	April Alexander	Windham School District	Debbie A White	Burnet TX
CSS208847	LaQuisha Allen	Sierra Vista Adult School (CCWF)	Linda Bolton	Chowchilla CA
CSS210101	Jessica Alvarado	Windham School District	Debbie A White	Burnet TX
CSS210022	Chastity Alvarez	Windham School District	Verna L Land	SanSaba TX
CSS210025	Alizay Anderson	Windham School District	Verna L Land	SanSaba TX
CSS209489	Byron Arceneaux	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS210116	Turner Ashby	Nida Corp	Kevin Gulliver	Louisville KY
CSS209840	Brooke Backenstos	Skills Oregon	Jeri Davis	Milwaukie OR
CSS210474	Kyle Baldwin	Central Ridge Library	Adam Chang	Beverly Hills FL
CSS210096	Erica Banks	Windham School District	Debbie A White	Burnet TX
CSS210124	Marcus Banoub	Nida Corp	Kevin Gulliver	Louisville KY
CSS210026	Cierra Barber	Windham School District	Verna L Land	SanSaba TX
CSS210468	Jeremiah Barrett	Greystone Adult School (FSP)	Denise Wright	Repsa CA
CSS209872	Charles Bartee	Windham School District	Cynthia Turner	Hondo TX
CSS209981	Prestin Begeman	ETA International	Richard W Booth Jr	Louisville KY
CSS209490	Daniel Beltran	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS209826	Breanna Benoit	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS210130	Jacob Berlinski	Nida Corp	Kevin Gulliver	Louisville KY
CSS209825	Amanda Berry	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS209133	Michelle Betancourt	CALPIA	Phillip G Moore	Folsom CA
CSS210068	Amanda Biggers	Windham School District	Debbie A White	Burnet TX
CSS210115	Zacharia Blubaugh	Nida Corp	Kevin Gulliver	Louisville KY
CSS210164	Jamal Bouajaj	Nida Corp	Kevin Gulliver	Louisville KY
CSS209370	Travis Boutell	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS209987	Eli Bowden	ETA International	Richard W Booth Jr	Louisville KY
CSS210139	Benjamin Bowman	Nida Corp	Kevin Gulliver	Louisville KY
CSS210375	Brian Brickhouse	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS210109	Dallas Bright	Nida Corp	Kevin Gulliver	Louisville KY
CSS210105	Spencer Brocksmith	Nida Corp	Kevin Gulliver	Louisville KY
CSS209867	Tyrun Brodrex	Windham School District	Cynthia Turner	Hondo TX
CSS210333	Cedrick Brown	CALPIA	William B Anderson	Soledad CA
CSS209018	Chris Brown	Veterans Assembled electronics	Tony J Denaro	Hartford CT
CSS209827	Crystal Brown	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS210282	Darrin Brown	CALPIA	Victor Ojeda	San Diego CA
CSS209822	Jair Brown	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS210077	Madison Brown	Windham School District	Debbie A White	Burnet TX
CSS210019	Hannah Bruce	Windham School District	Verna L Land	SanSaba TX
CSS209373	Brady Brummett	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS210382	John Bruton	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS210287	Marvin Bryant	CALPIA	Patricia Ackman	Vacaville CA
CSS208971	Joshua Buehler	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS209029	Melissa Buitrago	ASI Career Institute	M Neumann Monagle	Turnersville NJ
CSS210000	Daniel Burdette	ETA International	Richard W Booth Jr	Louisville KY
CSS209797	Lewis Burns	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS209881	Cornelius Burton	Windham School District	Cynthia Turner	Hondo TX
CSS209491	Michael Bush	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS208962	Dominique Cabrera	CALPIA	Vincent Moralez	Folsom CA
CSS209818	Robert Caldwell	CALPIA	Quauhtemoc Cortes	Avenal CA
CSS209871	David Camacho	Windham School District	Cynthia Turner	Hondo TX
CSS209805	Frank Cannon	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210079	Karyn Cantu	Windham School District	Debbie A White	Burnet TX
CSS209163	Devyn Capistran	Windham School District	Elia Hernandez	San Antonio TX

CSS210011	Hunter Casteel	ETA International	Richard W Booth Jr	Louisville KY
CSS210084	Helen Chappell	Windham School District	Debbie A White	Burnet TX
CSS210131	Nathan Chase	Nida Corp	Kevin Gulliver	Louisville KY
CSS210061	Amanda Clark	Windham School District	Debbie A White	Burnet TX
CSS209164	Brian Clark	Windham School District	Elia Hernandez	San Antonio TX
CSS210062	Nicole Clark	Windham School District	Debbie A White	Burnet TX
CSS209765	Joshua Classen	Infotec	Charles E Casbeer Jr	Virginia Beach VA
CSS208964	A Clemmons	CALPIA	Vincent Moralez	Folsom CA
CSS210167	Colton Conway	Nida Corp	Kevin Gulliver	Louisville KY
CSS210158	Samuel Costenbader	Nida Corp	Kevin Gulliver	Louisville KY
CSS210162	Zane Cozart	Nida Corp	Kevin Gulliver	Louisville KY
CSS209801	Brandon Crawford	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210184	Herbert Cruz	CALPIA	Anthony Ekwoi	San Diego CA
CSS210463	Michael Curtis	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS209836	Tucy Amanda Curtis	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS209869	Michael Daniel	Windham School District	Cynthia Turner	Hondo TX
CSS210064	Amber Davis	Windham School District	Debbie A White	Burnet TX
CSS209492	Major Davis	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS209493	Armando Dehuma	Windham Schl Dist, Dominguez	Jessica Driggers	Brandon FL
CSS210376	Jonathan Diamant	PRIDE Enterprises	Stephen LeNoir	San Luis Obispo CA
CSS209796	Roberto Diego	CALPIA	Amizarel Moyet	Avon Park FL
CSS210361	Joseph Dohalick	Pride Enterprises	Debbie A White	Burnet TX
CSS210094	Ashley Donohue	Windham School District	Caryn A Argenio	Folsom CA
CSS210373	Kassandra Duran	CALPIA	Jessica Driggers	Brandon FL
CSS210378	Alan Edmunds	PRIDE Enterprises	Cynthia Turner	Hondo TX
CSS209870	Benjamin Elias	Windham School District	Cynthia Turner	Hondo TX
CSS209880	Daniel English	Windham School District	Amizarel Moyet	Avon Park FL
CSS210364	Steven Etheredge	Pride Enterprises	Debbie A White	Burnet TX
CSS210074	Amanda Evans	Windham School District	Johnny L Worthy	Charlotte NC
CSS209823	Jamal Evans	Urban League - Cntrl Carolinas	Rebecca J Hall	Soledad CA
CSS210332	Robert Fallis	CALPIA	Richard W Booth Jr	Louisville KY
CSS210010	Justin Farley	ETA International	Johnny L Worthy	Charlotte NC
CSS209832	Jaleesa Farrow	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS209824	Almia Feaster	Urban League - Cntrl Carolinas	Kevin Gulliver	Louisville KY
CSS210122	Joseph Ferguson	Nida Corp	Harry J Hoffman	Somerset PA
CSS210273	John Field	SCI Laurel Highlands	Paul D Massey	San Antonio TX
CSS209494	Rene Figueroa	Windham Schl Dist, Dominguez	Kevin Gulliver	Louisville KY
CSS210165	Noah Finlison	Nida Corp	Richard W Booth Jr	Louisville KY
CSS209986	Jacob Flora	ETA International	Vincent Moralez	Folsom CA
CSS209816	Mireya Flores	Folsom Women's Facility	Jessica Driggers	Brandon FL
CSS210381	Calvin Ford	PRIDE Enterprises	Stephen LeNoir	San Luis Obispo CA
CSS209804	Gregory Ford	CALPIA	M Neumann Monagle	Turnersville NJ
CSS209027	Lisa Fortunato	ASI Career Institute	Centinela SP	Imperial CA
CSS210336	Damon Franklin	Windham School District	Debbie A White	Burnet TX
CSS210085	Jennifer Freiman	Nida Corp	Kevin Gulliver	Louisville KY
CSS210156	Tyler Fritz	CALPIA	Caryn A Argenio	Folsom CA
CSS209819	Aglae Garcia	Windham School District	Cynthia Turner	Hondo TX
CSS209875	Christopher Garcia	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS209799	Raymond Garcia	CALPIA	M Neumann Monagle	Turnersville NJ
CSS208965	Vanessa Garcia	ETA International	Richard W Booth Jr	Louisville KY
CSS209895	Megan Gilroy	ASI Career Institute	Phillip G Moore	Folsom CA
CSS209984	Gavin Ginn	ETA International	Dagoberto Ovalle	Avenal CA
CSS209932	Sherry Golding	Folsom Women's Facility	Debbie A White	Burnet TX
CSS209083	Todd Gonsalves	Golden Hills Adult School (ASP)	Debbie A White	Burnet TX
CSS210092	Carolina Gonzales	Windham School District	Debbie A White	Burnet TX
CSS210098	Crystal Grajola	Windham School District	Cynthia M Vasquez	Tehachapi CA
CSS210181	Michael Grandon	CALPIA	Jessica Driggers	Brandon FL
CSS210377	Edward Grayden	CALPIA - CCI PIA HFM	Cynthia M Vasquez	Tehachapi CA
CSS210182	Eddie Guidino	Windham School District	Elia Hernandez	San Antonio TX
CSS209151	Gonzalo Guerrero	Central Ridge Library	Adam Change	Beverly Hills FL
CSS210473	Justin Haines	Windham School District	Debbie A White	Burnet TX
CSS210103	Eryn Hall	Windham School District	Debbie A White	Burnet TX
CSS210065	Danielle Hankins	Windham School District	Jessica Driggers	Brandon FL
CSS209996	William Harbour	PRIDE Enterprises	Johnny L Worthy	Charlotte NC
CSS209833	Shalisha Hardwrich	Urban League - Cntrl Carolinas	Richard W Booth Jr	Louisville KY
CSS209983	Dillon Harper-Jones	ETA International	Verna L Land	SanSaba TX
CSS210021	Misty Hathcock	Windham School District	Debbie A White	Burnet TX
CSS210097	Audrea Hatten	Windham School District	Kevin Gulliver	Louisville KY
CSS210147	Justin Henn	Nida Corp	Michelle Purdy	Susansville CA
CSS209754	Tou Her	High Desert SP	Cynthia Turner	Hondo TX
CSS209866	Kevin Herd	Windham School District	William B Anderson	Soledad CA
CSS210335	Byron Hernandez	CALPIA	Elia Hernandez	San Antonio TX
CSS209162	Jonathan Hernandez	Windham School District	Verna L Land	SanSaba TX
CSS210020	Brittney Hilger	Windham School District	Kevin Gulliver	Louisville KY
CSS210140	Daniel Hoffman	Nida Corp	Stephen LeNoir	San Luis Obispo CA
CSS209136	Torrence Holmes	CALPIA	Johnny L Worthy	Charlotte NC
CSS209868	Dontavis Hood	Windham School District	Cynthia Turner	Hondo TX
CSS210146	Jarrod Houle	Nida Corp	Kevin Gulliver	Avon Park FL
CSS210362	Vincent Hudson	Pride Enterprises	Amizarel Moyet	Avon Park FL
CSS210099	Shelley Hughes	Windham School District	Debbie A White	Burnet TX
CSS210005	Javier Ibarra-Sanchez	ETA International	Richard W Booth Jr	Louisville KY
CSS210281	Alex Ilopo	CALPIA	Anthony Ekwoi	San Diego CA
CSS209802	Arvel Jackson	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS209830	Keisha Jackson	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC
CSS209798	Darius James	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS209791	Alphonso Jaryan	Urban League - Cntrl Carolinas	Johnny L Worthy	Charlotte NC

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between June 1 and July 31, 2018 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
CSS210171	Briana Jeibmann	Nida Corp	Kevin Gulliver	Louisville KY	CSS210280	Daniel Perez	CALPIA	Lisa Gularte	San Diego CA
CSS210161	Jordan Johnson	Nida Corp	Kevin Gulliver	Louisville KY	CSS209318	P Phanbandith	Salinas Valley SP	Javier Trujillo	Soledad CA
CSS209795	Ronnell Johnson	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS210089	Karen Phifer	Windham School District	Debbie A White	Burnet TX
CSS210023	Shunna Johnson	Windham School District	Verna L Land	SanSaba TX	CSS210095	Marissa Pickering	Windham School District	Debbie A White	Burnet TX
CSS208848	Chellyn Jones	Sierra Vista Adult School (CCWF)	Linda Bolton	Chowchilla CA	CSS210067	Corrina Piel	Windham School District	Debbie A White	Burnet TX
CSS209831	Ernesha Jones	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS208960	Marylane Plante	CALPIA	Justin Andrews	Chowchilla CA
CSS209834	Sharon Jones	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS209544	Patricia Presba	Valley SP	Justin Andrews	Chowchilla CA
CSS209821	Augustin Kasongo	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS210060	Karleatha Price	Sierra Vista Adult School (CCWF)	Linda Bolton	Chowchilla CA
CSS209814	Jeffrey Keyes	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS209500	Benjamin Pulido	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS210152	Yousef Khalil	Nida Corp	Kevin Gulliver	Louisville KY	CSS209550	Consuelo Pureco	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA
CSS210071	Emyle Killman	Windham School District	Debbie A White	Burnet TX	CSS208963	Elizabeth Randall	CALPIA	Vincent Moralez	Folsom CA
CSS209659	Keung Han Kim	CTF - Soledad - CALPIA	Dale R Mulhern	Soledad CA	CSS209874	Paul Reid	Windham School District	Cynthia Turner	Hondo TX
CSS210024	Beth Kirby	Windham School District	Verna L Land	SanSaba TX	CSS209793	Steven Rincon	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210107	Ryan Knepel	Nida Corp	Kevin Gulliver	Louisville KY	CSS208844	Antwaion Robinson	CALPIA	Alejandro Diaz	Imperial CA
CSS210117	Jace Lairsay	Nida Corp	Kevin Gulliver	Louisville KY	CSS210334	Greg Robinson	CALPIA	William B Anderson	Soledad CA
CSS208961	Shaunda Lane	CALPIA	Vincent Moralez	Folsom CA	CSS210379	Jubral Robinson	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS209549	Deborah Lange	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA	CSS208959	Lizbeth Robles	CALPIA	Alison Reidel	Folsom CA
CSS210073	Catherine Latson	Windham School District	Debbie A White	Burnet TX	CSS209152	Roy Robles	Windham School District	Elia Hernandez	San Antonio TX
CSS209300	Johnny Leonard	Vetarians Assembled electronics	Jason E Greene	Concord NC	CSS209547	Cherie Rodriguez	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA
CSS209150	Joseph Leonard	Windham School District	Elia Hernandez	San Antonio TX	CSS209995	Casey Ruiz	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS209135	Cleofas Lewis	CALPIA	Caryn A Argenio	Vacaville CA	CSS210086	Cassandra Ruiz	Windham School District	Debbie A White	Burnet TX
CSS209829	Lewis Lindo	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS209154	Michael Ruiz	Windham School District	Elia Hernandez	San Antonio TX
CSS210330	Martin Lomas	CALPIA	Rebecca J Hall	Soledad CA	CSS210042	Kenneth Russian	CALPIA	Robert L Martinez	Tehachapi CA
CSS210226	Edward Long	CALPIA - MCSP	Valerie J Lacey	Ione CA	CSS209548	Ramona Sandoval	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA
CSS209161	Pedro Lopez	Windham School District	Elia Hernandez	San Antonio TX	CSS209841	Sariah Sands	Skills Oregon	Jeri Davis	Milwaukie OR
CSS209319	Paul Loutzenhiser	CTF - Soledad - CALPIA	Dale R Mulhern	Soledad CA	CSS209066	Joshua Santos	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS210041	Marcos Luna	CALPIA	Robert L Martinez	Tehachapi CA	CSS209153	Alejandro Saucedo	Windham School District	Elia Hernandez	San Antonio TX
CSS209160	Obdulio Mancillas	Windham School District	Elia Hernandez	San Antonio TX	CSS209817	Elizabeth Schatz	Folsom Women's Facility	Vincent Moralez	Folsom CA
CSS210114	Lawbert Mankie	Nida Corp	Kevin Gulliver	Louisville KY	CSS209991	Ryan Sheidow	ETA International	Richard W Booth Jr	Louisville KY
CSS210004	Kyle Martin	ETA International	Richard W Booth Jr	Louisville KY	CSS209487	James Shepherd	CALPIA	Katica Bryant	Susanville CA
CSS210040	Anthony Martinez	CALPIA	Robert L Martinez	Tehachapi CA	CSS210082	Tonja Sherburne	Windham School District	Debbie A White	Burnet TX
CSS209495	Richard Martinez	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX	CSS209499	Justin Short	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX
CSS209159	Victor Martinez	Windham School District	Elia Hernandez	San Antonio TX	CSS209877	William Shuts	Windham School District	Cynthia Turner	Hondo TX
CSS210028	Brittany Massengill	Windham School District	Verna L Land	SanSaba TX	CSS208966	Lamar Simms	Folsom SP	Alison Reidel	Folsom CA
CSS209371	Jake Mattingly	Careerline Tech Center	Nancy L Kuzma	Holland MI	CSS209299	Quincy Singletary	Veterans Assembled electronics	Jason E Greene	Concord NC
CSS210150	Jonathan Mauser	Nida Corp	Kevin Gulliver	Louisville KY	CSS209809	Andrew Smith	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210072	Kristine Mayes	Windham School District	Debbie A White	Burnet TX	CSS210076	Bailey Smith	Windham School District	Debbie A White	Burnet TX
CSS209372	Hunter Maynard	Careerline Tech Center	Nancy L Kuzma	Holland MI	CSS210043	Christine Smith	CALPIA	Caryn A Argenio	Folsom CA
CSS210225	Veronica McCall	CALPIA	Caryn A Argenio	Folsom CA	CSS210409	Curtis Smith	CALPIA	Dale R Mulhern	Soledad CA
CSS209158	Cordell McCarter	Windham School District	Elia Hernandez	San Antonio TX	CSS210044	Maria Soto	CALPIA	Alison Reidel	Folsom CA
CSS209876	Justin McCarthy	Windham School District	Cynthia Turner	Hondo TX	CSS208958	Anthony Spears	CALPIA	Aliza Shaw	Jamestown CA
CSS209306	Jimmie McCracken	Veterans Assembled electronics	Harry L Adams	Concord NC	CSS210093	Jessica Spears	Windham School District	Debbie A White	Burnet TX
CSS209790	Barnard McGaughy	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS209980	Bailey St Clair	ETA International	Richard W Booth Jr	Louisville KY
CSS210137	Brayden Meduna	Nida Corp	Kevin Gulliver	Louisville KY	CSS210083	Sahvanna Stater	Windham School District	Debbie A White	Burnet TX
CSS209134	Daisy Mendez	CALPIA	Vincent Moralez	Folsom CA	CSS210128	Aaron Stocker	Nida Corp	Kevin Gulliver	Louisville KY
CSS210100	Michelle Mendez	Windham School District	Debbie A White	Burnet TX	CSS208845	Ben Stokes	CALPIA	Linda Goodman	Ione CA
CSS210027	Raven Mickens	Windham School District	Verna L Land	SanSaba TX	CSS209421	Kevin Stoleckas	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS209149	Erik Mijarez	Windham School District	Elia Hernandez	San Antonio TX	CSS210066	Summer Story	Windham School District	Debbie A White	Burnet TX
CSS208828	Davine Millar	Sierra Vista Adult School (CCWF)	Danny M Clark	Chowchilla CA	CSS210132	Sara Summerhill	Nida Corp	Kevin Gulliver	Louisville KY
CSS209157	Terrell Mills	Windham School District	Elia Hernandez	San Antonio TX	CSS209132	Bre'Anna Taylor	CALPIA	Phillip G Moore	Folsom CA
CSS209810	Donald Mitchell	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS209792	Lee Thao	CALPIA	Patricia Ackman	Vacaville CA
CSS209879	Sean Monson	Windham School District	Cynthia Turner	Hondo TX	CSS209755	Christopher Thompson	Pleasant Valley Adult School	Susana Solis	Lancaster CA
CSS209545	Karen Moore	Valley SP	Justin Andrews	Chowchilla CA	CSS209878	Michael Threat	Windham School District	Cynthia Turner	Hondo TX
CSS209989	Roy Moore	ETA International	Richard W Booth Jr	Louisville KY	CSS210318	Evan Toth	ETA International	Richard L Karlowsky	Charlottesville PA
CSS210088	Shelby Moore	Windham School District	Debbie A White	Burnet TX	CSS210120	Tyler Tucker	Nida Corp	Kevin Gulliver	Louisville KY
CSS209369	Nate Moored	Careerline Tech Center	Nancy L Kuzma	Holland MI	CSS210363	Bradley Twinam	Pride Enterprises	Amizarel Moyet	Avon Park FL
CSS209934	Uvaldo Mora	Centinela SP	Alejandro Diaz	Imperial CA	CSS210063	Jessica Va	Windham School District	Debbie A White	Burnet TX
CSS209485	Eliad Morales	CALPIA ASP HFM	Victor Lustre	Avenal CA	CSS209165	Christopher Valadez	Windham School District	Elia Hernandez	San Antonio TX
CSS209812	Henri Morales	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS210286	John Vang	CALPIA	Patricia Ackman	Vacaville CA
CSS209552	Natalie Morales	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA	CSS209363	Sara VanOrder	Careerline Tech Center	Nancy L Kuzma	Holland MI
CSS210359	Breanna Morris	Central Ridge Library	Adam Chang	Beverly Hills FL	CSS210075	Andrea Vasquez	Windham School District	Debbie A White	Burnet TX
CSS210112	Joseph Mosley	Nida Corp	Kevin Gulliver	Louisville KY	CSS209181	Ronnie Vaughn	Centinela SP	Alejandro Diaz	Imperial CA
CSS209497	Omar Moya	Windham School District,	Paul D Massey	San Antonio TX	CSS209486	Edgar Velazquez	CALPIA ASP HFM	Victor Lustre	Soledad CA
CSS210232	Zachary Mullen	Greater Altona Career & Tech Ctr	Scott Dalby	Altona PA	CSS210410	Charles Venzor	CALPIA	Rebecca J Hall	Soledad CA
CSS209156	James Munoz	Windham School District	Elia Hernandez	San Antonio TX	CSS210070	Bobbi Villanueva	Windham School District	Debbie A White	Burnet TX
CSS208955	Horacio Navarro	CALPIA	Michelle Purdy	Susanville CA	CSS209837	Wendy Wade	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC
CSS209992	Noah Nelson	ETA international	Richard W Booth Jr	Louisville KY	CSS210887	Amie Wakefield	Windham School District	Debbie A White	Burnet TX
CSS210224	Keith Nesbitt	CALPIA	Alan Alger	Folsom CA	CSS209988	William Wallace	ETA International	Richard W Booth Jr	Louisville KY
CSS209820	Beggy Ngango	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC	CSS210006	Christopher Waters	ETA International	Richard W Booth Jr	Louisville KY
CSS209856	Son Nguyen	CALPIA	Michelle Purdy	Susanville CA	CSS209484	Kenneth Whitehead	TN College of Applied Technology	Shirley M Brown	Hohenwald TN
CSS209803	Jacob Nielsen	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS209811	Darryl Williams	CALPIA	Stephen LeNoir	San Luis Obispo CA
CSS210069	Delani Nissen	Windham School District	Debbie A White	Burnet TX	CSS209969	Gerald Williams	Windham School District	Cynthia Turner	Hondo TX
CSS210331	Johnny Norton	CALPIA	William B Anderson	Soledad CA	CSS210090	Charise Wright	Windham School District	Debbie A White	Burnet TX
CSS209813	Christopher Oatey	CALPIA	Stephen LeNoir	San Luis Obispo CA	CSS210383	Paul Wright	PRIDE Enterprises	Jessica Driggers	Brandon FL
CSS210081	Ronda Ogilvie	Windham School District	Debbie A White	Burnet TX	CSS210285	Gilbert Ylitz	CALPIA	Anthony Ekwoi	San Diego CA
CSS209131	Charlotte O'Neil	CALPIA	Justin Andrews	Chowchilla CA	CSS209546	Alicia Zaragoza	Folsom Women's Facility CTE/HFM	Phillip G Moore	Folsom CA
CSS209982	Jacob O'Shaughnessy	ETA International	Richard W Booth Jr	Louisville KY	CSS209835	Kimyon Zari	Urban League - Cntrl Carolinas	Johnny L Worthing	Charlotte NC
CSS210380	James Parker	PRIDE Enterprises	Jessica Driggers	Brandon FL					
CSS209694	Rose Parker	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL					
CSS210412	Ray Pascual	CALPIA	Rebecca J Hall	Soledad CA					
CSS209839	MacKenna Payne	Skills Oregon	Jeri Davis	Milwaukie OR					
CSS209498	Jesus Pena	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX					
CSS208957	Luis Penalzoa	CALPIA	Michelle Purdy	Susanville CA					
CSS209323	Alex Perez	CALPIA	Patricia Ackman	Vacaville CA					
CSS209155	Antonio Perez	Windham School District	Elia Hernandez	San Antonio TX					
CSS209501	Christopher Perez	Windham Schl Dist, Dominguez	Paul D Massey	San Antonio TX					

Computer Service Technician (CST)

CST209343	M Abdul Majeed	Rollover	ETA International	Greencastle IN
CST209301	Shahabaz Basheer E	Nirmalagiri College	Syriac K Jose	Kerala India
CST209523	Fred Craycraft	Rollover	ETA International	Greencastle IN
CST209926	Roxanne Dias	Rollover	ETA International	Greencastle IN

Distributed Antenna Systems (DAS)

DAS210048	Chris LaPerle	Stayton Public Library	Stephanie Rubel	Stayton OR
-----------	---------------	------------------------	-----------------	------------

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
DAS209526	Kelly Murphy	North Seattle College	Charles J Eckard	Seattle WA
DAS210540	Zachary Zagari	Dane Brockmiller Consulting	Dane R Brockmiller	Eureka MO
DCI209324	Tyler Blagg	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209329	Isaiah Burke	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI210012	Hunter Casteel	ETA International	Richard W Booth Jr	Louisville KY
DCI209337	Gunnar Halloran	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209334	Tristan Harn	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209330	Travis Jackson	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209325	Charles King	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209327	Corey Letourneau	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI209336	Luisana Mendoza	Advanced Technology Center	Robert C Stover	Virginia Beach VA
DCI210009	Donovan Tames	ETA International	Richard W Booth Jr	Louisville KY
DCI209326	Jay Wertz	Advanced Technology Center	Robert C Stover	Virginia Beach VA

Electronics Modules - DC (EM1)

EM1210238	Ruth Baker	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1208989	D Barcnas Alvarado	North Johnston High School	James W Phillips	Kenly NC
EM1210306	Wesley Browne	Veterans Assembled electronics	Harry L Adams	Fayetteville NC
EM1209285	Timothy Carter	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209034	Venecia Castaneda	High Point Central	Christopher C Moore	High Point NC
EM1208980	Kacie Clark	North Johnston High School	James W Phillips	Kenly NC
EM1209205	Matthew Cochran	Bishop State Community College	Joseph Williams	Mobile AL
EM1209270	Richard Crist	Crest High School	Walter S Spurling	Shelby NC
EM1209264	Sierra Crocker	Crest High School	Walter S Spurling	Shelby NC
EM1209032	Dylan Davis	High Point Central	Christopher C Moore	High Point NC
EM1209316	Christ Davis-Tanner	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209247	Colin DeWall	West Stanly High School	Adam Storms	Oakboro NC
EM1209248	River Dodd	West Stanly High School	Adam Storms	Oakboro NC
EM1208981	Sydney Durham	North Johnston High School	James W Phillips	Kenly NC
EM1209359	Enrico Fagnano	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1209344	Matt Frost-Shoemaker	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209345	Ariel Garcia	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1209033	Dominik Goetsch	High Point Central	Christopher C Moore	High Point NC
EM1209556	Joana Goulos	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM1209557	Vayise Greene	Hanover High School	Chandra N Rhue	Mechanicsville VA
EM1209263	William Greene	Crest High School	Walter S Spurling	Shelby NC
EM1209202	Nicholas Griffin	Bishop State Community College	Joseph W Battista	Mobile AL
EM1209274	Garrett Hamilton	Crest High School	Walter S Spurling	Shelby NC
EM1209558	Jonathan Harnois	Hanover High School	Chandra N Rhue	Mechanicsville VA
EM1209244	Dylan Hatley	West Stanly High School	Adam Storms	Oakboro NC
EM1209632	Erik Henson	Greater Lowell Technical HS	Timothy L Yauch	Waldorf MD
EM1209265	Tyler Henson	Crest High School	Walter S Spurling	Shelby NC
EM1209648	Howard Jackson	Veterans Assembled electronics	John W Young	Framingham MA
EM1209279	Damemian Jadoo	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM1208986	Joshua Johnson	North Johnston High School	James W Phillips	Kenly NC
EM1209571	Quashon Johnson	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1208927	Bryan Jones	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1209573	Michael Joyner	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209561	John Lander	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM1209236	Zachary Landrum	Bishop State Community College	Joseph Williams	Mobile AL
EM1209787	Antoine Loud	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM1209638	Benjamin Martin	North Point High School	Timothy L Yauch	Waldorf MD
EM1208982	Naomi Melnicuk	North Johnston High School	James W Phillips	Kenly NC
EM1209260	Oswaldo Montesino	Crest High School	Walter S Spurling	Shelby NC
EM1209788	Scott Morris	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1208984	C Nadeau-Edwards	North Johnston High School	James W Phillips	Kenly NC
EM1209528	Bernard Odae	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1209311	Andrew Olsson	Veterans Assembled electronics	Jason E Greene	Concord NC
EM1208939	Erick Ortiz	Lexington City Schools	Len S Butts	Lexington NC
EM1208970	Efrain Parilla-Merced	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM1209642	Christina Parrales	North Point High School	Timothy L Yauch	Waldorf MD
EM1209166	Efrain Parrilla-Merced	Veterans Assembled electronics	Tony J Denaro	Hartford CT
EM1208983	Nicholas Pigg	North Johnston High School	James W Phillips	Kenly NC
EM1210212	Alexander Reshetov	Veterans Assembled electronics	Harry L Adams	Fayetteville NC
EM1209259	Luke Reynolds	Crest High School	Walter S Spurling	Shelby NC
EM1210059	Jermaine Richardson	Veterans Assembled electronics	Anthony J Ruoti	Providence RI
EM1209562	Noah Roan	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM1209192	C Robison-Peterson	South Stanly High School	William E Sorenson	Norwood NC
EM1210307	Rodrigo Santos	Veterans Assembled electronics	Tony J Denaro	Hartford CT
EM1209752	Brian Shofner	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1210049	Kevin Smith	Veterans Assembled electronics	John W Young	Framingham MA
EM1209978	Christopher Sowa	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM1209266	Seth Spurling	Crest High School	Walter S Spurling	Shelby NC
EM1209441	Noah Stilwell	Crest High School	Walter S Spurling	Shelby NC
EM1210507	Thomas Sullivan	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM1209594	Randon Summers	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209564	Joseph Theakston	Hanover High School	Chandra N Rhue	Mechanicsville VA
EM1209237	Cody Thornton	Bishop State Community College	Joseph Williams	Mobile AL
EM1209016	Richard Timberlake	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM1209978	Joshua Van Auken	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM1209596	Daniel Varnell	SouthWest Edgecombe HS	Frank Matthews	Pinetops NC
EM1209239	Brian Walsh	Veterans Assembled electronics	Anthony J Ruoti	Providence RI
EM1209305	Jarvis Watkins	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM1209565	Jordan Watkins	Hanover High School	Chandra N Rhue	Mechanicsville VA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
EM1210357	Vincent Watkins	Veterans Assembled electronics	Harry S Adams	Concord NC
EM1210219	Brandon Watson	Veterans Assembled electronics	Jason E Greene	Concord NC
EM1209698	Kenneth Whitehead	TN College of Applied Technology	Shirley M Brown	Hohenwald TN
EM1209246	Daniel Williams	West Stanly High School	Adam Storms	Oakboro NC

Electronics Modules - AC (EM2)

EM2209424	Marco Antonio	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM2209296	Christopher Barclay	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM2209106	Jose Carpio	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2209129	Luke Craver	Wichita Area Technical College	Joseph Varrientos	Wichita KS
EM2209650	Runako Dixon	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2209689	Enrico Fagnano	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2209127	Daniel Freund	Wichita Area Technical College	Joseph Varrientos	Wichita KS
EM2210304	Howard Jackson	Veterans Assembled electronics	John W Young	Framingham MA
EM2209750	Christopher Jacobs	Veterans Assembled electronics	Anthony J Ruoti	Providence RI
EM2209628	Richard Johnson	Veterans Assembled electronics	Robert C Berlin	Orlando FL
EM2210235	Sasha Johnson	Bishop State Community College	Joseph Williams	Mobile AL
EM2209622	Ricardo Lebron	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2209280	Junior Leon	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL
EM2209973	Jamichael Loyd	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2209767	Jeremy McCray	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2209624	Brian Mendon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM2210446	Scott Morris	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2209304	Keith Morrow	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM2209649	Andrew Olsson	Veterans Assembled electronics	Jason E Greene	Concord NC
EM2209428	Jonathan Polignone	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM2209426	Pablo Rodriguez	Peabody Veterans Memorial High School	Dale Larocque	Peabody MA
EM2209128	Patrick Roell	Wichita Area Technical College	Joseph Varrientos	Wichita KS
EM2210445	Rodrigo Santos	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM2210058	Brian Shofner	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM2209425	Christopher Silverio	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM2210310	Kevin Smith	Veterans Assembled electronics	John W Young	Framingham MA
EM2209130	Marshall Smith	Wichita Area Technical College	Joseph Varrientos	Wichita KS
EM2210201	Christopher Sowa	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM2209651	Richard Timberlake	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM2210406	Joshua Van Auken	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM2209974	Brian Walsh	Veterans Assembled electronics	Anthony J Ruoti	Providence RI
EM2209427	Justin Walsh	Peabody Veterans Memorial HS	Dale Larocque	Peabody MA
EM2209997	Kenneth White	FCI Ray Brook	Matthew C Russell	Ray Brook NY

Electronics Modules - Analog (EM3)

EM3209118	Robert Araujo	Veterans Assembled electronics	John W Young	Framingham MA
EM3209747	Christopher Barclay	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM3209051	Sheldon Bingham	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM3210237	Kyle Braden	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM3210239	Daniel Clark	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM3210175	Sean Delongh	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM3209970	Enrico Fagnano	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3209626	Mark Giuliano	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM3209199	James Hamilton	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3209692	Alshun Huston	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM3210305	Christopher Jacobs	Veterans Assembled electronics	Zachary Barrett	Providence RI
EM3209050	Keith Laird	Veterans Assembled electronics	Robert C Berlin	Orlando FL
EM3209975	Ricardo Lebron	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM3208942	Evans Martin	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM3210169	Jeremy McCray	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM3210057	Brian Mendon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM3210447	Keith Morrow	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM3209298	Donald Nicholson	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3209766	Andrew Olsson	Veterans Assembled electronics	Jason E Greene	Concord NC
EM3209356	Michael Payne	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3209350	M Ruiz-Aponte	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3210469	Brian Shofner	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM3210408	Christopher Sowa	Veterans Assembled electronics	Tony J Denaro	Hartford CT
EM3209775	Jesse Stark	FCI Ray Brook	Matthew C Russell	Ray Brook NY
EM3210234	Richard Timberlake	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT
EM3209998	Kenneth White	FCI Ray Brook	Matthew C Russell	Ray Brook NY

Electronics Modules - Digital (EM4)

EM4209656	Mario Anzaldo	Paul Fields	Paul S Fields Jr	Flt Wainwright AK
EM4209693	Robert Araujo	Veterans Assembled electronics	John T Young	Framingham MA
EM4209931	Christopher Barclay	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM4209085	Jacob Berlinski	West Stanly High School	Adam Storms	Oakboro NC
EM4209678	Sheldon Bingham	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM4209695	Daniel Clark	Veterans Assembled electronics	Tony J Denaro	Hartford CT
EM4208943	Ray Colon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL
EM4209145	Aida DeJesus	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM4208941	Jonathan Dudak	Carbon Career & Technical Inst	Joseph S Farkas	Jim Thorpe PA
EM4210448	Enrico Fagnano	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM4208993	Mark Giuliano	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM4209652	James Hamilton	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL
EM4209303	Brandon Harris	Veterans Assembled electronics	Anthony J Ruoti	Providence RI
EM4210047	Alshun Huston	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL
EM4209653	Keith Laird	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL
EM4209015	Dale Larocque	Peabody Veterans Memorial HS	Supervisor	Peabody MA
EM4208976	Robert Lee	North Johnston High School	James W Phillips	Kenly NC

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between June 1 and July 31, 2018 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETAs formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
EM4209117	Evans Martin	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL	FOI209708	Brian Allen	Light Brigade	Mark P Kazes	Anaheim CA
EM4210354	Geremy McCray	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI210442	David Alonso	Light Brigade	Robert E Dorian	El Paso TX
EM4210312	Brian Mendon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL	FOI209059	Daniel Alonzo	364TRS/TTKMS	Steven G Baker	Sheppard AFB TX
EM4209432	Dakota Mercer	ECPI University	John Bowerman	Charlotte NC	FOI209220	Matthew Alvarez	Light Brigade	Phil J Shoemaker	Hobbs NM
EM4208977	Susi Moreno-Ruiz	North Johnston High School	James W Phillips	Kenly NC	FOI210494	Rolando Alvarez	Light Brigade	John C Dron	Orlando FL
EM4209297	Seth Morton	West Stanly High School	Adam Storms	Oakboro NC	FOI209842	Chris Ambrocio-Cuevas	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA
EM4209679	Donald Nicholson	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI210421	Anthony Anaya	SENU	Jacob A Atkins	Ft Campbell KY
EM4210464	Andrew Olsson	Veterans Assembled electronics	Harry L Adams	Concord NC	FOI209844	Ed Araujo-Rodriguez	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA
EM4209691	Michael Payne	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI210367	Frankie Armijo	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
EM4209146	Jean Caleb Phanord	Veterans Assembled electronics	John W Young	Framingham MA	FOI209858	TX Engineering Extension Srvc	TX Engineering Extension Srvc	Joe D Smith	College Station TX
EM4209086	Jaron Price	West Stanly High School	Adam Storms	Oakboro NC	FOI210193	Matt Arroyo Guzman	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
EM4209884	M Ruiz-Aponte	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI210037	Jeffery Austin	SENU	Jacob A Atkins	Ft Campbell KY
EM4209430	Casey Sanders	ECPI University	John Bowerman	Charlotte NC	FOI210264	Brennen Baker	Light Brigade	John C Dron	Baton Rouge LA
EM4209771	Adam Ward	Paul Fields	Paul S Fields Jr	Ft Wainwright AK	FOI209857	David Baker	TX Engineering Extension Srvc	Joe D Smith	College Station TX
EM4209999	Kenneth White	FCI Ray Brook	Matthew C Russell	Ray Brook NY	FOI210186	Declan Ballard	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
Electronics Modules - Comprehensive (EM5)					FOI209721	Scott Banelos	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
EM5209098	Jordan Acosta	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210337	Victor Barajas	APT College	Debra J Cruickshank	Sacramento CA
EM5209038	Alisha Altidor	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209457	Darren Bark	ETA International	National City CA	
EM5209886	Robert Araujo	Veterans Assembled electronics	John W Young	Framingham MA	FOI209722	Renato Barrera	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
EM5210170	Christopher Barclay	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL	FOI210418	Matthew Basso	SENU	Jacob A Atkins	Ft Campbell KY
EM5209748	Sheldon Bingham	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI210263	Bert Batchelor	Light Brigade	John C Dron	Baton Rouge LA
EM5209099	William Carnero	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209918	Mark Bazoun	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
EM5209107	Jorge Chavez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210441	Tony Beal	Light Brigade	Mark P Kazes	Spartanburg SC
EM5210176	Daniel Clark	Veterans Assembled electronics	Tony J Denaro	Hartford CT	FOI209704	Zachary Beard	Light Brigade	Mark P Kazes	Melbourne FL
EM5209292	Ray Colon	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL	FOI210440	Jason Beck	Light Brigade	Mark P Kazes	Spartanburg SC
EM5209479	Aida Dejesus	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI210436	Larry Belcher	Light Brigade	Mark P Kazes	Spartanburg SC
EM5209103	Bryan Feliciano	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI208996	James Bendele	Pacific Signal University	Scott B Teder	Ft Stewart GA
EM5209783	James Hamilton	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI209060	Dillon Benefield	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
EM5209053	Lorenzo Hanna	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI209947	Daniel Berniche	Light Brigade	Mark P Kazes	Lowell MA
EM5209119	Wayne Heckman	Veterans Assembled electronics	John W Young	Framingham MA	FOI209447	Benjamin Binonemi	ECPI University	Norman D Blackburn	Greensboro NC
EM5209113	J Zahee Hollingsworth	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209452	Jesse Blanchard	ECPI University	Norman D Blackburn	Greensboro NC
EM5209760	William Hose	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT	FOI209375	Nelson Bond	Light Brigade	Cameron L Karch	Alexandria VA
EM5210294	Alshun Huston	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI210261	Stuart Booth	Light Brigade	John C Dron	Baton Rouge LA
EM5209105	Ismael Jimenez-Garcia	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210260	Robert Bordelon	Light Brigade	John C Dron	Baton Rouge LA
EM5209040	Julius Johnson	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209203	Peyton Boudreaux	Light Brigade	Albon E Gilbert	Mobile AL
EM5209763	Keith Laird	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL	FOI208998	Nicholas Bowie	Pacific Signal University	Scott B Teder	Ft Stewart GA
EM5209115	Leroy Lee	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209193	Eliot Braddy	Light Brigade	Michael R Wilder	Geneva IL
EM5209022	Ronald Marshall	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI209210	Jaime Brayan	Light Brigade	Albon E Gilbert	Mobile AL
EM5209294	Evans Martin	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI209946	William Brink	Light Brigade	Mark P Kazes	Lowell MA
EM5209062	Jimmy McCracken	Veterans Assembled electronics	Harry L Adams	Fayetteville NC	FOI209456	Tavarius Brinson	ETA International	George G Franceschi	National City CA
EM5210521	Geremy McCray	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI209008	Griffin Brockus	Pacific Signal University	Scott B Teder	Ft Stewart GA
EM5209039	Dayanna Medina	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209381	Bradley Brown	Light Brigade	Sean M Sheedy	Roseville CA
EM5209116	Christopher Navarro	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210339	Eric Brown	APT College	Debra J Cruickshank	Sacramento CA
EM5209928	Donald Nicholson	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI209221	Caleb Brown	Light Brigade	Phil J Shoemaker	Hobbs NM
EM5209037	Anthony Oropesa	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209072	Travis Bruno-Erck	Indian Hills Community College	James J Goudy	Outtuma IA
EM5209045	Christian Otanez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209913	Taiwanosa Bryant	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
EM5209020	Rose Parker	Veterans Assembled electronics	Robert C Berlin Jr	Orlando FL	FOI209723	Abel Burgos	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
EM5209779	Michael Payne	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI210341	Shawn Burnett	APT College	Debra J Cruickshank	Sacramento CA
EM5209481	Jean Caleb Phanord	Veterans Assembled Electronics	John T Young	Frammingham MA	FOI210414	Chrystin Bush	KITCO Fiber Optics	Felipe Guadalupe	Virginia Beach VA
EM5209629	Jonathan Ramirez	Veterans Assembled electronics	Francisco A Sablan	Bellevue FL	FOI210324	Scott Canny	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
EM5209114	Daniel Rincon	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210495	Javier Carballosa	Light Brigade	John C Dron	Orlando FL
EM5209109	Alvaro Rodriguez	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209703	Jason Carr	Light Brigade	Mark P Kazes	Melbourne FL
EM5209282	Frank Ruiz	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI210343	Trevor Carranza	APT College	Debra J Cruickshank	Sacramento CA
EM5210191	M Ruiz-Aponte	Veterans Assembled electronics	Clyde J Dolly	Melbourne FL	FOI209094	Luis Carrasquillo	Pacific Signal University	Scott B Teder	Ft Stewart GA
EM5209776	Dana Scott	FCI Ray Brook	Matthew C Russell	Ray Brook NY	FOI209724	James Carter	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
EM5209636	Bradley Sweeney	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT	FOI210443	Enrique Casillas	Light Brigade	Robert E Dorian	El Paso TX
EM5210523	Luis Torres-Pacheco	Veterans Assembled electronics	Michael S Hagedorn	Orlando FL	FOI209455	Zachary Cawthorne	ETA International	George G Franceschi	National City CA
EM5209101	Narrio Walks	George T Baker Aviation Tech Coll	Howard Carter Jr	Miami FL	FOI209843	Carlos Cedano	Courage University, G6, I Corps	Jason Brumet	Ft Lewis WA
EM5209014	Adam Ward	Paul Fields	Paul S Fields Jr	Ft Wainwright AK	FOI210388	Chen Meng Chong	FiberOpto Asia	Boon Kwee Thiam	Singapore
EM5210001	Kenneth White	FCI Ray Brook	Matthew C Russell	Ray Brook NY	FOI209909	Lirin Chun	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
Electronics Security Networking Technician (ESNT)					FOI210368	Caleb Clark	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
ESNT209660	Jeff Burger	Slayton Solutions	David J Engebretson	Chicago IL	FOI209400	Nathan Clark	Light Brigade	Sean M Sheedy	Seattle WA
ESNT209661	Brian Craig	Slayton Solutions	David J Engebretson	Chicago IL	FOI209206	Caleb Cody	Light Brigade	Albon E Gilbert	Mobile AL
ESNT209662	Phillip Dallas	Slayton Solutions	David J Engebretson	Chicago IL	FOI209922	Darren Colona	Fort Hood Signal University	Jeffrey M Jones	Ft Hood TX
ESNT209663	Brian Dombrowski	Slayton Solutions	David J Engebretson	Chicago IL	FOI210451	Victor Conde	OEMTD	Robert E Evans	Ft Gordon GA
ESNT209664	Justin Gazouski	Slayton Solutions	David J Engebretson	Chicago IL	FOI209390	Travis Cook	Light Brigade	Mark P Kazes	Richmond VA
ESNT209665	Jason Hilton	Slayton Solutions	David J Engebretson	Chicago IL	FOI210560	Brandon Cooper	OEMTD	Robert E Evans	Ft Gordon GA
ESNT209666	Wesley Junis	Slayton Solutions	David J Engebretson	Chicago IL	FOI208856	Kevin Cooper	TX Engineering Extension Srvc	Joe D Smith	College Station TX
ESNT209667	Christopher Konrady	Slayton Solutions	David J Engebretson	Chicago IL	FOI210419	Robert Cooper	SENU	Jacob A Atkins	Ft Campbell KY
ESNT209668	Sam MacLeod	Slayton Solutions	David J Engebretson	Chicago IL	FOI209508	Jose Cortez	Iron Horse Signal University	John P Enos	Ft Polk LA
ESNT209669	Matthew Poling	Slayton Solutions	David J Engebretson	Chicago IL	FOI209580	Gary Cox	Light Brigade	Mark P Kazes	Richmond VA
ESNT209671	Scott Zylstra	Slayton Solutions	David J Engebretson	Chicago IL	FOI209855	Steven Cross	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA
Fiber Optics Designer (FOD)					FOI209123	Debra Cruickshank	APT College	Aradeshir Daneshmand	Sacramento CA
FOD209785	John Eckert	Infotec	Charles E Casbeer Jr	Virginia Beach VA	FOI210035	Mathew Daniels	SENU	Jacob A Atkins	Ft Campbell KY
FOD209786	Brack Johnson	Infotec	Charles E Casbeer Jr	Virginia Beach VA	FOI209736	Darell Davis	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait
FOD210501	Amanda McSween	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI	FOI209902	Markus Dawson	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
FOD210500	Roger Williams	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI	FOI209001	Alexander Debrah	Pacific Signal University	Scott B Teder	Ft Stewart GA
Fiber Optics Installer (FOI)					FOI209515	Jean Delgado Gonzalez	Iron Horse Signal University	John P Enos	Ft Polk LA
FOI209851	Andrea Adams	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA	FOI210258	Trent DeMaria	Light Brigade	John C Dron	Baton Rouge LA
FOI209377	Anteneh Afework	Light Brigade	Cameron L Karch	Alexandria VA	FOI209074	Reece Denniston	Indian Hills Community College	James J Goudy	Outtuma IA
FOI208413	Brett Albertson	High Tech Regional Training Site	Carmelo Bezarez	Sacramento CA	FOI209920	Pedro Diaz	Fort Hood Signal University	Jeffrey M Jones	Ft Hood TX
FOI209705	Oliver Alcantara	Light Brigade	Mark P Kazes	Melbourne FL	FOI209046	Michael Downs	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
					FOI209682	Ryan Dressel	364 TRS/TTKMS	Steven G Baker	Sheppard TX
					FOI209442	Chris Driskell	ECPI University	Norman D Blackburn	Greensboro NC
					FOI209207	Courtney Dubose	Light Brigade	Albon E Gilbert	Mobile AL
					FOI210257	Michael Duet	Light Brigade	John C Dron	Baton Rouge LA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
FOI209848	Lee Eastham	Courage University, G6, I Corps	Jason L Brumet	FT Lewis WA	FOI210563	Christian Marin	OEMTD	Robert E Evans	FT Gordon GA
FOI209512	Sonya Echols	Iron Horse Signal University	John P Enos	FT Polk LA	FOI209908	F Martinez Juan	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
FOI209379	Lawrence Edmonds	Light Brigade	Cameron L Karch	Alexandria VA	FOI210425	Mark Mason	Light Brigade	Sean M Sheedy	Colorado Springs CO
FOI209944	Martin Elliott	Light Brigade	Mark P Kazes	Lowell MA	FOI209738	David Matrazzo	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait
FOI209510	Ryan Ellis	Iron Horse Signal University	John P Enos	FT Polk LA	FOI209384	Shane Mattix	Light Brigade	Sean M Sheedy	Roseville CA
FOI209222	Greg Faulkner	Light Brigade	Phil J Shoemaker	Hobbs NM	FOI209939	John McCormack	Light Brigade	Mark P Kazes	Lowell MA
FOI209852	Siaosi Fehoko	Courage University, G6, I Corps	Jason L Brumet	FT Lewis WA	FOI210196	Brandon McCracken	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
FOI209208	Eric Ferguson	Light Brigade	Albon E Gilbert	Mobile AL	FOI209727	De'Quan McFadden	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI210345	Todd Ferguson	APT College	Debra J Cruickshank	Sacramento CA	FOI209712	Kenny McGill	Light Brigade	Mark P Kazes	Anaheim CA
FOI209725	Kevin Figueiredo	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait	FOI209409	Sean McIlvenna	Light Brigade	Sean M Sheedy	Seattle WA
FOI210360	Ramon Fileto	APT College	Francis B Reyes	Hollister CA	FOI209739	Tiani McIntyre	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait
FOI210430	Dustin Fisher	Light Brigade	Sean M Sheedy	Colorado Springs CO	FOI209713	Ryan McKellar	Light Brigade	Mark P Kazes	Anaheim CA
FOI209943	James Fitzmeyer	Light Brigade	Mark P Kazes	Lowell MA	FOI209513	Asheton McKoy	Iron Horse Signal University	John P Enos	FT Polk LA
FOI210348	Jeffrey Flanagan	APT College	Debra J Cruickshank	Sacramento CA	FOI209211	Nicholas McLin	Light Brigade	Albon E Gilbert	Mobile AL
FOI209401	Raymond Fleming	Light Brigade	Sean M Sheedy	Seattle WA	FOI209915	Lindsay McMail	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
FOI209709	Terence Foisia	Light Brigade	Mark P Kazes	Anaheim CA	FOI210565	Jason Meyer	OEMTD	Robert E Evans	FT Gordon GA
FOI209737	Eliezer Foster	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait	FOI209212	Jeffrey Michaelson	Light Brigade	Albon E Gilbert	Mobile AL
FOI210429	James Frison	Light Brigade	Joshua M Jackson	Colorado Springs CO	FOI209505	Marcus Miller	Iron Horse Signal University	John P Enos	FT Polk LA
FOI209007	James Fulkerson	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI209676	Timothy Mitchell	ECPI University	Norman D Blackburn	Greensboro NC
FOI210256	David Gaines	Light Brigade	John C Dron	Baton Rouge LA	FOI209453	Tara Montgomery	ETA International	George G Franceschi	National City CA
FOI209845	Jeremy Gaithe	Courage University, G6, I Corps	Jason L Brumet	FT Lewis WA	FOI209917	Matthew Moody	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI
FOI209900	Miguel Gallegos	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOI209728	Tiesha Moore	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI210416	Spencer Gallup	KITCO Fiber Optics	Felipe Guadalupe	Virginia Beach VA	FOI209935	Joseph Morse	Light Brigade	Mark P Kazes	Camp Buehring Kuwait
FOI209223	Kendall Galyean	Light Brigade	Phil J Shoemaker	Hobbs NM	FOI210251	Paul Mulligan	Light Brigade	John C Dron	Baton Rouge LA
FOI210454	Eulioja Garcia	OEMTD	Robert E Evans	FT Gordon GA	FOI209410	Aleksandr Nazarchuk	Light Brigade	Sean M Sheedy	Seattle WA
FOI209403	Hugo Garcia	Light Brigade	Sean M Sheedy	Seattle WA	FOI209936	Lora Neis	Light Brigade	Mark P Kazes	Lowell MA
FOI209404	Niko Garcia	Light Brigade	Sean M Sheedy	Seattle WA	FOI210187	Jacob Neisendorf	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
FOI209281	Clevon Gaspar	OEMTD	Robert E Evans	FT Gordon GA	FOI209385	Jason Nelson	Light Brigade	Sean M Sheedy	Roseville CA
FOI210271	Janina Gielata	Light Brigade	Phil J Shoemaker	San Antonio TX	FOI209937	Michael Netzer	Light Brigade	Mark P Kazes	Lowell MA
FOI209378	Sean Golden	Light Brigade	Cameron L Karch	Alexandria VA	FOI209740	Michael Nichols	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait
FOI208994	Justin Gonzalez	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI210369	Samuel Nielsen	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI210439	Josh Goodson	Light Brigade	Mark P Kazes	Spartanburg SC	FOI209444	Blamon Nimely	ECPI University	Norman D Blackburn	Greensboro NC
FOI209847	Jacquelyn Grandberry	Courage University, G6, I Corps	Jason L Brumet	FT Lewis WA	FOI210458	Larry Nunez	OEMTD	Robert E Evans	FT Gordon GA
FOI210438	James Green	Light Brigade	Mark P Kazes	Spartanburg SC	FOI210250	Derrick Odds	Light Brigade	John C Dron	Baton Rouge LA
FOI208997	James Grimm	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI210358	Deidrick Odom	Apex Optics Inc	Greyson O Knapp	Houston TX
FOI209000	John Guadarrama	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI209921	Rumon O'Gorman	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX
FOI209726	Jon Guana Bermeo	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait	FOI209386	Jade Oliver	Light Brigade	Sean M Sheedy	Roseville CA
FOI210456	Gregory Gusler	OEMTD	Robert E Evans	FT Gordon GA	FOI209853	Omar Olivera	Courage University, G6, I Corps	Jason L Brumet	JBLM WA
FOI209405	Oakley Hackleman	Light Brigade	Sean M Sheedy	Seattle WA	FOI209005	Griffin O'Neil	Pacific Signal University	Scott B Teder	FT Stewart GA
FOI209391	Josh Hamilton	Light Brigade	Mark P Kazes	Richmond VA	FOI209195	Daniel Ortiz	Light Brigade	Michael R Wilder	Geneva IL
FOI209209	David Hancox	Light Brigade	Albon E Gilbert	Mobile AL	FOI209047	Jordan Overby	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
FOI209449	Cassandra Hartline	ECPI University	Norman D Blackburn	Greensboro NC	FOI209923	Najee Overton	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX
FOI210325	Ashley Hartman	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI210326	Sunny Park	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI209850	Keith Hathorn	Courage University, G6, I Corps	Jason L Brumet	FT Lewis WA	FOI209714	Greg Parks	Light Brigade	Mark P Kazes	Anaheim CA
FOI209683	Anthony Hawkins	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI209729	Anthony Pascual	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI209507	Christopher Hayes	Iron Horse Signal University	John P Enos	FT Polk LA	FOI209411	Lyndsay Pelchat	Light Brigade	Sean M Sheedy	Seattle WA
FOI209392	Nicholas Heaton	Light Brigade	Mark P Kazes	Richmond VA	FOI209448	Bradley Perdue	ECPI University	Norman D Blackburn	Greensboro NC
FOI210255	Robert Hebert	Light Brigade	John C Dron	Baton Rouge LA	FOI209718	James Perry	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait
FOI209898	Jeremy Heinz	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI210329	Malcolm Perry	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI210437	Donald Heinze	Light Brigade	Mark P Kazes	Spartanburg SC	FOI209451	Christopher Phillips	ECPI University	Norman D Blackburn	Greensboro NC
FOI210270	Matthew Hernandez	Light Brigade	Phil J Shoemaker	San Antonio TX	FOI210288	Marcus Phillips	SENU	Jacob A Atkins	FT Campbell KY
FOI210266	David Herrera	Light Brigade	Phil J Shoemaker	San Antonio TX	FOI209919	Demarcus Prater	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX
FOI209910	Dustin Hess	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOI210033	Austin Prenzl	SENU	Jacob A Atkins	FT Campbell KY
FOI209376	Olufemi Hinson	Light Brigade	Cameron L Karch	Alexandria VA	FOI209125	Bashar Qopi	APT College	Aradeshir Daneshmand	San Diego CA
FOI209224	Kaiden Hinajos	Light Brigade	Phil J Shoemaker	Hobbs NM	FOI210435	Jeffrey Radford	Light Brigade	Mark P Kazes	Spartanburg SC
FOI209393	Steven Hoffman	Light Brigade	Mark P Kazes	Richmond VA	FOI209730	Kevin Rainer	US Army CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI209382	Brandon Holderby	Light Brigade	Sean M Sheedy	Roseville CA	FOI209228	Dominique Ramirez	Light Brigade	Phil J Shoemaker	Hobbs NM
FOI209445	Teruance Holmes	ECPI University	Norman D Blackburn	Greensboro NC	FOI210370	Jonathon Ramseur	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI209942	Michael Horn	Light Brigade	Mark P Kazes	Lowell MA	FOI210413	Sonya Ratliff	KITCO Fiber Optics	Felipe Guadalupe	Virginia Beach VA
FOI209308	MD Hossen	FiberOpto Asia	Boon Kwee Thiam	Singapore	FOI210389	Darmanar Ravi Kumar	FiberOpto Asia	Boon Kwee Thiam	Singapore
FOI209383	Jason Houser	Light Brigade	Sean M Sheedy	Roseville CA	FOI209412	Malcolm Reed	Light Brigade	Sean M Sheedy	Seattle WA
FOI210254	Brad Hughes	Light Brigade	John C Dron	Baton Rouge LA	FOI210268	Peyton Reese	Light Brigade	Phil J Shoemaker	San Antonio TX
FOI210427	William Hughes	Light Brigade	Sean M Sheedy	Colorado Springs CO	FOI209715	Christopher Reeve	Light Brigade	Mark P Kazes	Anaheim CA
FOI209194	Mohammed Hussain	Light Brigade	Michael R Wilder	Geneva IL	FOI209938	Matthew Reynolds	Light Brigade	Mark P Kazes	Lowell MA
FOI209710	Jamie Johnson	Light Brigade	Mark P Kazes	Anaheim CA	FOI210038	Kevin Rice	FibertOptic.com	David J Cameron	Las Vegas NV
FOI209516	James Jones	Iron Horse Signal University	John P Enos	FT Polk LA	FOI210496	Landon Rich	Light Brigade	John C Dron	Orlando FL
FOI209925	Aminata Kamara	Fort Hood Signal University	Jeffrey M Jones	FT Hood TX	FOI209006	Steven Richard	Pacific Signal University	Scott B Teder	FT Stewart GA
FOI210426	Shane Kau	Light Brigade	Sean M Sheedy	Colorado Springs CO	FOI210424	Scott Richardson	Light Brigade	Sean M Sheedy	Colorado Springs CO
FOI209941	Daniel Kelleher	Light Brigade	Mark P Kazes	Lowell MA	FOI210267	Zachary Richardson	Light Brigade	Phil J Shoemaker	San Antonio TX
FOI209002	Sierra Kennedy	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI209196	Lance Ridenour	Light Brigade	Michael R Wilder	Geneva IL
FOI208954	DuJuan King	JM Fiber Optics	Kenneth Rivera	Chino CA	FOI210253	Albert Riley	Light Brigade	John C Dron	Baton Rouge LA
FOI209225	CJ Kisslan	Light Brigade	Phil J Shoemaker	Hobbs NM	FOI209213	Michael Ritchie	Light Brigade	Albon E Gilbert	Mobile AL
FOI209940	Daniel Landry	Light Brigade	Mark P Kazes	Lowell MA	FOI209229	Andres Rivera	Light Brigade	Phil J Shoemaker	Hobbs NM
FOI209406	Stan Latham	Light Brigade	Sean M Sheedy	Seattle WA	FOI209681	Patricia Rivera	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX
FOI209914	Kyle Lewandowski	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOI210434	Tom Robertson	Light Brigade	Mark P Kazes	Spartanburg SC
FOI209226	Thor Libkie	Light Brigade	Phil J Shoemaker	Dobbs NM	FOI209731	Ryan Roberts	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI210390	William Lim	FiberOpto Asia	Boon Kwee Thiam	Singapore	FOI210249	Dana Robinson	Light Brigade	John C Dron	Baton Rouge LA
FOI209058	Kyle Lindsey	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOI209198	Kenneth Robinson	Light Brigade	Michael R Wilder	Geneva IL
FOI209717	Jacob Lloyd	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait	FOI209394	KSean Robinson	Light Brigade	Mark P Kazes	Richmond VA
FOI209227	Irving Lopez	Light Brigade	Phil J Shoemaker	Hobbs NM	FOI209387	Terrell Roderick	Light Brigade	Sean M Sheedy	Roseville CA
FOI209003	Luis Lopez	Pacific Signal University	Scott B Teder	FT Stewart GA	FOI209201	Aaron Rodhouse	Light Brigade	Michael R Wilder	Geneve IL
FOI210036	Adam Luft	SENU	Jacob A Atkins	FT Campbell KY	FOI209687	Benjamin Rodriguez	Light Brigade	Mark P Kazes	Anaheim CA
FOI209407	Joe Macie	Light Brigade	Sean M Sheedy	Seattle WA	FOI210194	Emiliano Rodriguez	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX
FOI209219	Brian Macias	Light Brigade	Nickoli O Kjos	Walnut Creek CA	FOI209905	Michael Rogers	Fort Hood Signal University	Chad A Kelley	Schofield Bks HI
FOI209711	Kari Macko	Light Brigade	Mark P Kazes	Anaheim CA	FOI209732	Ronald Roldan	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait
FOI209408	Jorge Marciano	Light Brigade	Sean M Sheedy	Seattle WA	FOI209916	Eric Rose	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI

NEW ETA CERTIFIED TECHNICIANS

The following is a list of professionals who have earned new certifications between June 1 and July 31, 2018 under one or more of ETA International's 80+ certification programs. Names of these highly qualified technicians have earned ETA's formal endorsement and approval.

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION	CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
FOI209214	Wyndol Ryer	Light Brigade	Albon E Gilbert	Mobile AL	FOSP209961	Jonathan Demers	Light Brigade	John C Dron	Denver CO
FOI209733	Cerone Samuel	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait	FOSP210203	Jon DiBartolomeo	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI208993	Dwayne Sanders	Pacific Signal University	Scott B Teder	Ft Stewart GA	FOSP210459	Kenson Dublin	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI209684	Jean Sanjurjo Cruz	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOSP209358	David Ellington	Light Brigade	Sean M Sheedy	Washington DC
FOI209741	Eric Santos	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait	FOSP209364	Nicholas Estes	Light Brigade	Sean M Sheedy	Washington DC
FOI210433	Philip Schefferine	Light Brigade	Mark P Kazes	Spartanburg SC	FOSP209960	Cameron Feagle	Light Brigade	John C Dron	Denver CO
FOI209742	Joshua Schiebel-Sales	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait	FOSP210301	Gabriel Ferguson	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI210371	Lechance Seaberry	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOSP210054	Dan Fitzgerald	Light Brigade	John C Dron	Denver CO
FOI209734	Kedra Segler	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait	FOSP210461	Ashwood Forbes	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI209458	Paola Serrano	ETA International	George G Franceschi	National City CA	FOSP209186	Michael Garcia	Light Brigade	John C Dron	Louisville KY
FOI209215	John Shirley	Light Brigade	Albon E Gilbert	Mobile AL1	FOSP209956	Matt Garland	Light Brigade	John C Dron	Denver CO
FOI209230	Alexandro Sias	Light Brigade	Phil J Shoemaker	Hobbs NM	FOSP209994	Cynthia George	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI210457	Wyatt Siegrist	OEMTD	Robert E Evans	Ft Gordon GA	FOSP209706	Jason Gideon	Light Brigade	Phil J Shoemaker	Belize City Belize
FOI210432	Donald Silas	Light Brigade	Mark P Kazes	Spartanburg SC	FOSP209357	Michael Grimes	Light Brigade	Sean M Sheedy	Washington DC
FOI210247	Marty Simmons	Light Brigade	John C Dron	Baton Rouge LA	FOSP209955	Lucas Hill	Light Brigade	John C Dron	Denver CO
FOI209719	Brion Smalling	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait	FOSP209188	Eugene Hostetter	Light Brigade	John C Dron	Louisville KY
FOI209911	Alicia Smith	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOSP209366	Taylor Hovermale	Light Brigade	Sean M Sheedy	Washington DC
FOI209231	Nathan Smith	Light Brigade	Phil J Shoemaker	Hobbs NM	FOSP210214	Robert Huber	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209395	Robert Smith	Light Brigade	Mark P Kazes	Richmond VA	FOSP209361	Joshua Joyner	Light Brigade	Sean M Sheedy	Washington DC
FOI209388	Jeremy Snyder	Light Brigade	Sean M Sheedy	Roseville CA	FOSP209190	Jeremy Kilpatrick	Light Brigade	John C Dron	Louisville KY
FOI209506	Colin Sparks	Iron Horse Signal University	John P Enos	Ft Polk LA	FOSP209953	Carl Koenig	Light Brigade	John C Dron	Denver CO
FOI210190	Samuel Stahl	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX	FOSP210300	Cody La Caille	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI210497	Brittany Stainrod	Light Brigade	John C Dron	Orlando FL	FOSP210213	Roland LaCompte	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209454	Shane Stevens	ETA International	George G Franceschi	National City CA	FOSP210200	Michael Leblanc	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209057	Tyler Stevens	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOSP210197	Rodney Lucero	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209216	Christopher Stockton	Light Brigade	Albon E Gilbert	Mobile AL	FOSP209952	Ryan Martin	Light Brigade	John C Dron	Denver CO
FOI209849	Curtis Suber	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA	FOSP210502	Amanda McCarthy	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI210289	Steven Suchocki	SENU	Jacob A Atkins	Ft Campbell KY	FOSP210199	Bruce Mues	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI210352	Patrick Suhr	APT College	Debra J Cruickshank	Sacramento CA	FOSP209365	Wesley Olinger	Light Brigade	Sean M Sheedy	Washington DC
FOI209413	Gavin Swayne	Light Brigade	Sean M Sheedy	Seattle WA	FOSP210198	John Parker	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209774	Joseph Swe	364 TRS/TTKMS	Robert A Poole	Sheppard AFB TX	FOSP210298	Anila Prabhoo	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI209907	Lee Sweeney	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOSP210299	Anil Ragoonanan	Advanced Solutions Technical Inst	John C Dron	San Diego CA
FOI209389	Philip Sweet	Light Brigade	Sean M Sheedy	Roseville CA	FOSP210460	Douaine Rodgers	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI209397	Jeffrey Sydenstricker	Light Brigade	Mark P Kazes	Richmond VA	FOSP209353	Neydin Rodriguez	Light Brigade	Sean M Sheedy	Washington DC
FOI209443	Ali Syed	ECPI University	Norman D Blackburn	Greensboro NC	FOSP209360	Jose Saenz Fuerte	Light Brigade	Sean M Sheedy	Washington DC
FOI209307	Abu Taleb	FiberOpto Asia	Boon Kwee Thiam	Singapore	FOSP210462	Arnold Salamanca	Advanced Solutions Technical Inst	Chrystal S Murray	Trinidad WI
FOI210265	Humberto Tamez	Light Brigade	Phil J Shoemaker	San Antonio TX	FOSP209965	John Saur	Light Brigade	John C Dron	San Diego CA
FOI209511	Donald Tatum	Iron Horse Signal University	John P Enos	Ft Polk LA	FOSP210055	Cleavie Stuehrenberg	Light Brigade	John C Dron	Denver CO
FOI209685	Jancel Taverasgomez	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX	FOSP209966	Randy Totanes	Light Brigade	John C Dron	San Diego CA
FOI210247	Chad Taylor	Light Brigade	John C Dron	Baton Rouge LA	FOSP209964	Jason Traynum	Light Brigade	John C Dron	Denver CO
FOI209716	Jeff Taylor	Light Brigade	Mark P Kazes	Anaheim CA	FOSP209951	Chris Underwood	Light Brigade	John C Dron	Denver CO
FOI209367	Fesseha Tesfamichael	Light Brigade	Cameron L Karch	Alexandria VA	FOSP210202	Noel Valdez	Apex Optics Inc	Greyson O Knapp	Socorro NM
FOI209398	Davis Theakston	Light Brigade	Mark P Kazes	Richmond VA	FOSP209950	Mark Walters	Light Brigade	John C Dron	Denver CO
FOI209912	Christopher Thomas	Fort Hood Signal University	Chad A Kelly	Schofield Bks HI	FOSP209949	Wayne Watts	Light Brigade	John C Dron	Denver CO
FOI210423	Justin Thornton	Light Brigade	Sean M Sheedy	Colorado Springs CO	FOSP209355	Kristopher Williams	Light Brigade	Sean M Sheedy	Washington DC
FOI209217	Tomaz Thornton	Light Brigade	Albon E Gilbert	Mobile AL	FOSP209968	Jose Zermeno	Light Brigade	John C Dron	San Diego CA
FOI210574	Michael Thrasher	OEMTD	Robert E Evans	Ft Gordon GA	FOSP209963	Salvador Zermeno	Light Brigade	John C Dron	San Diego CA
FOI210195	Gregory Tomassetti	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX					
FOI210422	John Tompkins	Light Brigade	Sean M Sheedy	Colorado Springs CO					
FOI208995	Thomas Toomer	Pacific Signal University	Scott B Teder	Ft Stewart GA					
FOI209688	Abran Torices	Light Brigade	Mark P Kazes	Anaheim CA					
FOI209232	Eric Valentin	Light Brigade	Phil J Shoemaker	Hobbs NM					
FOI209368	Phillip Vaughan	Light Brigade	Cameron L Karch	Alexandria VA					
FOI209309	Sakthivel Veeramuthu	FiberOpto Asia	Boon Kwee Thiam	Singapore					
FOI209450	Ronald Vido	ECPI University	Norman D Blackburn	Greensboro NC					
FOI209233	Armando Villanueva	Light Brigade	Phil J Shoemaker	Hobbs NM					
FOI209004	Hector Villanueva	Pacific Signal University	Scott B Teder	Ft Stewart GA					
FOI210332	Jeremy Vohs	ETA International	Tyree Bearden	League City TX					
FOI209735	Somsack Vongvirath	US Army - CECOM	Joshua M Jackson	Camp Buehring Kuwait					
FOI209509	Robert Voss	Iron Horse Signal University	John P Enos	Ft Polk LA					
FOI210498	William Warkenthien	Light Brigade	John C Dron	Orlando FL					
FOI209897	Nicholas Waterman	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX					
FOI209743	Robert Weeks	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait					
FOI209680	Winston Wells	364 TRS/TTKMS	Steven G Baker	Sheppard AFB TX					
FOI209414	Matthew Westergard	Light Brigade	Sean M Sheedy	Seattle WA					
FOI209854	Alexander White	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA					
FOI209690	William Wiggan	Light Brigade	Mark P Kazes	Anaheim CA					
FOI209846	Leon Williams	Courage University, G6, I Corps	Jason L Brumet	Ft Lewis WA					
FOI209976	Marcus Williams	The Splicer Lease School	Tawana Mason	Houston TX					
FOI209446	Rashad Williams	ECPI University	Norman D Blackburn	Greensboro NC					
FOI210246	Andy Wilson	Light Brigade	John C Dron	Baton Rouge LA					
FOI209744	Patrick Wood	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait					
FOI209218	Jonathan Woodall	Light Brigade	Albon E Gilbert	Mobile AL					
FOI209720	Richard Woods	US Army - CECOM	Joshua M Jackson	Camp Arifjan Kuwait					
FOI210355	Kong Yang	APT College	Debra J Cruickshank	Sacramento CA					
FOI210450	Dustin Yates	OEMTD	Robert E Evans	Ft Gordon GA					
FOI210188	Austin Young	364 TRS/TTKMS	Henry Yates III	Sheppard AFB TX					
FOI209514	Jonathan Young	Iron Horse Signal University	John P Enos	Ft Polk LA					
FOI210499	Eugene Zigler	Light Brigade	John C Dron	Orlando FL					

Fiber Optics Technician - Outside Plant (FOSP)

FOSP209502	Linford August	Light Brigade	Phil J Shoemaker	Belize City Belize
FOSP209184	George Boileau	Light Brigade	John C Dron	Louisville KY
FOSP209352	Christopher Boyd	Light Brigade	Sean M Sheedy	Washington DC
FOSP209707	Risden Clare	Light Brigade	Phil J Shoemaker	Belize City Belize
FOSP209962	Michael Cooper	Light Brigade	John C Dron	Denver CO

Fiber Optics Technician (FOT)

FOT210338	Victor Barajas	APT College	Debra J Cruickshank	Sacramento CA
FOT210340	Eric Brown	APT College	Debra J Cruickshank	Sacramento CA
FOT210342	Shawn Burnett	APT College	Debra J Cruickshank	Sacramento CA
FOT210415	Chrystin Bush	KITCO Fiber Optics	Felipe Guadalupe	Virginia Beach VA
FOT210344	Trevor Carranza	APT College	Debra J Cruickshank	Sacramento CA
FOT209124	Debra Cruickshank	APT College	Ardehsir Daneshmand	Sacramento CA
FOT210346	Todd Ferguson	APT College	Debra J Cruickshank	Sacramento CA
FOT210349	Jeffrey Flanagan	APT College	Debra J Cruickshank	Sacramento CA
FOT210417	Spencer Gallup	KITCO Fiber Optics	Felipe Guadalupe	Virginia Beach VA
FOT209200	Clevon Gaspar	OEMTD	Robert E Evans	Ft Gordon GA
FOT209126	Bashar Oopi	APT College	Ardehsir Daneshmand	Sacramento CA
FOT210353	Patrick Suhr	APT College	Debra J Cruickshank	Sacramento CA
FOT210174	Marcus Williams	The Splicer Lease School	Tywana Mason	Houston TX
FOT210356	Kong Yang	APT College	Debra J Cruickshank	Sacramento CA

General Communications Technician (GCT1)

GCT1210296	Michael Van Winkle	Stayton Public Library	Stephanie Rubel	Stayton OR
------------	--------------------	------------------------	-----------------	------------

GTR 8000 P25 RF Site Performance Verification (GSPV)

GSPV209475	M Kaleem Uddin	Calgary Public Library	Alison Aberle	Calgary AB
------------	----------------	------------------------	---------------	------------

M Core Technician (MCT)

MCT210466	Louis Kotler	Univ of Maryland-College Park	Megan Kuhn	College Park MD
-----------	--------------	-------------------------------	------------	-----------------

Network Systems Technician (NST)

NST210233	Marco Gomez	Rollover	ETA International	Greencastle IN
-----------	-------------	----------	-------------------	----------------

Photovoltaic Installer - Level 1 (PV1)

PV1210397	M Akbariziyarani	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210394	Arbi Begian	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210018	Vesdell Bullard	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH



CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
PV1209519	Joseph Clark	Blue Rock Station	Jay Warmke	Brookville PA
PV1210392	Ade Gharibian	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210017	David Griffin	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH
PV1210402	Edwin Grigoryans	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210398	Vic Hacopian	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210403	Artak Hakobyan	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210399	Vahagn Herouni	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1209640	Ed James	Heartland Community College	Christopher Miller	Normal IL
PV1209518	Josh Jaros	Blue Rock Station	Jay Warmke	Brookville PA
PV1210396	John Keshishoghli	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210393	Mher Khachikyan	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210016	Marczaum Lockett	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH
PV1210015	Lucas Lykins	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH
PV1210014	John Mann	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH
PV1209520	James Manno	Blue Rock Station	Jay Warmke	Brookville PA
PV1210401	Robert Navasardyan	Glendale Community College	Patrick Shahnazarian	Glendale CA
PV1210013	Daniel Nordstrom	Ohio State University- Ag Tech Inst	Frederick C Michel	Wooster OH
PV1209522	Eric Rensel	Blue Rock Station	Jay Warmke	Brookville PA
PV1209517	Sylvia Rensel	Blue Rock Station	Jay Warmke	Brookville PA
PV1210470	Robert Robinson	Daniel Morgan Technical Center	Chris Dinkins	Spartanburg SC
PV1210400	Richard Sarthou	Glendale Community College	Patrick Shahnazarian	Glendale CA

CERT. #	NAME	SCHOOL	PROCTOR	LOCATION
R56120204	Alvin Cacabelos	Motorola Solutions	Reid R Harlocker	Schaumburg IL
R56209542	Steven Campos	Motorola Solutions	Sam M Chreiteh	Plantation FL
R56209540	Troy Endicott	Motorola Solutions	Sam M Chreiteh	Plantation FL
R56210207	Andrew Hartline	Motorola Solutions	Reid R Harlocker	Schaumburg IL
R56210210	Leo Hubbard	Motorola Solutions	Reid R Harlocker	Schaumburg IL
R56209541	Herman Pang	Motorola Solutions	Sam M Chreiteh	Plantation FL
R56208746	Brian Williams	Motorola Solutions	Sam M Chreiteh	Peachtree City GA

Residential Electronics Systems Integrator (RESI)

RESI210395	James Blowers	Glendale Community College	Patrick Shahnazarian	Glendale CA
RESI209891	Kenneth Davis	Veterans Assembled electronics	Derek Abrassart-White	Hartford CT

Student Electronics Technician (SET)

SET208944	John Barnes	Old Colony Regional Vo Tech HS	Richard A Dutra	Rochester MA
SET209025	Tanner Safford	Old Colony Regional Vo Tech HS	Richard A Dutra	Rochester MA
ST209459	Garrett Wilcox	Warren Co Career Center	Timothy M Sampson	Warren PA

Wireless Network Technician (WNT)

WNT209180	Eduardo Maldonado	Metacom CET	Max Gutierrez Palma	Santiago Chile
WNT209173	Ricardo Poblete	Metacom CET	Maxi Gutierrez Palma	Santiago Chile
WNT209176	Juan Sola	Metacom CET	Max Gutierrez Palma	Santiago Chile
WNT209179	Sebastian Villegas	Metacom CET	Max Gutierrez Palma	Santiago Chile

NEW ETA 10-YEAR MEMBERS!

ETA celebrates our members who have maintained membership for 10 or more consecutive years between June 1 and July 31, 2006 to 2016. Thanks for supporting your professional trade association!

NAME	LOCATION
Daniel Agababian CET	Deer Park NY
James Anderson CETsr	Newborn GA
Lloyd Armstrong CETsr	Hahnville LA
Jonathan Autenrieth FOT	Waco TX
Miloud Belbachir	Houston TX
David Broach CETsr	Madison GA
Clifford Casazzone CET	Farmingdale NY
Michael Cavazzini CET	New Castle DE
George Charlton	Tulsa OK
Yeau-Yih Chen CETsr	Mahwah NJ
James Coe CETsr	Marrer LA
Delmarva Communications, Inc	New Castle DE
Parker Difuntorum CETsr	Sacramento CA
James Dukette	Ray Brook NY

NAME	LOCATION
Robert Duran CETsr	Apple Valley CA
Lawrence Fable	Brooklyn NY
Don Handel CETsr	Palm Springs CA
Lucas Henry CETsr	San Juan Capistrano CA
Chris Holder CETsr	Houston TX
Stephen Horton CETsr	Rome GA
Kenneth Kear	Congers NY
Lance King CETsr	Orlando FL
John Koyné	Wilmington DE
Aaron Kraft FOSP	Bismarck ND
Steve Maher	Greencastle IN
Frank Matthews CETa	Rocky Mount NC
Jason Maurakis CSM	Blairs VA
James Miller FOSP	Bismarck ND

NAME	LOCATION
Alfredo Newman	Albuquerque NM
Eugene Orta CET	Fresno CA
M Pavilonis	Otisville NY
James Phillips CETa	Princeton NC
Terry Price CETsr	North Huntingdon PA
Tim Proctor CET	Blairs VA
Nelson Quintana CET	Miami Lakes FL
Donald Rhoney CET	High Point NC
Arlan Roisland CETsr	Lonsdale MN
Daniel Stake CETsr	Riverside CA
Ronald Von Hoelle	Bear DE
Kenneth Wherry	Van Nuys CA
Chad Yeatts CSS	Chatham VA



New Certified Service Centers

Barbeck Communications Group, Decatur, IL
Integrated, LLC, Jackson, TN
Metro Communications, LLC, Knoxville, TN
Nashville Communications, Nashville, TN
Tri-County Communications, Oneonta, NY
Metropolitan Communications, Carrollton, GA



New Lifetime Member

Michael Dennis Tillman
Monroe, GA

THE HAWTHORNE EFFECT AND LIFI

How the Quality of Life is Changing, Thanks to LiFi Optical Wireless Communication Technology

by **JB Groves III** | FOI, ITS, Wharton County Junior College

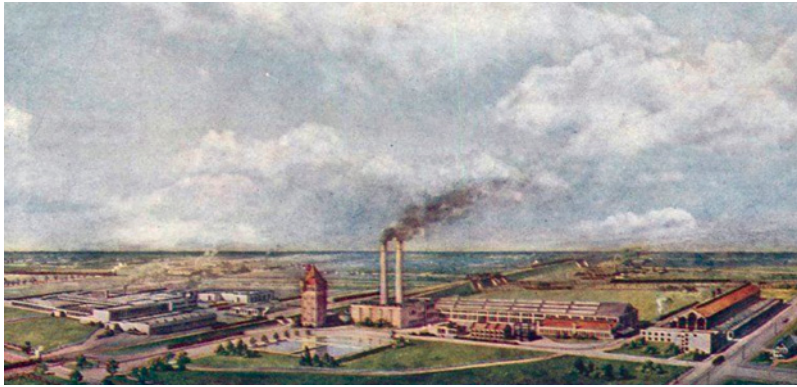


Figure 1



Figure 2

In 1991, I was introduced to the American Productivity and Quality Center (APQC) in Houston, TX by a colleague at the University of Houston while working on my undergraduate degree. A part of the curriculum was economics, which focused on quality/productivity enhancement theories. One of those theories was the Hawthorne effect.

The Hawthorne effect theory originated from Henry A. Landsberger's analysis of experimental results derived from a study commissioned from the management of a Western Electric factory outside of Chicago called the Hawthorne Works – "The Electrical Capital of America" (figure 1).

One of the resulting observations from this study was that workers seemed to become more productive in higher or lower levels of light, which was a meaningful benefit for productivity and quality. The tower (figure 2) pictured in figure one is the only remnant that remains of the complex. It is a museum found on the grounds of Morton College.

I'm going to fast forward a bit and use the Hawthorne effect and Light Fidelity (LiFi) as a quality of life application analogy to the current undertakings of an entrepreneur in the country of Abidjan on the Ivorian Coast of Africa, Ange Frederick Balma, with LIFI LED CÔTE D'IVOIRE.

His company is an integral part of the government of Abidjan and an organization called 1 World Connected with efforts to connect 5,000 people in the Ivorian coast villages to the Internet by 2020. Balma's project involved implementing Optical Wireless Communication LiFi systems in the village of Drongoin on the Ivorian Coast.

According to Balma, the implementation of LiFi in the villages resulted in the following quality of life benefits:

- "The long term goal is to bring the young people back to the countryside."
- "The young people go to the big cities but they cannot find jobs. They do not know what to do. We want to help them get their act together and help them do more with their lives."
- "We have already seen them coming back by bringing technology to Africa that will help reach goals set by our leaders."
- "It is a way of bringing development to the area, especially with young people."
- "LiFi technology provides power to lights in their homes, school, hospital and the Internet, gaining access to information for all facets of the community."
- "When the school children get home at night, they have lights and can sit down and do their homework in peace. I have named them the 'Children of the Light'."
- "In today's world, if you cannot use a phone, tablet, or computer, you might as well be illiterate."
- "They talk about bringing light to the villages – but if you can bring light and the Internet at the same time – it is even better."

LiFi has absolutely changed the quality of life, thanks to light. I would say that this is an overwhelming success story for Hawthorne's effect. //

Groves Gets Lots of Attention after LiFi Presentation



ETA International attended the High Impact Technology Exchange last week in Miami, FL. After his session “How LiFi Network Technologies will Change Our Lives,” educators crowded around JB Groves, FOI, ITS, Instructor of Computer Science at Wharton County Junior College (Richmond, TX). They wanted more information about the new careers LiFi will create. JB eagerly spread the word about the creation of ETA’s new LiFi certification currently in committee development that will help propel their students’ careers. //

FiberOpto Asia and Sticklers Fiber Optics Make Big Impact for ETA Fiber Optics Students

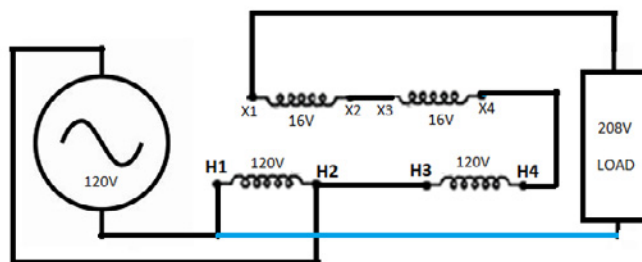
Brian Teague, Product Line Manager, Sticklers Fiber Optics, is pictured with Boon Kwee (BK) Thiam, FOT, Instructor, FiberOpto Asia, as they double checked the testing insertion loss performance set up Thiam was working for one of his FTTH customers. Teague and Thiam were with Dixon Tan, Sticklers Asia Business Manager, and Jerald Chan, General Manager for MicroCare-Sticklers Asia.

Teague said Thiam is doing an impressive job of representing ETA and using Bill Woodward’s (FOD) latest book, “Fiber Optics Installer (FOI) Certification Exam Guide” and content for fiber optic installations and trainings in Myanmar, Vietnam, Brunei, Thailand, Philippines, Indonesia, Malaysia and Singapore.

“The ETA programs are literally helping and impacting thousands of people in our industry all over Southeast Asia, helping many people you may never meet become better at their job, teaching them to work safer through better situational awareness on the work site, and increasing their overall competitiveness in the marketplace when they use the skills they are picking during BK’s training sessions,” Teague said. //



**Puzzle question
on page 9**



ETA CERTIFICATION MAINTENANCE FAQs

Q: What is Certification Maintenance and how do I satisfy the requirements for it?

A: Certification Maintenance is ETA's policy for complying with ISO's 17024 recertification standards and with ETA's accreditation through the International Certification Accreditation Council (ICAC). It also makes sure ETA has the most up-to-date information on file with the people they have certified. What it requires is a completed certification maintenance form with updated information for the technician, employer verification, continuing education hours and a nominal processing fee of \$25 per year. Maintenance also serves as a way to promote members staying current in their field.

Q: Do different certifications have different requirements?

A: Yes. Because ETA offers certifications in many different fields, we have different recertification requirements for different certifications.

+ *One-Year Renewal:*

- All ARINC and SAE certifications

+ *Maintenance with Hands-on:*

- Fiber optics certifications, Data Cabling, Photovoltaics, Small Wind, Termination and Testing, Photonics, Broadband-VoIP and Passive Intermodulation Testing

+ *Non-Renewable:*

- Student Electronics Technician (SET)

+ *Retest Only*

- Motorola R56, MCT (MCORE), CSIA (R56 Auditor), GTR 8000 Repeater Site (GTT)

+ *Lifetime Certifications:*

- Customer Service Specialist, Certified Service Manager, CET Master (Please note all lifetime certifications are not accredited by the International Certification Accreditation Council)

+ *Standard Certification Maintenance:*

- All other certifications

Q: What is Certification Maintenance with Hands-On?

A: Certification maintenance with hands-on is for certifications that have a hands-on assessment as part of the certification exam during a training class or time of testing. Normal certification maintenance requires EITHER employer verification OR 10 hours of continuing education submitted annually to ETA. Certification maintenance with Hands-On requires employer verification AND continuing education, totaling 24 hours over the course of the four-year certification period. The fees associated with both of these are the same--\$25 per year.

Q: What is Continuing Education and does my on-the-job experience qualify?

A: No, your on-the-job experience does not count for continuing education, but it does satisfy your employer verification requirement. ETA defines continuing education as additional industry experience you acquire outside of your normal job duties to improve your skills and knowledge. There is not a comprehensive list of continuing education, so if you attend training or a seminar send documentation (certificate of completion, transcript, etc.) to ETA to see if it qualifies. Here is a

list of examples of valid continuing education:

- Education credits
- Graduation certificates
- College credit transcripts
- Electronics technician training sessions or courses (completion certificate required)
- Association or manufacturer/supplier-sponsored conferences or seminars (receipt of registration required)
- Military electronics training classes
- Serving on ETA committees as a Subject Matter Expert
- Publication of a technical article or research
- Submit an article for ETA's *High Tech News* magazine.
- eITprep online self-study courses

Q: I have multiple certifications. Do I need to submit multiple payments?

A: No. One certification maintenance payment covers all of your maintainable certifications for that year. Keep in mind, though, that if you have one Hands-On certification as well as non-hands-on certifications, you will still need to meet both the continuing education and employer verification requirements for the Hands-On certification.

Q: I missed a year (or more) of maintenance, can I catch up?

A: Absolutely! As long as you're within the 90-day grace period, then you can always catch up on certification maintenance. You will have to make up the payments for the years missed.

Q: How do I submit my Certification Maintenance?

A: There are many ways to submit your certification maintenance: Mail to 5 Depot St Greencastle, IN 46135

Email to eta@eta-i.org

Fax to 765-653-4287

Submit online at eta-i.org/certification_maintenance_form.html

Q: Why have I not received a letter to remind me about my maintenance?

A: ETA sends letters through the mail on a yearly basis. If you have not received yours, there can be any number of issues that can cause this, so make sure to contact ETA about your maintenance if you haven't heard from us in a while. Be sure to keep your address and contact information up-to-date. We love to hear from our certification holders!

Q: I earned my certification a long time ago. Is there any way to recertify?

A: Contact us! More than likely, you will have to retest to recertify, but give us a call and we'll make sure you are pointed in the right direction.

Q: I'm an employer. What reason do I have to encourage my employees to maintain their certifications?

A: The best answer to this is that you want to show clients and customers that your employees not only have obtained the knowledge required to do their job, but have also validated that knowledge through an independent third party and maintained that knowledge and ability. It also shows that your company is committed to ensuring your technicians are not only knowledgeable, but that they also keep up-to-date with technology and care about their industry.

COMMITTEE CORNER UPDATE

ETA RESEARCH AND DEVELOPMENT:

David Weaver, CSS and Ed Kirkpatrick, PVII, CSS

ETA committee members have so much passion for sharing their knowledge. Subject Matter Experts (SMEs), to say the least, are the lifeblood of certifications. ETA's Test Development department has been busy with the formation of new SME committees to develop new certifications that industry craves.

The new IoT Smart Technology Systems (STS) certifications (formerly RESI) committee has developed a new competency for the Basic Smart Technology Systems certification and is currently working on new exam questions. The number of questions for the Basic STS will be increased from the RESI's 75 question to 100. The target date for completion is mid-September. While working on the Basic IoT/STS, the committee is also reviewing and discussing competencies for the four certification endorsements within STS, which are: Audio/Video Entertainment, Computer Networking, Security-Surveillance and Environmental Controls.

The STS committee currently has 14 members and continues to grow. They are as follows: John Baldwin, CETsr; Clifton Beck; John Bosnack; Chuck Brooks, RESI; Joseph Delio, CETms; John Dings, CET, RESI, CSS; Marilyn Fernandez, FOI, RESI, B-VoIP, WNT, TCM; Michael Goshen, ITS, CST, NST; Lawrence Hardman, FOT, RESI, B-VoIP, WNT, NCT, CST; Ed Kirkpatrick, PVI, CSS; Rick Pinkava, CST; Charles Poole; Randy Reusser, CETsr, FOI, RESI, CSM; and John Rooks, FOI.

The Audio/Video Forensic Analyst (AVFA) is another new ETA certification in development. The AVFA identifies the major knowledge, skills, and abilities for a certified Audio-Video Forensics Analyst, which includes evaluating, authenticating, and enhancing analog/digital media using digital electronic technology. A certified Audio-Video Forensics Analyst must be capable of recovering and repairing analog/digital data while maintaining the integrity of all original recordings. The AVFA committee has finished the competencies and is working to complete the examination question pool. The certification is projected to be ready by the publication of this issue.

The AVFA committee currently includes: Muhammad Ali; Doug Carner, CCFE, CPP, CFHI; Marisa T. Dery, AES, IAI, IEEE, NAIS, CARAS; Michael Goshen, ITS, CST, NST; Ed Kirkpatrick, PVI, CSS; Brian Klier; Joe Maher, CSM, CSS; Jennifer Owen;

Muhammad Siddique; and Muhammad Yousaf.

In addition, the Systems Level Technician (SLT) will be added to the electronics program. The SLT committee has completed the competencies for basic systems electronics and is creating the examination pool. The committee suggests the SLT is for individuals trained in the basic foundational levels of electronics used in troubleshooting complex functions without the need for component circuit analysis. The SLT will provide a foundation of skills, in a wide variety of electronic industries, needed by technical personnel to advance their abilities with their work endeavors.

The SLT committee members are: John Poelma II; Ira Wiesenfeld, PE, CETms; John Baldwin, CETsr; Karl Eilers, CAT, LAS; Bob Lovelace, M.Ed; Joe Cook; John Shows, A.V.P. MGCCC; Aaron Cleveland, CET; Jeff Mori; Rich Booth, FOT; Jay Thompson, CETsr; Dwayne LaFontaine; Charlie Hardt; Jason Throop; A.J. Wiesenfeld, PE, CETsr; Rob Walker, CETsr; and industry members from Duke Energy, Southern Company, Chevron, and four additional members.

Introduction to 5G (5GT) is another new ETA certification that will make its debut at Education Forum 2019. For details about the certification and partner training workshop at the conference, co-locating with the International Wireless Communications Expo in Las Vegas March 4-8, 2019, please see the press release here: http://www.eta-i.org/2018_ETA_Promotes_5G_with_New_Certification_and_Partner_Training.html.

Lastly, the fiber committee members working on aerospace content completed the ARINC Fiber Optic Installer (AFI) examination update. Committee members include Bill Woodward, PE, FOD; Dr. Geoff Proudley, SFF; Larry Wood, AFT, FEED; and Kevin Barks, SFF, FOT.

ETA thanks the many members who have given countless hours above and beyond their normal workday to participate as Subject Matter Experts in its many certification programs.

If you have any questions, or would like to volunteer your expertise, please contact David Weaver, CSS dweaver@eta-i.org and Ed Kirkpatrick, PVI, CSS ekirkpatrick@eta-i.org.

What's All This Prank Stuff, Anyhow?

by Paul Rako

Reprint permission granted. This article first appeared May 29, 2018 on Electronic Design, www.electronicdesign.com.

Who says engineers don't have a sense of humor? Remember the WOM, inspired partly by the Umac 606 phantasatron? The DEAD diode? The "SCROM" scratchable read-only memory? The list goes on.

Many of the early analog electronic greats were inveterate pranksters. Sometimes the prank made the papers, as when Bob Widlar bought a sheep and staked him on the lawn at National Semiconductor (Fig. 1). National had announced it was cutting back on lawn maintenance to save money, and Widlar thought he should make a statement regarding excessive cost cutting. National was founded by Charlie Spork, among others. Charlie was the manufacturing guy at Fairchild, so he tended to have a factory sensibility. You don't need a fancy lawn to manufacture semiconductors.



1. Bob Widlar poses with the sheep he staked to the lawn at National Semiconductor. His Mercedes is in the background. He transported the sheep in the back seat the 30 or so miles from Morgan Hill. (Courtesy of Fran Hoffart)

Pierre Lamond, a manager at National, also had that manufacturing mentality. He was notorious for expecting punctuality of his engineers, as if they should punch a clock in the morning. He used to stand at the entrance to the campus and take names of anyone who dared be even a few minutes late. A friend told me that the IC designers were so upset at this treatment that they all threatened to walk out en masse if Lamond kept up his strict tardiness rules.

It was around this time that analog geniuses Jim Williams and Bob Widlar figured out how to make a wall socket that converted the 60-Hz line frequency to something less. They got Widlar's brother, Jim (Fig. 2), to install the socket where Lamond had his desk clock plugged in. Since the clock ran slow, it would make Lamond late to appointments and such. Williams told me the whole floor could hear Lamond's shouts when he discovered the subterfuge.

April Fool's

With the prankster nature of analog folks, its no wonder that April 1st is a high-holy day. I have a pdf copy of what looks suspiciously similar to a Linear Technology design newsletter issue. The logo is similar, but the company name is "Unreal Technology." Dated April 1, 2003, VOLUME XIII NUMBER



2. Bob Widlar's brother Jim, at the 2018 Analog Aficionados party in Silicon Valley.

1.5, the issue has topics such as "SMBus/I2C Clarifier Improves Quality of Serial Bus Data." The part supposedly can take text with gibberish and convert it to a Joyce Kilmer poem. The article is written by Dave "Smoke and Mirrors" Dwelley.

Jim Williams has an article, too, "A Coprocessor-Based Fast Logarithmic Computer." The logarithms are created by the well-known trick of putting a diode in the feedback of an op amp. The coprocessor is a Z-80 microcontroller hooked up by its power and ground pins to reverse-bias them, so the whole 8,500-transistor chip serves as the diode. The newsletter had other great spoofs, like a quad temperature sensor where all four sensors were in the chip die, a pretty useless feature.

Bob Pease had his own joys on April 1st. Back in October of 2010, Pease wrote me about one of his April Fools' pranks. Pease remembered.

"Here at NSC (National Semiconductor), we took a few hundred dead TO-3 can regulators, and I cut the leads off, and had them silkscreened as BD-1. Bob Dobkin invented the BD-1, but I got them screened up. The BD-1 got some publicity in EEE magazine. It's a Battery Discharger, BD-1. If you bolt onto each end, it can carry about 900 amps. Maybe not 1000. Good for discharging large batteries. After the publicity came out, our marketing guy for regulators, Roy Essex, was furious that he could not find any info on this new IC. Some dumb customer had been calling him, and asking why he was so ignorant that he could not get him more info on this new NSC circuit. He was highly annoyed.

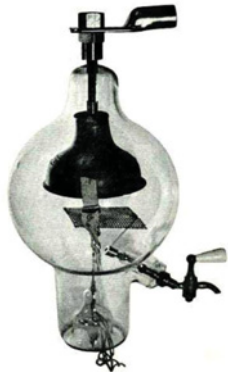
"I left a dozen BD-1's on Roy's desk, explaining that any press release dated 1 April, and published in a magazine on April 1, should be taken very lightly!! His furious comments increased, for a while. I bet he is still pissed off at us. Beast [sic] regards. / rap / It's past noon. I need a drink!"

This discussion was part of an email where he described silkscreening some parts that had an obscene acronym aimed at a competitor. He sent those parts to engineers at the competitor, and let them puzzle over the part until one of them pronounced it out loud, when its profane intent became very clear. Pease remarked, "The guys making silkscreens were usually agreeable to my insane requests."

WOM-Batty

Creating absurd and phony parts were another trait of electrical engineers. They include the Signetics WOM, a Write-Only Memory. Pease noted that it “was professionally presented in full color in a four-page foldout section of electronics magazines.” You can still find the 1972 datasheet online. John G. (Jack) Curtis, the perpetrator of the prank, has a website describing the WOM in exquisite detail. He takes Pease to task for an unreliable account of the creation story of the WOM, but all Pease had to go on was industry hearsay, there were no websites when Pease would describe the WOM.

What is delightful is that the WOM was partially inspired by the Umac 606 (Fig. 3). Well-known to Ham enthusiasts, this was a spoof datasheet for a vacuum tube that the EIMAC division of Varian published in 1950. The datasheet begins, “The Umac 606 is an infernal anode, helical beamed phantasatron having a dissipation rating. The unique vacuum in the phantasatron is



3. The Umac 606 was a spoof vacuum tube with an anode shaped like a toilet plunger. (Courtesy of EIMAC Division of Varian)

of the double-pumped type, permitting a clear view of the non-emitting triple-processed plunger-type plate. Because of its unique self-flushing construction, this tube will remain usable throughout its useful life.”

You can tell that engineers loved to parody marketing jargon, even 67 years ago. As a former application engineer, I love the “application notes” section of the Umac 606, which contains the phrases, “Because of its unique construction, the 606 can serve as an oscillator, modulator, or amplifier. It usually serves as all three simultaneously. No specific operating conditions are available. Ratings will be available however, as

soon as our competitors issue their catalogue. Exhaustive tests in our advertising department have shown that the 606 will give 50 percent more output than you will obtain.”

The comment about the datasheet having better specs than you will obtain rings true for me. It took a lot of patience to explain to customers that specs in the datasheet were optimum specs at very specific operation conditions. Many customers thought it was somehow unfair or fraudulent that an amplifier could not have the same distortion or power-supply rejection at 3 V as it had at 15 V. Of course, they wanted to use it at 3 V and were quite miffed that the part did not measure up to their expectations.

The DEAD, the SCROM, and Pre-Earthquake Motion Sensors. Another great prank part was dreamed up by former Linear Tech CTO Bob Dobkin. Now part of Analog Devices, Dobkin dreamed up the DEAD in 1975, a Darkness Emitting Arsenide Diode. Pease noted, “This had many features—light output never fell off with time, and they were cheap due to high yield. Just check the acronym.”

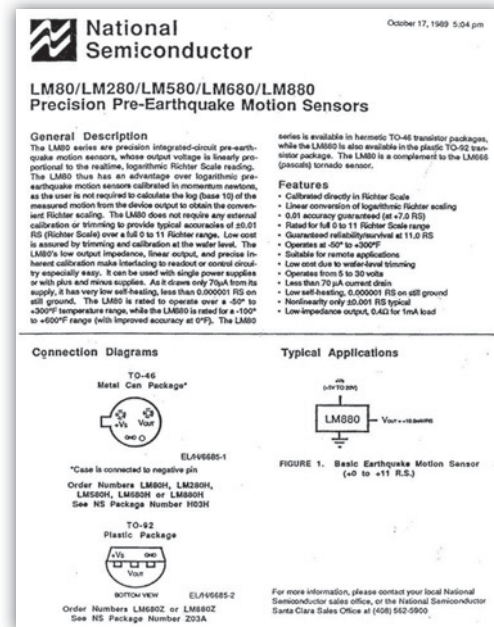
Some spoof ICs have a basis in fact. While at Signetics, Jerry Lawson (Fig. 4) came up with the term SCROM, the “Scratchable Read-Only-Memory.” It was a joke reference to the way that they could prototype a ROM (read-only memory) by scratching the metallization on a die to give the memory values desired. This was when a 64-bit memory was big, back in the 1970s. I have a video interview I did with Lawson that I will get up soon. He



4. Jerry Lawson at the eFlea breakfast in March 2011, a month before his death. Jerry was instrumental in applications and the cartridge video game at Fairchild Semiconductor.

was a great guy, yet another friend I made at the Silicon Valley Electronics Flea Market.

The pranksters at National Semiconductor (now Texas Instruments) came up with another spoof part in 1989. It was the LM80/LM280/LM580/LM680/LM880 Precision Pre-Earthquake Motion Sensors (Fig. 5). The datasheet date, October 17, 1989 5:04 PM, was the exact moment of the Loma Prieta earthquake in San Francisco. The LM part numbers are all interstate freeway designations around the Bay Area.



5. A spoof datasheet for a pre-earthquake sensor that the engineers at National Semiconductor came up with shortly after the 1989 Loma Prieta earthquake.

The datasheet starts, “The LM80 series are precision integrated-circuit pre-earthquake motion sensors, whose output voltage is linearly proportional to the realtime logarithmic Richter Scale reading. The LM80 thus has an advantage over logarithmic pre-earthquake motion sensors calibrated in momentum newtons, as the user is not required to calculate the log (base 10) of the measured motion from the device output to obtain the convenient Richter scaling.”

The datasheet features include wildly implausible accuracy, temperature, current, and self-heating claims. I am not sure where I got this datasheet image, but it was most likely from the prankster-in-chief, Bob Pease himself. Perhaps he should have been called the Czar of Pranks, not the Czar of Bandgaps. //



ETA[®] International
5 Depot Street
Greencastle IN 46135
(800) 288-3824
www.eta-i.org
eta@eta-i.org

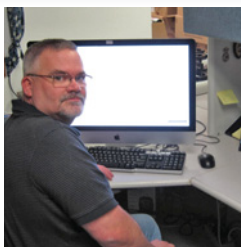
Address Service Requested

Presorted Standard
US Postage Paid
Tucson, AZ
Permit #271

**Don't Forget to
Submit Your
ETA Board & Award
Nominations!**



Where Does ETA Certification Take You?



Mike Stafford, CETsr
Communications Engineer
City of San Antonio
ITSD - Radio Services Division

Mike said he's had a healthy interest in electronics and communications since an early age, beginning with a father who was an engineer for Honeywell and a science teacher who exposed him to Ham Radio and electronics

in high school. (Call Sign: W4MIC)

He began his career almost 30 years ago with an enlistment in the U.S. Air Force. After separation, he was hired by a local two-way radio shop in a small North Carolina town.

"It was a raw, basic, and pithy introduction to the radio industry, beginning with installing radios into patrol cars," Mike said, "and I clawed my way upward from there."

Over the years, he has had many educational opportunities and a lot of experience - ranging from two-way radio to microwave and from fiber optics to satellite systems. He recently completed his engineering degree, which he said has only served to demonstrate how much more he has to learn.

Mike has earned many different credentials over the years and obtained several ETA certifications. He is currently a Senior Certified Electronics Technician (CETsr), and is only two credentials away from obtaining his Master CET.

"As the recognized industry standard, ETA certification has become an essential factor in my career," he said, and added, "I try to show my employers that I am a professional in what I do, continually bettering myself by learning the latest skills, and ETA is a valuable resource in doing so."

He was recently hired by the City of San Antonio as a Communications Engineer for the Radio Services Division of the Information Technology Services Department, where they value his education, experience, and consider his professional certifications as a valuable tool for career advancement.

Help ETA spread the word about the many exciting and lucrative careers available in the electronics industry!

Your photos and job experiences will show the next generation that electronics can take you places most people only dream about. As a professional trade association, it is our duty to educate the public that there are many lucrative job openings just waiting to be filled by qualified technicians. With your help, ETA can raise the visibility of certified electronics technicians and show the world all of the varied job titles that make up this exciting industry.

You could win a free ETA stainless steel travel mug!

Just send ETA your on-the-job photo, your job title and a brief description of your job and how ETA certification has helped further your career. Thanks!