UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SHOPIFY, INC., Petitioner,

V.

DDR HOLDINGS, LLC, Patent Owner.

Case No.: <u>Unassigned</u> *INTER PARTES* REVIEW OF U.S. PATENT NOS. 9,639,876

DECLARATION OF MICHAEL SHAMOS IN SUPPORT OF PETITIONS FOR *INTER PARTES* REVIEW OF U.S. PATENT NOS. 9,639,876



TABLE OF CONTENTS

I.	Educ	Education and Experience				
II.	Technology Background					
	A.	Historical Evolution of Web-Based Commerce Systems	3			
	B.	Ecommerce and Affiliate Marketing Systems				
	C.	Site Cobranding and Design Matching				
	D.	Outsourced Web Hosting and Ecommerce Hosting	9			
	E.	Common Features of Ecommerce Websites	14			
		1. HTML	14			
		2. Headers && Footers	15			
		3. Navigation Links	16			
		4. Left-Hand Navigation	17			
		5. Company Logos	17			
		6. Web Page Data Storage	18			
		7. Web-Based Ecommerce and Shopping Cart Technology	19			
III.	Leve	l of Ordinary Skill in the Art	23			
IV.	Clain	n Construction Standard	24			
V.	Obvi	ousness Standard	24			
VI.	Mate	rials Considered	26			
VII.	Anal	ysis of the DDR Patents	27			
VIII.	Clain	n Construction	28			
IX.	Prior Art Overview					
	A.	Digital River	31			
	B.	The April 1997 Website	31			
	C.	The Brochure	32			
	D.	The December 1997 Website	33			
	E.	Summary of the Digital River Publications and Motivation to Combine the Same	34			
	F	Moore (U.S. Patent No. 6 330 575)	35			



	G.	Motivation to Combine the Teachings of <i>Moore</i> and the Digital Ri Publications	
	H.	Arnold (U.S. Patent No. 6,016,504)	39
	I.	Motivation to Combine the Teachings of <i>Moore</i> and <i>Arnold</i>	41
X.	Grou	and 1 – The Digital River Publications	43
	A.	Claim 1 is rendered obvious by the Digital River Publications	43
	B.	Claim Element 1.0 is disclosed by the Digital River Publications	43
	C.	Claim Element 1.1 is disclosed by the Digital River Publications	44
	D.	Claim Element 1.2 is disclosed by the Digital River Publications	44
	E.	Claim Element 1.3 is disclosed by the Digital River Publications	45
	F.	Claim Element 1.4 is disclosed by the Digital River Publications	46
	G.	Claim Element 1.5 is disclosed by the Digital River Publications	47
	H.	Claim Element 1.6 is disclosed by the Digital River Publications	47
	I.	Claim Element 1.7 is disclosed by the Digital River Publications	48
	J.	Claim 2 is rendered obvious by the Digital River Publications	48
	K.	Claim 3 is rendered obvious by the Digital River Publications	49
	L.	Claim 4 is rendered obvious by the Digital River Publications	50
	M.	Claim 5 is rendered obvious by the Digital River Publications	50
	N.	Claim 7 is rendered obvious by the Digital River Publications	51
	O.	Claim Element 7.0 is disclosed by the Digital River Publications	51
	P.	Claim Element 7.1 is disclosed by the Digital River Publications	51
	Q.	Claim 8 is rendered obvious by the Digital River Publications	52
	R.	Claims 11-15 and 17-18 are rendered obvious by the Digital River Publications	
XI.	Grou	and 2: The Challenged Claims are anticipated by Moore	53
	A.	Claim 1 is anticipated by <i>Moore</i>	53
	B.	Claim Element 1.0 is disclosed by <i>Moore</i>	53
	C.	Claim Element 1.1 is disclosed by <i>Moore</i>	54
	D.	Claim Element 1.2 is disclosed by <i>Moore</i>	55
	E.	Claim Element 1.3 is disclosed by <i>Moore</i>	56
	F.	Claim Element 1.4 is disclosed by <i>Moore</i>	57



	G.	Claim Element 1.5 is disclosed by <i>Moore</i>	58
	H.	Claim Element 1.6 is disclosed by <i>Moore</i>	59
	I.	Claim Element 1.7 is disclosed by <i>Moore</i>	60
	J.	Claim 2 is anticipated by <i>Moore</i>	61
	K.	Claim 3 is anticipated by <i>Moore</i>	62
	L.	Claim 4 is anticipated by <i>Moore</i>	63
	M.	Claim 5 is anticipated by <i>Moore</i>	65
	N.	Claim 7 is anticipated by Moore	66
	O.	Claim Element 7.0 is disclosed by <i>Moore</i>	65
	P.	Claim Element 7.1 is disclosed by <i>Moore</i>	66
	Q.	Claim 8 is anticipated by <i>Moore</i>	66
	R.	Claims 11-15 and 17-18 are anticipated by <i>Moore</i>	67
XII.	Ground 3: Claims 1, 7, 10 and 17 are rendered obvious by Moore in view of <i>Arnold</i>		
	A.	Claim 1 is rendered obvious by <i>Moore</i> in view of <i>Arnold</i>	67
	B.	Claim 7 is rendered obvious by Moore in view of Arnold	68
	C.	Claim Element 7.0 is disclosed by <i>Moore</i> in view of <i>Arnold</i>	67
	D.	Claim Element 7.1 is disclosed by <i>Moore</i> in view of <i>Arnold</i>	68
	E.	Claim 11 is rendered obvious by <i>Moore</i> in view of <i>Arnold</i>	69
	F.	Claim 17 is rendered obvious by <i>Moore</i> in view of <i>Arnold</i>	69
XIII.		nd 4: Claims 1-5, 7-8, 11-15, and 17-18 are rendered obvious by the re in view of the Digital River Publications	.69
VIII			70



DECLARATION OF MICHAEL SHAMOS

- 1. My name is Michael I. Shamos. I am over the age of twenty-one (21) years, of sound mind and capable of making the statements set forth in this declaration. I am competent to testify to matters set forth herein. All the facts and statements contained herein are within my personal knowledge and they are, to the best of my knowledge, true and correct.
- 2. I have been retained on behalf of Shopify, Inc. ("Petitioner") to offer opinions relating to the invalidity of U.S. Patent No. 9,639,876 (the "'876 Patent"), U.S. Patent No. 9,043,228 (the "'228 Patent), U.S. Patent No. 8,515,825 (the "'825 Patent") (collectively, the "DDR Patents"), which are assigned to DDR Holdings, LLC ("Patent Owner"), as well as opinions concerning references presented by Petitioner in this *inter partes* review ("IPR").
- 3. I am being compensated at the rate of \$600 per hour for my work performed in connection with this matter. My compensation does not depend on the contents of this declaration, any testimony I may provide, or the ultimate outcome of this IPR proceeding or any other related proceeding involving the parties. I do not have a financial interest in any of the parties.

I. Education and Experience

I hold the title of Distinguished Career Professor in the School of
Computer Science at Carnegie Mellon University in Pittsburgh, Pennsylvania. I



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

