

J. Thomas Chapin, PhD.
13900 Bethany Oaks Pointe
Alpharetta, Ga., 30004 USA

Professional Experience

Underwriters Laboratories Inc.

General Manager Fire Protection Division

2001-present

Responsible for managing the US Operations and establishing the global expansion strategy for the Division. Currently reviewing operations functions, staff performance and facilities utilization to improve customer support and responsiveness to significant public issues. Immediate focus is on developing contacts within the fire community, regulatory officials and industry trade associations. Increasing client assistance programs, research investigations, forensic analysis and expanded service offerings for the Division.

Lucent Technologies, Optical Fiber Solutions, Norcross, Ga., Technical Manager

FAP Materials Development Group

2000 – 2001

Manage Materials Development Group in support of Fiber Optic Apparatus and Premises Copper Cable business units with FY2001 estimated revenues of \$350M. Part of Senior Leadership Team responsible for all aspects of the business including budgets, personnel, technical strategy and project prioritization to achieve the financial objectives of the business unit which employs 300 people. The FAP Materials Group is responsible for materials technology at 2 US and 5 offshore factories. Regularly interact with domestic and offshore suppliers to define technology strategy for Lucent's fiber optic products. Participate in domestic and international codes and standards bodies (UL, NFPA, IEC) and with other cable manufacturers to define market standards. Successfully implemented Theory of Constraints practice to achieve rapid time to market for newly developed fiber optic products.

Lucent Technologies, Bell Laboratories, Norcross, Ga., Technical Manager

Premise Cable Material Platform and Development Group

1998 – 2000

Managed Materials Group in support of three Lucent business units: Fiber Optic Premises Cable, Systemax? Premise Copper Cable and ExchangeMax? Central Office copper cable. Combined revenues for the businesses were \$800M in 2000. Responsible for prioritizing development projects to achieve the financial objectives for the business units. Activity consisted of assessing business strategy along with technology platform projects, new product development, product redesign and process improvement projects. Materials Group employed 8 Ph.D. and MS-level members. Group realized \$10M in cost savings and introduced 9 new copper and fiber products to the market. Appointed Technical Director of the NFPA 262/UL910 Harmonization Committee.

Lucent Technologies, Bell Laboratories, Norcross, Ga., Member Technical Staff

1993 - 1998

Materials development and fire research associated with fiber optic and electronic wire and cable premises cable products. Responsible for fire research, materials selection, UL Listing and testing of premises cables. Principal Lucent contact for UL, CSA and IEC standards committees. Chairperson for the ASTM D9.21 TG7 Fire Hazards committee and represented the US on the IEC SC20C and TC89 Committees. Managed large-scale fire, smoke and corrosivity investigations on wire and cable products at UL and at the Building Research Establishment, Fire Research Station in the UK.

AT&T Customer Support & Operations, Atlanta Ga., Manager, Bids and Proposals

1991 - 1993

Established and managed a 20-member group responsible for international and domestic

telecommunications bids and proposals. Developed procedures and metrics for creating complete proposals with supporting financial analysis, graphics and text. Group released more than 127 proposals with financial value ranging from \$53K to \$3B dollars.

AT&T Bell Laboratories, Atlanta, Ga., Member Technical Staff **1980 - 1991**

1985 - 1990 - Responsible for R&D effort, from conception to manufacture, for materials used in AT&T Optical Fiber products, resulting in 6 US Patents. Developed specifications, conducted formulation and process studies and coordinated supplier activities. Represented AT&T on the Electronic Industries Association Fiber Optic standards committee. Lead development of the DLux? Fiber Optic coatings used in high-speed optical fiber manufacture; coatings are now a system standard. Participated in first transatlantic fiber optic ocean cable system development (TAT-8) for AT&T.

1980 - 1985 - Developed materials and products used in telecommunications products. Responsible for investigations on outside plant materials, such as: stress cracking, oxidation, hydrolysis, UV degradation and corrosion. Developed six commercial products: PIC Restoration Spray, D-1000? Polyurethane encapsulant, submarine cable filling compound, PIC Aerosol Wash, Elastrel? Controlled Release Insecticide, and PIC Aerosol Wash.

The Upjohn Company, North Haven, CT, R&D Scientist I **1977 - 1980**

Designed and synthesized new thermoplastic materials from polymeric isocyanates. Performed synthesis reactions from bench to pilot plant scale. Responsible for characterizing polymer intermediates and products with a variety of analytical techniques: GPC-laser light scattering, thermal analysis, viscometry, optical and electron microscopy. Expert knowledge of extrusion, RIM, injection molding and foam process technology.

Education

University of Connecticut, Storrs, CT, Institute of Materials Science **1974 - 1978**

Doctor of Philosophy, Polymer Chemistry, 4.0/4.0 GPA

Thesis: *Excimer Fluorescence in Synthetic Polypeptides*

University of Connecticut, Storrs, CT, Chemistry Department **1970 - 1974**

Bachelor of Science, Chemistry, Honors Scholar Graduate, 3.2/4.0 GPA

Thesis: *Synthesis and Degradation of 6,3-Benzylated Nylon*

Publications

1. *Design, Synthesis and Degradation of Polymers Susceptible to Hydrolysis by Proteolytic Enzymes* Proc. Third Int. Biodeterioration Symposium, Kingston, RI, 1977, J.T. Chapin.
2. *Conformation Aspects of Synthetic Polypeptides via Excimer Fluorescence*, ACS National Meeting, Chicago, Ill., 1977, J.T. Chapin, et.al.
3. *High Temperature Polyamide Polymerization Using 4,4' Diphenylmethanediisocyanate*, ACS National Meeting 1980, San Francisco, 1980, J.T. Chapin, et.al.
4. *Conformational Aspects of Compounds Exhibiting Excimer Fluorescence*, ACS National Meeting, New York, 1980, J.T. Chapin, et.al.
5. *New Transparent Polyamides*, SPE 39th Annual Technical Conference and Exhibition, Boston, Mass., 1981, J.T. Chapin, et.al.
6. *Polymer Coatings in Optical Fibers*, Third Symposium of Plastics in Telecommunications, London, England, 1986, J.T. Chapin, et.al.
7. *Thermo-Oxidative Aging of a Primary Lightguide Coating in Films and Dual-Coated Fibers*, SPE ANTEC

- Meeting, 1988, J.T. Chapin, et.al.
8. *AT&T DLux? 100 Optical Fiber Coatings*, Optical Fiber Conference, Austin, Texas, 1989, J.T. Chapin, et.al.
 9. *Current State of Fire Corrosivity Testing: Preliminary Electrical Leakage Current Measurements*, 44th IWCS 1995, Philadelphia, PA, J.T. Chapin, et.al.
 10. *New Approach to Smoke Corrosivity Testing*, 21st International Conference on Fire Safety, San Francisco, CA, 1996, J.T. Chapin et.al.
 11. *Smoke Corrosivity Testing - Comparison of Leakage Current to pH and Conductivity*, 22nd International Conference on Fire Safety, Columbus, OH, 1996, J.T. Chapin et.al.
 12. *Full Scale Fire Research on Concealed Space Communication Cables*, Interflam '96, Cambridge, UK, 1996, J.T. Chapin, et.al.
 13. *Comparison of Cable and Material Leakage Current Measurements*, NFPRF Conference, June 1996. San Francisco, J.T. Chapin, et.al.
 14. *Leakage Current Smoke Corrosivity Testing - Comparison of Cable and Material Data*, 45th IWCS 1996, Reno, NV, J.T. Chapin, et.al.
 15. *Electronic Reliability Studies: Nonthermal Fire Damage of Cable Smoke Effluent on Test Patterns*, 23rd International Conference on Fire Safety, San Francisco, CA, 1997, J.T. Chapin et.al.
 16. *Electronic Reliability Studies: Nonthermal Fire Damage of Cable Smoke Effluent on Test Patterns*, JECTEC Technical Seminar, Hamamatsu, Japan, 1997, J.T. Chapin et.al.
 17. *Comparison of Leakage Current Measurements to Various US and IEC Smoke Corrosivity Test Methods*, NFPRF Conference, June 1997. San Francisco, J.T. Chapin, et.al.
 18. *Comparison of Leakage Current Measurements to Various US and IEC Smoke Corrosivity Test Methods*, 24th International Conference on Fire Safety, Columbus, OH, 1997, J.T. Chapin et.al.
 19. *Comparison of Copper and Fiber Optic LAN Cables in Various Large and Full Scale Fire Tests Facilities*, 46th IWCS 1997, Philadelphia, Pa., November 1997, J. T. Chapin, et.al.
 20. *Comparison of LAN Cable Smoke Corrosivity by Various US and IEC Test Methods*, Loss Prevention Council Insurer's Seminar, London, February, 1998, J.T. Chapin et.al.
 21. *Comparison of LAN Cable Smoke Corrosivity by Various US and IEC Test Methods*, Japan Cable Industry Seminar, Tokyo, February, 1998, J.T. Chapin et.al.
 22. *Comparison of Copper and Fiber Optic LAN Cable Fire Performance*, NFPRF Conference, San Francisco, 1998, J.T. Chapin et.al.
 23. *Smoke Corrosivity Measurements - Comparison of Electrical Leakage Current Data for PVDF Copolymers and Homopolymers*, Plastics in Telecom VIII, London, 1998, J.T. Chapin et.al.
 24. *The Effect of Smoke from Plastics on Digital Communications Equipment* Plastics in Telecom VIII, London, 1998, J.T. Chapin, et.al.
 25. *Comparison of LAN Cable Smoke Corrosivity by US and IEC Test Methods* Plastics in Telecom VIII, London, 1998, J.T. Chapin, et.al.
 26. *Comparison of Fire Behavior of Copper and Fiber Optic Cables in Large, and Full Scale Fire Test Facilities* Plastics in Telecom VIII, London, 1998, J.T. Chapin et.al.
 27. *Smoke Corrosivity Investigations on Digital Electronic Equipment*, 47th IWCS, Philadelphia, PA, 1998, J.T. Chapin, et.al.
 28. *The Development and Performance of a Calibration Cable for the NFPA 262/UL 910 Plenum Cable Fire Test*, 48th IWCS, Atlantic City, NJ, 1999, J.T. Chapin, et.al., p. 421.
 29. *Effects of Smoke Effluent on Network Equipment – The Implications for Cable and Network Design*, Tough Safe Buildings for 21st Century Business, LPC Securitex Symposium, Hong Kong, June 15, 2000, J. T. Chapin.
 30. *Effects of Smoke on Equipment Reliability*, UL NEBS Conference, Las Vegas, October 2000, J. T. Chapin, Pravin Gandhi.
 31. *The Evolution of Materials Technology in Wire and Cable Applications*, NFPRF Symposium, Baltimore,

May 2001, J. T. Chapin, et.al.

32. *Development of Low Smoke Non-Halogen MiniCord² Cables*, 50th IWCS, Orlando, FL, November 2001, J. T. Chapin, et.al.
33. *The Development of an Improved Reference Cable for the NFPA 262/UL 910 Plenum Fire Test*, 50th IWCS, Orlando, FL, November 2001, J. T. Chapin, et.al.

Patents

1. US Patent 4,507,362, *Restorative Spray Coating for Insulated Copper Conductors*, March 26, 1985, J.T. Chapin, et al.
2. US Patent 4,594,380, *Elastomeric Controlled Release Formulation and Article Comprising Same*, June 6, 1986, J.T. Chapin, et al.
3. US Patent 4,767,812, *Article Comprising and Elastomeric Controlled Release Insecticide*, August 30, 1988, J.T. Chapin, et al.
4. US Patent 4,849,579, *Encapsulating Compound and Articles Comprising Same*, July 18, 1989, J.T. Chapin, et. al.
5. US Patent 4,876,303, *Articles Comprising a Mineral-Oil-Free Encapsulant*, July 18, 1989, J.T. Chapin, et al.
6. US Patent 4,955,688, *Optical Fiber Package and Methods of Making*, September 11, 1990, J.T. Chapin, et al.
7. US Patent 4,962,992, *Optical Transmission Media and Methods for Making Same*, October 16, 1990, J.T. Chapin, et al.
8. US Patent 5,035,169, *Guided Vehicle System*, July 30, 1991 J.T. Chapin, et al.
9. US Patent 5,064,490, *Methods of Providing an Optical Fiber Package*, November 12, 1991, J.T. Chapin, et al.
10. US Patent 5,104,433, *Method of Making Optical Fiber*, April 14, 1992, J.T. Chapin, et. al.
11. US Patent 5,155,788, *Sheathed Optical Fiber*, October 13, 1992, J.T. Chapin, et. al.
12. US Patent
13. 5,684,910, *Buffered Optical Fiber Having a Strippable Buffer Layer*, May 1997, J.T. Chapin, et. al.
14. US Patent 5,898,133, *Coaxial Cable for Plenum Applications*, April 27, 1999, J.T. Chapin, et. al.
15. US Patent 5,982,967, *Color Coded Optical Fiber and Cable and a Method for Manufacturing Same*, November 11, 1999, J.T. Chapin, et. al.
16. US Patent 6,108,475, *Optical Fiber Products Having a Stress Indicating Capability and Process for Making Same*, August 22, 2000, J.T. Chapin, et. al.
17. US Patent 6,298,188, *Plenum Rated High Modulus Buffered Optical Fiber*, October 22, 1999, J.T. Chapin, et. al.

Technical Societies and Standards Organizations

Sigma Xi Member

American Chemical Society Member

NFPA Fire Committee Member

Technical Director of the International FPRF NFPA 262/UL 910 Harmonization Project 1998-2000

Technical Director of the FPRF RAC for the NFPA 262/UL 910 Test 2000 - current

Deputy Technical Advisor 1998-2000, IEC SC20C Electrical Fire Test Committee

Deputy Technical Advisor 1998-2000, IEC TC89 Fire Hazard Committee

ASTM D9.21 Task Group Chairman 1998, TG7 Fire Hazards

Technical Chairman, HCVLAN Alcatel/DuPont/BICC/DuPont joint European Project

Awards

Awarded most outstanding technical presentation, International Wire and Cable Symposium, 15 November 2000, "The Development and Performance of a Calibration Cable for the NFPA 90A/UL 910 Plenum Cable Fire Test". (This paper was co-authored with Pravin Gandhi, UL Senior Staff Engineer.)