UNITED STATES PATENT AND TRADEMARK OFFICE						
BEFORE THE PATENT TRIAL AND APPEAL BOARD						
APPLE INC. Petitioner						
V.						
UNILOC USA, INC. and UNILOC LUXEMBOURG, S.A. Patent Owner						
Patent 6,993,049						

DECLARATION OF DR. CHARLES D. KNUTSON IN SUPPORT OF THE PETITION



TABLE OF CONTENTS

I.	INTRODUCTION4			
II.	SUMMARY OF CONCLUSIONS 4			
III.	QUALIFICATIONS AND EXPERIENCE			
IV.	DOCUMENTS REVIEWED			
V.	LEGAL UNDERSTANDINGS			
VI.	THE '049 PATENT			
VII.	RELEVANT FIELD AND LEVEL OF ONE OF ORDINARY SKILL IN THE ART			
VIII.	II. CLAIM CONSTRUCTION			
	A.	"inquiry message[s]"	. 16	
IX.	OVE	RVIEW OF LARSSON	. 19	
	A.	LARSSON AND LARSSON IN VIEW OF BT CORE EACH RENDER CLAIM 11 OBVIOUS	22	
	B.	LARSSON AND LARSSON IN VIEW OF BT CORE EACH RENDER CLAIM 12 OBVIOUS	. 45	
X.	OVERVIEW OF IrOBEX			
	A.	IrOBEX RENDERS CLAIM 11 OBVIOUS	. 51	
	B.	IrOBEX RENDERS CLAIM 12 OBVIOUS	. 59	
ΧI	CONCLUSION 60			



DECLARATION EXHIBITS

APPLE-1001	U.S. Patent No. 6,993,049 to Davies ("'049 Patent")
APPLE-1002	Prosecution History of the '049 Patent ("the Prosecution History")
APPLE-1003	Declaration of Dr. Charles Knutson
APPLE-1004	Curriculum Vitae of Dr. Charles Knutson
APPLE-1005	U.S. Patent No. 6,704,293 ("Larsson")
APPLE-1006	IrDA Object Exchange Protocol ("IrOBEX")
APPLE-1007	Prosecution History of the 7,587,207 Patent ("207 Prosecution History")
APPLE-1008	Second Declaration of Dr. Charles Knutson
APPLE-1009	U.S. Patent No. 7,587,207 ("Davies" or the "'207 Patent")
APPLE-1010	U.S. Patent No. 6,570,857 ("Haartsen")
APPLE-1011	U.S. Patent No. 6,480,505 ("Johansson")
APPLE-1012	Specification of the Bluetooth System: Wireless connections made easy, Profiles, Vol. 2, Bluetooth, Dec. 1, 1999 ("BT Profiles")
APPLE-1013	The New Shorter Oxford English Dictionary on Historical Principles, Vol. 1, Clarendon Press, 1993 ("Oxford Dictionary")
APPLE-1014	Specification of the Bluetooth System: Wireless connections made easy, Core, Vol. 1, Bluetooth, Dec. 1, 1999 ("BT Core")
APPLE-1015	U.S. Patent No. 6,683,886 ("Tuijn")



I, Charles D. Knutson, hereby declare the following:

I. INTRODUCTION

- 1. I have been retained by Fish & Richardson P.C., counsel for Apple Inc. ("Apple" or "Petitioner"), to analyze certain issues relating to the validity of certain claims of U.S. Patent No. 6,993,049 ("'049 Patent").
- 2. In forming the opinions I have expressed in this declaration, I have reviewed the '049 patent, its file history, the Petition for *Inter Partes Review* from Apple, and any documents cited or listed in this declaration. Furthermore, my opinions are also based on my experience and knowledge (as detailed further below).
- 3. I have been retained on behalf of Apple Inc., and am being compensated for my work on this matter. My compensation is not contingent upon the outcome of this matter.

II. SUMMARY OF CONCLUSIONS

4. As explained below, my opinion is that a POSITA would have viewed claims 11 and 12 of the '049 patent as being obvious in view of the following grounds.

Ground	'049 Patent Claims	Basis for Unpatentability
Ground 1	Claims 11 and 12	§103: Obviousness over Larsson
Ground 2	Claims 11 and 12	§103: Obviousness over Larsson in view of BT (Bluetooth) Core



Ground	'049 Patent Claims	Basis for Unpatentability
Ground 3	Claims 11 and 12	§103: Obviousness over IrOBEX

III. QUALIFICATIONS AND EXPERIENCE

- 5. I received my Doctor of Philosophy (Ph.D.) degree in the field of Computer Science from Oregon State University in 1998. I received my Master of Science (M.S.) and Bachelor of Science (B.S.) degrees in Computer Science from Brigham Young University.
- 6. Since 1986, I have been engaged in engineering, management, research, and instructional positions. During my undergraduate education at Brigham Young University between 1985 and 1988, I focused on operating systems, leading to my employment as a development engineer at Hewlett-Packard between May, 1988, and February, 1989. During that time, I developed low-level system software for the HP Vectra personal computer.
- 7. I was employed as a development engineer, test engineer, and manager at Novell, Inc. between March, 1989, and September, 1994. During that time, I became very familiar with the theory and operation of data communication systems and system software. As a system test manager at Novell, I pioneered the creation of cutting edge system test tools for automated validation of network protocols.



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.

