ATIS STEP STANDARDS WORK

Bon Pipkin

ATIS

Alliance for Telecommunications Industry Solutions

- A standards organization that develops technical and operational standards for the telecommunications industry
- Accredited by the American National Standards Industry(ANSI).
- More than 250 member companies, including various service providers, equipment manufacturers, and vendors.
- Encompasses numerous industry committees and fora, which discuss, evaluate, and author guidelines concerning such topics as data security network reliability, interoperability, and subscription services.
- ATIS is a member organization of a number of other standards organizations. In addition to being a founding member of the Global Standards Foundation; a member organization of the International Telecommunications Union (ITU) Standardization Sector (ITU-T) and the ITU Radio Sector (ITU-R).

ATIS STEP

Sustainability in Telecom: Energy and Protection Committee

- **Scope:** The technical requirements, measurement techniques, metrics, and operational practices documented in STEP's work products encompass:
  - environmental impacts;
  - energy production, storage and distribution systems;
  - energy efficiency, and;
  - electrical and physical protection;

  for customer, access, transport and core telecommunications equipment and environments.
- **Chair**: Ken Biholar, ALU
- **Vice-chair**: Bon Pipkin, AT&T
- **Web site: http://www.atis.org/step/**
- **Operating Procedures**

ATIS STEP SUB-COMMITTEES

- **Telecommunications Energy Efficiency (TEE)**

  Chair: John Messina, AT&T

  Vice-chair: Leo Rabinovich, Cisco

- **Network Power Systems (NPS)**

  Chair: Jim Jackson, AT&T

  Vice-chair: Ernie Gallo, Telcordia/Ericsson

- **Network Physical Protection (NPP)**

  Chair: Randy Ivans, UL

  Vice-chair: Clayton Forbes, NTS Labs

- **Network Electrical Protection (NEP)**

  Chair: Ernie Gallo, Telcordia/Ericsson

  Vice-chair: Larry Payne, AT&T

ATIS STEP
Telecommunications Energy Efficiency (TEE)

The STEP-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
Telecommunications Energy Efficiency (TEE)

The work undertaken by STEP-TEE includes the development of standards and technical reports which define energy efficiency metrics, measurement techniques and new technologies, as well as operational practices for telecommunications components, systems and facilities.

ATIS STEP
Telecommunications Energy Efficiency (TEE)

2013 Goals:

- Address comments for the TEE Wireline Access standard and return to the membership with a default letter ballot.
- Develop draft – Optical Access Equipment
- Revise– TEE General Requirements
- Revise – TEE Router and Ethernet Switch Products
- Revise– TEE Server Requirements
- Develop draft - TEE Power Systems, DC/DC Converters
- Develop draft - TEE Power Systems, DC/AC Inverters
- Develop draft - TEE Power Systems, UPSs
- Wireless Working Group to develop proposal for a revision of TEE Radio Base Stations

ATIS STEP
Telecommunications Energy Efficiency (TEE)

AT&T has endorsed the ATIS energy efficiency standards by incorporating the requirements in ATT-TP-76200, Network Equipment Power, Grounding, Environmental, and Physical Design Requirements. Procurement is also including energy efficiency reporting in the purchasing contract language.

AT&T has identified the amount of energy consumed by the network on an annual basis and is making a concerted effort toward sustainability through improved energy efficiency

ATIS STEP
Network Power Systems (NPS)

- STEP-NPS develops system-level Standards and Technical Reports relating to the providing Power sourcing for telecommunications networks.
- STEP-NPS is responsible for
  - The voltages that are used in the telecommunications networks.
  - The type of equipment to be used to provide power along with the connecting pieces including cable connectors and buss systems.
  - Electrical specifications such as noise circuit distribution requirements and method's of plant structure such as central or distributed.
  - Network facilities covered include telecommunications central offices, switching centers and similar type facilities, outside plant such as aerial, buried and underground wire and cable, and network plant at entrances to customer structures or buildings.

ATIS STEP
Network Power Systems (NPS)

2013 ATIS NPS Documents

- **ATIS-0600330.2008**, Valve-Regulated Lead-Acid Batteries Used in the Telecommunications Environment.
- **ATIS-0600311.2007**, DC Power Systems - Telecommunications Environment Protection: LB120 closed without comment or no votes, will be published following the ANSI Public Review and the associated Issue will be placed in Final Closure.
- Draft Standard for Irreversible Compression Lugs, Inline Splices, and Taps: Discussed Comments received towards LB 117: STEP-NPS-2012-011R3, is the current baseline and the current comment resolution report is contained in STEP-NPS-2013-003.
- **Issue #106: Revision of ATIS 0600315**, Voltage Levels for DC-Powered Equipment Used in the Telecommunications Environment (STEP-NPS-2013-004): It is the intent to finish this document at the April 2013 face-to-face meeting.

ATIS STEP
Network Power Systems (NPS)

2013 ATIS NPS Documents - continued

- **Issue #117:** 400v DC-Powered Equipment Used in the Telecommunications Environment: This Issue to be withdrawn due to a lack of contributions.

- **STEP-NPS-2012-002R2,** Draft Standard for Line-Powering of Telecommunications Equipment on OSP Twisted Copper Pair Loops. Considerable progress was made on this baseline document resulting in STEP-NPS-2013-005. This document will be shared with ATIS Legal to ensure all content regarding safety is appropriate for an ATIS standard.

Future Meetings

- April 22-25, 2013, Minneapolis, MN (ATIS AMOC). Ernie Gallo can answer questions in regard to participation in ATIS NEP

ATIS STEP
Network Physical Protection (NPP)

Mission: STEP-NPP, proposes, develops and recommends Standards and Technical Reports relating to the physical protection and physical design of telecommunications network equipment and the facilities in which they are housed. 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
Network Physical Protection (NPP)

Previous Publications:

Pb-Free Working Group

This group was charged with the development of standards relating to the reliability of lead free solder joints and studying the effects of the different processes needed for lead-free technologies on component reliability. The Pb-Free Working Group completed their work in 2012 and the group is currently dormant.

- **ATIS-0600020.2010:** Guideline for Pb-Free Assembly Qualification and Test Requirements for Printed Wiring Board Assemblies
- **ATIS-0600019.2009:** Test Requirements for Pb-Free Subassembly Modules

ATIS STEP
Network Physical Protection (NPP)

Current Work:

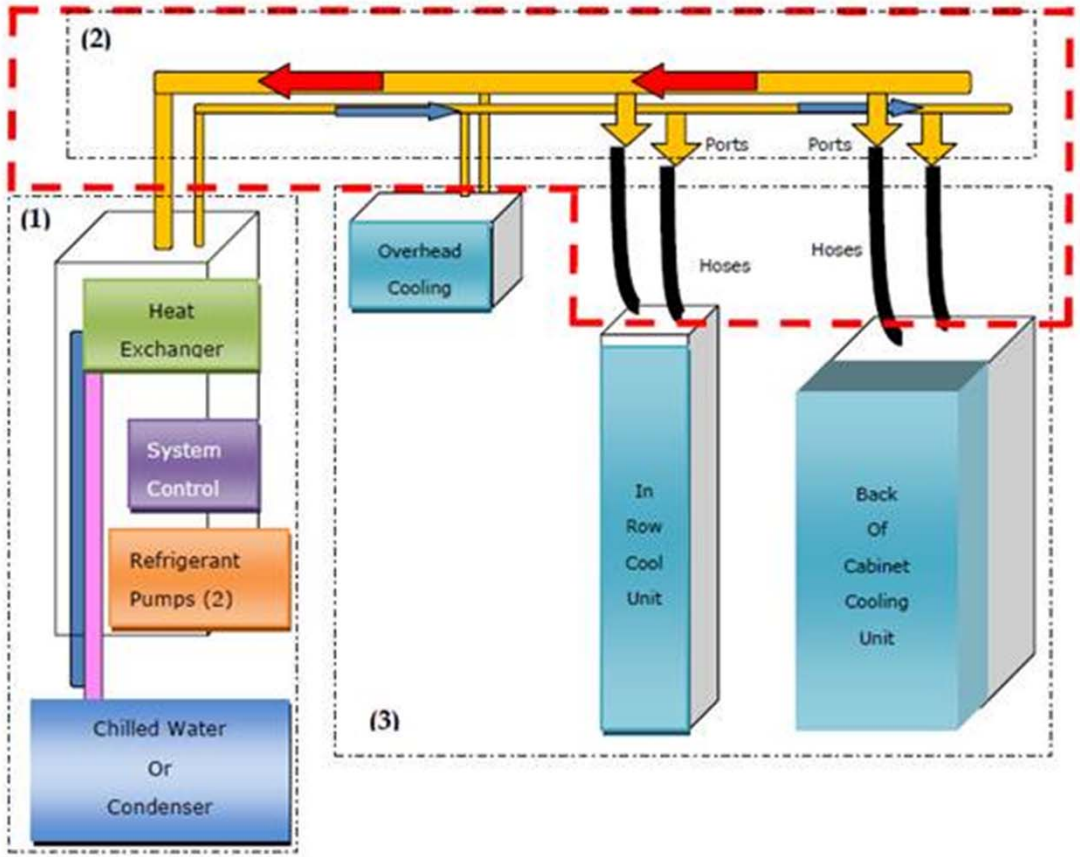
Distributed Refrigerant Cooling Systems Infrastructure

The defined scope of the standard focuses on the infrastructure and connection points to the infrastructure. Right now different manufacturers have varying design criteria. For this reason, this standard will attempt to be technology transparent and deliver refrigerant using a least common denominator approach. The universal application allows for the installation of a single, common infrastructure that is adaptable to support multiple vendors of Distributed Refrigerant Cooling.

ATIS STEP
Network Physical Protection (NPP)

Current Work:

Distributed Refrigerant Cooling Systems Infrastructure



ATIS STEP
Network Physical Protection (NPP)

2013:

Standards Review

- **ATIS-0600009.2007,** RoHS - Compliant Plating Standard for Structural Metals, Bus Bars, and Fasteners. Participants reviewed this document and saw no need for change.

- **ATIS-0600328.2007** (STEP-NEP-2012-011) - Protection of Telecommunication Link from Physical Stress and Radiation Effects and Associated Requirement for DC Power Systems (Joint with NEP and NPS). NPP has completed their review of this document and NEP has also completed their edits of this document, and will be asking for letter ballot on the revision.

- **ATIS-0600010.2007**, Temperature, Humidity and Altitude Standards. Currently under review by the subcommittee to revise this standard.

ATIS STEP
Network Physical Protection (NPP)

2013: Standards Review Continued

- **ATIS-0600010.02.2012**, Equipment Handling, Transportation Vibration and Rail Car Shock Requirements for Network Telecommunications Equipment. Reviewed and revised. One specific addition was a new test procedure for field replaceable units (FRUs) that reflects how these products are actually handled in the real world.

- **ATIS-0600307.2007** Fire Resistance Criteria - Ignitability Requirements for Equipment Assemblies, Ancillary Non-Metallic Apparatus, and Fire Spread Requirements for Wire and Cable. Being revised to update flammability ratings designations and the addition of new products and assemblies such as cable routing assemblies.

- Review changes in Telcordia 's GR63-CORE document for relevance to changes in related STEP-NPP documents.

ATIS STEP
Network Electrical Protection (NEP)

- Develops system-level Standards and Technical Reports relating to the electrical protection of telecommunications networks.
- Is responsible for
  - system-level electrical protection of telecommunications networks, including wireline, optical and wireless networks
  - electrical stresses may include system-level electrostatic discharge (ESD) criteria for central office equipment, lightning and ac power influences, electromagnetic interference (EMI), and electro-magnetic pulse (EMP).
  - electrical protection methods may include equipotential bonding, grounding, and the application of electrical protection devices.
  - network facilities covered include telecommunications central offices, switching centers and similar type facilities, outside plant such as aerial, buried and underground wire and cable, and network plant at entrances to customer structures or buildings

ATIS STEP
Network Electrical Protection (NEP)

Previous Publications:

ATIS-0600001 *Electrical Protection Standards and Reference Documents Associated with Telecommunication Networks*

2013 ATIS NEP Documents

- **ATIS-0600333.2007,** *Grounding and Bonding of Telecommunications Equipment*
- **ATIS-0600328.2007,** *Protection of Telecommunications Links from Physical Stress and Radiation Effects and Associated Requirements for DC Power Systems (A Baseline Standard)*
- **ATIS-0600308.2008,** *Central Office Equipment - Electrostatic Discharge Immunity Requirements*
- **ATIS-0600308.2008**, *Central Office Equipment - Electrostatic Discharge Immunity*
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ATIS STEP
Network Electrical Protection (NEP)

Previous Publications Continued:

- **ATIS-0600316.2008,** *Electrical Protection of Telecommunications Outside Plant*
- **ATIS-0600313.2008**, *Electrical Protection of Telecommunications Central Offices and Similar Type Facilities*.
- **ATIS-0600334.2008,** *Electrical Protection of Communications Towers and Associated Structures.*

2013: Ethernet Applications

Active Investigate non-traditional Ethernet and PoE applications and what are the protection considerations and potential threats

Future Meetings

- April 22-25, 2013, Minneapolis, MN (ATIS AMOC). Ernie Gallo can answer questions in regard to participation in ATIS NEP

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