WI-LAN Inc. v. Alcatel-Lucent USA Inc. et al Doc. 185 Att. 2

EXHIBIT 1

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Wireless Technology Expertise

- Cellular Networks (2G, 3G, 4G, GSM, GPRS, EDGE, UMTS, WCDMA, HSPA, HSDPA, HPSA+, LTE and LTE-Advanced)
- Cellular Infrastructure Equipment (Base Stations, Backhaul and Handsets)
- Radio Frequency (RF), Microwave and MM-Wave Devices, Systems and Networks
- RF Design, including RF Assemblies, Subassemblies and Components
- Wireless Standards, Rules and Regulations (3GPP, 3GPP2, FCC, ETSI, CEPT)
- Intellectual Property, Patent Infringement and Litigation Support

Professional Summary

Dr. Wells has over 20 years of wireless technology experience gained from working in three continents. He is currently an independent consultant providing expertise on cellular technologies, wireless devices, network infrastructure and wireless rules and regulations to a client base of attorneys, intellectual property organizations, investment and research institutions, public listed and private companies. Dr. Wells has 40 academic and commercial publications and presentations, and is lead inventor on three patents. He is Senior Member of the IEEE and is author of "Multi-Gigabit Microwave and Millimeter-Wave Wireless Communications," Artech House, 2010.

Employment History

2007 to present **AJIS LLC, Pleasanton, CA** *Independent Consultant*

Managing Partner of AJIS LLC, an independent consulting firm specializing in wireless technology and emerging wireless fields. His consulting experience includes:

- Expert witness and expert consulting support of 3G and 4G wireless patent litigation. Multiple projects analyzing 3GPP WCDMA and LTE patents and infringing equipment.
- Cellular backhaul and wireless technology consulting for investment and research institutions.
- Wireless product development and marketing strategies for NYSE and NASDAQ-listed public companies, private entities and startups.
- Specialized technical workshops on various wireless technologies; including cellular networks, mm-wave radios, security sensors and short range radios.
- Specialized global regulatory tasks and product approvals for consortium of US and international wireless companies.

2005 to 2007 **GigaBeam Corporation, Herdon, VA**
Director Product Management and Global Regulatory Affairs

Responsible for overall product strategy for industry-transforming 1.25 Gbps (1,250 Mbps) wireless products. Setup global regulatory framework for 71-76 / 81-86 GHz bands. Participated in FCC, CEPT, ETSI and other technical body meetings. Initiated market development in over 40 countries including Europe, Canada, Caribbean, Latin America, Middle East and Asia.

2000 to 2004 **Stratex Networks (now Aviat Networks), San Jose, CA**
Director Product Development

Responsible for global product development of Outdoor Unit (ODU) portfolio of high-end digital microwave radios primarily for cellular backhaul applications.

- Led RF/microwave development team of 35, with $5M annual budget.
- Technical leadership of flagship Eclipse product providing 6-622 Mbps data at 5-40 GHz. Product shipped over 150,000 units. Managed full product lifecycle. Innovative design drove 7 patents and yielded several technology and low cost manufacturing breakthroughs.
- Technical management of overseas manufacturing subcontractors.

1998 to 2000 **Adaptive Broadband (now GE Digital Energy), Rochester, NY**
1999-00: Director Wideband Products, 1998-9: Engineering Group Leader

Full responsibility for the Terrestrial Infrastructure Group.

- P&L responsibility for $4M wireless division.
- Increased revenue 200% over 4 quarters through new products and product repositioning.
- Responsible for the development of the LEDR II family of digital radios.

1994 to 1998 **MAS Technology (now Aviat Networks), Wellington, New Zealand**
1995-98: RF Group Manager, 1994-95: Senior RF Design Engineer

Responsible for RF hardware development for advanced 330 MHz to 7 GHz telecommunication equipment for worldwide export.

- Led development of three families of innovative wireless products.
- Responsible for company's European regulatory approvals.
- Personally designed wide range of RF devices.

1993 to 1994 **Matra Marconi Space, Portsmouth, UK** *Senior Design Engineer*

Developed X-band GaAs MMIC mixer and L-band upconverter / amplifier and low noise VCO.

1990 to 1992 **University of Bath, Bath, United Kingdom** *Post Doctoral Research Officer*

- Fabricated novel quantum amplifiers in clean room environment. Demonstrated negative resistance for oscillator applications.
- Developed numerical models to predict mm-wave performance. Built and verified performance in 94 and 183 GHz systems. Extended theoretical simulations to 600 GHz.

Education

Year	College/University	Degree
2004	Stanford Executive Institute, Stanford University, CA, USA	Graduated from 10-day, full-time executive management course
1998	Massey University, New Zealand	M.B.A. (Graduated top 10% of class with Distinction)
1991	University of Bath, United Kingdom	Ph.D., Microwave Physics
1987	University of Bath, United Kingdom	B.Sc., Physics with Physical Electronics (Graduated 3rd in class with 1st Class Honors)

Expert Witness Experience

Several cases in process, where complaint has not yet been served. Filed cases include:

Sept 2011 to present	*[Specifics withheld. Case still in progress]* Case: Patent infringement case relating to one 3G WCDMA patent Role: Testifying expert for defendant
Mar 2011 to present	*[Specifics withheld. Case still in progress]* Case: Patent infringement case relating to four 3G HSPA patents Role: Testifying expert for plaintiff
Oct 2010 to Jan 2011	*People of the State of California v. Wandrey*, CR920809 Case: Criminal murder case involving location via cell phone Role: Retained by defendant to provide technical evaluation
Sept 2010 to Oct 2010	*People of the State of California v. Tran*, CC826024 Case: Criminal murder case involving location via cell phone Role: Retained by defendant to provide technical evaluation
May 2010 to Apr 2011	*People of the State of California v. Rivas & Carrillo*, SS090603A/B, SS110071A/B Case: Criminal murder case involving location via cell phone Role: Testifying expert for defendant. Testified in court. Provided expert report
June 2009 to June 2010	*American Traffic Solutions v. Redflex Traffic Systems*, CV 08-2051-PHX-FJM Case: Unfair competition related to FCC authorization of speed radars Role: Testifying expert for plaintiff. Provided expert report, supplement to expert report and declaration

Professional Affiliations and Achievements

2009 – present	Co-chair, Intellectual Property Special Interest Group (IP SIG), IEEE Consultants' Network of Silicon Valley (CNSV)
2008 – present	Member, IEEE Consultants' Network of Silicon Valley (CNSV)
2008 – present	Manger and Moderator, LinkedIn MM-Wave Special Interest Group
1995 – present	Senior Member, Institute of Electrical and Electronic Engineers (IEEE). (Member since 1995; Senior Member since 1999)
1995 – present	Member, IEEE Microwave Theory and Techniques Society (MTT-S)
2011 – 2012	Technical Reviewer, Wireless and Cellular Communication Systems, International Microwave Symposium (IMS2011 and IMS2012)
2010	Guest speaker, Carnegie Mellon University (CMU) course 96-833: Fundamental Consulting Skills
2009	Reviewer for US Government's Broadband Technology Opportunity Program (BTOP) and Broadband Initiatives Program (BIP), part of American Recovery and Reinvestment Act of 2009
2009	Selected Expert Advice columnist for Microwave Journal
2009	Session chair, International Microwave Symposium (IMS2009)
2008	Co-chair and organizer, IWPC workshop on Millimeter-Wave Security Sensors
2008	Co-chair, IWPC workshop on Extending the Life of GSM & EDGE Networks
2008	Co-chair, IWPC workshop on Wireless IP/Ethernet Backhaul for Next Generation Mobile Networks
2005 – 2006	Member, European Conference of Postal and Telecommunications Administrations Spectrum Engineering Group 19 (CEPT SE19)
2005 – 2006	Member, European Telecommunications Standards Institute Transmission and Multiplex Group 4 (ETSI TM4)
2002 – 2006	Member and deputy chair, Wireless Communications Association (WCA) 40+ GHz Spectrum Development Committee
2001 – 2004	Member, Cal Poly Electrical Engineering Industrial Advisory Committee
1993 – 2002	Member, Institution of Electronic Engineers (MIEE)
1987 – 1995	Member, Institute of Physics (MInstP)
1995	Registered as Chartered Engineer (CEng)
1990	Registered as Chartered Physicist (CPhy)

Publications and Presentations

Books and Published Research Reports

J.A. Wells, "*Backhaul for Small Cells*," Mobile Experts, Oct. 2011

J.A. Wells, "*Multi-Gigabit Microwave and Millimeter-Wave Wireless Communications*," Artech House, Boston, Sept. 2010 (ISBN 1608070824)

J.A. Wells, "*Venture Capital: Does It Exist In New Zealand?*" MBA Thesis, Massey University, 1998

J.A. Wells, "*The Design and Optimisation of a Millimetre-Wave Balanced Mixer*," PhD Thesis, University of Bath, 1991

Publications

J.A. Wells, "The Seven Rules for Hiring a Wireless Technology Expert," *New Matter; Official Publication of the Intellectual Property Section of the State Bar of California*, Vol. 35, No. 4, pp. 5-6, Dec. 2010

J.A. Wells, "MM-Waves in the Living Room: The Future of Wireless High Definition Multimedia Connectivity," *Microwave Journal*, Vol. 52, No.8, pp. 72-84, Aug. 2009

J.A. Wells, "The Gigabit Millimeter-Wave Superhighway," *Microwave Journal Online*, Expert Advice Blog, Aug. 2009 (Invited Column)

J.A. Wells, "Faster Than Fiber: The Future of Multi-Gb/s Wireless", *IEEE Microwave Magazine*, Vol. 10, No.3, pp. 104-112, May 2009 (Invited Paper)

J.A. Wells, "Multigigabit Wireless Technology at 70, 80 and 90 GHz," *RF Design*, pp. 50-58, May 2006

J.A. Wells, "Gigabit per Second Wireless Backhaul at 70 and 80 GHz for WiMAX Networks," *Focus on Technology* supplement in *Wireless Design and Development*, pp. S6-S8, May 2006

J.A. Wells, "New Multi-Gigabit Wireless Systems Satisfy High Security Rapid Response Applications," *Military Embedded Systems*, Vol. 2, No. 1, pp. 22-26, Spring 2006

J.A. Wells, "Multi-Gigabit Connectivity at 70, 80 and 90 GHz," *Microwave Journal*, pp. 128-135, July 2005

J.A. Wells, "Millimeter Wave Point-To-Point Radios," *Applied Microwave and Wireless*, pp. 81-82, Aug. 2002 (Guest Editorial)

J.A. Wells and N.J. Cronin, "Theoretical Analysis of Air Bridging and Back Etching Techniques on the Shunt Capacitance of Planar Subharmonic Mixer Diodes," *IEE Proceedings - Part H*, Vol. 140, No. 6, pp. 474-80, Dec. 1993

J.A. Wells and N.J. Cronin, "Frequency Dependant Simulation of Planar Millimeter-Wave Mixer Diodes," *17th International Conference on Infra-Red and Millimeter Waves Digest*, USA, pp. 214-5, Dec. 1992

J.A. Wells and N.J. Cronin, "Determination and Reduction of the Capacitance Associated with the Bonding Pads of Planar Millimeter-Wave Mixer Diodes," *IEEE Microwave and Guided Wave Letters*, Vol. 2, No. 7, pp. 297-9, July 1992

J.A. Wells and N.J. Cronin, "Planar Schottky-Diode Devices for Millimetre-Wave Balanced Mixer Applications," *21st European Microwave Conference Digest*, Germany, pp. 370-5, Sept. 1991

N.J. Cronin, R. James and J.A. Wells, "Subharmonic Mixers for Short Millimetre Wavelengths," *16th International Conference on Infra-Red and Millimeter Waves Digest*, Switzerland, p. 143, Aug. 1991

J.A. Wells, N.J. Cronin and P.H. Reece, "A Rugged 94GHz Crossbar Balanced Mixer," *IEE Proceedings - Part H*, Vol. 137, No. 4, pp. 235-7, Aug. 1990

J.A. Wells, N.J. Cronin and P.H. Reece, "A Rugged 94GHz Millimetre-Wave Balanced Mixer," *1st International Conference on Millimeter Waves and Far-Infrared Technology Digest*, China, pp. 254-6, June 1989

Presentations

J.A. Wells, "Building a Successful Consulting Practice," *Carnegie Mellon University (CMU) course 96-833: Fundamental Consulting Skills*, USA, May 2011

J.A. Wells, "Faster Than Fiber: Enabling Multi-Gigabit Wireless Communication Links," *IEEE International Microwave Symposium IMS 2009*, USA, June 2009

J.A. Wells, "The Future of Cellular Infrastructure," *IEEE CNSV*, USA, Mar. 2009

J.A. Wells, "Wireless Backhaul Trends: The Future Role of Wireless, Fiber Optics and Copper Wire," *IEEE-SCV Communications Society*, USA, Oct. 2008

J.A. Wells, "Millimeter-Wave Sensor Systems Benchmarking for Security Applications," *IWPC Workshop on MM-Wave Sensors for Layered Security of Critical Infrastructure*, USA, April 2008

J.A. Wells, "Marketing for Translators and Interpreters," *Northern California Translators Association Workshop*, USA, Mar. 2007

J.A. Wells, "WiFiber: New Spectrum Links for Wireless Gigabit Transmission," *ACM/IEEE conference on Supercomputing SC06*, USA, Nov. 2006

J.A. Wells, "WiFiber Wireless Fiber: Ultra High Data Rate Radios," *Wireless Fibre Amsterdam*, The Netherlands, Sept. 2006 (Keynote Speaker)

J. Krzywicki and J.A. Wells, "Gbps+ Wireless Local Loop: Transforming Last Mile Economics," *USTA Webinar*, Aug. 2006

J. Krzywicki and J.A. Wells, "WiFiber: New Spectrum Links for Wireless Gigabit Local Broadband," *Internet 2 Spring Meeting*, USA, April 2006

J.A. Wells, "Multi-Gigabit Wireless Backhaul at 70 and 80 GHz for WiMAX Networks," *PTC'06*, USA, Jan. 2006

J.A. Wells, "Future Trends in MM-Wave Radios for Wireless Backhaul Applications," *IWPC Workshop on Millimeter Wave Backhaul and 60 GHz Unlicensed Band Radios*, USA, June 2002

J.A. Wells, "Millimeter Wave Point-To-Point Radios for Carrier Class Access and Transport Applications," *8th WCA Technical Symposium Proceedings*, USA, Feb. 2002

J.A. Wells, "Commercial Opportunities at 94 GHz," *IEEE MTT-S International Microwave Symposium*, USA, May 2001 (Invited Panelist)

J.A. Wells, "Research and Development at MAS Technology," *New Zealand Communications Research Workshop 1997*, New Zealand, May 1997 (Invited Paper)

J.A. Wells, "Overcoming RF Technical Difficulties in Moving from QPSK to 16 QAM Modulation," *New Zealand Communications Research Workshop 1997*, New Zealand, May 1997

J.A. Wells, "Modern Microwave Technology," *VHF Convention 1995*, New Zealand, April 1995

J.A. Wells, "100W 2GHz Linear FET Amplifier Design," *VHF Convention 1995*, New Zealand, April 1995

J.A. Wells, "Low Phase Noise Oscillator Design for Wide band Radio Applications," *4th New Zealand Communications Workshop*, New Zealand, Sept. 1994

J.A. Wells, "Numerical Modeling of Millimeter-Wave Schottky Diodes," *2nd UK-Japan N+N Meeting on Terahertz Technology*, Japan, July 1992

Patents

Lead inventor on three patents:

US Patent 7,623,829: Transceiver power detection and control architecture

US Patent 7,236,745: Transceiver power detection architecture

European Patent WO2004080035: Transceiver power detection architecture