



### DATA CENTERS

POWER & MONITORING, INC. staff have prepared drawings and specs for more than 15 Data Centers involving 24/7 operation. These buildings involved electric services, UPS systems, emergency generators, lighting, specialty systems, computer networks, and automation systems. These services were provided for the following Customers:

#### Projects included:

- \* AboveNet – all sites in USA – Developed the program for the Client for Monitoring and Control Systems including system architecture, structure, systems, design, material standardization, software selection, integration strategies, vendor selection, automation team structure and delivery methods. Standardized system architectures, materials, software, procurement methods and testing criteria. Responsible for BMS and BAS at all sites nationwide and an enterprise wide capability.
- \* United Parcel Services, Atlanta, GA. – 172,500 s.f. Data Center. Building Automation System with major integration with all building systems. Included real time control of cooling tower/pump systems, supervisory control of multi-train chiller systems, all HVAC and miscellaneous systems, monitoring of HV switchgear, engine/generators, UPS systems and a fiber optics, 30 node, Token Ring communication network with bridges to other data center networks.
- \* America On Line, Dulles, VA –Designed Critical Load Monitoring System (Data Trax) including UPS units, Computer Room Liebert A/C units, low voltage switchgear, transformers, high voltage switchgear, chillers and motor control centers and Power Logic power monitoring.
- \* AboveNet SJ3 – ISP - San Jose, CA - Oversee design and development of DDC, PLC, Power Monitoring, and Instrumentation systems at center. Manage effort of suppliers and coordinate vendors including decisions on signal lists, screen display, database software, control software, and hardware selections.
- \* Terremark Worldwide NAP of the Americas - Miami, FL - Design a building automation system for the 120,000 sf Tier 1 Internet communications traffic hub. System to supervise facility plant operations including monitoring all equipment and energy usage. Develop I/O Lists, System Architecture drawings, cabinet drawings, and construction documents for bid.
- \* Silver Spring, MD Data Center expansion – Double raised floor capacity mechanically and electrically to this Tier IV facility, adding generation, two more trains of Pilar UPS systems and all supporting equipment. Expanded Siemens Power Monitoring System to include equipment added to building.

- \* Metro Media Fiber Networks, NY City – Develop “white paper” and monitoring system justification to top management for budget approval and then validated design efforts and product selections for monitoring and control systems for data center.
- \* AboveNet Corporate, Alexandria, VA – Develop master plan for Monitoring System for ISX sites including scope of design, System budgetary costs per site, master schedule for multiple site roll out.
- \* JP Morgan/Chase, Wilmington, DE – Roll out of Aperture Asset Management system across multiple datacenter sites involving site surveys, equipment database management, cpu/physical/mechanical/electrical parameter data acquisition, space management, etc.
- \* CSC, Newark, DE – Evaluation of site Monitoring and Control System (mech and elec). Recommendations for system improvements using the latest technologies.