PROTECTION ENGINEERS GROUP

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ATIS Sustainability in Telecom: Energy and Protection Committee (STEP) Update

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About ATIS STEP

- ATIS is accredited by the American National Standards Institute (ANSI) to develop telecom standards; Sustainability in Telecom: Energy and Protection (STEP) Committee is one of 14 ATIS standards committees.
- STEP develops standards for telecommunications equipment and environments in the areas of network protection (subcommittees NEP and NPP), energy efficiency (TEE), and power (NPS).
- Enables vendors, operators, and their customers to design, deploy and operate reliable, environmentally sustainable, and energy-efficient communications technologies.

ATIS STEP

- ATIS Sustainability in Telecom:
- Energy and Protection Committee (STEP), working groups
  - Network Electrical Protection (NEP)
  - Network Power Systems (NPS)
  - Network Physical Protection (NPP)
  - Telecommunications Energy Efficiency (TEE) and
  - Wireless Working Group (WWG).

ATIS STEP

- **ATIS STEP-NEP: Network Electrical Protection Subcommittee**
- STEP-NEP develops system-level Standards and Technical Reports relating to the electrical protection of telecommunications networks.

- **ATIS STEP-NPS: Network Power Systems Subcommittee**
- STEP-NPS develops standards and technical reports relating to power systems and power systems interfaces with telecommunications load equipment. In addition, STEP-NPS recommends positions on matters within its scope of expertise, under consideration by other national, regional and international standards development organizations (e.g., IEEE, IEC, and UL).

ATIS STEP

- **ATIS STEP-NPP: Network Physical Protection Subcommittee**
- STEP-NPP, proposes, develops and recommends Standards, Technical and Guidance Reports relating to the physical protection and physical design of telecommunications network equipment and the facilities in which they are housed. In addition, the group recommends positions on matters, within its scope of expertise, under consideration by other national, regional and international standards development organizations.
- The subjects of the STEP-NPP's Standards and Technical Reports include, but are not limited to, temperature, humidity, ignitability, fire spread, earthquake, vibration and shock resistance, contamination, acoustic noise, and naturally occurring phenomena. The subjects also include the mechanical design of telecommunications network equipment and the structures in which they are housed.

ATIS STEP

- **ATIS STEP-TEE: Telecommunications Energy Efficiency**
- STEP Telecommunications Energy Efficiency (TEE) subcommittee develops and recommends standards and technical reports related to the energy efficiency of telecommunication equipment. In addition, STEP-TEE recommends positions on matters within its scope of expertise, under consideration by other national, regional and international standards development organizations.

- **ATIS STEP-TEE WWG: Telecommunications Energy Efficiency Wireless Working Group**
- The STEP Telecommunications Energy Efficiency (TEE) Wireless Working Group (WWG) develops and recommends standards and technical reports related to the energy efficiency of mobile wireless networks.
- The scope of work includes the development of standards and technical reports related to the energy efficiency of mobile wireless networks and their elements. This includes the definition of metrics and measurement procedures.

ATIS: Network Electrical Protection Standards

Recent Published Standards

- Revision of Remote End POTS Splitter

New Initiatives

- Electrical Protection (including Lightning, Power Fault, and Grounding) for Reverse Powering from Customer Premises
- Revision of Grounding / Bonding of Telecom Equipment
- Revision of CO Equipment Electrostatic Discharge Immunity Requirements
- Revision of Electrical Protection of Communications Towers

Leaders:

Chair: John Fuller, AT&T

Vice Chair: Ernie Gallo, Ericsson

ATIS: Network Physical Protection Standards

Recent Published Standards

- Revision of Reference Guideline for Environmental Testing of Communications Equipment
- Revision of Equipment Surface Temperature

New Initiatives

- Revision of Refrigerants
- Review of Protection of Telecom Links from Physical Stress and Radiation effects
- Review of Fire Resistance Criteria

Leaders:

Chair: Clayton Forbes, National Technical Systems (NTS)
Vice Chair: Chris Von Hagel, Intertek

ATIS: Network Power Standards

Recent Published Standards

- 400v DC-Powered Equipment Used in the Telecommunications Environment
- Line-Powering of Telecommunications Equipment on OSP Twisted Copper Pair Loops

New Initiatives

- Baseline Central Office Power Routine; Minimum Tasks and Frequencies

Leaders:

Chair: Ernie Gallo, Ericsson
Vice Chair: James Jackson, AT&T

ATIS: Network Physical Protection Standards

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New Initiatives

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Leaders:

Chair: Clayton Forbes, National Technical Systems (NTS)
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ATIS: Energy Efficiency Standards

Recent Published Standards

- Wi-Fi Access Points
- Transport (Optical Access added)
- Base Station Input Power
- DC/DC Converters
- AC/DC Converters
- Uninterruptible Power Supplies
- Base Station Energy Efficiency

New Initiatives

- Estimate for Energy Efficiency of Networks/Solutions

Leaders, TEE (Telecommunications Energy Efficiency) :
Chair: Leonid Rabinovich, Cisco
Vice Chair: Steve Martin, AT&T

Leaders, TEE Wireless Working Group :
Chair: Daniel Dianat, Ericsson
Vice Chair: Rick Damiano, Verizon Wireless

Sustainability and Protection: ATIS STEP

- ATIS STEP Committee (Sustainability in Telecom: Energy and Protection; scope includes Energy Efficiency Measurement, Power, and Protection Standards)
- ATIS STEP has strong participation from Service Providers (SPs) and Systems Integrators (SIs).
  - SPs rely on STEP to create standards that have a strong basis in technology
  - SIs benefit from direct access to the operational experience of their users
- Current Issues include:
  - Active Broadband (Ethernet) Protection Considerations
  - Energy Efficiency of Base Stations and of WAPs
  - Data Center power standards

- About ATIS STEP - Roster of members

- Members include:
  - Service Providers: AT&T, CenturyLink, Charter, Comcast, TELUS, Verizon and Verizon Wireless

  - Solutions Providers: ADTRAN, Alpha, Bourns, Burndy, Cablcon, Ciena, Cisco, CSI Telecommunications Inc., Eltek (Delta), ERICO, Ericsson, Fujitsu, General Electric DC Power, Huawei, Intel, Intertek, Juniper, Microsemi, National Technical Systems, Nokia, Southwire, Thomas & Betts

STEP Summary

- ATIS Has A Strong Portfolio of Energy Efficiency Measurement, Power, and Protection Standards
- ATIS STEP is one of ATIS' most active committees, with strong participation from Service Providers and Solutions Providers.
  - Service Providers rely on the expertise within STEP to target standards that have a strong basis in technology
  - Solution Providers benefit from direct access to the operational experience of their users

STEP Contact Information

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Advancing the Information and Communications Industry Transformation

In a rapidly changing industry, innovation needs a home. ATIS is a forum where technology companies convene to find solutions to their most pressing shared challenges.

Thanks for Your Attention

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