USTTI

2019 COURSE CATALOG

Global Growth Through Communications Sharing

171 Countries Served By The USTTI: 1983-2019

Afghanistan
Albania
Algeria
Angola
Anguilla
Antigua and Barbuda
Argentina
Armenia
Aruba
Azerbaijan
Bahamas
Bahrain
Bangladesh
Barbados
Belarus
Belize
Benin
Bermuda
Bhutan
Bolivia
Bosnia and Herzegovina
  Botswana
Brazil
British Virgin Islands
Brunei
Bulgaria
Burkina Faso
Burundi
Cambodia
Cameroon
Cape Verde
Central African Republic
Chad
Chile
Colombia
Comoros
Congo
Cook Islands
Costa Rica
Cote d'Ivoire
Cyprus
Czech Republic

Democratic
  Republic of the Congo
Djibouti
Dominica
Dominican Republic
Ecuador
Egypt
El Salvador
Equatorial Guinea
Eritrea
Estonia
Ethiopia
Federated States of
  Micronesia
Fiji
Gabon
Gambia
Georgia
Ghana
Grenada
Guatemala
Guinea
Guinea Bissau
Guyana
Haiti
Honduras
Hong Kong
Hungary
India
Indonesia
Iraq
Israel
Jamaica
Jordan
Kazakhstan
Kenya
Kiribati
Kosovo
Kuwait
Kyrgyzstan
Laos
Latvia

Lebanon
Lesotho
Liberia
Libya
Lithuania
Macau
Macedonia
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Marshall Islands
Mauritania
Mauritius
Mexico
Moldova
Mongolia
Montserrat
Morocco
Mozambique
Myanmar
Namibia
Nepal
Netherlands Antilles
Nicaragua
Niger
Nigeria
Oman
Pakistan
Palau
Palestinian National Authority
Panama
Papua New Guinea
Paraguay
People's Republic of China
Peru
Philippines
Poland
Qatar
Romania

Russian Federation
Rwanda
Samoa
Sao Tome and Principe
Saudi Arabia
Senegal
Serbia
Seychelles
Sierra Leone
Singapore
Slovakia
Slovenia
Solomon Islands
Somalia
South Africa
South Korea
South Sudan
Sri Lanka
St. Kitts and Nevis
St. Lucia
St. Vincent and the
  Grenadines
Sudan
Suriname
Swaziland
Syria
Taiwan
Tajikistan
Tanzania
Thailand
Togo
Tonga
Trinidad and Tobago
Tunisia
Turkey
Turkmenistan
Tuvalu
Uganda
Ukraine
United Arab Emirates
Uruguay
U.S. Virgin Islands
Uzbekistan
Venezuela
Vietnam
Yemen
Zambia
Zimbabwe

USTTI Family Of Volunteer Trainers And Supporters In 2019

Each year, hundreds of leaders from corporate America, the Federal Government, American universities and colleges, and other entities involved in the communications-IT marketplace of the United States generously volunteer their time, expertise and resources for USTTI scholars from every part of the developing world who attend USTTI training. Information about the USTTI family of sponsors can be obtained through the web sites listed below, as well as by accessing the USTTI site at www.ustti.org.

AT&T *	www.att.com
CITEL	www.citel.oas.org
Comcast Corporation*	www.comcast.com
Comsearch	www.comsearch.com
Dynamic Spectrum Alliance	www.dynamicspectrumalliance.org
Ericsson *	www.ericsson.com
Facebook*	www.facebook.com
Federal Communications Commission (FCC) *	www.fcc.gov
Google*	www.google.com
GSM Association*	www.gsma.com
HLP&R	www.hlprdc.com
Howard University	www.howard.edu
Louis Stokes Health Sciences Library	http://hsl.howard.edu
ICANN*	www.icann.org
Inmarsat *	www.inmarsat.com
Intel Corporation *	www.intel.com
Intelsat *	www.intelsat.com
International Telecommunication Union (ITU)	www.itu.int
The Internet Society (ISOC) *	www.isoc.org
Keysight Technologies	www.keysight.com
Latham & Watkins, LLP	www.lw.com
M3AA Foundation	www.m3aaf.org
Microsoft Corporation*	www.microsoft.com
National Instruments	www.ni.com
National Aeronautics and Space Administration	www.nasa.gov
National Public Radio (NPR)	www.npr.org

National Oceanic and Atmospheric Administration (NOAA)	www.noaa.gov
NBC 4 (WRC-TV Channel 4) Washington, DC	www.nbc4.com
OneWeb*	www.oneweb.net
Packet Clearing House	www.pch.net
Pan American Health Organization (PAHO)	www.paho.org
Public Utility Research Center (PURC)	www.cba.ufl.edu/purc
QUALCOMM Incorporated *	www.qualcomm.com
SCOLA (Foreign Language TV/Web Provider)	www.scola.org
Silicon Flatirons	www.silicon-flatirons.org
SPX Communication Technologies*	www.spx.com/en
TCI International, Inc. (an SPX Company)	www.spx.com/en/tci
Tektronix, Inc.	www.tektronix.com
United Kingdom Telecommunications Academy (UKTA)	www.ukta.co.uk
U.S. Department of Commerce, National Telecom and Information Administration (NTIA) *	www.ntia.doc.gov
U.S. Department of Justice	www.justice.gov
U.S. Department of State *	www.state.gov
University of Colorado Boulder	www.colorado.edu
ATLAS Institute	www.colorado.edu/atlas
University of Virginia, Office of Telemedicine	www.telemed.virginia.edu
Verizon *	www.verizon.com
The Walt Disney Company*	www.disney.com

Also a member of the USTTI Board of Directors

USTTI

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Chairman's Report

2018 was a challenging yet rewarding year for the USTTI. In 2018, the USTTI staff worked tenaciously to graduate 200 women and men from 58 developing countries bringing the total number of graduates, since the USTTI was launched, in Nairobi in 1982, to 9,817.

2018 was also a special year in that Doreen Bogdan-Martin, a longtime friend of the USTTI, was elected to be the ITU's Director of the Telecommunication Development Bureau (BDT). Ms. Bogdan-Martin will hopefully be able to utilize a 2002 MOU between the USTTI and the ITU, to collaborate on our mutual goal of empowering as many women and men working in the global ICT marketplace.

I want to extend a sincere thanks to the USTTI Board of Directors, both federal and private sector members, for their unequivocal commitment to aggressively continue the USTTI's 37-year history of sharing important knowledge with women and men who are well-positioned to make affordable and accessible modern communications a reality for their fellow countrymen. I also want to congratulate USTTI President James O'Connor for his superb job during this challenging year. Special thanks also go to the scores of ICT officials and business leaders who volunteer their expertise by conducting training each year for our USTTI scholars.

Michael R. Gardner

Chairman, USTTI

USTTI President James O'Connor congratulates Doreen Bogdan-Martin following her election to be the ITU's Director of the Telecommunication Development Bureau (BDT). Ms. Bogdan-Martin is the first woman to be elected to the ITU's senior management.

USTTI 2019

From Brazil to Bahrain, Cambodia to Cote d'Ivoire, Niger to Nicaragua, Saudi Arabia to Suriname, Uruguay to the UAE, USTTI scholars in these and forty-four other countries are sharing the information they gained during their 2018 USTTI training. Through intensive course offerings that were conducted in Washington, DC; San Diego, CA; Silicon Valley and other parts of the United States subject matter experts once again volunteered their time, energy and expertise to conduct the USTTI's 36th year of training.

In planning for 2019, we reflect on the many accomplishments of USTTI Alumni during 2018. USTTI graduates have been elevated to roles as Minister, Regulatory Chairman and many served as the Head of Delegation for their country at the ITU Plenipotentiary Conference in Dubai.

In 2019, the USTTI will offer new courses addressing Emerging Technologies, 5G and Emergency Communications. Through these offerings, and our entire 2019 curriculum, the USTTI will continue to share the experiences of the United States government and industry in the constantly evolving telecommunications sector. This year we will also graduate our 10,000th USTTI Scholar. As we prepare for this momentous occasion we are also focused on solidifying the future of the program. That is why we have launched our USTTI's Next 10,000 Scholars Fundraising Campaign. The Next 10,000 Scholars Campaign is calling on all members of the USTTI family to financially contribute to the USTTI as we work to enhance revenue and ensure the mission of the USTTI continues in the decades ahead.

As we begin our 37th year of tuition-free training, I am honored to be part of the USTTI family. I thank all of the women and men who make our training possible and I thank our USTTI Scholars and Alumni for your continued trust and friendship. I look forward to a successful 2019 and to welcoming you to USTTI training.

Sincerely,

James J. O'Connor
USTTI President

USTTI 2019
BOARD OF DIRECTORS

United States Telecommunications Training Institute

BACKGROUND

In preparation for the 1982 ITU Plenipotentiary Conference in Nairobi, Kenya, Ambassador Michael Gardner asked leaders of major, often competing, U.S. ICT corporations to join together with senior U.S. government officials to provide diverse tuition-free training for qualified communications professionals, regulators, and entrepreneurs from the developing world. The affirmative response was overwhelming and, as a result, the USTTI was launched at the Nairobi ITU Conference as a public-private, non-profit partnership dedicated to aggressively sharing ICT knowledge with women and men working to make modern communications a reality throughout the developing world.

Among those joining Ambassador Gardner as founding members of the USTTI Board were: William McGowan, founder of MCI Communications; Dr. Joseph Charyk, Chairman of the Board and first President of the Communications Satellite Corporation (COMSAT); Charles Wick, the Director of the United States Information Agency (USIA) during the 1980s; Dick Nichols, Vice-President of AT&T International; and Harrison "Jack" Schmitt, former United States Senator from New Mexico and the twelfth man to walk on the moon.

USTTI TODAY

USTTI training empowers developing country officials with the skills needed to manage their spectrum, deploy wireless technologies, develop national broadband plans, implement national Cybersecurity strategies, support Internet deployment, launch cloud services, protect children online, and ensure sound emergency communications plans all while working to support the rule of law. Thanks to the steadfast contributions of USTTI corporate and government board members, as well as hundreds of volunteer ICT experts from government, industry and academia throughout the United States, the USTTI has graduated 9,817 women and men in 171 developing countries since 1982.

The model for USTTI's continued and effective program is simple: each year hundreds of ICT experts from industry and government provide intensive tuition-free training to women and men who are involved, typically at senior levels, in their developing countries ICT infrastructure. The USTTI's training takes place at industry and government offices throughout the United States where these ICT experts volunteer their time and high tech facilities. This efficient volunteer approach allows the USTTI to conduct its tuition-free curriculum with a lean five-person staff working out of the USTTI's headquarters in Washington, DC.

The USTTI Board of Directors reflects the dynamic public-private partnership that remains a core principle of the USTTI's approach to training. Corporate Board members of the USTTI are:

▸ Adiel Akplogan, Vice President Technical Engagement, Internet Corporation for Assigned Names and Numbers (ICANN);

▸ Rebecca Arbogast, Senior Vice President, Global Public Policy, Comcast NBCUniversal;

▸ JB Ballard, President, SPX Communication Technologies;

In 2018, QUALCOMM's highly popular "5G and a Connected World" course trained officials from Belize, Cambodia, Egypt, Ghana, Indonesia, Jamaica, Malaysia, Philippines, Saudi Arabia and Vietnam. The intensive one week course addressed the latest developments in the mobile broadband ecosystem, 3G/4G industry forecasts, Internet of Everything, frequency bands and spectrum licensing innovations. QUALCOMM is represented on the USTTI Board of directors by Tom Wasilewski, Vice President for Government Affairs.

"I thank USTTI and all the team for this beautiful and successful experience."

Karima Mahmoudi – (Tunisia)

"The USTTI experience has for me been a "WOW" experience."

Samuel Agyekum – (Ghana)

▸ Donna Bethea-Murphy, Senior Vice President, Regulatory Policy and Development, Inmarsat, Inc;

▸ Ellen Blackler, Vice President, Global Public Policy, The Walt Disney Company;

▸ Jared Carlson, Vice President, Government Affairs and Public Policy, Ericsson;

▸ Tom Dailey, Senior Vice President and General Counsel, Verizon international

▸ Gonzalo de Dios, Associate General Counsel, Intelsat US LLC;

▸ Belinda Exelby, Head of International Relations, GSM Association (GSMA);

▸ Will Hudson, Senior Advisor for International Policy, Google LLC;

▸ Karim Antonio Lesina, Senior Vice President, International External and Regulatory Affairs, AT&T;

▸ Paul Mitchell, Senior Director, Internet, Microsoft;

▸ Robert Pepper, Head, Global Connectivity Policy and Planning, Facebook.

▸ Peter Pitsch, Consultant, Intel Corporation;

▸ Ruth Pritchard Kelly, Vice President, Regulatory Affairs, OneWeb

▸ Andrew Sullivan, President and Chief Executive Officer, Internet Society (ISOC); and

▸ Tom Wasilewski, Vice President, Government Affairs, QUALCOMM Incorporated;

USTTI Board Member companies provide tuition-free training at their corporate facilities, finance the general overhead costs of the USTTI, and designate a senior executive to serve on USTTI's Board of Directors.

Senior communications officials from the Federal Government also play a critical role in the success of the USTTI, and are represented on the USTTI Board of Directors by: Ajit Pai, Chairman of the Federal Communications Commission (FCC); David J. Redl, the Assistant Secretary of Commerce for Communications and Information and Administrator of the National Telecommunications & Information Administration (NTIA); and Robert L. Strayer, Ambassador,

Deputy Assistant Secretary of State for Cyber and International Communications and Information Policy, U.S. Department of State.

In addition to their membership on the USTTI Board of Directors, U.S. government officials and their departments and agencies provide significant training as well as other in kind and scholarship support for USTTI participants. In 2019, the FCC will provide vital training through its seven courses in spectrum management, spectrum monitoring, and regulatory and privatization issues while the NTIA will offer spectrum management, emergency communications and Internet policy training courses. In addition, the NTIA provides a grant to the USTTI to fund and support a hands-on, interactive, senior level Internet policy making seminar. The NTIA also provides an annual grant to help publish the USTTI's Course Catalog and Annual Report. Finally, besides participating in USTTI leadership seminars, the State Department provides vital financial support while also utilizing its extensive network of officials in developing countries to process candidates for USTTI training.

The United States Congress has recognized the significance of the USTTI's global training outreach through special amendments to two legislative acts: the Cable Communications Policy Act of 1984 and the Omnibus Diplomatic Security and Antiterrorism Act of 1986. These amendments explicitly authorize support (including use of staff, other appropriate resources, and service on the Board of Directors) of USTTI's activities by the State Department, FCC, and NTIA. Importantly, for 2019, the State Department has provided the USTTI with a grant to support the travel and subsistence needs for USTTI applicants from the poorest developing countries.

USTTI TRAINING
To ensure a robust learning experience for all USTTI scholars, the USTTI Board of Directors is committed to maintaining

the relevance of the USTTI's diverse cutting-edge curriculum. Instead of operating a costly training center, USTTI offers the vast majority of its tuition-free training in corporate and federal training facilities and laboratories that are volunteered by our sponsors across the United States. As a result, the same facilities used for corporate and government in house training also effectively serve as classrooms for USTTI scholars.

Throughout the past thirty-six years, the USTTI has offered a total of 2,227 diverse training courses and graduated 9,817 women and men who are the key ICT regulators, managers, and service providers in 171 developing countries. As the USTTI enters its 37th year of training, the increased popularity and need for the USTTI's tuition-free training is reinforced by the fact that in 2018, the USTTI's curriculum attracted 7,040 applications for the 714 available training slots.

Applicant Information
WHO SHOULD APPLY
ICT (Information Communication Technology) officials; entrepreneurs; wireless, satellite, telehealth, emergency communications and broadcast professionals who are proficient in English and employed in the public or private sector of a developing country are encouraged to apply for USTTI training. While substantial practical experience in a country's communications infrastructure is required for all training, a post secondary education and/or university degree in telecommunications, broadcasting, management, engineering, or electronics is also beneficial. Educational background, professional experience, achievements, and current job responsibilities must be clearly described in the "Current Position and Work Experience" section of USTTI's Application for Training. Additionally, candidates should focus on the "Applicant Training Goals" section of the application, as this section is critically reviewed by our course sponsors.

HOW TO APPLY

Those interested in applying for US-based training should do so via the USTTI web site, http://ustti.org. Applying online guarantees the quickest processing time. PLEASE NOTE: Due to lengthy visa requirements, USTTI urges applicants to submit applications at least ten weeks before the beginning of their first desired course. Applications received after the ten week deadline will still be considered, but are less likely to result in acceptance. Applicants are reminded that their USTTI application must be fully completed and include current office, and mobile phone numbers, at least one valid e-mail address, and contact information for two relatives living in their home country as well as any residing in the United States, if applicable. Incomplete applications may not be considered. For those applying via fax or mail, applications should be typed.

Applicants should carefully review the course descriptions provided in the catalog and apply selectively for only those courses that are most appropriate to their experience, responsibilities and goals. Applicants should take special notice of the available course sequences, which provide an opportunity to maximize the training experience by attending several consecutive courses.

SELECTION PROCESS

The acceptance procedure for US-based courses is a collaborative effort between the USTTI and its training partners, with the final acceptance decisions made by course sponsors. Sponsors review each application and select only the most qualified candidates. Selection criteria include: professional qualifications, suitability for the course, thoroughness in completing the application, and most importantly, goals for participating in USTTI training. Applicants must clearly demonstrate in their "Applicant Training Goals" essay how their participation would benefit their company or organization, what leadership role they might assume upon completion of training, and how they envision implementing the training upon returning home.

If accepted for training, applicants will be notified by the USTTI via an official e-mail at least 7 weeks prior to the start of training. Applicants may be accepted to one or all of the courses to which they apply, depending upon the number of training slots available, applicant qualifications, and course focus. Participation in USTTI training is not guaranteed until accepted applicants confirm their attendance and their funding source via e-mail or fax, secure a U.S. entry visa (if necessary), and provide their purchased travel itinerary to the appropriate Curriculum Coordinator.

FUNDING PROCESS

Applicants should seek funding from their employers for their international and domestic U.S. travel and for their living expenses during USTTI training. If employer funding is unavailable, or

"Thank you for the great opportunity given by USTTI for sharing with us the best and qualitative experiences."

Tran Tuan Anh – (Vietnam)

"Wonderful course – theory, site visits, exercise, visitors."

Omar Al-Odat – (Jordan)

only partially available, applicants are encouraged to secure sponsorship from international organizations that recognize the importance of USTTI training, such as the International Telecommunication Union (ITU), The World Bank, the United Nations Development Program (UNDP), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the Organization of American States (OAS CITEL). The USTTI will attempt to help qualified applicants for whom no other funding sources for travel and subsistence are available. However, USTTI funding is extremely limited and therefore not guaranteed. As such, applicants are much more likely to attend training if they secure all of their travel and living expenses.

PARTICIPANT EXPENSES

The recommended subsistence rate for shared housing, meals and miscellaneous expenses for participants attending US-based USTTI training is approximately US $120 per day, although this amount may be greater or less at certain training locations due to varying hotel costs. This rate covers only the cost of meals and a shared hotel room in USTTI designated hotels. This figure does not cover single occupancy rooms or personal expenses such as hotel services and souvenirs.

VISA INFORMATION

Due to significant changes in U.S. visa regulations, USTTI urges all applicants to consult the U.S. Embassy website in your home country (a complete list of U.S. Embassies and Consulates can be found at http://www.usembassy.gov/) or contact the U.S. Consulate directly to determine specific application requirements, fees, interview procedures, and deadlines before applying. It can take up to four (4) months in some countries to secure a visa appointment. Therefore, we recommend applicants begin the visa process immediately after submitting course applications to USTTI to ensure sufficient time for filing necessary documents. It is essential that all USTTI applicants possess passports that will

be valid for at least six (6) months after the conclusion of training; otherwise the U.S. Embassy has been instructed not to issue an entry Visa.

TRAVEL ARRANGEMENTS

In order to avoid confusion and disruption during USTTI orientation and training, USTTI scholars must send a copy of their final air travel itinerary for ALL required travel to their USTTI Curriculum Coordinator before arriving in the U.S. It is also necessary that all international and U.S. domestic airline reservations be made in accordance with the dates provided in USTTI acceptance information. Last-minute ticket purchases and itinerary changes are expensive and may not be possible. Moreover, the USTTI cannot finalize participant hotel arrangements until receiving your final flight itinerary.

IMPORTANT CONSIDERATIONS BEFORE SUBMITTING YOUR APPLICATION:

▸ Have you reviewed the course sequence information?

▸ Is your passport valid for at least six (6) months beyond the conclusion of the last training course to which you applied?

▸ Have you consulted the web site of the U.S. Consulate in your country to determine U.S. entry visa requirements and procedures?

▸ Have you visited the USTTI web site (http://ustti.org) to review the online application procedures?

▸ Is your application complete, including valid e-mail addresses, office and mobile phone numbers, passport details, supervisor contact information, and contact information for relatives in your country as well as the U.S.?

USTTI POLICIES FOR PARTICIPANTS

▸ Participants in USTTI training must adhere to the USTTI's policies, which cannot be waived without written authorization from a professional member of the USTTI staff. The most important requirements are:

▸ USTTI Scholars must attend orientation in Washington, DC, even if the participant is a former USTTI graduate.

▸ USTTI Scholars must stay in the hotels designated by the USTTI. There are no exceptions.

▸ Spouses and/or family members may not accompany USTTI Scholars during training.

▸ USTTI Scholars must be prepared to pay their hotel room charge in full at time of check in. All incidental expenses, such as telephone calls, movies, or room service, are the sole responsibility of each individual USTTI Scholar, regardless of any sponsorship.

▸ Since USTTI training is offered only in English, participants must have a functional proficiency in English.

▸ USTTI Scholars must attend all classes unless excused by the training staff for health or emergency reasons.

▸ During orientation, each USTTI Scholar must pay an insurance and administrative fee of US$150 for the first course/week of training and US$75 for each additional course/week of training. This fee is mandatory since the USTTI is required to provide emergency medical insurance for all USTTI Scholars regardless of a Scholar's individual coverage under a personal or company insurance policy. This insurance does not cover dental care, eye care, prescriptions, or pre-existing conditions.

▸ To avoid any disruption to the USTTI admission process, applicants for USTTI training may not contact course sponsors regarding acceptance or funding decisions.

▸ Failure to adhere to any of these requirements will result in a participant's immediate dismissal from training.

In addition to the previously listed requirements, USTTI's attendance policy applies to all participants:

For purposes of attendance, the USTTI considers an individual "confirmed" for a particular training course once he or she has submitted the following documentation to a USTTI Curriculum Coordinator:

- Valid passport information page;
- Employer authorization letter;
- Funding Commitment form signed by the individual or organization providing funding;
- Valid US entry visa; and
- Final flight itinerary.

Once an individual is confirmed for training, failure to attend training without an official employer letter stating the professional crisis preventing participation will result in the following penalties:

- The confirmed individual will be barred from participating in USTTI training for a period of three (3) years; and
- The individual's organization will be barred from sending employees for USTTI training for a period of one (1) year.

This revised attendance policy is intended to limit the number of last-minute participant cancellations for training, which unfairly deprive other willing applicants of an opportunity to benefit from USTTI training.

USTTI Funding

In 2018, the USTTI corporate and government Board members, along with training sponsors from both academia and the ICT industries provided cash and in-kind contributions to support the USTTI, a 501(c)(3) non-profit corporation. These contributions allowed the USTTI to offer tuition-free training courses while also providing travel and subsistence funding, educational materials, and a host of other services to the USTTI.

The USTTI's overhead costs - program development expenses, salaries for our small staff, and institutional costs such as rent, utilities, and postage - are paid for by private sector contributions. The USTTI's 2018 operating budget of $716,225 was tightly controlled so that all revenues raised by the USTTI in excess of overhead costs were used to provide additional travel and subsistence support for promising USTTI Scholars from many of the least developed countries.

In addition to funding from the private sector, the USTTI received essential support from the Federal Government in 2018 to support the travel and subsistence needs of developing country leaders. Experts from the National Telecommunications and Information Administration (NTIA) of the U.S. Department of Commerce and the Federal Communications Commission (FCC) provided a total of nine courses, as well as in-kind support for the USTTI.

The USTTI is a 501(c)(3) non-profit corporation, meeting all requirements for charitable contributions. In 2019, the USTTI will need approximately $1,500,000 in order to provide travel and subsistence needs of qualified applicants who are unable to support their own participation in USTTI training. Corporations and organizations wishing to support the USTTI should contact USTTI President Jim O'Connor at 1150 Connecticut Avenue, NW, Suite 702, Washington, DC 20036-4131, USA. Telephone: +1-202-785-7373, Fax: +1-202-785-1930, E-mail: joconnor@ustti.org.

"Everything was just perfect."

Ferry Arief Wibowo – (Indonesia)

"Excellent, the trainers were so clear."

Javier More Sanchez – (Peru) Course

Number	Course Title	Dates	Sponsor	Location
FIRST TRIMESTER				
5G AND EMERGING TECHNOLOGIES SEQUENCE: (PAGES 13-15)				
19-100	5G - The Path to the Next Generation	Mar 18 - 19	GSMA	Washington, DC
19-101	Digital Transformation: Unlocking the Potential of IoT	Mar 20	Verizon	Washington, DC
19-102	Regulatory Principles and Best Practices	Mar 21	USTTI	Washington, DC
19-103	Creating an Enabling Regulatory Environment for Cloud Services	Mar 22	Microsoft Corporation	Washington, DC
19-104	Enabling the Full Value of Wireless Connectivity: Game Changing Technology for the Digital Age	Mar 25 -26	Ericsson	Washington, DC
SPECTRUM MANAGEMENT SEQUENCE: (PAGES 32-37)				
19-110	Advanced Spectrum Management for Mobile Telecommunications	Apr 22 - 23	GSMA	Washington, DC
19-111	Spectrum Management in the Civil Sector	Apr 24 - May 3	Federal Communications Commission and Comsearch	Washington, DC
19-112	Introduction to Radio Spectrum Monitoring and Measuring	May 6 - 10	Federal Communications Commission and National Instruments	Columbia, MD
19-113	Practical Applications of Spectrum Management and Spectrum Monitoring	May 13 - 17	TCI International, Inc. (an SPX Company)	Fremont, CA
SECOND TRIMESTER				
CYBERSECURITY AND ICT POLICY SEQUENCE I: (PAGES 16-22)				
19-200	Anti-Abuse Training: Summary of Best Practices and Additional Resources Available	June 2019	M3AA	Washington, DC
19-201	National Cybersecurity Policy: Balancing Risk and Innovation	June 2019	Microsoft Corporation	Washington, DC
19-202	Network Disaster Recovery and IP Network/Cyber Security for Senior Policy Makers	June 2019	AT&T	Washington, DC
19-203	Introduction to the Internet Domain Name System	June 2019	ICANN	Washington, DC

Number	Course Title	Dates	Sponsor	Location
19-204	Introduction to Community Networks	June 2019	Internet Society (ISOC)	Washington, DC
19-205	Principles of Mobile Privacy	June 2019	GSMA	Washington, DC
19-206	Children and Mobile Technology	June 2019	GSMA	Washington, DC
19-207	Communications Infrastructure Economics and Regulation	June 2019	Packet Clearing House	Washington, DC
19-208	CERTs and Cybersecurity Coordination	June 2019	Packet Clearing House	Washington, DC
19-209	Country Code Top Level Domain Administration and Operations	June 2019	Packet Clearing House	Washington, DC
MANAGEMENT TRAINING SEQUENCE: (PAGE 25)				
19-220	Managing Effectively in the Changing Telecommunications Environment	Jun 24 - 28	ATLAS Institute, University of Colorado Boulder	Boulder, CO
TELECOM/IT POLICY AND REGULATION SEQUENCE: (PAGES 39–42)				
19-230	Seminar in Competition Policy for Telecommunications	Jul 19	USTTI in Conjunction with the US Federal Communications Commission (FCC), Department of Justice, Federal Trade Commission and DC Legal Community	Washington, DC
19-231	Regulatory and Privatization Issues in Telecommunications	Jul 22 - 26	Federal Communications Commission (FCC) and USTTI Board Member Corporations	Washington, DC
19-232	Subsea Cable Construction and Maintenance	Jul 29	AT&T	Washington, DC
19-233	Creating an Enabling Regulatory Environment for Cloud Services	Jul 30	Microsoft Corporation	Washington, DC
19-234	Internet of Things	Jul 31 - Aug 1	GSMA	Washington, DC
MOBILE BROADBAND SEQUENCE: (PAGES 25 – 29)				
19-240	The Role of Satellite Communications in the 5G Ecosystem	Aug 8	Inmarsat	Washington, DC
19-241	Seminar in Radio Spectrum Monitoring	Aug 9	Federal Communications Commission (FCC)	Columbia, MD

Number	Course Title	Dates	Sponsor	Location
19-242	5G and a Connected World	**Aug 12 - 16**	QUALCOMM Corporation	**San Diego, CA**
19-243	Enabling the Full Value of Wireless Connectivity: Game Changing Technology for the Digital Age	**Aug 19 - 21**	Ericsson	**San Jose, CA**
19-244	5G and Wi-Fi: Facilitating Mobile Broadband Deployments, Enabling Connected Societies, and Bridging the Digital Divide	**TBA**	Intel Corporation	**San Jose, CA**

THIRD TRIMESTER

SATELLITE COMMUNICATIONS SEQUENCE: (PAGES 31 – 32)

19-300	The Role of Satellite Communications in the 5G Ecosystem	**Sept 9**	Inmarsat	**Washington, DC**
19-301	Satellite Communications Primer	**Sept 11 -13**	Intelsat	**Ellenwood, GA**
19-302	Introduction to Non-geostationary Satellite Constellations	**TBA**	OneWeb	**Washington, DC**

SPECTRUM MANAGEMENT SEQUENCE II: (PAGES 34 – 36)

19-310	Evolving Trends in Spectrum Management	**Sept 16**	Microsoft Corporation	**Washington, DC**
19-311	Radio Frequency Spectrum Management	**Sept 17 - 27**	The National Telecommunications and Information Administration (NTIA)	**Washington, DC**

CYBERSECURITY AND ICT POLICY SEQUENCE II: (PAGES 16 – 22)

19-320	Anti-Abuse Training: Summary of Best Practices and Additional Resources Available	**Sept 2019**	M3AA	**Washington, DC**
19-321	National Cybersecurity Policy: Balancing Risk and Innovation	**Sept 2019**	Microsoft Corporation	**Washington, DC**
19-322	Introduction to the Internet Domain Name System	**Sept 2019**	ICANN	**Washington, DC**
19-323	Communications Infrastructure Economics and Regulation	**Sept 2019**	Packet Clearing House	**Washington, DC**
19-324	CERTs and Cybersecurity Coordination	**Sept 2019**	Packet Clearing House	**Washington, DC**
19-325	Country Code Top Level Domain Administration and Operations	**Sept 2019**	Packet Clearing House	**Washington, DC**

Number	Course Title	Dates	Sponsor	Location
19-326	Introduction to Community Networks	Sept 2019	Internet Society (ISOC)	Washington, DC
19-327	Principles of Mobile Privacy	Sept 2019	GSMA	Washington, DC
19-328	Children and Mobile Technology	Sept 2019	GSMA	Washington, DC
SPECTRUM MONITORING SEQUENCE: (PAGES 37-38)				
19-330	Radio Spectrum Monitoring Techniques and Procedures	Sept 30 - Oct 4	Federal Communications Commission and Keysight Technologies	Columbia, MD
19-331	Laboratory Techniques in Support of Equipment Authorization Programs	Oct 7 - 11	Federal Communications Commission and Keysight Technologies	Columbia, MD
TELEHEALTH SEQUENCE: (PAGE 42)				
19-340	Telemedicine and Distance Learning Synopsis	Oct 14 - 16	University of Virginia Health System, Office of Telemedicine	Charlottesville, VA
19-341	Telemedicine Review	Oct 17 - 18	Howard University and the Louis Stokes Health Sciences Library	Washington, DC
EMERGENCY COMMUNICATIONS SEQUENCE (PAGES 22 – 25):				
19-350	Satellite Services and Disaster Response	Oct 21	Inmarsat	Washington, DC
19-351	Disaster Preparedness and Response	Oct 22	GSMA	Washington, DC
19-352	Disaster Communications Planning	Oct 23 – 24	NTIA	Washington, DC
19-353	Disaster Communications Management	Oct 28 - Nov 1	Pan American Health Organization (PAHO)	Washington, DC
INTRODUCTION TO RULE OF LAW SEQUENCE: (PAGES 29 – 30)				
19-360	The Rule of Law and Best Practices in Telecommunication Regulation	November 2019	USTTI	Washington, DC
19-361	Regulatory Principles	November 2019	Andy Haire	Washington, DC
19-362	Competition Policy in the Digital Age	November 2019	GSMA	Washington, DC
19-363	Purpose and Impact of European Regulation of Communications	November 2019	United Kingdom Telecommunications Academy (UKTA)	Washington, DC

In 2018, Inmarsat trained a diverse group of scholars from Barbados, Belize, Brazil, Cambodia, Colombia, Ghana, Grenada, Indonesia, Malaysia, Nigeria, the Philippines, Saudi Arabia, Senegal, Sierra Leone, South Sudan, Trinidad and Tobago, and Vietnam. Pictured here with USTTI Scholars are Ethan Lucarelli (far left), Inmarsat's Director for Regulatory and Public Policy and USTTI Board Representative Donna Bethea-Murphy (Sixth from right, in front), Inmarsat's Senior Vice President for Regulatory Policy and Development.

"The training was very educational and I am grateful for the opportunity to participate."

Philmore Trowers – (Jamaica)

"The experience was great."

Maria Victoria Sukenik – (Argentina)

5G and Emerging Technologies Sequence

Ericsson

Enabling the Full Value of Wireless Connectivity: Game Changing Technology for the Digital Age

Course 19-104:
March 25-26, 2019

Course Description:
Discover how you can lead your country in becoming part of the transformation to a fully connected world.

This course is taught by Ericsson, a world leader in communications technology and services. The company's portfolio comprises mobile and fixed network infrastructure, telecom services, software, broadband and multimedia solutions for operators, enterprises and the media industry. Ericsson also provides support for networks with over 2 billion subscribers. The company consists of more than 111,000 experts who provide customers in 180 countries with innovative solutions and services. Together with their customers, Ericsson is building a more connected future where anyone and any industry is empowered to reach their full potential.

This course will cover 5G, the Internet of Things, standards based Long-Term Evolution (LTE) and High Speed Packet Access (HSPA). This course will also show you how innovating technology for good makes life better, whether through connecting people in new ways, building technologies for industries in transformation or creating a more inclusive society.

The course will consist of several modules that integrate classroom discussion, case study, and practical applications.

Participant Learning Objectives:

▶ Overview of technology and network evolution: HSPA, LTE and 5G radio access

▶ Overview of hot topics affecting today's networks:
  ▹ Cybersecurity Policy
  ▹ Net Neutrality

▶ Brief overview of global mobile broadband deployments and spectrum status

Following years of providing tuition-free training, ICANN joined the USTTI Board of Directors in 2018. Pictured left, Adiel Akplogan (far right) ICANN's Vice President for Technical Engagement and Matt Larson (sixth from the right) ICANN's Vice President for Research, join USTTI scholars following a training on the Internet Domain Name System (DNS), its operational and policy definition ecosystems, the general vulnerability associated with it and mitigation mechanisms such as DNSSEC. ICANN is represented on the USTTI Board of Directors by Adiel Akplogan.

- ▶ Examples of how regulations can help to increase the affordability for consumers and the coverage & capacity of the networks
- ▶ Understanding of how technology innovation and connectivity can benefit society

Focus:
This seminar was created for technical, regulatory and government professionals who are prepared to become innovative policy makers and leaders.

Location:
Washington, DC

GSMA
5G – The Path to the Next Generation

Course 19-100: March 18-19, 2019

Course Description:
The mobile industry is preparing to embark on the transition to fifth generation (5G) technology, which will build on the achievements of 4G while also creating new opportunities for innovation. 5G will usher in a new era that will see connectivity become increasingly fluid and flexible. This course covers the key aspects of

5G technology and examines the role governments and regulators can play in helping unlock the benefits of future 5G services for their citizens.

Learning Objectives:

- ▶ Learn about the underlying technologies and concepts associated with 5G
- ▶ Discover the key differences between 5G and previous generations of mobile technology
- ▶ Understand how governments and regulators can help accelerate the development of 5G technology and services in their countries

Location:
Washington, DC

Microsoft
Creating an Enabling Regulatory Environment for Cloud Services

Course 19-103: March 22, 2019

Course Description:
This one-day seminar will address how regulators can foster the development of cloud services by creating policy frameworks that enable nations both to reap the benefits of these services

"The course was extremely interactive and professors were very open."

Henry Nah – (Liberia)

"The course exceeded my expectations."

Michelle Suzette Vidale – (Trinidad and Tobago)

and mitigate some of the risks associated with them. The course will first highlight the key attributes of cloud services, emphasizing the ways in which they alter the policy-making landscape and require different modes of regulation than their predecessors. Participants will discuss the economic and social advantages offered by cloud services and also be encouraged to probe deeply into the sources of concern surrounding these services, particularly issues related to user privacy, data security, and surveillance.

The second segment of the course will focus on different approaches countries have taken for regulating different elements of cloud services and the extent to which each has been successful at promoting growth and development of these services. Regulations discussed will include issues relating to investment in broadband and mobile data networks, as well as the provision, pricing, interconnection, and expansion of network infrastructure and data centers. In particular, this segment will focus on the most successful strategies for promoting growth of cloud services in emerging and developing economies.

The final segment of the course will look at challenges associated with cloud services and how they may be addressed through regulation. The focus will be on protecting consumer privacy, protecting sensitive information, and understanding implications for surveillance by both domestic and foreign governments. Concrete examples of regulations proposed or implemented by different countries will be discussed, with an emphasis on helping regulators define their goals in each of these

areas and design policy approaches suitable for those priorities. Participants will also discuss broader issues surrounding the capabilities and limitations of national laws when it comes to regulating cloud services and consider the role of international cooperation and regulatory harmonization.

Learning Objectives:

▶ Develop an understanding of the benefits and risks of cloud services and the ways in which they require different regulations from their predecessors

▶ Critically assess different regulatory frameworks for cloud services to gain insight into how regulations governing network infrastructure can most effectively be used to drive growth in these services

▶ Develop nuanced understanding of the privacy, security, and surveillance challenges associated with cloud services and the strengths and weaknesses of different regulations intended to address those challenges

Focus:
Government regulators and policy-makers

Location:
Washington, DC

Verizon

Digital Transformation: Unlocking the Potential of IoT

Course 19-101: March 20, 2019

Course Description:
This course will examine the role of IoT and M2M technologies in accelerating digital transformation, and improving how businesses, governments, and consumers

operate, along with regulatory frameworks that facilitate the deployment of these technologies. IoT solutions use M2M technology to connect machines to provide the visibility businesses and governments need to help improve management and delivery of services, among other things. Organizations that have already started using IoT solutions are seeing benefits in many areas. For example, with smart communities solutions, all parts of the city can be connected, so that government officials become aware of what's going on and where, which helps them make communities safer and more energy efficient. IoT and M2M technologies also enable the coordination and control of emergency response, resource management, fleet management, energy usage, traffic management, and much more.

Participants in this course will learn about the importance of IoT in accelerating digital transformation and the wide range of technologies that are driving the deployment of IoT and the innovative services enabled by these technologies. Participants will also have the opportunity to explore IoT services in a technology center setting. The course will also cover public policies that foster deployment of IoT by creating an environment that attracts investment and removes regulatory barriers to availability of innovative services.

Participant Learning Objectives:

1. Learn about the important role IoT is playing in accelerating digital transformation and the wide-range of technologies that are driving IoT deployment

2. Explore innovative IoT services in a technology-center setting

3. Discuss policies that foster the accelerated deployment of IoT services and the benefits of appropriate regulatory simplification

Focus:
Government regulators and officials

Location:
Washington, DC

Cybersecurity and ICT Policy Sequence

AT&T
Network Disaster Recovery and IP Network/Cyber Security for Senior Policy Makers

Course 19-202: June 2019

Course Description:
The first section of the course will focus on Network Disaster Recovery. The second section of the course will focus on cyber security, and will address Internet Security and Enterprise Security; the kinds of risks occurring in cyber space and with physical networks; and ongoing preventative and remedial responses that are currently being undertaken to address the kinds of online and cyber threats, such as DDOSS attacks, botnets, and malware. This course will include a presentation and virtual tour of the AT&T Global Network Operation Center.

This course will address two interrelated areas: Section I: Network Disaster Recovery and the role of planning to address logical and physical threats to the network and Section II: IP network/cyber security issues and key issues facing telecommunications companies, their customers, and senior policy makers.

Section I: Network Disaster Recovery (NDR)
This course seeks to address the challenges of preparing for and then responding to a network disaster outage in a world where communications, online applications and Internet are critical to ensuring public safety and ensuring reliable, sustainable communications services delivery in times of disasters. As governments and individuals increase their reliance on communications networks to conduct mission critical activities, ensuring communications network operations during a disaster has increasing importance. To confront these risks, and to preserve the communications networks,

"This is very a good course and so informative and well planned."

Zeinab Mahmoud Abdelazeem Genedy – (Egypt)

comprehensive preparation and planning for a catastrophic network outage is essential.

Disruption of communications networks prevents public safety organizations, such as first responders, public health officials, and law enforcement from meeting the public's needs. Disaster preparedness and recovery planning is designed to reduce the disruption of essential services when an emergency situation occurs. Emergency communications planning is a key component of any disaster mitigation strategy and disaster recovery plans. Disaster plans should be flexible enough to be adapted to particular emergency situations. Telecommunications companies must ensure their continuity of operations and manage the security and operability of their communications systems and networks during emergencies. Governmental agencies have both concerns about the continuity and recovery of communications networks from a policy perspective, and must rely on communications networks to support governmental response to citizens in real time, during an actual disaster.

There are several factors to be considered in developing and adopting a Network Disaster Recovery plan, including Professional Services, Emergency Communications & Wireless Solutions; Network & Recovery Services; and Data Protection Services. Execution of a NDR strategy is critical to minimizing damage and restoring a network outage. This course will address various execution methods, including training of personnel, testing of equipment and managing events.

This portion of the course describes a case example of how a global communications company plans and prepares for Network Disaster Recovery. Topics addressed: Planning for Securing the Network; Adopting a Network Disaster Recovery Strategy; and Implementing and Execution of NDR Strategy.

Section II: Cyber Security: IP Network Security for Senior Policy Makers

As governments and individuals increase their reliance on the Internet and ongoing applications to conduct mission critical activities, and as more private networks are interconnected to the Internet, a firm knowledge of the kinds of risks and threats that are underway and growing in the online world and implementation of Internet Security techniques has increasing importance. The growth of risks and threats to the security of the Internet and IP networks is well understood. Threats come from a variety of sources, including malicious attacks orchestrated by individuals, or criminal elements, non savvy users; and other sources. The increase in exposure with interconnected networks is accompanied by an increase in potential network security risks presented by attacks such as viruses, spam, and denial of service, hacking and corporate espionage and botnets. To confront these risks, and to preserve the Internet and online applications as essential tools for conducting important social and economic activity, Internet security measures are evolving and improving quickly. Network operators and ISPs, along with others in the Internet eco-system are actively addressing minimizing harm to data and individuals, working to identify risks and isolate them, and to

build in forms of prevention against harmful attacks.

The course will provide a session on current forms of Internet security risk, an overview of cutting edge measures that can be taken to minimize those risks, and a discussion of areas for international public private collaboration and cooperation in both the technical and policy areas.

Participant Learning Objectives:
This course is designed for policy makers at a senior level.

Location:
Washington, DC

ICANN

Introduction to the Internet Domain Name System

Course 19-203: June 2019
Course 19-322: September 2019

Course Description:
This course provides a basic understanding of the Internet Domain Name System (DNS), its operational and policy definition ecosystems, the general vulnerability associated with it and some mitigation mechanisms such as DNSSEC. The training is provided by the Internet Corporation for Assigned Names and Numbers (ICANN) and the sessions delivered by operational experts and specialists selected by ICANN. ICANN is the global organization that coordinates the multi-stakeholder DNS policy development process and it works closely with peer organizations to maintain a secure, stable and resilient DNS.

▸ Overview of the DNS ecosystem and ICANN's role in it

▸ Introduction to DNS concepts and operations

▶ Introduction to DNS abuse threats and their mitigations

▶ Introduction to and theory of DNSSEC

Learning Objectives:

At the end of this course, partipants will understand the DNS ecosystem, how relevant policies are developed and how to participate. In addition, he/she acquires an introductory level understanding of DNS and DNSSEC concepts and operations as well as abuse risks and mitigation measures.

Focus:

This course is designed for individuals and organizations that can benefit from a general understanding of the DNS and its policy making ecosystem in order to further engage with operators, working with them to anticipate and mitigate possible risks posed by DNS abuse. Government and managers of Government IT infrastructure will benefit from this basic understanding of the DNS ecosystem in order to fulfill their mission to steer a secure, stable and resilient local DNS infrastructure.

Location:

Washington, DC

GSM Association (GSMA)
Children and Mobile Technology

Course 19-206: June 2019

Course 19-328: September 2019

Course Description:

Children and young people are among the most avid users of mobile technologies but these new technologies also come with new dangers. Parents, governments and industry have a role to play in protecting and supporting children who are connected. This course looks at the issues from several angles and examines whether regulation is necessary

Learning Objectives:

▶ Learn what is known about children's use of mobile technologies

▶ Acknowledge the benefits while mitigating risks for children

▶ Understand the law related to online child sexual exploitation

▶ Understand the role of regulation in child online protection

Location:

Washington, DC

"My experience with USTTI has been awesome. I love the training and hospitality."

Harry McNinson – (Ghana)

GSM Association (GSMA)
Principles of Mobile Privacy

Course 19-205: June 2019
Course 19-327: September 2019

Course Description:
The growth of the mobile internet and converged services is creating new challenges related to the use and protection of people's personal information. This course investigates the current state of mobile privacy, highlights research into consumer attitudes towards their privacy and examines current and emerging regulations around the world. The course also reviews the GSMA's universal Mobile Privacy Principles, Privacy Design Guidelines for app developers and industry initiatives that give consumers more control over how their information is used.

Learning Objectives:
▶ Understand the facets of mobile privacy, data protection and consumer trust

▶ Consider the role of mobile operators, internet content providers and consumers in respecting and protecting the privacy of consumers

▶ Discover how regulation can be applied effectively to protect consumer privacy in a converged world

Location:
Washington, DC

ISOC
Introduction to Community Networks

Course 19-204: June 2019
Course 19-326: September 2019

Course Description:
The Training will cover community network development with an emphasis on the policy/regulatory, development, and technical aspects for sustaining them. Students will be provided with an overview of global and regional activities to develop community networks, an overview of the types of networks being built, consideration of changes that can be made to policy and regulatory frameworks to support them, and ways/means to sustain them. The course will include a discussion about possible changes to universal service programmes, and approaches for obtaining funding to support them.

Learning Objectives:
This course will provide participants with an overview of community network actors, how to change policy and regulatory environments to include community networks, and suggestions for licensing, universal service funding, and spectrum options to support them.

Focus:
Realities of deploying community networks, sustainable models, capacity building opportunities and funding opportunities, and an introduction to key activities and players in the community.

Location:
Washington, DC

M3AA
Anti-Abuse Training: Summary of Best Practices and Additional Resources Available

Course 19-200: June 2019
Course 19-320: September 2019

Course Description:
The course provides a basic understating of terminology, abuse threats and an initial understanding of anti-abuse best practices for service providers. The training is based on proven and known anti-abuse best practices for network and hosting operations to fight online abuse such as spam, bots and malware, and the continual updating of these practices with new techniques and technologies. The training is provided by the M3AA Foundation, a global nonprofit dedicated to helping developing online countries become safe, functional and valued members of the Internet community. This anti-abuse training foundation is championed by M3AAWG and supported with continued development of proven anti-abuse best practices. The Messaging, Malware and Mobile Anti-Abuse Working Group (M3AAWG), a global non-profit and industry-led organization, has taken a multi-disciplinary approach to fighting online abuse for the past decade, with industry education, public policy advice, the development of industry best practices and by facilitating global collaboration. For the development of proven best practices it draws upon technical experts, researchers and policy specialists from a broad base of Internet service providers and

network operators representing over one billion mailboxes, and from key technology providers, academia and volume sender organizations.

Participant Learning Objectives:

Summary level instruction to help students understand messaging abuse (spam plus other forms of abuse); network threats; best practice for service providers that address abuse; resources that can help address threats and abuse and resources for further capacity building in fighting abuse.

Focus:

The course is focused on individuals and organizations that can benefit from a basic understanding of proven and known operational best practices to prevent and address all forms of messaging abuse and other network threats. Government regulatory personnel can benefit from this basic understanding as well as operational and technical service providers' personnel.

Location:

Washington, DC

Microsoft Corporation

National Cybersecurity Policy: Balancing Risk and Innovation

Course 19-201: June 2019

Course 19-321: September 2019

Course Description:

Countries around the world are developing new cybersecurity policies, practices, and programs to manage national-level risks related to the protection of key government assets and data, and working to identify and help to manage risks around critical infrastructures, enterprises, organizations, and citizens. As governments around the world begin to create their own national strategies for cybersecurity or contemplate the most effective measures to ensure security within borders, it is crucial for policy-makers to understand what makes for sound, effective national cybersecurity strategies and how these policies can be designed to protect vital infrastructures and data while still allowing for economic growth and technological innovation. This course will explore several key attributes of national strategies for cybersecurity and use examples from national

"THIS WAS AN EXCEPTIONAL EXPERIENCE. THANKS TO USTTI AND NTIA FOR DESCRIBING EVERYTHING ON THE REGULATORY HORIZON."

Mohamed Abdullahi Haji – (Kenya)

strategies around the world and from key multinational organizations like the ITU, to illustrate both the ways in which policies can strengthen a nation's cybersecurity, as well as the ways they can hinder other goals, if they are not carefully constructed. The focus of the course will be on identifying national strategies that balance security objectives with key economic considerations and provide clear, actionable guidance to both government and industry actors, as well as for citizens.

Learning Objectives:
This course will introduce key concepts and principles intended to benefit countries just beginning to build cybersecurity strategies, as well as those who are in the process of updating their current plans, including:

1. The importance of having a national cybersecurity strategy and its central role in establishing principles, policies, and even programs to reduce risk

2. The challenges of coordinating cybersecurity policy across the various governmental elements responsible for law enforcement, commerce, diplomacy, interior security, and even defense

3. Recommendations for structuring international engagement and cooperation on cybersecurity issues

4. Processes for organizing national-level risk identification, assessments and management efforts

5. Approaches and models for public-private partnerships, including how to build and govern information sharing programs

6. Strategies for maintaining flexibility in the face of constantly changing threat landscape

7. Development of education and public awareness efforts

Focus:
Government regulators and representatives of intergovernmental organizations

Location:
Washington, DC

Packet Clearing House
Communications Infrastructure Economics and Regulation

Course 19-207: June 2019
Course 19-323: September 2019

Course Description:
This one-day seminar will emphasize Internet economics, the development of national information economies, and the interaction between communications regulation and technological development. The first half of the day's discussion will focus on the general economic environment in which modern broadband telecommunications services operate. The second half of the day will be spent on the more specific regulatory and competitive requirements of Voice over IP, wireline broadband infrastructure, and mobile wireless technologies, in developing countries.

Focus:
Government regulators, technical, managerial, and business professionals

Location:
Washington, DC

Packet Clearing House
CERTs and Cybersecurity Coordination

Course 19-208: June 2019
Course 19-324: September 2019

Course Description:
This half-day seminar will cover the formation of Computer Emergency Response Teams and the development of national policy on cybersecurity, cybercrime, and cyberwarfare coordination and defense. The course will emphasize cost-effective measures to promote the development of a culture of security within the context of a developing economy. We will discuss the respective roles and responsibilities of Internet users, Internet service providers, law enforcement, and defense ministries, and the modes of communication and coordination that allow for effective countermeasures and remediation of Internet threats.

The seminar will be led by Bill Woodcock, Executive Director of Packet Clearing House, a non-profit research institute dedicated to understanding and supporting Internet traffic exchange technology, policy, and economics. Bill has operated national and international Internet service provision and content delivery networks since 1989, was one of the co-developers of Anycast, a technology now considered best-practice in DNS service-provision, and has built most of the global Domain Name System service provision networks currently in operation.

Focus:
Government regulators, technical, managerial, and business professionals

Location:
Washington, DC

Packet Clearing House
Country Code Top Level Domain Administration and Operations

Course 19-209: June 2019

Course 19-325: September 2019

Course Description:
This half-day seminar will cover best-practices in the technical and business administration of country-code top level domains (ccTLDs). We will compare governance frameworks and policy models, discuss accountability to the Internet community and examine the procedures and technologies that make it possible for these national domains to thrive and support growing internet economies within their regions.

Focus:
Government regulators, technical, managerial, and business professionals

Location:
Washington, DC

EMERGENCY COMMUNICATIONS SEQUENCE

GSM Association (GSMA)
Disaster Preparedness and Response

Course 19-351: October 22, 2019

Course Description:
Recent emergencies, such as the major hurricanes in the Caribbean and the earthquake in Mexico, highlight the increasingly important role mobile plays during times of crisis. As mobile communication becomes ever more critical to the success of disaster response efforts, there is a need for policymakers and regulators to better understand how they can support the benefits that mobile communication delivers during emergencies. This course looks at how the inclusion of mobile in disaster response plans can help save lives and speed up recovery times.

"USTTI NEVER DISAPPOINTS. ALL TRAINING SESSIONS ARE ALWAYS INFORMATIVE."

Sharolyn Dougal - (Belize)

Participant Learning Objectives:

▸ Learn how improved coordination between mobile operators, governments, regulatory authorities and the humanitarian response community is critical during times of crisis

▸ Discover how regulators around the world are adopting flexible approaches to policy during emergencies to positively impact response efforts

▸ Consider how aid is becoming increasingly digitized and the role mobile can play in this new environment of digitized aid

Location:
Washington, DC

Inmarsat
Satellite Services and Disaster Response

Course 19-350: October 21, 2019

Course Description:

▸ Role of satellites in disaster response

▸ Disaster Response Activities, Phases, and Major Actors

▸ First Responders

▸ Regulatory Issues

▸ Fixed Satellite Services v. Mobile Satellite Services

▸ Next Generation Capabilities and Trends

▸ Case Studies (Hurricane Katrina and Tsunami)

Focus:
Engineers and managers of all experience levels

Location:
Washington, DC

The National Telecommunications and Information Administration (NTIA)
Disaster Communications Planning

Course 19-352: October 23 – 24, 2019

Course Description:
Effective communications are an essential key to successfully responding to a disaster or emergency. Having a pre-determined plan for the implementation and training of people and resources, is the key to providing essential communications support for first responders through post-disaster recovery workers. This is especially important when personnel from other countries participate in the response and recovery processes.

The course is designed to help spectrum managers, those involved in emergency and disaster communications, develop plans and systems that can be implemented before, during and after natural and manmade disasters which may be disrupted.

Presenters represent the National Telecommunications and Information Administration (NTIA), the manager of the federal government's use of the spectrum, U. S. government, and non-government disaster and emergency response organizations.

Learning Objectives:

▸ Provide through examples provided by both communicators and responders, an understanding of the need and value of having a dynamic plan for the equipping, training and deploying local and in-coming response teams

▸ Assessing the specific needs of both the responders and communicators and applying best practices to planning efforts

▸ Gain an understanding of how to work with outside response teams

Focus:
Spectrum managers, response team communications managers and emergency services managers with responsibility of developing, implementing and managing disaster communications systems.

Location:
Washington, DC

Pan American Health Organization (PAHO)
Disaster Communications Management

Course 19-353: October 28 – November 1, 2019

Course Description:
The course is designed to address telecommunications needs for mitigating the effects of natural and manmade disasters in which normal communications are often disrupted by physical damage, system overload or adverse weather conditions.

Site selection, planning and design considerations for Emergency Operations Centers (EOC's) will be reviewed. Field trips will be made to different types of Emergency Operations Centers (EOCs) in actual operation. Information flow requirements within EOC's and between EOCs and government and non government officials, public safety operations, public and government media and emergency medical services will be studied. Participants will visit and be briefed at a 911 emergency response center, an urban Search and

Rescue Training Academy, a S&R first responder and FEMA equipment deployment facility. Students will also see, understand and appreciate for the first time, preparations, logistics and communications and other equipment and training that go into a US disaster recovery effort. The role that communications plays in this effort will be evident. PAHO's EOC and computerized supply management system for disaster mitigation and other similar facilities will also be reviewed. Special focus will be on methods of tracking, exchanging and using critical information prior to, during and after an emergency. The course will cover vulnerability assessment, resiliency and telecommunications infrastructure development requirements for disaster prone regions.

Participants will be introduced, through field trips and classrooms, to a wide range of technologies including Very Small Aperture Terminals (VSATs), mobile and fixed satellite communications, remote sensing, Global Positioning Systems (GPS), Geographic Information Systems (GIS), drones, public safety interoperability, amateur radio and the Internet including social networks. Participants will be given the tools to help them evaluate which technologies will be applicable to their countries for a wide range of applications including: refugee management, anti-terrorism, natural and man-made disaster recovery and relief operations, early detection and warning, public safety, public information and emergency medical including telemedicine. The application of these technologies for economic development, rural communications, transportation and public health will be highlighted and some applicable regulatory considerations will be discussed briefly. Emphasis will be placed on understanding and using the power of the internet, including social networks and smart phones, for disaster mitigation operations and for detailed information retrieval. The benefits and characteristics of an internationally recognized Common Alerting Protocol (CAP) will be discussed. At the end of the course each student will be expected to structure and present a simple example of an Emergency Response Center designed to address an emergency situation, real or imaginary, in their country. The students should use some of the applicable technology, concepts and practices learned in the course in their design. The purpose of this presentation is to help the students develop the skills necessary to convey information learned in this course to their peers.

Participant Learning Objectives:

Participant learning objectives include the ability to make choices concerning the application of disaster related communications technologies. Students should develop an understanding of

"The training was very useful and informative. Thank you for providing this platform to learn and share our experiences."

Davis K. Moshweunyane – (South Africa)

information flow and how to integrate available and new communications technologies and services into a disaster communications network.

Focus:
Provide an understanding of the power of certain satellite and terrestrial communications technology, networks, systems and infrastructure that can effectively be used to mitigate the adverse effects of manmade and natural disasters.

Location:
Washington, DC

Management Training Sequence

ATLAS Institute, University of Colorado Boulder
Managing Effectively in the Changing Telecommunications Environment

Course 19-220: June 24-28, 2019

Course Description:
At its core, this course is about managing in a period of accelerating change, not only in telecommunications, but in Information and Communications Technologies (ICTs) more broadly. Regulators, policymakers, and executives in affected fields must understand and adapt to these disruptive changes if their respective institutions – public and private – are not only to avoid failure but to also survive and prosper. The purpose of the course is to provide participants with insights and tools necessary to provide the

sort of transformational leadership that is required in the successful management of their respective organizations. In the course, this purpose will be accomplished through classroom discussion and activities addressing such topics as the fundamental changes in technology that are so dramatically affecting ICTs, the writings of various management experts on the topic of addressing the associated disruptive changes, as well as introducing for discussion and analysis, specific topics dealing, for example, with project management, operational decision making, management in a multi-cultural environment, advanced marketing techniques in the digital age, Machine Learning and Artificial Intelligence, Internet Governance, privacy and cybersecurity.
The course is appropriate for regulators and managerial level telecommunications staff. It is not appropriate for telecommunications staff without management responsibilities.

This course will feature guest lectures by University of Colorado Professors and other executives and researchers with in-depth knowledge and understanding of the types of topics listed above. The course's lead instructor, Prof. Dale Hatfield, will also be present each day to provide additional insight and to tie together the other lectures. Prof. Hatfield is an Adjunct Professor in the Interdisciplinary Telecommunications Program and an Executive Fellow in the Silicon Flatirons Center -- both at the University of Colorado at Boulder. Prior to joining the University, Hatfield was the Chief of the Office of Engineering and Technology at the Federal Communications Commission (FCC). He has

also held positions as the Chief Technologist of the FCC and Acting Assistant Secretary of Commerce for Communications and Information of the National Telecommunications and Information Administration. Hatfield also has extensive international experience and has consulted on issues of telecommunication policy and regulation in many developing countries.

Participant Learning Objectives:

‣ Gain insights into the rapid changes in technologies, markets and regulation

‣ Explore transformational leadership strategies/tools for dealing with disruptive changes

‣ Increase knowledge of the economic and financial aspects of the industry

‣ Experience effective team building and group problem solving

‣ Discover strategies and techniques for dealing with cultural diversity

Location:
Boulder, CO

Mobile Broadband Sequence

Ericsson
Enabling the Full Value of Wireless Connectivity: Game Changing Technology for the Digital Age

Course 19-243: August 19-21, 2019

Course Description:
Discover how you can lead your

country in becoming part of the transformation to a fully connected world.

This course is taught by Ericsson, a world leader in communications technology and services. The company's portfolio comprises mobile and fixed network infrastructure, telecom services, software, broadband and multimedia solutions for operators, enterprises and the media industry. Ericsson also provides support for networks with over 2 billion subscribers. The company consists of more than 111,000 experts who provide customers in 180 countries with innovative solutions and services. Together with their customers, Ericsson is building a more connected future where anyone and any industry is empowered to reach their full potential.

This course will cover 5G, the Internet of Things, standards based Long-Term Evolution (LTE) and High Speed Packet Access (HSPA). This course will also show you how innovating technology for good makes life better, whether through connecting people in new ways, building technologies for industries in transformation or creating a more inclusive society.

The course will consist of several modules that integrate classroom discussion, case study, and practical applications.

Participant Learning Objectives:

▸ Overview of technology and network evolution: HSPA, LTE and 5G radio access

▸ Overview of hot topics affecting today's networks:
  ▸ Cybersecurity Policy
  ▸ Net Neutrality

▸ Brief overview of global mobile broadband deployments and spectrum status

▸ Examples of how regulations can help to increase the affordability for consumers and the coverage & capacity of the networks

▸ Understanding of how technology innovation and connectivity can benefit society

Focus:
This seminar was created for technical, regulatory and government professionals who are prepared to become innovative policy makers and leaders.

Location:
San Jose, CA

"THIS COURSE GAVE A WONDERFUL EXPERIENCE IN MY LIFE BECAUSE OF NEW TECHNOLOGIES."

Taspong Boonjareun – (Thailand)

Federal Communications Commission (FCC)

Seminar in Radio Spectrum Monitoring

Course 19-241: August 9, 2019

Course Description:
This one day seminar will provide an overview of radio monitoring and radio interference resolution performed at the Columbia Operations Center facility (Columbia, Maryland) of the Federal Communications Commission. The course will include classroom instruction on the role of the FCC Enforcement Bureau, and an overview of the harmful interference and regulatory issues that the field staff investigate. The instructors will demonstrate the radio monitoring and measuring equipment including spectrum analyzers, field strength meters, radio frequency radiation meters, and the FCC custom design mobile direction finding vehicle.

Focus:
Technical

Location:
Columbia, MD (Washington, DC area)

Inmarsat

The Role of Satellite Communications in the 5G Ecosystem

Course 19-240: August 8, 2019

Course Description:
Satellite communications have long been known for their ubiquity, reliability, and mobility, which have made them vital for rural and remote areas, during times of disaster when other communications networks are unavailable, and for users requiring highly-secure mobile solutions. Because of evolution in technology and business models, however, satellite communications increasingly are seen as a competitor or complement to other broadband technologies any time and everywhere. This session will address the essential role of satellite technologies in the development and deployment of next generation communications systems. The session will discuss how satellite communications will be an integral part of the system of systems that will create the 5G user experience. It will also discuss the role of satellite communications in the Internet of Things and recent developments in satellite technology.

Participant Learning Objectives:
Obtain an understanding of the role satellite technologies play in the development and deployment of next generation communications systems.

Focus:
Government Regulators and Policymakers

Location:
Washington, DC

Intel Corporation

5G and Wi-Fi: Facilitating Mobile Broadband Deployments, Enabling Connected Societies, and Bridging the Digital Divide

Course 19-244: TBA

Course Description:
Find out all the latest information on 5G and Wi-Fi and ways to facilitate mobile broadband deployment and enable the connected society vision through integrating communities, taking an important step in bridging the digital divide.

This course, taught by representatives from the world's largest chip maker and a leading manufacturer of computer, networking, Internet of things (IoT), and communications products, will provide information on the communication technologies and policies driving next generation connectivity for billions worldwide. This course presents an overview of 5G, its various usage scenarios, diverse applications, and the latest standards and technologies underpinning both licensed and unlicensed components of the future's mobile communication networks. The course will also address what spectrum allocation, allotment, and assignment policies are best suited to fostering the efficient adoption and deployment of next generation mobile technologies including 4G, 5G, Wi-Fi and WiGig. Additionally, the course will provide an introduction to best practices in promoting mobile broadband deployment as well as equipment homologation. Finally, the course will provide an update on relevant ITU activities.

Participant Learning Objectives:

▸ Overview of next generation wireless broadband devices, applications and technologies

▸ Insight into establishing an innovative regulatory framework for enabling flexible, low cost, interoperable next generation mobile broadband and IoT deployment in developing countries that fosters economic growth by enabling new applications and use cases

▶ Introduction to global practices to promote broadband deployment in underserved areas.

▶ Update on relevant ITU activities

Focus:
Government regulators and policymakers

Location:
San Jose, CA

QUALCOMM Incorporated
5G and a Connected World

Course 19-242: August 12-16, 2019

Course Description:
This course will cover the latest developments on the different aspects of the mobile broadband ecosystem, including an overview of 3GPP based technologies (e.g., HSPA+/advanced, LTE/advanced, and the 5G platform), 3G/4G industry forecasts, Internet of Everything, frequency bands and spectrum licensing innovations. The course is also intended to offer information and tools applicable for national broadband plans, including how the mobile broadband platform is playing an increasingly important role in other sectors such as healthcare, education, energy, automotive and smart cities initiatives. Participants are encouraged to review ahead of time technical information and white papers available on our website (www.qualcomm.com/invention/research/resources).

Participant Learning Objectives:

▶ Overview of 3GPP & 3GPP2 based mobile broadband technologies and standards roadmap, heterogeneous networks, 3G/4G market and industry update, Wi-Fi evolution, foundations of unified 5G platform, chipset and application processors roadmap

▶ Developments on m-Health, m-Education, smart grid, telematics, smart cities and developments in the automotive space

▶ Overview of mobile broadband spectrum(licensed and unlicensed), regulatory and policy developments, including ITU-R, WRC-15, upcoming WRC-19, ITU-D, and Artificial Intelligence

▶ Wireless Reach (www.wirelessreach.com) case studies on the impact mobile broadband education, health, environmental, entrepreneurship, public safety fields in both developing and developed countries

"It was an excellent experience."

Cesar Camilo Rodriguez Sanchez – (Colombia)

Focus:
Designed for technical managers in regulatory agencies, communications ministries, MNOs (mobile network operators), and/or fixed carriers who are faced with making decisions on terrestrial wireless issues, including spectrum allocation recommendations and how these impact technology deployment, planning, and expanding broadband connectivity in their countries. A basic understanding of 3G wireless networks and technologies such as CDMA, GSM and HSPA is required.

Location:
San Diego, CA

Introduction to Rule of Law Sequence

Andy Haire
Regulatory Principles

Course 19-361: November 2019

Course Description:
Provide a thought provoking session that explores competition policy, regulatory issues, network security and regulatory best practices. Examine not only the roles that the regulator plays, but gain an understanding of how others see us. Who are the markets stakeholders? Which models work and which don't? Where is regulatory power drawn from? What are the tools of the regulator, and from several case studies what are the best practices that are vital for a regulator?

Conclude with a careful examination of various responsibilities found in most regulatory authorities, and what

tradeoffs should be understood to achieve outcomes.

Focus
Regulators, Policy Makers and Operators

Location
Washington, DC

GSM Association (GSMA)
Competition Policy in the Digital Age

Course 19-362: November 2019

Course Description:
Competition in mobile telecommunications is multifaceted and dynamic. Regulatory authorities must be alert to rapid technological changes that impact infrastructure competition. This course provides a foundation for understanding the rules of competition and the regulatory powers that apply to the telecommunications sector, taking into account the wider competitive landscape that now includes Over-The-Top players.

Participant Learning Objectives:

▶ Understand the application of competition law as it applies to the telecommunications sector, especially abuse of dominance and merger control

▶ Look at the interaction between competition law and regulation, especially Significant Market Power/Dominant Carrier regulation

▶ Compare the treatment of the telecommunications sector in regulation and competition law with the situation in the wider communications ecosystem

Location:
Washington, DC

USTTI
The Rule of Law and Best Practices in Telecommunication Regulation

Course 19-360: November 2019

Course Description:
The rapid changes in the field of telecommunications have prompted both regulators around the world and the entities they regulate to examine the effectiveness of regulatory structures, practices, and procedures governing today's telecommunications marketplace. This course is intended to expose participants to ideas and approaches that can lead to the development of best practices in telecommunication regulation suitable to a variety of settings and circumstances. With an introduction to the concept of the Rule of Law and its role in telecommunications regulation as a starting point, the course sessions will present a variety of regulatory models, procedures, and practices and discuss the advantages and disadvantages of each. Course sessions will focus not only on the perspectives of telecommunications regulators, but also will feature presentations in which investors in telecommunications infrastructure, providers of telecommunications services, and consumers who use and rely upon those services will share their views.

Participant Learning Objectives:

▶ Develop an understanding of the goals and concerns of national policy-makers and regulators in regard to their countries' respective telecommunications needs in today's telecommunications environment

Intel Corporations training course "5G and Wi-Fi: Facilitating mobile Broadband deployments, enabling Connected societies, and bridging the digital divide" shared information on the communication technologies and policies driving next generation connectivity for billions worldwide. Pictured Left, nineteen USTTI Scholars from Belize, Cambodia, Egypt, Ghana, Indonesia, Jamaica, Malaysia, the Philippines and Vietnam join Intel's John Roman (second from right) outside Intel's headquarters in Silicon Valley. Peter Pitsch represents Intel on the USTTI Board of Directors.

▶ Examine the role of the Rule of Law and the advantages and disadvantages of various regulatory practices procedures, and approaches in use or under consideration in the United States and elsewhere

▶ Identify effective "best practices" that can be adapted by regulators in a variety of settings to achieve favorable policy and regulatory outcomes for telecommunications users and service providers alike

Focus:
This course is designed for government policy-makers and regulators; executives and managers of telecommunications companies subject to existing or proposed governmental regulations; and government and private sector attorneys who advise them.

Location:
Washington, DC

United Kingdom Telecommunications Academy (UKTA)
Purpose and Impact of European Regulation of Communications

Course 19-363: November 2019

Course Description:
This course will provide a detailed overview of the European Framework of communications regulation. The objective of the course is for students to understand and then apply the principles of the European regime and the new regulatory levers that have been agreed in the 2018 European Electronics Communications Code.

Participant Learning Objectives:

1. Understand the regulation of communication in Europe and the duties of National Regulatory Authorities

2. Analysis of the main new regulatory tools defined in the 2018 Code

3. Apply the principles in group based exercise looking at different scenarios for a hypothetical European country

Focus:
Regulators, Policy Makers and Operators

Location:
Washington, DC

"Keep doing what you are doing, it not only changes people, it changes nations."

Muataz Mohammed – (Sudan)

Satellite Communications Sequence

Inmarsat

The Role of Satellite Communications in the 5G Ecosystem

Course 19-300: September 9, 2019

Course Description:
Satellite communications have long been known for their ubiquity, reliability, and mobility, which have made them vital for rural and remote areas, during times of disaster when other communications networks are unavailable, and for users requiring highly-secure mobile solutions. Because of evolution in technology and business models, however, satellite communications increasingly are seen as a competitor or complement to other broadband technologies any time and everywhere. This session will address the essential role of satellite technologies in the development and deployment of next generation communications systems. The session will discuss how satellite communications will be an integral part of the system of systems that will create the 5G user experience. It will also discuss the role of satellite communications in the Internet of Things and recent developments in satellite technology.

Participant Learning Objectives:
Obtain an understanding of the role satellite technologies play in the development and deployment of next generation communications systems.

Focus:
Government Regulators and Policymakers

Location:
Washington, DC

Intelsat

Satellite Communications Primer

Course 19-301: September 11 – 13, 2019

Course Description:
This course will provide practical technical and regulatory fundamentals of satellite-based communications and services. The training will focus on the technical basis and characteristics of satellite architectures and operations, signal and applications management, and frequency use. In addition, this course will explore regulatory aspects associated with satellite-based communications services, including international policy and regulations, frequency assignments and allocations, coordination issues, spectrum management policies, and the regulation of satellite-based communications and services. The course will also provide a fundamental understanding of satellite transmission technologies, as well as an overview of satellite applications. Work will focus on the state of technology development and the practical implementation of satellite-based services, including the integration of digital applications and hybrid, end-to-end solutions. The course includes a hands-on session that will allow participants to gain technical expertise in satellite-based communications and services.

Participant Learning Objectives:
Participants will become aware of the range of technical and regulatory issues associated with satellite-based communications and services, including technological developments related to satellite transmission and reception techniques. The focus of this course will be on developing an understanding of the fundamentals that impact the global satellite communications industry, the state of development of present and future satellite-based communications services and applications, and the regulatory and technical challenges applicable to the use of spectrum. This course is oriented toward managerial and technical staff seeking to gain a better technical understanding of the working methodologies of satellite communications, including application development, as well as policy and regulatory issues affecting satellite-based communications and spectrum management.

Focus:
Regulators, policy makers, managerial and technical staff.

Location:
Ellenwood, GA

OneWeb

Introduction to Non-geostationary Satellite Constellations

Course 19-302: *For further information please consult ustti.org*

Course Description:
Non-geostationary satellite constellations will guarantee true geographic universal broadband access for the world; however, they pose challenges to regulators as no single set of rules and regulations will fit them all (unlike with traditional geostationary satellites). The session will include a technical overview

(the different orbits (LEO, MEO), frequency bands (Ku, Ka, Q, V) as well as insight into the various business plans being offered (users, verticals, markets); and in addition, learn about how regulators can adapt existing regimes to accommodate the full potential these systems promise to bring nations around the globe.

Location:
Washington, DC

Spectrum Management Sequence

Federal Communications Commission (FCC) and Comsearch

Spectrum Management in the Civil Sector

Course 19-111: April 24 – May 3, 2019

Course Description:
This course is intended to provide information and material for the national civilian telecommunications spectrum manager that will enable the making of logical spectrum related decisions that are well grounded in basic technical procedures. The training will initially provide an explanation of the dichotomy that exists in the United States with the Federal Communications Commission (FCC) responsible for civilian sector spectrum management and the National Telecommunications and Information Administration (NTIA) responsible for federal government sector spectrum management.

The course will provide information on: (1) the development of sound civilian telecommunications policy; (2) public sector telecommunications law; (3) national telecommunications rules and regulations; (4) elements and use of radio, television, wireline or fiber-optic carrier, and satellite carrier licensee data bases; (5) criteria for the assignment of frequency authorizations in both national and international communications services; and (6) the general methodology for approval of transmitting and radiating equipment. It will include discussions with telecommunications industry leaders and will provide exposure to state-of-the-art systems in advanced communications technology from

"The experience has been second to none. A very big eye opener that provided a very good networking opportunity with other students from different cultural backgrounds."

Limbani Ross Magomero–(Malawi)

those in industry who are involved on a day to day basis.

Participants will receive instruction from FCC staff in Washington, DC, Columbia, MD; and Gettysburg, PA; and by Comsearch, the course co-sponsor, in communications engineering. Comsearch has been the pre-eminent global provider of spectrum management and wireless engineering products and services for over forty years. Course time will be divided into classroom work in Washington with both sponsors, a tour of the FCC Laboratory in Columbia, MD., where equipment radiation measurement and authorization work is accomplished, and a visit to the automated FCC license issuance processing line in Gettysburg, PA. The course will be augmented by site visits to operating commercial telecommunications entities. Current issues confronting common carrier, mass media, and private radio terrestrial and satellite-based telecommunications services will be discussed. Regulatory policy options will be examined, the national process for creating telecommunications rules and regulations will be explained, and the spectrum allocation and assignment process will be examined. In addition, market based spectrum philosophies, such as lotteries and auctions, will be discussed. The application of new and modern technologies (personal communications, cellular, paging, both low-Earth and geostationary mobile-satellite service, advanced and high definition television, digital audio radio, multiple access, satellite coordination, switching, ultra-wide band, etc.) will be included in course presentations. Operation of a national, geographically-dispersed telecommunications regulatory agency, incorporating automated

licensing processes, provision of public service, standard-setting, and enforcement techniques will also be discussed.

Please note the reduction in course duration from ten days in previous years, to eight days. The FCC will present as much of the course content related above as possible within the condensed timeframe.

Participant Learning Objectives:
Participants will be able to: (1) understand the appropriate principles of national civilian radio spectrum management systems; (2) understand the automated station and equipment authorization process; (3) learn how to deal with the general public for information dissemination and radio interference complaint purposes; and (4) initiate or review civilian statutory and regulatory policies for new or expanded radio services, and be aware of the latest technology in telecommunications arenas.

Focus:
Managerial and technical with technical emphasis

Location:
Washington, DC

Federal Communications Commission (FCC) and National Instruments
Introduction to Radio Spectrum Monitoring and Measuring

Course 19-112: May 6 – 10, 2019

Course Description:
Course participants will receive an introduction to spectrum monitoring and related measurement techniques at a field facility of the Federal Communications

Commission (FCC). Initially, an overview of the role of the Enforcement Bureau and Field Operations will be presented in a classroom setting prior to transportation of the class to the FCC Columbia Operations Center facility in Columbia, MD. Following introduction of FCC course instructors, a tour will be conducted of these facilities. At the FCC facility, the class will be separated into small rotating work stations: Fixed and Mobile direction finding; Spectrum Measurement Software; and Satellite Monitoring from an equipped satellite console using a large Cassegrain feed parabolic antenna.

On the final day of the training, the course co-sponsor, National Instruments, will discuss methods for spectrum monitoring, including record and playback of spectrum for time continuous spectrum analysis. In addition, a hardware and software demonstration will be shown to highlight some common PC-based tools for spectrum monitoring applications. National Instruments is the industry leader in PC-based measurement and automation tools used worldwide in applications like communications, automotive, aerospace and semi-conductor.

Participant Learning Objectives:
To obtain a working understanding of: (1) spectrum management techniques related to enforcement of national and international radio regulations, and their practical application using spectrum monitoring and measurement tools; (2) signal recognition, and how the signals are received, through correlation between available databases and other publications and observed/measured signal characteristics; (3) how received signals are processed through

receivers, monitors, oscilloscopes and spectrum analyzers to establish transmission parameters; (4) how special engineering measurement equipment is applied against various types of communication signals (including broadcast and satellite signals) to understand the basis for their complex monitoring results; (5) the fundamentals of basic monitoring, measuring, and direction finding theory; and (6) the latest RF survey and measurement systems available today.

Focus:
Managerial and technical with a technical emphasis

Location:
Columbia, MD (Washington, DC area)

GSM Association (GSMA)

Advanced Spectrum Management for Mobile Telecommunications

Course 19-110: April 22-23, 2019

Course Description:
This course considers the history and technical evolution of mobile telecommunications before moving on to cover the core functions of the spectrum manager. Participants will learn about how spectrum is used, the characteristics of spectrum bands and the progression of mobile technologies. The course also covers the principles of spectrum planning at national and international levels and includes a deep dive into spectrum licensing and an overview of regulatory issues related to spectrum.

Learning Objectives:

▸ Understand the processes and approaches to spectrum allocation and licensing

▸ Learn how spectrum management is changing in the ever-evolving communications sector

▸ Understand how the concepts can be applied to the spectrum conditions in your own country

Location:
Washington, DC

Microsoft Corporation

Evolving Trends in Spectrum Management

Course 19-310: September 16, 2019

"I WOULD LIKE TO THANK USTTI. THEY ARE DOING GREAT JOB HELPING DEVELOPING COUNTRIES TO BE ALIGNED ON THE UPDATED TECHNOLOGY."

Christian Iyizerwa–(Rwanda)

Course Description:

Today's global economy is driven, in part by broadband connectivity and the services provided through it. Increasingly that connectivity is wireless. Additionally, innovations in sensor technologies and the Internet of Things are creating additional demand for high-performance wireless connections. These trends affect the spectrum allocation and management systems globally. Regulators strive to simultaneously ensure existing services are free from harmful interference and deliver reliable services, and facilitate the more rapid entry of new services that also require spectrum.

Advances in technology are now making spectrum sharing and reuse possible, creating greater efficiencies and facilitating solutions to some of the more intractable connectivity challenges in the world. This course will provide an overview of these technologies, techniques, and applications; including dynamic spectrum sharing, database management, use of white spaces, and tiered access. The course will offer a review of new regulatory models that some countries have introduced to accelerate progress in this area and compare different technical rules that have been implemented to date using case studies.

Participant Learning Objectives:

This course will introduce key concepts and principles intended to benefit countries seeking to understand the changing technical landscape, evolve their spectrum management strategies, as well as those who are in the process of updating their current plans. Key topics covered include:

▸ What is Dynamic Spectrum Access (DSA)

▸ What are the key technologies that enable DSA, how do they differ, when should they be used

▸ Existing lessons learned through deployment of DSA solutions

▸ Methods to protect incumbent services including databases, sensing, and hybrid approaches to DSA

▸ Recommendations for a balanced forward-looking spectrum management policy

▸ A review of several country case-studies in DSA regulation

Focus:
Government regulators and representatives of intergovernmental organizations

Location:
Washington, DC

The National Telecommunications and Information Administration (NTIA)
Radio Frequency Spectrum Management

Course 19-311: September 17 – 27, 2019

Course Description:
Developing and managing a national radio frequency spectrum management agency requires a highly trained staff to meet the daily as well as long-range spectrum requirements for the implementation of new systems and technologies. This course addresses the various elements required to plan, organize, manage, and control an effective spectrum management agency with the developing nation in mind. Participants will be introduced to spectrum management principles, national spectrum planning and policy, engineering analysis, and computer-aided techniques.

Participants will contribute to the class by sharing best practices and lessons learned through presentations on their respective spectrum management agencies. In addition, the course will discuss the technological and regulatory changes that have taken place worldwide over the past few years.

The course generally covers these processes in detail, including sections on international and domestic legal and regulatory foundations, and typical bilateral and multilateral agreements. Frequency assignment methods and new marketplace forces such as auctions and spectrum fees and charges are presented.

The course addresses national spectrum management architectures, strategic spectrum planning, frequency assignment and licensing and spectrum monitoring, measuring and enforcement. Specific modeling techniques appropriate for spectrum management will be covered. Sessions include engineering analysis, electromagnetic compatibility, spectrum measurements and monitoring, and technical standards. Computerized and automated spectrum management processes are discussed. Special attention is given to radio services of greatest interest, including land mobile and satellite communications. Visits to wireless service providers will be included.

The course is sponsored by the National Telecommunications and Information Administration (NTIA), the President's principal adviser on telecommunications matters, and manager of the federal government's use of the spectrum. Presenters

represent NTIA, other U. S. government agencies, international organizations and the private sector.

Participant Learning Objectives:

At the conclusion of the course, participants will be able to: (1) understand the appropriate principles and policies of an effective radio frequency spectrum management program; (2) identify, evaluate, and select the appropriate management techniques to establish and operate radio frequency assignment and associated planning processes; (3) recognize, assess, and select appropriate technical support programs for engineering and electromagnetic compatibility; (4) understand the procedures and elements required to plan, develop, and specify computer hardware and software for a computer-aided national spectrum management system; and (5) initiate or review overall regulatory plans for new or expanded radio services, as well as potential improvements in existing regulatory processes.

Focus:

Managerial with technical emphasis, such as stakeholder analysis and consensus development, with an emphasis on policymaking

processes in the regional and global environment during technology transitions.

Location:

Washington, DC

TCI International, Inc. (an SPX Company)

Practical Applications of Spectrum Management and Spectrum Monitoring

Course 19-113: May 13 – 17, 2019

Course Description:

Course participants will receive training at TCI International, Inc. (an SPX Company) corporate headquarters in Fremont, CA. The course focuses on the practical application of ITU-compliant spectrum management and monitoring techniques and the modern day challenges associated with both, including licensing tools, propagation analysis tools, radio direction finding and signal measurements for fixed, mobile and transportable applications. The course employs classroom and hands-on activities to provide students with a practical overview of spectrum management and

"VERY COMPLETE AND EXPERIENCED PRESENTERS; AN EXTREMELY USEFUL COURSE."

Donovon Dorsett – (Bahamas)

monitoring techniques and their interaction. Classroom time is used to instruct in system planning and coverage analysis, the principles of propagation analysis, operational principles of a monitoring station, principles of signal measurements, radio direction finding, signal identification and recording, and RF drone detection techniques. The hands-on portion of the course will demonstrate real time application of the principles taught in the classroom and include mission planning, operational set-up, running missions, and data analysis.

Participant Learning Objectives:
To learn practical implementation of spectrum management, spectrum monitoring, radio direction finding, and signal measurement techniques as they relate to the international standards of the ITU and today's signal environment. This includes: (1) management tools (2) monitoring coverage and planning tools; (3) propagation analysis tools; (4) radio direction finding; (5) signal monitoring, identification, and correlation to the frequency management database; (6) spectrum occupancy observations and analysis as part of the frequency management function; and (7) transmitter measurements as required to ensure compliance to the radio regulations.

Focus:
Managerial and high level technical, with emphasis on hands-on demonstrations.

Location:
Fremont, CA

Spectrum Monitoring Sequence

Federal Communications Commission (FCC) and Keysight Technologies
Radio Spectrum Monitoring Techniques and Procedures

Course 19-330: September 30 – October 4, 2019

Course Description:
Course participants will receive an introduction to spectrum monitoring and related measurement techniques at a field facility of the Federal Communications Commission (FCC). Initially, an overview of the role of the Enforcement Bureau and Field Operations will be presented in a classroom setting prior to transportation of the class to the FCC Columbia Operations Center facility in Columbia, MD. Following introduction of FCC course instructors, a tour will be conducted of these facilities. At the FCC facility, the class will be separated into small rotating work stations: Fixed and Mobile direction finding; Spectrum Measurement Software; and Satellite Monitoring from an equipped satellite console using a large Cassegrain feed parabolic antenna.

On the final day of the training, the course co-sponsor, Keysight Technologies, will discuss methods for spectrum monitoring, including record and playback of spectrum for time continuous spectrum analysis. In addition, a hardware and software demonstration will be shown to highlight some common PC-based tools for spectrum monitoring applications.

Participant Learning Objectives:
To obtain a working understanding of: (1) spectrum management techniques related to enforcement of national and international radio regulations, and their practical application using spectrum monitoring and measurement tools; (2) signal recognition, and how the signals are received, through correlation between available databases and other publications and observed/measured signal characteristics; (3) how received signals are processed through receivers, monitors, oscilloscopes and spectrum analyzers to establish transmission parameters; (4) how special engineering measurement equipment is applied against various types of communication signals (including broadcast and satellite signals) to understand the basis for their complex monitoring results; (5) the fundamentals of basic monitoring, measuring, and direction finding theory; and (6) the latest RF survey and measurement systems available today.

Focus:
Managerial and technical with a technical emphasis

Location:
Columbia, MD (Washington, DC area)

Federal Communications Commission (FCC) and Keysight Technologies
Laboratory Techniques in Support of Equipment Authorization Programs

Course 19-331: October 7 – 11, 2019

Course Description:
This program is intended to give participants hands-on training and

On an annual basis the Pan American Health Organization (PAHO) offers much needed training in addressing Disaster Communications Management. This one week course is constructed and lead by Jerry Freibaum (first row, first on the left), an ICT specialist with more than 40 years of Government and private sector experience in the area of Emergency Communications. In 2018 officials from Barbados, Brazil, Colombia, Ghana, Grenada, Nigeria, the Philippines, Saudi Arabia, Senegal, Sierra Leone, South Sudan, Sudan, Trinidad and Tobago, and Vietnam completed the highly popular training that combines lecture, site visits and participant presentations to share the information necessary to mitigate the effects of manmade and natural disasters.

experience in a functioning laboratory environment, in making technical measurements as applied to testing wireless radio equipment in support of governmental radio frequency equipment authorization programs. In addition to an explanation of the U.S. equipment authorization process, the course will focus on three elements of related laboratory activities. 1) testing radio frequency equipment for compliance with established technical standards; 2) developing and using new compliance measurement techniques for application in testing new radio technology; and 3) developing techniques for improving electromagnetic compatibility in radio frequency equipment. The participants will have the opportunity to work with FCC engineers and technicians in a fully operational electronics laboratory using modern equipment and methodologies. A site visit to the PCTest Engineering Laboratory of Columbia, MD. will be included.

A presentation by Keysight Technologies, the Course Co-sponsor, will be given on the final day of the training. Keysight Technologies is the world's leading electronic measurement company.

This course is intended for engineers and technicians involved in active and developing radio frequency equipment authorization programs.

Participant Learning Objectives:
Participants will develop a working knowledge and understanding of the type of measurements used to determine compliance with technical standards for radio frequency emissions, how to improve the performance of equipment with respect to electromagnetic compatibility, how to calibrate equipment used for such measurements, and how to approach the development of new measurement techniques for new radio services.

Focus:
Technical

Location:
Columbia, MD (Washington, DC area)

"USTTI TRAINING IS NOT ONLY TRAINING BUT NATION EMPOWERMENT THAT HELPS THE PARTICIPANT AND THE COUNTRY."

Emeka Mojekwu – (Nigeria)

Telecom/IT Policy and Regulation Sequence

AT&T
Subsea Cable Construction and Maintenance

Course 19-232: July 29, 2019

Course Description:
Among the important factors for making broadband more available and affordable to a country, is the access to subsea cable capacity. In recent years, there has been a surge in construction of new cable systems that land in additional countries, bringing improved access to high capacity transmission. With the optimal policies in place to promote investment and competition, the new cable systems can substantially decrease the cost and increase the availability of capacity. This has been beneficial for the country where capacity lands, and for neighboring countries with competitive access to that capacity because the additional capacity helps support the deployment of evolving and emerging technologies, including Over-the-Top (OTT) platforms and the Internet of Things (IoT).

This course will offer an experienced overview of the most important commercial, technical and policy elements that an operator or policy-maker should take into account when evaluating a new cable system. The course will be hosted by AT&T, and taught by individuals with extensive experience working on the development of

such systems. As submarine cable connectivity facilitates global data flows, the course also will include a discussion on policy issues, such as taxation as related to OTT platforms, and trends in data protection.

Specific subjects will include:
▸ Initial Legal Concepts and Regulatory Policies to promote Subsea Cable Investment and Use
▸ Feasibility of New System: Market Assessment and Commercial Model Options
▸ Definition / Design of New System: Topology and Design Best Practices
▸ Financing New System Models
▸ Deployment of New System
▸ Role of Subsea Cable Ship
▸ Life-Cycle Upgrade & Maintenance
▸ OTT Policy (taxation)
▸ Data Protection Trends

Location:
Washington, DC

Federal Communications Commission (FCC) and USTTI Board Member Corporations
Regulatory and Privatization Issues in Telecommunications

Courses 19-231: July 22-26, 2019

Course Description:
This course, taught by Federal Communications Commission (FCC) Bureau-level policy managers, offers executive-level telecommunications policy personnel a broad overview of telecommunications policy-making considerations in a dynamic and competitive environment. With the rapidly changing regulatory

environment predominant in so many countries, regulatory bodies are confronted with new challenges as they attempt to assimilate modern telecommunications technology.

The course describes the US regulatory structure including the legislative authority, the FCC organizational structure and an outline of the regulatory philosophy affecting the major services. The changing regulatory structure, which reflects current technological developments, and influences the need for competition and privatization, as mandated by the Telecommunications Act of 1996, is presented. Discussion of the FCC decision-making process, a site visit to the headquarters of Intelsat Corporation in McLean, Virginia, and a roundtable discussion concerning the changing global telecommunication environment, with class members, government, and industry representatives as participants, will be included to enhance the learning process.

Participant Learning Objectives:
The objectives of the course are: (1) to understand the changing regulatory philosophy of the United States as we participate in the dynamic worldwide telecommunications environment, including development of the necessary considerations that need to be given in responding to those changes; and (2) to develop, with high-level regulatory managers from developing nations, methods of grappling with privatization and other related deregulatory issues in managing their organizations in an effective, efficient market-driven manner.

Focus:
Strategic planning and management (limited to those responsible for communications policy determination)

Location:
Washington, DC

GSM Association (GSMA)
Internet of Things

Course 19-234: July 31 – August 1, 2019

Course Description:
IoT involves connecting devices to the internet across multiple networks to allow them to communicate with humans, applications and each other. IoT is set to have a huge impact on our daily lives, helping us to reduce traffic congestion, improve care for the elderly and create smarter homes and offices. This course provides a high-level overview of IoT concepts from a mobile perspective, outlines the role IoT can play in enhancing the quality of life of citizens and explores the implications that IoT has for policymakers and regulators.

Participant Learning Objectives:
▶ Understand the benefits IoT can bring to citizens, consumers and businesses

▶ Learn about the key difference between IoT and traditional telecoms services

▶ Discover the regulatory implications of IoT

Location:
Washington, DC

Microsoft Corporation
Creating an Enabling Regulatory Environment for Cloud Services

Course 19-233: July 30, 2019

Course Description:
This one-day seminar will address how regulators can foster the development of cloud services by creating policy frameworks that enable nations both to reap the benefits of these services and mitigate some of the risks associated with them. The course will first highlight the key attributes of cloud services, emphasizing the ways in which they alter the policy-making landscape and require different modes of regulation than their predecessors. Participants will discuss the economic and social advantages offered by cloud services and also be encouraged to probe deeply into the sources

"The course program addresses important topics in telecommunications."

Khaled Alsaleh-(Saudi Arabia)

"Was amazing experience. Learned a lot."

Flora Rodrigues – (Brazil)

of concern surrounding these services, particularly issues related to user privacy, data security, and surveillance.

The second segment of the course will focus on different approaches countries have taken for regulating different elements of cloud services and the extent to which each has been successful at promoting growth and development of these services. Regulations discussed will include issues relating to investment in broadband and mobile data networks, as well as the provision, pricing, interconnection, and expansion of network infrastructure and data centers. In particular, this segment will focus on the most successful strategies for promoting growth of cloud services in emerging and developing economies.

The final segment of the course will look at challenges associated with cloud services and how they may be addressed through regulation. The focus will be on protecting consumer privacy, protecting sensitive information, and understanding implications for surveillance by both domestic and foreign governments. Concrete examples of regulations proposed or implemented by different countries will be discussed, with an emphasis on helping regulators define their goals in each of these areas and design policy approaches suitable for those priorities. Participants will also discuss broader issues surrounding the capabilities and limitations of national laws when it comes to regulating cloud services and consider the role of international cooperation and regulatory harmonization.

Participant Learning Objectives:

▶ Develop an understanding of the benefits and risks of cloud services and the ways in which they require different regulations from their predecessors

▶ Critically assess different regulatory frameworks for cloud services to gain insight into how regulations governing network infrastructure can most effectively be used to drive growth in these services

▶ Develop nuanced understanding of the privacy, security, and surveillance challenges associated with cloud services and the strengths and weaknesses of different regulations intended to address those challenges

Focus:
Government regulators and policy-makers

Location:
Washington, DC

USTTI in Conjunction with the US Federal Communications Commission (FCC), Department of Justice, Federal Trade Commission and DC Legal Community

Seminar in Competition Policy for Telecommunications

Course 19-230: July 19, 2019

Course Description:
The Course will be conducted by recognized competition policy and anti-trust experts from the US Federal Communications Commission (FCC), the Department of Justice, The Federal Trade Commission (FTC), and the Washington D.C. Legal community

and will address basic aspects of competition policy, particularly as applicable to telecommunications industries. The discussion during the first half of this intensive one day seminar and workshop will focus on three interrelated aspects of competition policy:

1. To what extent (and with what qualifications and exceptions) can we anticipate that freely functioning private markets will satisfy consumer-citizens, needs, enhance society's wealth, and provide opportunities for workers and owners to increase their wealth? How do these principals apply to telecommunications markets?

2. What laws and legal institutions, especially anti-trust law and agencies regulating telecommunications firms, have proved beneficial in protecting and fostering market performance in those areas where reliance on marketplace forces and market decisions appears wanted?

3. What kinds of legal oversight of private behavior are necessary in cases where markets either will fail to operate optimally or cannot provide what society desires? For example, why does competition policy not fully embrace unregulated private markets for telecommunications services?

The second half of the course will consist of a workshop where participants and instructors will jointly address issues of telecommunications policy and competition that currently affect the participants' home countries.

Participant Learning Objectives:
For policy makers and regulatory managers who wish to develop a more thorough understanding of

competition policy which may serve as a foundational backdrop for policy-making considerations as applied to the telecommunications sector.

Focus:
Theory and practice of competition, as applied to telecommunications

Location:
Washington, DC

Telehealth Sequence

Howard University and the Louis Stokes Health Sciences Library
Telemedicine Review

Course 19-341: October 17-18, 2019

Course Description:
Participants will visit the medical library and the telemedicine facilities at Howard University. They will experience technology demonstrations, review equipment/applications and participate in exchanges with telemedicine and medical informatics staff.

Participant Learning Objectives:
Exposure to telemedicine and education applications

Focus:
Engineers and managers of all expertise levels

Location:
Washington, DC

University of Virginia Health System, Office of Telemedicine
Telemedicine and Distance Learning Synopsis

Course 19-340: October 14-16, 2019

Course Description:
Participants will gain hands-on experience in a live Telemedicine and Distance Learning environment at the University of Virginia in Charlottesville, VA. Presentations, demonstrations, and simulated patient encounters will be conducted both at UVA and with remote sites throughout Virginia. Technicians will demonstrate numerous technologies such as transmission over ISDN, Wireless and over the Internet. Clinicians and multimedia production staff will cover the entire process of producing, broadcasting, and recording for later Internet access to Distance Education and Continuing Medical Education.

Participant Learning Objectives:
To understand the many different options available to conduct interactive medicine and education

Focus:
Engineers, Doctors, Nurses, Clinicians and officials responsible for overseeing Telemedicine programs.

Location:
Charlottesville, VA

"Very well designed course on new technologies particularly the sessions addressing 5G and related technologies."

Dominador Garabiles – (Philippines)

"I pray that USTTI continues to share this kind of training."

Proscovia Nagayi – (Uganda)

2019 USTTI Application For Training

We recommend that you file your application online at www.ustti.org. You must answer the following questions completely in order to qualify for USTTI training. Please print or type clearly. Use additional sheets if necessary. Photocopies of this application are acceptable. Please fax or airmail your completed application along with a copy of your valid passport's information page(s) to USTTI. A working fax number or e-mail address where you can be reached is essential.

Applicant Information

Have you applied to USTTI in the past? ☐ Yes ☐ No

Given (First) Name(s) _____ Surname (Last) Name(s)_____

Job Title _____

Organization/Employer _____

Organization Mailing Address_____

City, State, Country _____

Mobile/Emergency Number (Country Code/City Code/Number)_____

Business Phone_____ Fax_____

Work E-mail _____ Personal E-mail_____

Home Address_____ Home Telephone_____

Home City _____ Birthplace (City, Country)_____

Date of Birth (Month/Day/Year) _____ Citizenship_____

Course Selection

Indicate below the number and name of the course(s) to which you are applying, in order of preference.

_____
_____
_____
_____
_____

Applicant Training Goals

Please explain how your participation would benefit your company/organization and your country. What potential leadership role might you play upon your return home? Please attach a separate document if necessary.

_____
_____
_____
_____
_____

English Language Ability

Please check the appropriate boxes below.

	Excellent	Adequate	Poor
Reading	☐	☐	☐
Writing	☐	☐	☐
Speaking	☐	☐	☐
Comprehension	☐	☐	☐

Name_____ Country_____

Formal Education

Please list formal education, beginning with the secondary school

Secondary _____ Location_____

Subject _____ Degree _____ Year Earned _____

University _____ Location_____

Subject _____ Degree _____ Year Earned _____

Other _____ Location_____

Subject _____ Degree _____

Current Position, Professional Experience, and Achievements

Describe your current and previous communications/IT responsibilities; where applicable, please highlight managerial experience. Include types of systems and equipment with which you have worked, attendance at major conferences, awards, and any other accolades you have received. Please attach a separate document if necessary.

_____
_____
_____
_____
_____
_____

Emergency Contact Information

Please provide contact information for two relatives or friends in your country. Please also provide the contact information of two relatives or friends in the United States. If you do not have any contacts in the United States, please leave the section blank.

In-country:

Name_____ Relationship _____

Phone _____ E-mail _____

Name_____ Relationship _____

Phone _____ E-mail _____

In the U.S.:

Name_____ Relationship _____

Phone _____ E-mail _____

Name_____ Relationship _____

Phone _____ E-mail _____

Funding

Please check the appropriate boxes below

1. My organization will pay for my travel. ☐Yes ☐No

2. My organization will pay for my subsistence. ☐Yes ☐No

3. I am applying for USTTI support for: ☐Travel ☐Subsistence

Please provide your supervisor's information below:

USTTI financial support is limited. Applicants are strongly encouraged to seek other sources of travel and subsistence funding. Please notify USTTI immediately if your funding status changes. Please note that at orientation each participant must pay the US$150 administrative fee for the first course and US$75 for each subsequent course.

Supervisor Name_____

Position/Title _____

Organization _____

Telephone_____

Fax _____

E-mail _____

Supervisor Signature _____Date _____

Applicant Signature _____Date _____

Send Application via airmail or fax to:
USTTI
1150 Connecticut Avenue, NW
Suite 702
Washington, DC 20036-4131
Telephone: +1-202-785-7373
Fax: +1-202-785-1930
E-mail: train@ustti.org
Website: www.ustti.org