Public Policy in a Changing World
How Will It Impact the ICT Professional?

Host - Charles Wilson, NSCA
Joseph Lee, Cisco Systems
Pat McMurray, T&R Communications/BICSI
Ron Tellas, Belden
Overview: 2019 saw an alarming uptick in proposed legislation to address the changing ICT industry. 2020 is promising to have even more activity. Technology, safety and the human element are often at odds with each other. Rapidly advancing technology continues to change the ways we work and live. We will discuss the landscape and some of the challenges and opportunities, as well as the importance in implementing new strategies and defending competency-based programs for the design, installation and integration of ICT fields.
Intelligent Building Systems Breakout

Physical Security
- Close Circuit TV
- Access Control
- Intruder Detection
- Key Management

Sustainability / Wellness
- Energy Monitoring
- Water Monitoring
- Gas Monitoring
- Demand Response
- Productivity Monitoring
- Air Quality

Fire / Life Safety
- Emergency Warning and Intercommunication System
- BMS Integration
- Security System Integration
- Data Access for Services
- Very Early Smoke Detection Apparatus (VESDA)
- Emergency Signage
- Emergency Lighting

Communications
- Base Building Telephone
- Public Address / Intercom
- Base Building Wi-Fi

Building Services
- Bathrooms Services
- Plug Load Monitoring

Building Envelope
- Insulation

Mechanical
- Building Management System (BMS)
- Building Energy Management Systems (BEMS)
- Device Supervisory Control
- Room Control

Vertical Transportation
- Elevator Management
- Elevator Display System
- Elevator Security Integration
- Elevator Communications
- Escalator Management

Tenant Improvements
- Window Shades
- Digital Signage
- Projectors
- White Noise Systems
- Meeting Room Automation
- Audio / Visual System

Power
- Enterprise
- IOT

Electrical
- Low Voltage Control
- Load Shedding
- Standby Power Systems
- High Voltage SCADA
- Combined Cooling/Heat/Power (CCHP)
- Lighting Control
- Micro Grid (DC) Monitoring

Hydraulic
- Water Recycling System
- Leak Detection
- Flow Control / Monitoring
- Toilet / Sink Flow

Car Park Systems
- Car Park Management
- Park Assist
- Car Charging Systems

IP Systems
- Transitioning to IP Monitoring Only

2020 BICSI WINTER Conference & Exhibition
IP/POE Digital Building Endpoints:
More Product Diversity Every Day

- Intel NUCs
- Shot Detection
- RFID Reader
- Raspberry Pi POE Hat
- Hospital Room Patient Display
- NFC Reader
- Ceiling Fans
- USB-C Chargers
- Cameras
- HVAC VAV's
- Badge Readers
- Touchscreen PC's
- Biometric Door Locks
- Curtain Motors
- POE Displays
- IP Call Tower
- Entry Barriers and Turnstiles
- Environmental Sensor Hubs
- Light Fixtures
- Temp Sensor
- Horns and Sirens
- IP Call Stations
- Status Signs
- Access Points
- Fan

2020 BICSI WINTER Conference & Exhibition
IoT Trends

IoT is fastest growing technology trend in the connected technologies and smart buildings sector

Internet of Things will connect over 50 billion devices by 2023

$520 billion market by 2021, more than double the figure of 2017

These devices will be connected primarily using PoE

IoT in manufacturing and industrial processes provide huge benefits to efficiency
# Regulations and Licensure

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• When we have a chance to provide testimony we generally win the debate based on fact and science</td>
<td>• Conflicting codes that govern our scope of work</td>
<td>• We often struggle to articulate the “Why” on how urgent this situation is with conflicting codes, no industry classification, and with our legislative agendas</td>
<td>• Clear and unified testimony and model legislation on an industry-wide basis</td>
<td>1. Regulatory capture (rather than skills and expertise) drive this debate</td>
</tr>
<tr>
<td>• Our skills, training, and expertise are well beyond that of the opposition</td>
<td>• Multiple standards that often cause more confusion than the value they provide</td>
<td>• Our voice is often silenced as we represent both union and non-union member companies who then have conflicting viewpoints</td>
<td>• More voices from the industry at the table when electrical licensure is being debated and put into law</td>
<td>2. Safety and training issues are being portrayed incorrectly</td>
</tr>
<tr>
<td>• We do a great job of monitoring and reporting on harmful legislation or regulatory changes</td>
<td>• The changes to electrical codes are now being buried in regulations and local ordinances</td>
<td>• The difference between the NEC and all the “carve out” language</td>
<td>• The rank and file association members understanding the importance of these issues</td>
<td>3. Since we cover so many tech sectors, we often have unintended consequences when changes occur</td>
</tr>
<tr>
<td>• As a connected technologies industry we generally agree on best practices</td>
<td>• We aren’t as united on these issues as we could be (working on it)</td>
<td>• LED lighting and PoE as a safety issue vs. a trade jurisdiction and scope issue.</td>
<td>• A unified position statement on the emerging technologies and the role we all play</td>
<td></td>
</tr>
</tbody>
</table>
# State Level Licensure and Regulatory Challenges

<table>
<thead>
<tr>
<th>State</th>
<th>Bill Type</th>
<th>Initial Proposal</th>
<th>Final Language</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>Exception Expansion</td>
<td>Telecom not exempt</td>
<td>Telecom providers exempt</td>
<td>Signed Into Law, Gain</td>
</tr>
<tr>
<td>Colorado</td>
<td>Electrical Board Sunset</td>
<td>Exempt “Building’s Electrical System” from exemptions</td>
<td>Overriding Class 2 and Class 3 Exemption</td>
<td>Signed Into Law, Gain</td>
</tr>
<tr>
<td>Florida</td>
<td>Narrow Update</td>
<td>77 Volt Limit</td>
<td>77 Volt Limit</td>
<td>Died in Committee, No Effect</td>
</tr>
<tr>
<td>Louisiana</td>
<td>Parish-level</td>
<td>Establish multiple ordinances</td>
<td>Override of state exemptions</td>
<td>Causes confusion</td>
</tr>
<tr>
<td>Maryland</td>
<td>State Level License Creation</td>
<td>50 Volt Limit</td>
<td>50V +/- 10V, but did not pass</td>
<td>Died in Committee, No Effect</td>
</tr>
<tr>
<td>North Dakota</td>
<td>New Power-Limited License</td>
<td>Confusing license definitions</td>
<td>Clear NEC derived definitions and reasonable license requirements</td>
<td>Signed Into Law, Gain</td>
</tr>
</tbody>
</table>
## State Level Licensure and Regulatory Challenges

<table>
<thead>
<tr>
<th>State</th>
<th>Bill Type</th>
<th>Initial Proposal</th>
<th>Final Language</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>No Bill, Petition by CEDIA</td>
<td>Make PoE explicitly exempt</td>
<td>Rejected, study group formed</td>
<td>Pending Study Group Outcome</td>
</tr>
<tr>
<td>New York</td>
<td>State Level License Creation</td>
<td>Create State-wide license</td>
<td>No Change Sought</td>
<td>Stalled, No Effect</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Narrow Update</td>
<td>Establish 50V Limit</td>
<td>N/A</td>
<td>Died in Committee, No Effect</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>State Level License Creation</td>
<td>10 V Limit</td>
<td>N/A</td>
<td>Stalled, No Effect</td>
</tr>
<tr>
<td>Texas</td>
<td>Narrow Update</td>
<td>50V / 50 VA Limit</td>
<td>N/A</td>
<td>Died in Committee, No Effect</td>
</tr>
<tr>
<td>Utah***</td>
<td>Licensure Requirements Update</td>
<td>No Exemption</td>
<td>Class 2/3 and Safety Exemption</td>
<td>Signed Into Law, Gain</td>
</tr>
</tbody>
</table>
Legislative Tracking

Labor Laws, Licensing, & Prevailing Wages

Jobs, Technology & STEM

School Safety

Cybersecurity/Internet of Things

OSHA/EPA

© 2020 Mapbox © OpenStreetMap
CO Rep. Tom Sullivan – (D)
- Formerly of USPS
- Worked on Sunset Bill that must be renewed every few years
- Said it was a constituent issue

OK Sen. Julie Daniels – (R)
- Represents Bartlesville area
- Bill was brought to her by a constituent

UT Rep. Mike Schultz – (R)
- Represents Hooper area
- House GOP Leader (Maj. Whip)
- General Contractor

TX Rep. Tracy King – (D)
- Represents rural W. Texas
- Healthcare Business
- Constituent Issue

ND Rep. Ben Koppelman – (R)
- Represents W. Fargo
- Building Contractor

PA Rep. Ed Neilson – (D)
- Represents NE Philly
- Used to work at IBEW Local 98
- Has run the same bill for the past 5 years

MD Rep. Kevin Hornberger – (R)
- Represents a rural part of the state
- Is a mechanical engineer
What is an Occupational Code Assignment?

• An Occupational Code Assignment is a process established to help occupational information users relate a job title or occupational specialty to an O*NET-SOC occupation. NOTE: the term “integrator” was submitted on Dec. 19, 2019 for consideration.

• Businesses, training and educational institutions, labor and occupational organizations, and professional associations can use the OCA process to determine if a job title or occupational specialty is recognized within the O*NET-SOC system and the U.S. labor market.
Here’s the Deal
Billions of NEW Connections... and Who Does the Work?

From Power + Data...

To Data w/ Power...

It’s really this simple... right?
Question #1

Why are we here? In your opinion, why is PoE getting all this attention? Is it LED lighting or power to connected devices or both?
Question #2

Would an industry classification specific to the systems integrator help clarify the qualifications more than new licensing requirements?
Question #3

What are the associations like NSCA and BICSI doing to protect our ability to do this type of work?
Question #4

How does the process work to get more involved? More informed? Take action?
Questions from Audience

Time permitting...

For more information

bicsi@bicsi.org

cwilson@nsca.org

https://www.nsca.org/track-legislation/

Thank you!