# IEC TC 81 UPDATE

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# General Administration

- USNC now chairs IEC Committee on Lightning Protection
- No major affect on Technical Advisory Group at this time

# Status

- Committee draft of 2nd Edition of IEC 62305 out for comments
  - Closing date today
- New standard (IEC 62561) under development to address components
  - CDs out for comments
  - Closing date today

# IEC 62305

- Part 1 – General Principles
- Part 2 – Risk Management
- Part 3 – Measures to reduce physical damage and life hazard in a structure
- Part 4 – Measures to reduce failures of electrical and electronic systems in a structure
  - Electrical systems include internal power distribution wiring and components

# IEC 62305 Revision Issues

- Part 1
  - Proposal to add a 3rd current component to environment
  - Negative first return stroke
  - Can lead to most severe stress to equipment
- Maintenance Team 8

# IEC 62305 Revision Issues

- Part 2
  - Revision in collective area calculation
  - Replace Risk Calculator software with more complete Excel spreadsheet

Maintenance Team 9

# IEC 62305 Revision Issues

- Part 3
  - Resolve vertical versus horizontal electrode length requirement
  - Resolve how to protect sides of tall structures
  - Revisit tables on materials and dimensions
  - Rework of Annex E

# IEC 62305 Revision Issues

- Part 3

  Resolve vertical versus horizontal electrode length requirement

  – TAG conclusion to accept IEC 2:1 factor unless other info becomes available

# IEC 62305 Revision Issues

- Part 3

  Resolve how to protect sides of tall structures

  - **5.2.3 Air-terminations against flashes to the side of tall structures**
  - On structures taller than 60 m, flashes to the side may occur, especially to points, corners and edges of surfaces.
  - NOTE: In general the risk due to these flashes is low because only a few per cent of all flashes to tall structures will be to the side and moreover their parameters are significantly lower than those of flashes to the top of structures. However, electrical and electronic equipment on walls outside structures may be destroyed even by lightning flashes with low current peak values.

# IEC 62305 Revision Issues

- Part 3

  Resolve how to protect sides of tall structures

  – Air termination system required for top 20% structure

  – Rules relaxed to LPL IV (60 m sphere)

  – May utilize metal cladding, curtain walls, steel frame and rebar in concrete.

Maintenance Team 8

# IEC 62305 Revision Issues

- Part 4
  - Rework SPD risk management
  - Focus on LEMP and overvoltages
  - Significant revision to Annex D
  - Focus on current sharing

Maintenance Team 3

# IEC 62561

- Part 1 – Connection components
- Part 2 – Conductors and earth electrodes
- Part 3 – Isolating spark gaps
- Plans in place for 3 more categories

# IEC 62561

- First edition CD out for comments
- Based on EN 50164
- Scope is to specify requirements and tests for applicable components
- USNC general comment is to ensure that items currently allowed in IEC 62305 will not require testing
- Working Group 11

# Agenda

- Comments on all CDs should be to TAG today
- Working Group 11 to meet 8-11 April 2008 to discuss comments on IEC 62561
- Maintenance Teams 3, 8, and 9 to meet 14-18 April 2008.
- Decision will be made to go to CDV after review of comments

# Schedule

- CDV - December 2008
- FDIS – September 2009
- Publication – December 2010
- Next committee meeting?
  - Maybe September/October 2008