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# BALA

DATA CENTER EXPERIENCE

## KEY FACTS

LOCATION:

Centennial, CO

SQUARE FEET:

103,000

COMPLETED:

2008

SERVICES:

MEP/FP, Structural, and Voice/Data Engineering, Security, Integrated Systems Testing

ARCHITECT:

Meyer Design

HIGHLIGHTS:

Tier III

N+1 Cooling Configuration

2N Electrical System

Double Interlock Pre-Action Sprinkler

VESDA Early Alarm



## GLOBAL COMMUNICATIONS FIRM

The goals for this facility were to make it energy efficient, flexible, robust and scalable, for all of the company's business units. The client wanted to follow their corporate commitment to green buildings, so many sustainable initiatives were incorporated into the design and build. Sustainable features include a fan wall system and free cooling capabilities, high efficiency lighting fixtures and controls.

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### Mechanical Systems

The mechanical system for the Data Center access floor area was engineered for varying zones and has an average load density of 284 watts/SF. Cooling for these loads is delivered primarily through a 42" access floor, and is provided by a fan wall system, comprising 7 - 195 ton fan units. Cooling is delivered only as required to meet the demand, producing energy savings. The system's design allows the client to capitalize on free cooling.

High density zones (16kW - 22kW/cabinet) have supplemental overhead cooling systems. The overhead trolley system allows the client to deploy supplemental overhead units, in an active server cabinet pod, without disrupting operations and adjacent equipment.

### Electrical Systems

The electrical power distribution is derived from a new 13.2kV, 12MW utility source, and the facility is

designed to accept a second service in the future. The power is transformed with 4MVA pad mount biodegradable soybean oil filled transformers. Power is distributed to cabinets overhead. This facility uses a Starline Bus system, chosen for its flexibility, and ability to rapidly deliver power to cabinets.

### Structural Systems

Screw piles, columns, and a lattice of frame steel members was added to the existing roof structure to accommodate the added loads of the overhead equipment and conveyance systems.

### Integrated Technologies

The technology systems were distributed in a multi-level, overhead support system, utilizing 2 distinct topologies for both the optical and UTP cable plant. Access floor systems included DMZ, SAN, high-density server farms and core business operations servers.

FOR MORE INFORMATION,  
PLEASE CONTACT:

Thomas M. Reusche  
Executive Vice President  
tmr@bala.com

BALA CONSULTING ENGINEERS, INC.  
443 SOUTH GULPH ROAD  
KING OF PRUSSIA, PA 19406

610 649 8000  
610 649 8475 FAX  
WWW.BALA.COM