UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SPRINT SPECTRUM L.P., CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS, AND AT&T MOBILITY LLC Petitioners

v.

ADAPTIX, INC. Patent Owner

Case No. TBD Patent 8,934,375

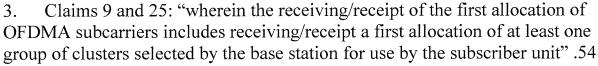
DECLARATION OF RICHARD D. GITLIN, Sc.D.



SPRINT 1002

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	Ritter In View Of Gesbert and Thoumy Renders Claims 1, 2, 8, 9, 12, 14	
	25, 28, and 30-32 Obvious Under 35 U.S.C. § 103(a)	
1.	Claims 1 and 17	27
2. se	Claims 2 and 18: "wherein the plurality of feedback clusters at the cond time is different than the plurality of feedback clusters at the first ti 53	me"
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	OFDMA subcarriers is receiving/receipt a first allocation of at least one coherence cluster"
	Claims 12 and 28: "wherein the receiving/receipt of the first allocation of OFDMA subcarriers includes consecutive clusters."
	5. Claims 14 and 30: "wherein the receiving/receipt of the first allocation of the at least one group of clusters includes receiving/receive a group identifier that identifies one group of the first allocation of the at least one group of clusters."
	6. Claims 15 and 31: "wherein the measuring/measurement of the first channel information for the plurality of subcarriers based on the first plurality of pilot symbols includes measuring channel information for all available clusters allocable by the base station."
	7. Claims 16 and 32: "providing/provide the first feedback information relating to all of the plurality of feedback clusters."60
G 13	6. Ritter in View of Gesbert, Thoumy, and Gitlin Renders Claims 3-7, 10-11, 3, 19-23, 26-27, and 29 Obvious Under 35 U.S.C. § 103(a)61
	1. Claims 3 and 19: "wherein at least one subcarrier of the first allocation of OFDMA subcarriers is non-contiguous with the other subcarriers of the first allocation of OFDMA subcarriers"
	Claims 4 and 20: "wherein the first allocation of OFDMA subcarriers includes a cluster identifier that identifies a first plurality of subcarriers in a first time slot and a second plurality of subcarriers in a second time slot, at least two subcarriers of the first plurality of subcarriers and of the second plurality of subcarriers being disjoint"
	Claims 6 and 22: "wherein the receiving/receipt of the first allocation of OFDMA subcarriers is receiving/receipt a first allocation of at least one diversity cluster"
	Claims 10 and 26: "wherein at least one cluster of the first allocation of the at least one group of clusters is disjoint from at least one other cluster of the first allocation of the at least one group of clusters to obtain frequency diversity."65
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I. <u>INTRODUCTION</u>

A. Background and Qualifications

- 1. My name is Richard D. Gitlin. I am currently a State of Florida 21st Century Scholar, Distinguished University Professor, and the Agere Systems Chaired Professor of Electrical Engineering at the University of South Florida ("USF"). I have more than 45 years of experience in the field of communications and wireless communications in particular. Throughout my career, I have managed and led research in wireline and wireless systems, broadband and optical networking, multimedia communications, and access technologies. My curriculum vitae is attached as Appendix B.
- 2. I have a Bachelor's Degree (with honors) in electrical engineering from the City College of New York and a Master of Science in electrical engineering and a Doctorate in engineering science from Columbia University.
- 3. After receiving my Doctorate from Columbia University in 1969, I joined Bell Laboratories ("Bell Labs"), which at the time was part of the Bell System, and successively became AT&T Bell Labs, and then Lucent Technologies-Bell Labs (which is now Nokia Bell Labs). I was with Bell Labs in its various instantiations for 32 years. My first assignment was in the data communications ("modem") area and, during this time, I contributed to the invention of many key modem technologies. I was also involved in the product



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