## JONATHAN L. JEW – Telecommunications & IT Consultant

Jonathan Jew is president of J&M Consultants, Inc. – an information technology and telecommunications consulting firm that specializes in data center projects. Jonathan's qualifications include over 30 years' experience with a wide variety of telecommunications and information technology projects including 100+ data centers totaling over 2 million square feet of raised floor space. He is internationally recognized as an expert in several fields relating to data center telecommunications infrastructure and telecommunications administration. Jonathan is the primary contributor to numerous U.S. National and International telecommunications and data center standards, and has a leadership position in several U.S. National and International standards committees. He has received awards by TIA, BICSI, and ANSI for his contributions to the industry.

## STANDARDS - PRIMARY CONTRIBUTOR/EDITOR

- ANSI/TIA-942 Telecommunications Infrastructure Standard for Data Centers (2005)
- ANSI/TIA-942-1 Data Center Coaxial Cabling Specifications and Application Distances (2008)
- ANSI/TIA-942-2 Additional Guidelines for Data Centers (2009)
- ANSI/TIA-942-A Telecommunications Infrastructure Standard for Data Centers Revision 1 (2012)
- ANSI/TIA-942-A-1 Cabling Guidelines for Data Center Fabrics (2013)
- ANSI/TIA-942-B Telecommunications Infrastructure Standard for Data Centers Revision 2 (2017)
- ANSI/BICSI-002 Data Center Design and Implementation Best Practices (2010 & 2014)
- ANSI/TIA-606-A-1 Administration of Equipment Rooms and Data Center Computer Rooms (2008)
- ANSI/TIA-606-B Administration Standard for Telecommunications Infrastructure (2012)
- ANSI/TIA-606-B-1 Automated Infrastructure Management Systems (2015)
- ANSI/TIA-606-C Administration Standard for Telecommunications Infrastructure (2017)
- ANSI/TIA-5048 Automated Infrastructure Management (AIM) Systems Requirements, Data Exchange and Applications (2017)
- TIA-569-B-1 Temperature and Humidity Requirements for Telecommunications Spaces (2009)
- ISO/IEC TR 14763-2-1 Telecommunications Administration Identifiers (2011)
- ISO/IEC 14763-2 Cabling Installation and Planning Data Center and Administration Chapters (2012)
- BICSI TDMM 13<sup>th</sup> Edition Administration and Data Center Chapters (2013)

## STANDARDS COMMITTEE POSITIONS

- Chair TIA TR-42.6 Telecommunications Administration, 2006-2017
- Vice-Chair TIA TR-42.1 Generic and Premises Cabling, 2011-2015
- Vice-Chair TIA TR-42.3 Pathways & Spaces, 2015-2020
- Chair TIA Data Center Fabric Task group, 2012
- Co-chair TIA TR-42.1.1 Data Center Working Group (during development of TIA-942), 2003-2005
- Chair BICSI data center subcommittee, 2003-2020
- Secretary TIA TR-42 Telecommunications Cabling Systems, 2014-2020
- Editor & Subject Mater Expert BICSI TDMM Administration and Data Center Chapters 13<sup>th</sup> & 14<sup>th</sup>
   Editions
- U.S. Technical Advisory Committee (USTAG) vice-chair ISO/IEC JTC 1 SC 25 WG 3 Interconnection of Information Technology Equipment, 2013-2020
- U.S. National Committee Project Lead ISO/IEC 24764 data center telecommunications cabling standard
- U.S. National Committee Project Lead ISO/IEC 11801-5 data center telecommunications cabling standard
- U.S. National Committee Project Lead ISO/IEC 18598 Automated Infrastructure Management standard
- U.S. National Committee Project Lead ISO/IEC 14763-2 Cabling Installation and Planning standard
- Editor & Leader ISO/IEC 14763-2-1 Telecommunications Administration Identifiers
- Editor & Leader ISO/IEC JTC 1 SC 25 WG 3 Energy Efficiency and Cabling Ad Hoc & White Paper
- Editorial Review Board BICSI ICT Today magazine, 2013-2020

## MAGAZINE ARTICLES - Published or contributed to 20 magazine articles

- BICSI Magazine 4/2010
- <u>Cabling Business Magazine</u> 8/2007
- <u>Cabling Systems Magazine</u> 11/2002

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- <u>Cabling Installation & Maintenance Magazine</u> 8/2004, 4/2007, 12/2007, 3/2008, 7/2008, 5/2010, 9/2010, 1/2011, 4/2011, 11/2011, 5/2012, 3/2013
- <u>Data Center Journal</u> 4/2007, 8/2009
- Electrical Contractor Magazine 4/2015
- Lightwave Magazine 3/2005, 9/2006
- Processor Magazine 7/2014
- BICSI Journal of Information Technology Systems/ICT Today Editorial Review Board 2013-2016

#### SPEAKING APPEARANCES – 60+ events

- AFCOM Data Center World (Presentation) Fall 2005
- ASHRAE (Presentation & Panel) January 2003
- Anixter 2009 2012 Seminar Series (Movie & Panel) San Jose, Los Angeles, Atlanta, New York, Houston, Dallas, Indianapolis, Detroit, Cleveland, Seattle, San Francisco, Denver, Salt Lake City, Omaha, Austin, Indianapolis, Phoenix, Pleasanton, Minneapolis, Dallas, Calgary, Toronto, and Data Center Webcast.
- <u>BICSI (Presentations)</u> Spring 2002, Fall 2003, Fall 2004, Fall 2009, Winter 2010, Fall 2012, 2010 BICSI Andean Conference, 2012 BICSI Andean Conference, 2012 Japan Regional Conference Tokyo, 2013 South Pacific Regional Conference Melbourne, 2014 Data Centres Europe Monaco, 2014 BICSI Andean Conference Bogota, Fall 2014, Mexico City 2015, Mexico City 2016, Bogota 2016, Dubai 2016, Bangkok 2016, Manila 2016, Tokyo 2016, Seoul 2016, Dubai, Las Vegas, Manila, Bangkok 2017, Tokyo, Manila & Bogota 2018, Dubai & Hong Kong 2019
- British Telecom/Data Center Journal (Instructor/Presenter) May 2007
- <u>Critical Facilities Summit</u> Oct 2015
- <u>Data Center Journal (Instructor/Presenter)</u> Jan 2006, Apr 2006, Oct 2006, Mar 2007, Apr 2008, Apr 2009, Oct 2009, April 2010
- <u>Data Center Summit 2016 Montevideo, Uruguay (Presenter)</u> Nov 2015
- <u>Data Center Turkey (Presenter) Istanbul</u> April 2017
- Data Centre Dynamics (Presentations) New York 2005, San Francisco 2005
- IEEE 802.3 (Presentation) July 2003
- The Uptime Institute(Presentation) Mar 2007
- TIA Data Center Conferences 2017 & 2018
- Wright Line Seminar (Presentation) 2006

## **ADVISOR FOR DATA CENTER STANDARDS**

- AMD developed internal standards for data center and telecom cabling infrastructure
- Avaya assisted Avaya to develop an application guide for data center cabling infrastructure
- <u>Cisco</u> advisor to Cisco on telecommunications infrastructure standards for data centers.
- <u>Dell</u> developed internal standards for data center and telecom cabling infrastructure
- Exodus developed application guide and standards for fiber infrastructure in data centers.
- GlobalCenter developed telecom infrastructure standards for web hosting centers.
- Sprint
   – advisor to Sprint on telecommunications infrastructure standards for web hosting data centers
- <u>Visa</u> advisor to Visa on telecommunications infrastructure standards for data centers and colocation site selection standards.

# DATA CENTER PROJECTS (Partial List) – 100+ Data Center Projects – IT/Telecom Infrastructure Design & Data Center Relocation. Partial list of projects:

- <u>ADP Brokerage Services</u> Project management, planning, and design for data center move from Manhattan to Journal Square, New Jersey
- <u>AMD</u> Project management, budgeting, equipment life-cycle (end of life) planning, planning, and design for consolidation of three AMD data centers and expansion of an existing data center
- <u>Blue Cross & Blue Shield of Florida</u> project management and design of data center cabling infrastructure for new data center in Jacksonville, FL
- <u>Case Western Reserve University</u> design specifications for new data center cabling infrastructure
- <u>Chevron</u> Project management, planning, and design for merger five Gulf data centers (Pittsburgh, Atlanta, London, and two in Houston) with Chevron data centers during Chevron-Gulf merger.
- <u>Chevron</u> Project management, planning, and design for relocation of Chevron headquarters data center from San Francisco, CA to San Ramon, CA

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- <u>Comcast</u> design & technical project management for remote data center projects at multiple locations nationally including Santa Clara, Ashburn, Secaucus, Philadelphia, Chicago, Houston, Detroit, Naples, Atlanta, Chelmsford
- <u>City & County of San Francisco</u> project management, planning, design, and relocation of City Hall data center and Hall of Justice data center to One Market. Project manager and designer for redesign of City 911 data center
- <u>Crowley Maritime</u> design & consulting for data center relocation from Oakland, CA to Jacksonville, FL
- <u>County of Santa Clara</u> Project management, planning, design & relocation of County data center in San Jose. CA
- <u>County of Sacramento</u> Project management, planning, and design for relocation of offices and data center to 8<sup>th</sup> & G Street.
- <u>Dell Computer Corporation</u> new data center project, two data center expansion projects, equipment life cycle (end-of-life) planning, network remediation projects, and development of telecommunications infrastructure standards
- <u>Drexel Burnham Lambert</u> Project management, planning, and design for data center relocation to 7
   World Trade Center in Manhattan.
- <u>Drexel Burnham Lambert</u> Project management, planning, and design for data center relocation from Manhattan to Lincoln Harbor, New Jersey
- <u>Franklin-Templeton</u> Project management, planning, design, and installation for relocation of San Mateo VAX data center to Rancho Cordova, CA (near Sacramento) and redesign of San Mateo Data Center
- <u>GlobalCenter</u> Lead designer & installation manager of telecom infrastructure for 22 Internet Data Centers in London (2), Dublin, Paris, Amsterdam, Munich, Frankfurt, Tokyo, Hong Kong, Sydney, Mexico City, Sunnyvale (3), Anaheim, Herndon (2), Boston, Miami, Chicago, and New York (2). Total raised floor space designed was about 1.4 million sq ft.
- <u>Google</u>– consultant on the design of telecommunications cabling standards, telecommunications spaces, telecommunications pathways, and optical fiber cabling for data centers.
- Intel Corporation design & relocation of headquarters Engineering Data Center in Santa Clara, CA
- <u>Levi Strauss & Co.</u> project management, planning, design & relocation of headquarters data center from San Francisco, CA to Westlake, TX.
- Mervyn's Project management, planning, design, and implementation of data center move from Hayward, CA to Plano, TX.
- <u>SBC Warburg</u> project management, planning, and design of telecom infrastructure for new headquarters data center, trading floor, & office buildings in Stamford, CT
- <u>Swiss Bank Corp.</u> Project management, planning, design, and implementation of office and data center move from World Trade Center to Swiss Bank Tower (35 fl high rise) in Manhattan and to 222 Broadway (26 fl high rise) in Manhattan.
- Swiss Bank Corp. expansion and redesign of trading floor data center in Manhattan.
- State of Washington design of primary data center (OB2 Data Center) expansion in Olympia, WA
- <u>Target</u>– Project management, planning, and design for relocation of three headquarters data centers from Minneapolis, MN to Brooklyn Park, MN
- <u>Taipei Stock Exchange</u> peer review of data center design Taipei, Taiwan
- <u>Visa</u> telecommunications cabling design for data centers in the UK, Virginia, Jakarta, Bangalore, Mumbai, Istanbul, Shanghai, and Beijing; project management and cabling system design for OCS data center relocation in Singapore.

# OTHER PROJECTS – Partial List – 42 office buildings, 4 campus cabling, 2 corporate mergers, 2 Y2K, 3 disaster recovery, 7 engineering labs, 2 trading floor expansions

- <u>Aetna</u> Disaster recovery planning
- Ascend Communications project manager for Corporate Business Continuity Planning Project.
- <u>Ascend Communications</u> design, installation, and management of seven engineering test labs, five new office buildings, and headquarters campus expansion.
- Ascend/Stratus Merger project manager for merger of Ascend and Stratus networks.
- <u>Chevron/Gulf Merger</u> responsible for project management and planning for network activities related to merger
- County of Sacramento Metro Airport design of new airport campus cabling system.
- County of Sacramento Coroner Crime Lab cabling system design.

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- <u>Franklin-Templeton</u> Project management, planning, design, and installation of disaster recovery & Year 2000 networks for VAX, mainframe, and NT systems.
- GlobalCenter cabling system design and project management for office building in Sunnyvale, CA
- Montgomery Securities design and project management for Year 2000 Industry-Wide Tests
- Rose Church Party, Ltd design of cabling systems for 5 major office buildings in Sydney, Australia
- State of Washington design of cabling systems for four office buildings in Olympia, WA
- <u>Swiss Bank Corp.</u> design, expansion, and management of New York trading floors.

#### **WORK HISTORY**

### 1988 - Present President and Lead Telecommunications Consultant – J&M Consultants, Inc.

Provided project management, relocation planning, design, and implementation of IT and telecommunications infrastructure for major data centers, engineering labs, office buildings, and trading floors worldwide.

## 1986 - 1988 Director of Systems & Networks / Senior Consultant – Total Assets Protection, Inc.

Provided project management, relocation planning, design, and implementation of IT and telecommunications infrastructure for major data centers and office buildings worldwide.

## 1981- 1986 Data Communications Analyst – Chevron Corporation

Responsible for project management, planning, design, and installation of data networks. In-house network consultant responsible for data center relocations.

## **EDUCATION**

BS Electrical Engineering & Computer Science; University of California, Berkeley, 1979
MS Computer Science; University of California, Berkeley, 1981

### **AWARDS**

- 2014 ANSI Meritorious Service Award
- 2010 Harry J Phister Award for Excellence in Telecommunications Industry Awarded by the University of South Florida, College of Engineering, the excellence in telecommunications award recognizes the lifetime achievement or major accomplishment of an individual in the telecommunications industry
- Featured by Cabling Installation and Maintenance Magazine in March 2013 as one of the 'Industry's Positive Contributors'
- TIA Certificate of Appreciation Award for contributions to ANSI/TIA data center & administration standards, 2008
- TIA Certificate of Appreciation Awards for TIA TR-42, TIA TR-42.1, and TIA TR-42.6 subcommittees leadership, 2016
- Mervyn's Outstanding Achievement Award, Data Center Relocation, 1992
- Chevron Special Incentive Award, Gulf-Chevron Merger, 1985
- Phi Beta Kappa, Honor Society
- Tau Beta Pi, Engineering Honor Society
- Eta Kappa Nu, Electrical Engineering Honor Society

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