

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.; SAMSUNG DISPLAY CO., LTD; SONY
CORPORATION
Petitioners,

v.

SURPASS TECH INNOVATION LLC
Patent Owner.

Case No. To Be Assigned
Patent No. 7,420,550

**PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,420,550
UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. § 42.100 *et seq.***

TABLE OF CONTENTS

I.	MANDATORY NOTICES (37 C.F.R. §42.8(a)(1))	1
	A. Real Party-In-Interest (37 C.F.R. §42.8(b)(1))	1
	B. Related Matters (37 C.F.R. §42.8(b)(2)).....	1
	C. Lead and Backup Counsel (37 C.F.R. §42.8(b)(3)).....	2
	D. Service Information (37 C.F.R. §42.8(b)(4))	2
II.	FEES (37 C.F.R. §42.103)	2
III.	REQUIREMENTS FOR INTER PARTES REVIEW UNDER 37 C.F.R. § 42.104.....	3
	A. Grounds for Standing (37 C.F.R. §42.104(a))	3
	B. Citation of Prior Art	3
	C. Claims and Statutory Grounds (37 C.F.R. §§42.104(b)(1) & (b)(2))	4
IV.	SUMMARY OF THE ‘550 PATENT	5
	A. Overview of the ‘550 Patent.....	5
	1. The Admitted Prior Art.....	5
	2. The Alleged Invention of The ’550 Patent	6
	B. Prosecution History Summary of the ‘550 Patent.....	9
	C. Person of Ordinary Skill in the Art	10
	D. Claim Construction (37 C.F.R. §42.104(b)(3)).....	10
	1. “the gate drivers” and “the source drivers”	11
	2. “The first and the second date lines of the first group of date lines”.....	14
	3. “Gate lines...insulated with each other” and “data lines . . . insulated with each other”	14
	4. “a space between the neighboring data lines”	15
	E. Unpatentability of the Construed Claims (37 C.F.R. §42.104(b)(4))	17
	F. Supporting Evidence (37 C.F.R. §42.104(b)(5))	17

V. THERE IS A REASONABLE LIKELIHOOD THAT PETITIONERS WILL PREVAIL WITH RESPECT TO AT LEAST ONE CLAIM OF THE '550 PATENT 18

A. Prior Art..... 18

1. U.S. Patent Appl. Pub. No. 2002/0186190 to Janssen *et al.* (“Janssen ’190”) (Ex. 1003)..... 18

2. PCT Publication WO 02/075708 A2 to Janssen *et al.* (“Janssen ’708”) (Ex. 1004)..... 21

3. Japanese Patent Application Publication No. 2-214818 by Horii *et al.* (“Horii”) (Exs. 1006 & 1007)..... 25

4. U.S. Patent No. 6,300,927 to Kubota *et al.* (“Kubota”) (Ex. 1005)..... 27

B. Ground I: Claim 1 is invalid under 35 U.S.C. §103(a) as obvious over Janssen ’190..... 30

C. Explanation of the Obviousness Grounds II-VII 33

D. Ground II: Claims 1-3 are invalid under 35 U.S.C. §103(a) as obvious over Janssen ’708 in view of Janssen ’190..... 33

E. Ground III: Claims 1-3 are invalid under 35 U.S.C. §103(a) as obvious over Janssen ’708 in view of Horii..... 41

F. Ground IV: Claims 1-3 are invalid under 35 U.S.C. §103(a) as obvious over Janssen ’708 in view of the Admitted Prior Art..... 50

G. Grounds V, VI and VII: Claims 4-5 are invalid under 35 U.S.C. §103(a) as obvious over Janssen ’708 in combination with Janssen ’190, Horii or the APA, and further in view of Kubota..... 57

VI. CONCLUSION..... 60

LIST OF EXHIBITS

Exhibit	Description
Ex. 1001	U.S. Patent No. 7,420,550
Ex. 1002	File History for U.S. Patent No. 7,420,550
Ex. 1003	U.S. Patent Application Publication No. 2002/0186190 to Janssen <i>et al.</i> (“Janssen ‘190”)
Ex. 1004	Published PCT Application WO 02/075708 A2, Publication Date September 26, 2002, to Janssen <i>et al.</i> (“Janssen ‘708”)
Ex. 1005	U.S. Patent No. 6,300,927 to Kubota <i>et al.</i> (“Kubota”)
Ex. 1006	Japanese Patent Application Publication No. 2-214818 by Horii <i>et al.</i> , Publication Date August 27, 1990
Ex. 1007	Certified English translation of Japanese Patent Application Publication No. 2-214818 by Horii <i>et al.</i> (“Horii”)
Ex. 1008	A. Lewis, <i>et al.</i> , “Polysilicon TFT Circuit Design and Performance,” IEEE Journal of Solid-State Circuits, Vol. 27, No. 12 (December 1992), pp.1833-1842 (“Lewis”)
Ex. 1009	Surpass Tech Innovation LLC’s Preliminary Response filed in IPR2015-00022, Paper No. 8, Jan. 15, 2015 (“Response”)
Ex. 1010	R. Joshi, “Chip on glass-interconnect for row/column driver packaging,” Microelectronics Journal 29 (1998), pp.343-349 (“Joshi”)
Ex. 1011	T. N. Ruckmongathan, “Driving matrix liquid crystal displays”, Pramana Journal of Physics, Vol. 53, No. 1 (July 1999), pp.199-212 (“Ruckmongathan”)
Ex. 1012	Brown, ed., Electronics and Computer Acronyms, Butterworths (1988), pp. 244-45 (“Brown”)
Ex. 1013	Declaration of Tsu-Jae King Liu, Ph. D.
Ex. 1014	<i>Curriculum vitae</i> of Tsu-Jae King Liu, Ph. D.
Ex. 1015	Roy, <i>Physics of Semiconductor Devices</i> , 2d ed., Universities Press (2004), p. 334 (“Roy”)

I. MANDATORY NOTICES (37 C.F.R. §42.8(a)(1))

Petitioners are Samsung Electronics Co., Ltd., Samsung Display Co., Ltd., and Sony Corporation (“Petitioners”).

A. Real Party-In-Interest (37 C.F.R. §42.8(b)(1))

The real parties in interest for this petition for *Inter Partes* Review are Samsung Electronics Co., Ltd.; Samsung Display Co., Ltd.; Samsung Electronics America, Inc.; Sony Corporation; Sony Electronics Inc.; and Sony Corporation of America.

B. Related Matters (37 C.F.R. §42.8(b)(2))

U.S. Patent No. 7,420,550 (“the ‘550 Patent”; Ex. 1001) is currently the subject of litigation against multiple defendants in the District of Delaware, captioned *Surpass Tech Innovation LLC v. Samsung Display Co., Ltd. et al.* (Civil Action No. 1:14-cv-00337-LPS) and *Surpass Tech Innovation LLC v. Sharp Corporation et al.* (Civil Action No. 1:14-cv-00338-LPS). Other defendants in the litigation include Sharp Corporation; Sharp Electronics Corporation; Sharp Electronics Manufacturing Company of America, Inc.; Vizio, Inc. (DE Corp.) and Vizio, Inc. (CA Corp.). The litigation has been stayed in view of IPR2015-00022, filed on October 3, 2014, by the Sharp litigation defendants. The Patent Owner Preliminary Response was filed on January 15, 2015. (Ex. 1009) and the petition was denied March 10, 2015 in Paper No. 9.

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.