



Benedict Occhiogrosso

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Professional Summary

Mr. Occhiogrosso is recognized in the field of Telecommunications and Information Technology. His expertise encompasses a broad range of technical and managerial disciplines including voice communications, data networking, carrier services for public/private switched & dedicated networks, image processing, wireless and cable transmission systems, and operational and strategic planning. As co-founder and President of DVI Communications, Inc. he is responsible for overseeing corporate operations and providing executive level direction on strategically significant projects. During the course of his career, he has worked for various organizations in a consultative, design/engineering and managerial capacity. He has supported numerous clients with respect to technology consulting in the financial services, high technology, legal, corporate, health care and education sectors. His technical practice presently encompasses Strategic Planning and Expert Witness litigation support. Earlier in his career, he worked in the military aerospace industry developing strategic and tactical command and control systems for various agencies in the defense and intelligence communities.

Expertise

- Automated out dialing systems
- Automatic Call Distribution (ACD) & Interactive Voice Response (IVR)
- Cabling & Wire-based systems
- Cellular telephony
- LOS Microwave Systems
- Mission - Critical Infrastructure Design for Data Centers
- Mobility management
- Packet Radio
- Packet Switching /Internet Protocol
- Packet Speech / Voice over IP
- Satellite communications
- Telephone switching systems
- Video Surveillance Systems & video Digitization
- Voice digitization/voice processing
- Voice messaging
- Wireless Communications Systems

Education

<u>Year</u>	<u>College or University</u>	<u>Degree</u>
1975	Polytechnic Institute of Brooklyn	MS, Electrical Engineering
1975	Polytechnic Institute of Brooklyn	BS, Electrical Engineering

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Enterprise Consulting Engagements

Mr. Occhiogrosso has been affiliated with DVI Communications since 1979, below are significant consulting engagements for which he has served as Principal-in-Charge and/or Project Manager.

- **Bertelsmann - New York, NY**

Mr. Occhiogrosso led the DVI team that provided planning, design, procurement and implementation management services associated with the “fast-track” relocation of 2,400 employees and 6 corporate subsidiaries into a new 900,000-sq. ft. office tower. A Northern Meridian telephone switch supporting 3,000 users, Satellite antenna farm, high speed LAN and Cat 5 cabling plant was deployed. Our services covered voice/data communications and video network infrastructure, data center design and rooftop satellite communications.

- **Bear Stearns & Co., New York, NY**

Mr. Occhiogrosso served as DVI's Principal-in-charge and Lead designer supporting the design, engineering acquisition and implementation management of a 1500 position trading floor and an 8,000 plus Centrex replacement for Bear Stearns' new world headquarters. The floor employed dual handsets, digital recording, VOIP, global hoot n' holler and traditional intercom with CTI hookups to application processors. IPC IQMX (IP turrets) with a Racal Tienna (all-digital, disk based/recording systems were deployed.

DVI had provided the project management and voice technologies consulting for the design, engineering and acquisition of all Back Office Voice, and Trader Voice, Communications Systems for BSC's new headquarters. This included: 8,000+ lines metro area switching system, a 5000+ user unified messaging system, as well as conferencing, intercom, paging and wireless systems. Systems examined included leading edge technologies from Lucent and Nortel as well as Verizon's Centrex offering. A massive research effort was mobilized in order to specify the major telecommunications systems to be purchased for the new headquarters building at 383 Madison Avenue. As part of developing the new Voice Technology for Bear Stearns HQ, DVI also contributed to the installation of a Demonstration and Test lab at Bear Stearns. DVI coordinated support from IPC, Bell, Lucent and Nortel. DVI furthermore managed the implementation and installation of two PBX's, Nortel 81C and a Nortel Meridian1 (Option 11c), IPC Tradenet MX Alliance system and Octel and Call Pilot voicemail, as well as the installation of a QSIG interface between IPC, Lucent, and Nortel. The installation consisted of managing the scope of the project, as well as supervising the various Trades (electricians, IPC, cabling) for the installation of PBX's, Trunks, Lines (T1, E1 and PRI's), phone sets, voicemail, and supervising and coordinating the demonstration of voice products for BSC's management and IT personnel. DVI also contributed to the Installation of two Unified Messaging solutions, Octel and Call Pilot. Octel was installed as a separate system, isolated from the BSC environment. The Nortel Unified Messaging was installed and rolled out to test users in the BSC environment.

- **City University of New York, College of Staten Island**

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Mr. Occhiogrosso served as project executive where DVI provided systems engineering, design, and procurement and implementation services in conjunction with the development of the College's new 19 building Willowbrook campus. This encompassed all voice, data, and video communications systems, inter/intra-building cabling, and radio and telemetry systems for the campus. The systems deployed support over 12,000 students and essential operations including administrative and academic computing, registration, finance, departmental, library, media/educational center, building and grounds. The systems designed and acquired included cabling, fiber backbone, LANs, telephone switch and data communications servers. Three (3) AT&T Definity G3s with Audix supporting over 2,000 extensions were deployed. DVI was also responsible for developing a technology implementation and transition plan for the relocation and consolidation of the College's previous campuses to the new campus.

- **Brooklyn Union Gas**

Mr. Occhiogrosso oversaw the analysis, design and engineering, selection for all voice (PABX/ACD/VRU), cabling and data communications for the new headquarters complex at Metrotech. This encompassed BUG's general office as well as the command-control System Control Complex which employed specialized LAN, video and process control telemetry data. An AT&T Definity G3i System supporting Audix voice mail and ACD were deployed. The Melita automated outdialler for credit collection was also deployed.

- **Société Générale - New York, NY**

In conjunction with the relocation of the Bank's U.S. headquarters to a new 350,000-sq. ft. office, DVI provided a full suite of telecommunications consulting services. The project involved the needs assessment, design, selection and implementation of technology for the bank's 300+ position trading floor (Etrali turrets/Triarch ITP), data networks (LAN/WAN), voice communications (PABX, voice mail), market data services and premises cabling infrastructure.

- **Roswell Park Cancer Institute – Buffalo, NY**

Mr. Occhiogrosso as project director, provided project planning, design, engineering, and procurement and implementation management services in support of the modernization of this nationally recognized cancer care center. The complex, consisting of an 18 building campus, underwent a \$241MM modernization, which included a state-of-the-art telecommunications network interconnecting the complex with a new telephone/voice mail system (NTI), in-building wireless telephony and high-speed local area networking. These systems were designed to support a new 180 bed hospital, new lab/vivarium complex, several renovated buildings, bed side computing and high resolution medical imaging transmissions.

- **Citibank - New York, NY**

Mr. Occhiogrosso served as project manager, project principal and lead investigator for DVI's efforts in support of Citicorp. DVI designed and procured a multi-node N.Y. City wide voice communications system supporting over 20,000 lines (Citipax). This distributed system replaced several large existing PBXs as well as Centrex service based upon digital central office technology. Three NTI SL-100s were deployed to serve five locations. This included the tower at Court Square, LIC (1.1 MM sq. ft.). This system was expanded to include an 8000-user voice Messaging system (VMS). DVI supported feasibility, economic and

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requirements analyses as well as the design, engineering and implementation support for Citipax. DVI also performed a detailed disaster recovery plan/vulnerability analysis.

In addition to the Citipax PABX system, Mr. Occhiogrosso had also supported numerous diverse projects for Citicorp, including:

- Analyzed and improved the performance of a large-scale international message switching system (Citiswitch II), which supports numerous EFT applications. He subsequently participated in a task force to redesign Citibank's international message switching network.
- Specified and supported the design of an international packet switching network (CitiWIN) that integrated numerous Citibank applications and is deployed in some ninety (90) countries.
- For the domestic banking group, supported the analysis and design of home services offering advanced banking and investment services to customers in the privacy of their homes.
- For NYBOPS, analyzed alternate disaster recovery strategies for a multi-site ACD, including the Rockwell System and Periphonics VRU.
- For CitiSatcom, supported the complete procurement cycle for Citibank's VSET network deployment.
- He also supported several new business ventures including: DTS (Digital Transmission Services), FM subcarrier information service distribution and Videotex.
- He also provided ongoing technological consultation to Citibank in the areas of protocol conversion, digital PABX's and Local Area Networks.

Over *the last 4 years*, Mr. Occhiogrosso has continued to support several consulting clients. A summary of consulting projects (over this period) follows:

For *Capital One Financial*, Glen Allen VA a Credit Card Processing concern, he performed analysis and design of replacement VoIP technology for Cap One's existing voice communications systems in its HQ, front and back offices and call/ contact centers at multiple corporate campuses. This included PBX, voice mail, ACD and examined both premises-based systems as well as managed service alternatives.

For *Medical & Health Research Associates (MHRA)*, NY NY, he designed and selected the PBX, Voice mail and Telecommunications Services which support their new HQ operations.

For *Montclair State University*, Montclair NJ as part of their Campus IT Infrastructure Upgrade, he performed a critical design review of the new Fiber Optic Backbone Cabling and Transmission Systems

For the *NYC School Construction Authority* to Enhance Physical security at dozens of Elementary & intermediate Public Schools in NYC, he headed up a Quality Assurance team which evaluated the Digital Video over IP Surveillance systems installed. The system employed analog cameras, video codecs, LAN distribution and video compression, motion detection and image processing.

For *SES Americom*, Princeton NJ, he provided consulting services for Telecommunications Systems upgrades and New Service Introduction.

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This included: VoIP System design and deployment for the Maritime Mobile Broadband service, Encrypted IPTV, and a future Ka-band Satellite Communications system.

For the *Port Authority of NY & NJ*, he provided consulting services for Strategic Plan for VoIP Migration & Financial Analysis of both premise-based and managed services to support 12,000+ users.

For the *NY Transit Authority, MTA* he is the Principal –in –charge of a major project to replace and upgrade the Radio System which presently serves 5000 buses, 1000 support vehicles and hundreds of portable users throughout NYC, the edge of NJ and parts of Westchester. The system operates at 800 MHz will use Digital TDMA Radios and will also deploy over 2 dozen new base stations(with wired and microwave backhaul) as well as a state-of-the-art Command & Dispatch center (manned 7/24). All buses will support 2-way communications, Automatic Vehicle Location and Tracking and emergency Notification system.

Research & Development

For DARPA Mr. Occhiogrosso supported research into packetized voice communications and integrated packet –circuit switching systems of voice, data and wideband applications. He also supported the analysis and design of low-bit rate vocoders with cryptosystems in shared user networks (mixed satellite and terrestrial) for survivable communications (pre-post and trans-attack). Among the other Military C3I systems he worked on included:

- Marine Integrated Fire and Air Support System (MIFASS) for Navalex and USMC
- Landing Force Integrated Communications System (LFICS) for Navalex and USMC
- Position Location Reporting System (PLRS) for USA/USMC
- Digital Communications Terminal (DCT) for USA
- AUTODIN II (for Defense Communications Agency (DCA)
- SORAK (for USAF, on behalf of Republic of South Korea)
- ULCS/ULMS (Unit Level Circuit and Message Switches) for Tri-Tac
- JTIDS (Joint Tactical Information Distribution System) for USAF
- Integrated Local Regional Access Network (ILRAN) for DCA
- Several classified initiatives

For DVI Communications internally and under development to TIE/Communications, Mr. Occhiogrosso led an engineering development team which developed a Store-and-Forward voice messaging system, the Speech Message Switch (SMS) for integrated use with TIE's voice-data PABX and standalone use for general industry. Product development encompassed hardware, component selection, circuit design, PC layout fabrication and testing, as well as software: specification, coding, debug and test. For Xerox Corporation, Mr. Occhiogrosso served as the Program Manager for a major support effort to develop a distributed satellite and microwave-based nationwide network (XTEN), providing advanced communications features to the business community, including: electronic document distribution, high speed data communications, communications security, and video teleconferencing. He was responsible for technical activities in the areas of system architecture and design, communications protocol development and implementation, security architecture, system service specifications, and simulation model development for traffic loading and performance evaluation.

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Wireless Experience

He has also supported numerous radio communications/wireless systems technologies including: Satellite (C- and Ku-band), LOS Microwave (4-40 GHz), UHF/VHF (AM/FM/TV Broadcast), Cellular (800 MHz), PCS (1.9GHz), paging (150/400/900 MHz) as well as in-building wireless 802.11 a/b/g). He is also thoroughly familiar with transmission characteristics of various channels and the tradeoffs in power management, modulation and encoding schema and reception techniques. Among the engagements we have supported spanning these technologies include:

- Design and implementation management of C and Ku-band satellite networks using TDMA & FDMA access methods for the United Nations and Citigroup
- Rooftop Satellite Systems Deployment for Data and TVRO applications for BMG and various Financial Services Firms
- Design and Implementation Management of Digital Page/ Radio –based Alerting System for Con-Edison and Power Authority of the State of NY (Indian Point); this included Radio frequency selection and radio control system design, based on frequency allocations, availability of base station and repeater, and path profile calculations.
- Design and Implementation management of Satellite Antenna Farm and LOS Microwave Back-up Links for Major Newspaper Worldwide Publishing Network
- Expert Witness support in VSAT Ku- band deployment litigation
- Expert Witness support in Breach of Contract suit for Air-to-Ground in-Flight Communications Systems
- Rooftop Site Management, Survey and Upgrade Plans for Metropolitan Life Real Estate (multiple Properties)
- Numerous In-building Wireless Systems deployments using Wi-Fi 802.11 a/b/g technology (university, corporate and Health care applications) including coverage /c capacity analysis, security , hardening and integration with existing LAN infrastructure
- Analysis of use of cellular data communications systems for Back-up and Recovery links to traditional wire line facilities
- Design and Implementation Management of LOS Microwave and Point-to-point Infrared High Speed Communications Links for various corporate, institutional and Government applications

Litigation Support Experience

Mr. Occhiogrosso served as an expert witness in various cases for several high-tech corporations encompassing patent infringement, trade secrets, product malfunctions Class Action for Service Level Agreements and breach of contract. Detailed technical subject matter encompassed the following disciplines:

- Voice digitization/voice processing
- Voice over Internet Protocol (VoIP)
- Voice Mail and Electronic messaging
- Interactive Voice Response Systems
- Cellular telephony and data communications

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- Air-to-ground communications (S/L Band)
- Satellite communications (C and Ku Band)
- Telephone switching systems
- Predictive/ progressive dialing systems

Expert Engagement:

Type of Matter: Patent Infringement
Client Law Firm: **Robins, Kaplan, Miller, & Ciresi LLP (Minneapolis MN) -for MAMS**
Case Name: Manufacturing Administration and Management Services Inc. v Davox Corporation, et.al (US District Court for the District of Massachusetts, Boston)
Services Provided: Analysis of a patent involving telecommunications technology, and the associated "file wrapper", analysis of the accused products, technical documentation and source code, providing advice to assist in patent claim construction and summary judgment proceedings, **expert reports, deposition testimony and trial testimony** re: call/contact center and progressive/predictive dialer technology.
Disposition: Case was tried and settled prior to judgment; Multi-million dollar award for our side.
Date: 2000 - 2003

Expert Engagement:

Type of Matter: Breach of Contract; Theft of Trade Secrets; Conspiracy; Fraud
Client Law Firm: **Schiff, Hardin, & Waite (Chicago) - for AT&T Wireless**
Case Name: In-Flight Phone Corp. v AT&T Wireless, Claircom Communications, McCaw Cellular (DuPage County Circuit Court , Illinois)
Services Provided: Reviewed extensive amounts of evidence; provided **expert consultative assistance** ; supported identification & orientation of testifying experts on all aspects of Air-to-Ground telephony(Ground station and airborne terminal)
Disposition: Our side prevailed (AT&T Wireless)
Date: 1996-2002

Over the last four years, this has continued with several assignments as follows:

Expert Engagement:

Type of Matter: Class Action Lawsuit regarding CO-based System Performance of Voice Mail services
Client Law Firm: **Stewart and Irwin P.C. - for Class** (Marion County Circuit Court, Indiana)
Case Name: Class v. Ameritech
Services Provided: Reviewed and analyzed extensive amount of documentation; provided **consultative expert assistance and deposition testimony**
Disposition: Case was settled favorably for our side (the class)
Date: 2003-2004

Expert Engagement:

Type of Matter: Patent Infringement
Client Law Firm: **Baker Botts LLP (Houston TX) - for SWBT**
Case Name: Gammino v. SWBT (US District Court for the Northern District of Texas, Dallas)

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Services Provided: Patent infringement & Invalidation Analyses, rendered **Expert Reports** and **provided deposition Testimony & Court Testimony at a Markman Hearing** for Payphone Blocking patents (Instrument and CO based)

Disposition: Case was decided in favor of our client SBC Communications/ SWBT; currently under appeal

Date: 2006-2007

Expert Engagement:

Type of Matter: Patent Infringement

Client Law Firm: **Steptoe & Johnson LLP (Washington DC) - for Vonage**

Case Name: Vonage v. Verizon (US District Court for the Eastern District of Virginia, Alexandria)

Services Provided: VoIP Patent infringement, Enablement & Invalidation Analyses, **rendered Expert Reports, was deposed & provided Expert Testimony at Trial** for VoIP/ Wireless patents

Disposition: Of the 3 patents in a 7 patent portfolio (that we handled) which Verizon alleged Vonage infringed, we assisted S&J In getting 2 patent infringement allegations withdrawn; Infringement Verdict against Vonage was overturned on Appeal for a third Wireless patent. Case subsequently settled.

Date: 2006-2007

Expert Engagement:

Type of Matter: Recapture of PE & O Insurance payout for IVR System Patent License

Client Law Firm: **D'Amato Lynch (NYC) - for AIG**

Case Name: AIG Specialty Lines v. American Century (US District Court for the Southern District of New York, New York City)

Services Provided: **provided Expert consulting services** with respect to Computer telephony integration, IVR Systems Development and call center technology

Disposition: Client subsequently sued and recovered Policy benefit payout from IVR developer

Date: 2004-2007

Expert Engagement:

Type of Matter: Patent Infringement

Client Law Firm: **Hogan Hartson LLP (Los Angeles) – for Kyocera Wireless Corp.(KWC)**

Case Name: MLR v. KWC (US District Court for the Southern District of California, San Diego)

Services Provided: On behalf of a Telecommunications Electronics Manufacturer in Wireless and Cellular Telephony & Data communications, **performed Patent Infringement, & Invalidation Analyses on a 5 patent portfolio**

Disposition: Case was settled favorably for our side (KWC)

Date: 2006-2007

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Professional Affiliations, Achievements & Awards

- National Forensic Center (NFC)
- Institute of Electrical & Electronics Engineers (IEEE)
- Association for Computing Machinery (ACM) (former)
- Society of Telecommunications Consultants (STC) (former)
- Health and Information Management Systems Society (HIMSS) (former)
- Communications Managers Association (CMA) Consultant Partner
- Electronic Industries Association (EIA)
- Association of Old Crows (AOC) (former)
- Wall Street Telecommunications Association (Author/Speaker)

Publications

Voice Mail, Digitized and Packetized Voice Systems

1. "Human Factors Considerations in the Design of Voice Mail Systems," Second International Symposium on Computer Message Systems. Washington D.C., September 1985.
2. "Voice Mail Technology Comes of Age Part I and II," Telephony, September 1984.
3. "Voice Store and Forward: A Rapidly Maturing Technology," Proceedings of ELECTRO '84. Boston, Massachusetts, May 1984
4. "Issues in Packet Voice Communication," Proceedings of IEEE, August 1979.
5. "Digitized Voice Comes of Age: Part II Techniques," Data Communications, April 1978.
6. "Digitized Voice Comes of Age: Part I Tradeoffs," Data Communications, March 1978.

Local Area Networks (LAN)

"LAN vs. PABX ?" in Local Area and Multiple Access Networks. Computer Science Press, edited by R.L. Pickholtz, 1986.

Network Analysis & Design

1. "Analysis and Design of Hybrid Switching Networks," IEEE Transactions on Communications, September 1981.
2. "Packet Switched Voice and Data Networks Advantages and Costs," Telecommunications, December 1978.
3. "Economic Analysis of Integrated Voice and Data Networks: A Case Study," Proceedings of the IEEE, November 1978.
4. "Design of Hybrid Switched Networks for Voice and Data," Proceedings of the International Conference on Communications, June 1978.

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5. "Performance Analysis of Integrated Switching Communications Systems," Proceedings of the National Telecommunications Conference. Los Angeles, California, December 1977.

Data Center Design and Engineering

1. "Maximizing Uptime for Mission Critical Applications", Development NY, May 2004
2. "Data Center Design and hardening tips", Development NY, May 2005
3. "New Challenges in data Center Design and Hardening", Development NY, May 2006

Disaster Recovery

"Business Continuity and Disaster Recovery in an Age of Heightened Awareness", Development NY, April 2003

In-Building Wireless

"The Ins and Outs of Building Wireless", Development NY, September 2004

Security

"Safety and Security Retrospective: 5 Years after 9-11", Development NY, September 2006
"Growing Impact of Information Technology (on Security)", Development NY, November 2005