

Arthur T. Brody, Ph.D.
Curriculum Vitae

Professional Summary

Dr. Brody has over 30 years of experience as a consultant and industry practitioner in networking, telecommunications, computer systems and multimedia technologies including digital video and audio standards such as MPEG. He combines his product problem solving and analytical skills honed as a physicist, with the engineering skills learned at Bell Laboratories and business management skills developed at commercial enterprises and as an industry analyst. His responsibilities have included telephony and network engineering, business and product management, intellectual property management, expert witness testimony, and product definition and development. Dr. Brody has worked throughout North America, Europe and Asia, successfully managing cultural differences with respect to business practices, management styles and relationship building.

Expertise

- Broadband Communications
- Business and Operations Support Systems
- Call Center Technologies and Operations
- Digital Switching
- Location Based Services
- Networking
- Wireless Technologies
- Networking
- Network Management
- Telephony
- Video, Audio and Multimedia Technologies
- Virtualization and Thin Client Technologies

Education

<u>Year</u>	<u>College or University</u>	<u>Degree</u>
1978	Stony Brook University	Ph.D., Physics
1973	City College of New York	B.A., Physics

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Curriculum Vitae

Professional Experience

From: 1990
To: Present
Organization: A. T. Brody & Associates, Inc.
Title: Principal Consultant

Summary: A.T. Brody & Associates, Inc. (ATB) is a high tech consulting firm specializing in telecommunications, networking and multimedia issues, business and engineering management, and market analyses. Founded in 1990, the company provides its clients with a wide variety of services so they may keep pace with the breakneck changes in their industries. Within its areas of expertise, ATB offers the following services:

- Strategic planning
- Product planning
- Market and competitive analyses
- Intellectual property evaluation and licensing
- Proposal and bid response generation
- Business process and workflow engineering
- Product requirements and specifications
- Sales and marketing support
- Litigation services including expert witness testimony

A partial list of projects and clients includes:

Strategic Planning and Business Management

- Led interview study of Director Level and above management in the Billing and Customer Care areas to determine key buying factors differentiating vendors. Questionnaires and interviews included wireline, wireless and cable MSO service providers.
- Assisted major telecommunications manufacturer in establishing competencies, methods and procedures for both Product Management and Marketing Management functions. Work was done in conjunction with Sequent Learning Systems (www.sequentlearning.com), and was based on combining client's current industry specific needs with best of class methodologies.

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- Developed strategic business plan for an IP-communications start-up. Served as interim CMO identifying and specifying initial product offerings, marketing the company's Intellectual Property, and managing business development efforts with both service provider and software/hardware vendor partners.
- Led team that critiqued strategic business plan for wireless Operations Support System software provider. Re-evaluated addressable markets, identified gaps, proposed merger and acquisition candidates, and provided an independent review of the final merger candidate. Return engagement one year later critiqued plan implementations, reorganized engineering teams and recommended risk reduction strategies.
- Led effort to develop an Internet/IP strategy for a major product line at a dominant circuit-switched Telecom equipment vendor. Strategy included both short and long-term product recommendations, addressable market forecasts and customer segment profiling.
- Prepared business plans and technical requirements for several international telecommunications transmission equipment manufacturers entering the U.S. market. Products included ATM switches, DSLAMs and SONET/DWDM muxes. Work covered all major elements including technology evaluation, market and competitive analyses, product definitions, R&D plans, marketing plans, sales plans, service/support plans, P&L forecasts and risk analyses. Product requirements were validated in the marketplace through one-on-one customer interviews and focus groups.
- For a major worldwide software vendor, worked with its consulting practice to establish a vertical telecommunications practice. Based on client's major core competencies, identified basic opportunities within the telecommunications segment, and defined initial customer care product offerings, methodologies and procedures. Helped determine delivery strategy (i.e., whether to make (develop), buy (purchase supplier) or resell (from partners) the required product elements).
- Provided both commercial and technical due diligence analysis of CLEC target for a major investment banking firm considering \$250MM+ investment. Analysis included reviews of current P&L and forecast models, business strategies, service offerings, technology evaluation, network architecture and operations implementations.
- Evaluated funding proposals for the U.S. Department of Commerce National Telecommunications and Information Administration (NTIA) as part of the

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Curriculum Vitae

Broadband Technology Opportunities Program (BTOP).

Intellectual Property Management

- Helped create an Intellectual Property Licensing Pool comprised of several consumer electronics giants, major telecommunications corporations and leading research universities. Technologies being licensed are used in goods and services in excess of \$100B revenue annually.
- Conducted a review of patents for a Fortune 50 company, to determine commercial value and potential licensors outside client's typical fields-of-use. Recommended marketing strategy that resulted in 15 times expected revenue from other fields-of-use licensing.
- Participated as board member for a major academic institution, along with other technical experts and patent attorneys that reviewed intellectual property resulting from research for commercial value and "patentability". Research areas included: telecom, multimedia such as MPEG video and audio, electrical engineering, computer science, materials science and chemistry.
- Developed and implemented commercialization strategy for major Asian research institute with essential intellectual property for audio and video standards including MPEG. Considerations included identifying applications, developing market revenue models, identifying potential licensees and proposing licensing strategies including paid-up licenses and patent pooling.
- Analyzed several Fortune 500 company patent portfolios for essential patents and other commercially valuable patents with respect to MPEG video standards for multimedia broadcasting. Rank ordered patents by commercial potential, essentiality and visibility in the practice of the standard.

Engineering Management and Systems Engineering

- Led Systems Integration and Testing technical due diligence team for analyzing risks associated with a multi-billion dollar loan to a large telecommunications service provider for an international consortium of banks. Risks were analyzed with respect to impact on cost, schedule and performance. Total System integration & Test and Business Readiness due diligence required the integration of data from complex project schedules, engineering plans, vendor capabilities and technology choices.

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- Lead systems engineer and one of two system architects for re-engineering of a service assurance Operations Support System. System used both in-band monitoring and network element data to determine Quality of Service. Work required structured analysis of undocumented current system capabilities melded with new features. Process included requirements and scenario generation, event-response analysis, functional partitioning, hardware selection, runtime software and development tool selection, performance/sizing analyses, and architecture/design reviews.
- Lead service assurance systems engineer for requirements and design of a major Operations Support System designed to coordinate alarm, event, traffic, performance and billing data (CDRs) from transmission, switching and SS7 network elements. By correlating events from multiple and independent sources, system improves fault isolation and management, service assurance and revenue assurance operations.
- Based on client's business drivers, enabling technologies and market needs, defined business strategy and core functionality of a generic dispatch management system incorporated into its Customer Care/Work Management product offering. Resultant RFP responses generated \$100MM+ potential; several awards were confirmed.
- Developed detailed specifications for an intelligent work delivery system for a major IXC. The goal was to deliver the right job to the right person at the right time within a central office (CO) environment taking into account work load, priorities, network equipment type, job type, skill sets, skill ratings, craft availability, etc. Constrained by current procedures so that processes had to migrate over time. Complexity covered reducing over 700 CO procedures and interfacing with 12+ legacy systems, while evolving to a TMN-compliant implementation. System also had to interface to "personnel" systems to automatically obtain or update technician schedules, skills, overtime pay and other technician data.

Market Management and Analysis

- Developed market model forecasting company-by-company sales by application of GaN based products such as high-brightness LEDs and laser diodes.
- Developed market model for telecommunications applications software and professional services segmented by customer type, region and product type. Econometric model included forward-looking growth projections and was used by

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the client to value its business for sale and to direct business and product strategies.

- Developed market model for Voice-over-Packet revenues segmented by service provider type and geographic region.
- Conducted interview survey on key buying factors for major supplier Billing Support Systems and Operations Support Systems. Conducted interviews with director level and above at customers and potential customers. Analyzed the interviews to generate recommendations for product and solution roadmaps, and to identify key messages for marketing communications.

Expert Witness

- Experienced expert witness for intellectual property and contract matters. Trial and hearing testifying experience. Prepared opinions or supported preparation of opinions on patent infringement, written description, validity, damages and willful infringement. Have been deposed over 100 hours. Prepared responses to questions for *Markman* hearings and helped prepare attorneys for *Markman* presentations. Wrote declarations in support of and in opposition to motions for summary judgment. Selected patents and claims for assertion. Familiar with litigation support tools such as iManage, Virtual Partner, Summation, RingTail, Concordance and SmartPatent.
- Cases:
- Verizon CA v. Katz (engaged on behalf of Katz) – No. 01-CV-09871 (C.D. Cal.)
 - Type of Matter – Patent Infringement
 - Law Firm – Fish & Neave, New York, NY
 - January 2003 – July 2004 - Served as an expert witness involving telecommunications call center technology. Completed expert witness reports on asserted claim validity. Provided declarations in support of client’s summary judgment motions and response. Deposed twice
 - Disposition – Settled
- Katz v. Cellco Partnership d/b/a Verizon Wireless (engaged on behalf of Katz) – No. 01-CV-5627 (E.D. Pa.)
 - Type of Matter – Patent Infringement
 - Law Firm – Fish & Neave, New York, NY
 - December 2002 - Served as an expert witness involving telecommunications call center technology. During discovery,

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- identified infringing services.
- Disposition – Settled
- In re UAL Corp. (engaged on behalf of Katz) – No. 02-B-48191 (Bankr. N.D. Ill.)
 - Type of Matter – Bankruptcy
 - Law Firm – Fish & Neave, New York, NY
 - May 2004 – July 2005 - Served as an expert witness involving telecommunications call center technology. Identifying infringing services and infringed claims.
 - Disposition – Unknown
- Katz v. PT-1 (engaged on behalf of Katz)
 - Type of Matter – Patent Infringement
 - Law Firm – Fish & Neave, New York, NY
 - May 2004 – July 2005 - Served as an expert witness involving telecommunications call center technology. Identifying infringing services and infringed claims.
 - Disposition – Settled
- Sunrise Telecom v. Acterna (engaged on behalf of Acterna) – No. 05-CV-00174 (E.D. Tex.)
 - Type of Matter – Patent Infringement
 - Law Firm – ReedSmith, New York, NY
 - May 2005 – August 2005 - Serving as an expert witness on case involving digital subscriber line (DSL) test equipment. Developed client's position with respect to non-infringement and invalidity. Helped develop claim constructions. Provided declaration in support of client's non-infringement and invalidity briefs for injunctive relief hearing.
 - Disposition – Settled
- Inline Connection Corp. v. Verizon (engaged on behalf of Inline) – No. 05-CV-00205 (E.D. Va.)
 - Type of Matter – Patent Infringement
 - Law Firm – HellerEhrman, New York, NY
 - May 2005 – Oct. 2005 - Served as a consulting witness involving digital subscriber line (DSL) network equipment.
- Katz v. Citibank, et al. (engaged on behalf of Katz) – No. 05-CV-00142 (E.D. Tex.)
 - Type of Matter – Patent Infringement

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Curriculum Vitae

- Law Firm – Cooley Godward Kronish, Reston, VA
- June 2005 – May 2008 - Serving as an expert witness involving telecommunications call center technology.
- Disposition – Settled

- 800 ADEPT, Inc. v. Murex Securities, Ltd., et al. (engaged on behalf of 800 ADEPT) – No. 02-CV-1354 (M.D. Fla. - Orlando)
 - Type of Matter – Patent Infringement, suit and counter-suit
 - Law Firm – Allen, Dyer, Doppelt, Milbrath & Gilchrist, P.A., Orlando, FL and Maher, Guiley and Maher, P.A., Orlando, FL
 - Oct. 2005 – Oct. 2006 - Served as expert witness involving call routing technology designed to deliver a call to the most appropriate service provider location based on distance between the caller and service provider location or other defined criteria. Prepared expert witness and rebuttal reports with respect to the invalidity of Murex's asserted patents, the validity of 800 ADEPT's asserted claims and charges of inequitable conduct against the 800 ADEPT patents' inventor. Wrote declarations in support of 800 ADEPT's motion for summary judgment and in opposition to Murex's motion for summary judgment. Helped prepare demonstrative exhibits for trial. Testified at deposition. Testified at trial both as a direct and rebuttal expert witness.
 - Disposition – Jury verdict and final judgment in favor of 800 ADEPT. All Murex asserted claims found invalid, and all claims of two key patents found to be invalid including one patent that had passed reexam. No inequitable conduct was found. All 800 ADEPT asserted claims found to be valid. Murex also found to infringe all 800 ADEPT asserted claims.

- Katz v. AEP, et al. (engaged on behalf of Katz) – No. 07-ML-01816-B (C.D. Cal.) and No. 07-ML-1816-C (C.D. Cal.)
 - Type of Matter – Patent Infringement
 - Law Firm – Cooley Godward Kronish, Reston, VA
 - January 2006 – Present - Serving as an expert witness involving telecommunications call center technology. Prepared report and declarations in opposition to Defendants' invalidity arguments with respect to invalidity of the claims asserted by Katz. Prepared report and declaration in opposition to Defendants' arguments of materiality of references purported to be undisclosed by Katz. Deposed for 30 hours on the above reports.
 - Disposition – Ongoing

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Curriculum Vitae

- Katz v. AIG Annuity Insurance Co., et al. (engaged on behalf of Katz) – No. 07-ML-01816-B (C.D. Cal.) and No. 07-ML-01816-C (C.D. Cal.)
 - Type of Matter – Patent Infringement
 - Law Firm – HellerEhrman LLP, Menlo Park, VA and Covington & Burling LLP, San Francisco, CA
 - November 2006 – Present - Serving as an expert witness involving telecommunications call center technology. Prepared report and declarations in opposition to Defendants' invalidity arguments with respect to invalidity of the claims asserted by Katz. Prepared report and declaration in opposition to Defendants' arguments of materiality of references purported to be undisclosed by Katz. Deposed for 15 hours on the above reports.
 - Disposition – Ongoing

- Sunrise Telecom, Inc. v. VeEx, Inc. (engaged on behalf of VeEx, Inc.) – No. 1-07-CV-078643 (Cal. Super. Ct. – Santa Clara County)
 - Type of Matter – Theft of Trade Secrets
 - Law Firm – ReedSmith, San Francisco, CA
 - February 2007 – September 2007 - Served as an expert witness on case involving portable Telecom test equipment. Identified materials in the public domain available to client that would let them design, develop, market and sell their products without theft of trade secrets. Prepared declaration in support of opposition to a preliminary injunction against the client.
 - Disposition – Settled

- 800 ADEPT, Inc. v. AT&T Wireless, et al. (engaged on behalf of 800 ADEPT) – No. 07-CV-00023 (E.D. Tex)
 - Type of Matter – Patent Infringement
 - Law Firm – Maher, Guiley and Maher, P.A., Orlando, FL
 - April 2007 – August 2008 - Served as expert witness on case involving call routing technology designed to deliver a call to the most appropriate service provider location based on distance between the caller and service provider location or other defined criteria such as user-defined geographic area. Deposed on claim construction issues. Have prepared declaration in support of *Markman* Reply Brief.

- 800 ADEPT, Inc. v. Enterprise Rent-a-Car, et al. (engaged on behalf of 800 ADEPT) – No. 07-CV-00057 (E.D. Tex.)
 - Type of Matter – Patent Infringement

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Curriculum Vitae

- Law Firm – Maher, Guiley and Maher, P.A., Orlando, FL
- April 2007 – August 2008 - Served as expert witness on case involving call routing technology designed to deliver a call to the most appropriate service provider location based on distance between the caller and service provider location or other defined criteria such as user-defined geographic area. Deposed in claim construction issues. Prepared declaration in support of *Markman* Reply Brief.

- Katz v. General Electric Capital Corp., et al (engaged on behalf of Katz) – No. 07-CV-02336 (C.D. Cal.)
 - Type of Matter – Patent Infringement
 - Law Firm – Hennigan, Bennett & Dorman LLP, Los Angeles, CA
 - March 2008 – Present - Serving as an expert witness on case involving telecommunications call center technology. Testified at deposition.
 - Disposition – Ongoing.

- Grape Technology vs. Jingle Networks, Inc. (engaged on behalf of Jingle) – No. 08-CV-00408 (D. Del.)
 - Type of Matter – Patent Infringement
 - Law Firm – Ropes & Gray, New York, NY
 - August 2008 - Serving as a consulting witness on case involving directory assistance automation.

- Makor Issues and Rights, Ltd. v. Tellabs, Inc. (engaged on behalf of Makor Issues and Rights, Ltd.) – No. 02-CV-04356 (N.D. Ill.)
 - Type of Matter – Securities Class Action
 - Law Firm – Milberg LLP
 - May 2009 – Present - Serving as an expert witness on case involving defendants’ alleged misrepresentations to the public. Testified at deposition.
 - Disposition – Ongoing

- Neutral Tandem, Inc. v. Peerless Network, LLC (engaged on behalf Neutral Tandem, Inc.) – No. 08-CV-03402 (N.D. Ill.)
 - Type of Matter – Patent Infringement
 - Law Firm – Jenner & Block LLP
 - June 2009 – Present - Serving as an expert witness on case involving specialized networks for call routing of transit traffic between carriers. Also assisting in response to *inter partes* reexamination. Testified at Markman hearing, preliminary injunction hearing and deposition.
 - Disposition - Ongoing

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Curriculum Vitae

- Sybase 365, LLC v. TeleCommunication Systems, Inc. (engaged on behalf of TeleCommunications Systems, Inc.) – No. 2:09-CV-00493 (E.D. Va.)
 - Type of Matter – Patent Infringement
 - Law Firm – Goodwin Proctor LLP
 - March 2010 - Served as an expert witness on case involving short messaging service (SMS) and E911 routing for mobile phones.
 - Disposition - Settled

- Lochner Technologies, LLC v. Dell, Inc., et al (engaged on behalf of Lochner Technologies, LLC) – No. 2:09-CV-00177 (E.D. Tx – Marshall)
 - Type of Matter – Patent Infringement
 - Law Firm – Russ, August & Kabat
 - June 2010 – January 2011 - Served as an expert witness on case involving remote computing and video display (e.g., desktop virtualization) using wireless communications.
 - Disposition - settled

- AT&T Inc. v. TiVo Inc. (engaged on behalf of TiVo, Inc.) – Case No. 4:10-CV - 01059 (N.D. Cal.).
 - Type of Matter – Patent Infringement
 - Law Firm – Irell & Manella LLP
 - September 2010 – March 2011 - Serving as an expert witness on case involving television program recording technology.
 - Disposition – Stayed

- Motorola Mobility, Inc. v. Apple Inc. (engaged on behalf of Motorola Mobility, Inc.) – Investigation No. 337-TA-745 (ITC, Washington, DC.).
 - Type of Matter – Patent Infringement
 - Law Firm – Ropes & Gray
 - March 2011 – Present – Serving as expert witness on case involving the use of GPS circuitry in determining the location of a mobile E911 caller.
 - Disposition – Ongoing

- Fujitsu Limited v. Belkin International, Inc., et al. (engaged on behalf of Belkin International, Inc., et al.) – Case No. 10-CV-03972 (N.D. Cal. – San Jose)
 - Type of Matter – Patent Infringement
 - Law Firms – Reed Smith LLP, O’Melveny & Meyers LLP, Law offices of S. J. Christine Yang

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Curriculum Vitae

- March 2011 – Present – Serving as expert witness on case involving the use of I/O cards inserted in externally accessible slots to provide both wired and wireless communication between devices.
- Disposition – Ongoing

Employment History

From: 1988
To: 1990
Organization: ADK Pressure Equipment Corp.
Title: Director, New Products
Summary: P&L responsibility for new product planning, development and sales, focusing on products for both existing and new customer bases. Managed multi-\$MM budget and development team of 20 people including various contractor and sub-contractor organizations. Directed development and release of 4 new products resulting in several large contracts and entrance into new markets.

From: 1985
To: 1988
Organization: Technicom Systems, Inc.
Title: Vice President, Marketing and Sales
Summary: Technicom was a subsidiary of TIE/communications, providing network monitoring, cable pressurization and loop test products. Managed Marketing and Sales staff of 14 with a budget of \$1MM+ (excluding commissions) based throughout the country, successfully addressing regional and cultural differences. Both direct sales force and manufacturer's representatives were used. Had P&L and customer service responsibility for sales revenues of \$10MM to \$20MM annually. Activities covered both domestic and international customer bases. Planned and introduced to the market five new products, culminating in sales of products to five of the eight major U.S. telephone companies, and a successful joint venture with a major Japanese firm.

From: 1981
To: 1985
Organization: AT&T Bell Laboratories
Titles: Technical Manager; Member of technical Staff
Summary: As Technical Manager, Dr. Brody managed group of 6 Members of Technical Staff (MTS) generating product-marketing strategies, application architectures and planning tools for digital transmission and switching systems. Group output had direct impact

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Curriculum Vitae

on \$300MM+ of product sales and 100+ MTS development activities annually.

1981-1984 As Member of Technical Staff, Dr. Brody was lead engineer in R&D area where he was responsible for network Operations, Administration, Maintenance and Provisioning products and procedures for leased line service assurance. Championed and engineered new OSSs designed to streamline customer operations and increase revenues with respect to network management, testing and surveillance products.

From: 1978
To: 1981
Organization: Syracuse University
Title: Research Associate, High Energy Physics Group

Professional Affiliations, Achievements & Awards

- Member, Institute for Electrical and Electronics Engineers (IEEE)
- Member, IEEE Communications Society
- Member, American Physical Society
- Member, American Association for the Advancement of Science
- Member, Sigma Chi, Scientific Research Society
- Panel member in PBS program "Opening The Lines: The Great Telephone Debate"

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