

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		14/285,223
	Filing Date		May 22, 2014
	First Named Inventor	Frank M. Caimi	
	Art Unit	2845	
	Examiner Name	Not Yet Assigned	
	Attorney Docket Number	5000-0150	

U.S.PATENTS						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		2947987		1960-08-02	Dodington	
		3646559		1972-02-29	Wiley	
		5047787		1991-09-10	Hogberg	
		5189434		1993-02-23	Bell	
		5463406		1995-10-31	Vannatta	
		5617102		1997-04-01	Prater	
		6069590		2000- 05-30	Thompson	
		6141539	A	2000-10-31	Marino, Ronald A.	
		6509883		2003-01-21	Foti	
		6573869		2003-06-03	Moore	
		6876337		2005-04-05	Larry	

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NON-PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
		"PCT International Search Report and Written Opinion for International Application No. PCT/US07/76667", Date of Mailing: August 20, 2008,	
		"PCT International Search Report and Written Opinion for International Application No. PCT/US08/60723", Date of Mailing: August 6, 2008,	
		ANDERSON, et al., "Decoupling and Descattering Networks for Antennas", IEEE Transactions On Antennas And Propagation, November 1976,	
		CAIMI, FRANK M. et al., "ANTENNA STRUCTURES AND METHODS THEREOF", U.S. Serial No. 14/285,262 filed May 22, 2014, Attorney Docket No. 5000-0192	
		DIALLO, A. et al., "Efficient Two-Port Antenna System For GSM/DCS/UMTS Multimode Mobile Phones", ELECTRONICS LETTERS, March 29, 2007 Vol. 43 No,	
		DIALLO, A. et al., "Enhanced Diversity Antennas For Umts Handsets", Antennas and Propagation, 2006. EuCAP 2006. First European Conference,	
		DIALLO, A. et al., "Estimation Of The Diversity Performance Of Several Two-Antenna Systems In Different Propagation Environments", Antennas and Propagation Society International Symposium, 2007 IEEE,	

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		DIALLO, A. et al., "Evaluation Of The Performances Of Several Four-Antenna Systems In A Reverberation Chamber", Antenna Technology: Small and Smart Antennas Metamaterials and Applications, 2007. IWAT '07.,	
		DIALLO, A. et al., "MIMO Performance Of Enhanced UMTS Four-Antenna Structures For Mobile Phones In The Presence Of The User's Head", Antennas and Propagation Society International Symposium, 2007 IEEE,	
		DIALLO, A. et al., "Reverberation Chamber Evaluation Of Multi-Antenna Handsets Having Low Mutual Coupling And High Efficiencies", In proceeding of: Proceedings of the European Conference on Antennas and Propagation EuCAP 2006, 6-10 Nov. 2006,	
		DIALLO, A. et al., "Study and Reduction of the Mutual Coupling Between Two Mobile Phone PIFAs Operating in the DCS1800 and UMTS Bands", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, VOL. 54, NO. 11, NOVEMBER 2006,	
		DOSSCHE, et al., "Three Different Ways To Decorrelate Two Closely Spaced Monopoles For MIMO Applications", IEEE 2005,	
		FOLTZ, et al., "Multielement Top-loaded Vertical Antennas with Mutually Isolated Input Ports", University of Texas, Pan American, Electrical Engineering, pgs. 1-24, GloMo 1998,	
		KO, et al., "Compact Integrated Diversity Antenna for Wireless Communications", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, VOL. 49, NO.6, JUNE 2001,	
		LAU, et al., "Impact of Matching Network on Bandwidth of Compact Antenna Arrays", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, VOL. 54, NO. 11, NOVEMBER 2006,	

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		RANVIER, et al., "Mutual Coupling Reduction For Patch Antenna Array", Proceedings of The European Conference on Antennas and Propagation: EuCAP 2006 (ESA SP-626). 6-10 November 2006,	
		RANVIER, S. et al., "Capacity Enhancement by Increasing Both Mutual Coupling and Efficiency: a Novel Approach", Antennas and Propagation Society International Symposium, 2007 IEEE,	
		STJERNMAN, et al., "Antenna Mutual Coupling Effects on Correlation, Efficiency and Shannon Capacity in MIMO Wireless Systems", EuCAP 2006 - European Conference on Antennas & Propagation, November 06, 2006,	
		WALLACE, et al., "Mutual Coupling in MIMO Wireless Systems: A Rigorous Network Theory Analysis", Wireless Communications, IEEE Transactions, July 2004,	
		WALLACE, et al., "Termination-Dependent Diversity Performance of Coupled Antennas: Network Theory Analysis", IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION, VOL. D 52, NO. 1, JANUARY 2004,	
		WALLACE, et al., "The Capacity of MIMO Wireless Systems with Mutual Coupling", Vehicular Technology Conference, 2002. Proceedings. VTC 2002-Fall. 2002 IEEE 56th (Volume:2),	

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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e) (1).

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That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e) (2).

See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Ed Guntin/	Date (YYYY-MM-DD)	
Name/Print	Ed Guntin	Registration Number	41049

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