

US 20100123670A1

## (19) United States (12) Patent Application Publication Philipp

#### (10) Pub. No.: US 2010/0123670 A1 (43) Pub. Date: May 20, 2010

#### (54) TOUCH SCREEN SENSOR

(75) Inventor: **Harald Philipp**, Hamble (GB)

Correspondence Address: SCHWEGMAN, LUNDBERG & WOESSNER / ATMEL P.O. BOX 2938 MINNEAPOLIS, MN 55402 (US)

- (73) Assignee: Atmel Corporation, San Jose, CA (US)
- (21) Appl. No.: 12/421,696

DOCKF

R

M

(22) Filed: Apr. 10, 2009

#### **Related U.S. Application Data**

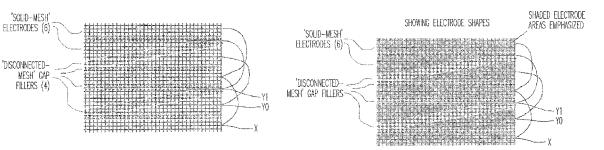
(60) Provisional application No. 61/115,032, filed on Nov. 15, 2008.

#### **Publication Classification**

(51)	Int. Cl.	
	G06F 3/041	(2006.01)
	G06F 19/00	(2006.01)
	H05K 3/30	(2006.01)
(52)	U.S. Cl	

#### (57) **ABSTRACT**

A two-dimensional touch sensor comprising a plurality of electrodes arranged in a mesh pattern on a substrate. Each electrode is formed by interconnected metal traces, the metal being intrinsically opaque, but the metal traces being sufficiently narrow to be practically invisible. The metal traces have a width less than or equal to  $10 \,\mu\text{m}$  and occupy less than or equal to 5% of the area of each electrode. The electrodes can be deposited additively via a printing process, for example using copper as the metal. The narrow width of the tracks allows the film to be highly transparent, since the electric field used in capacitive touch screens can be made to propagate with very low metal densities.



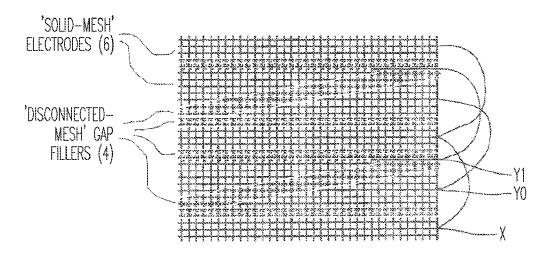


Fig. 1A

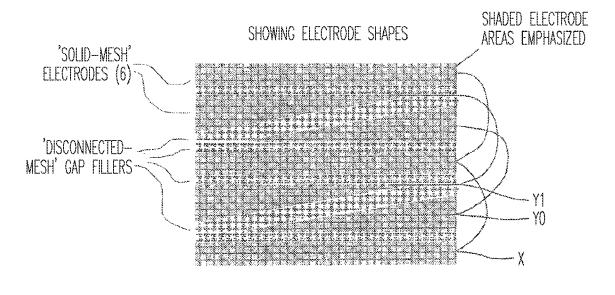
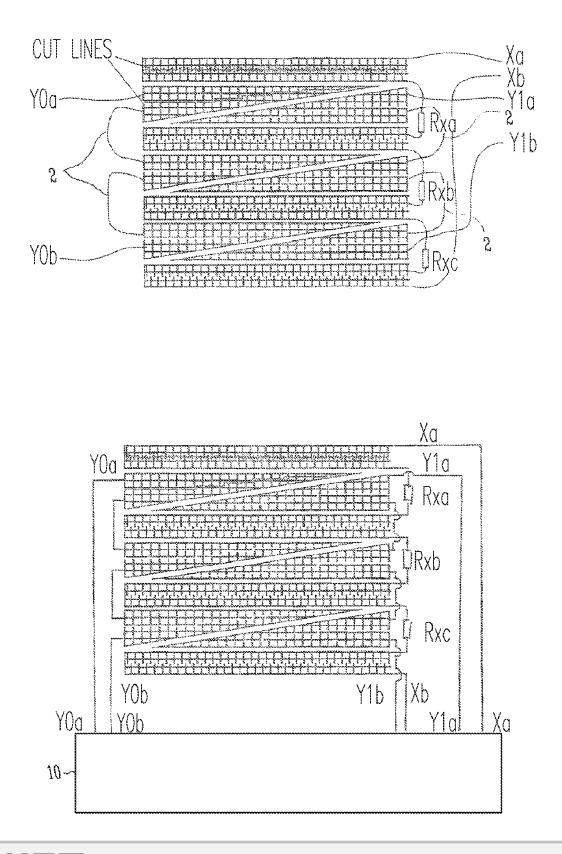


Fig. 1B



DOCKET A L A R M Find authenticated court documents without watermarks at <u>docketalarm.com</u>.

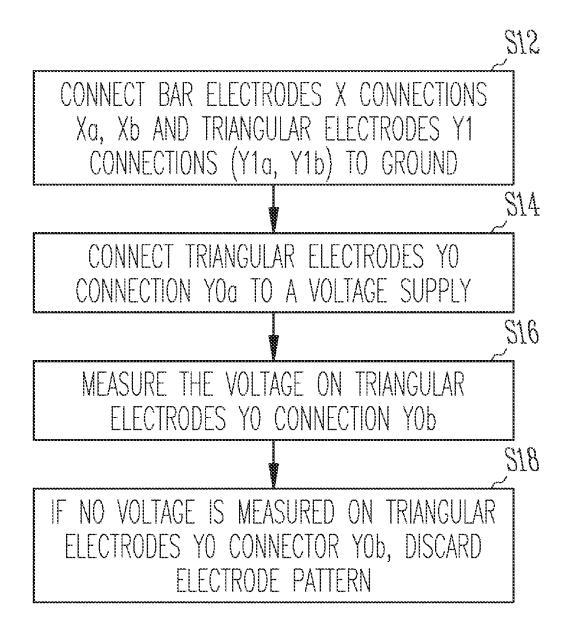


Fig.2C

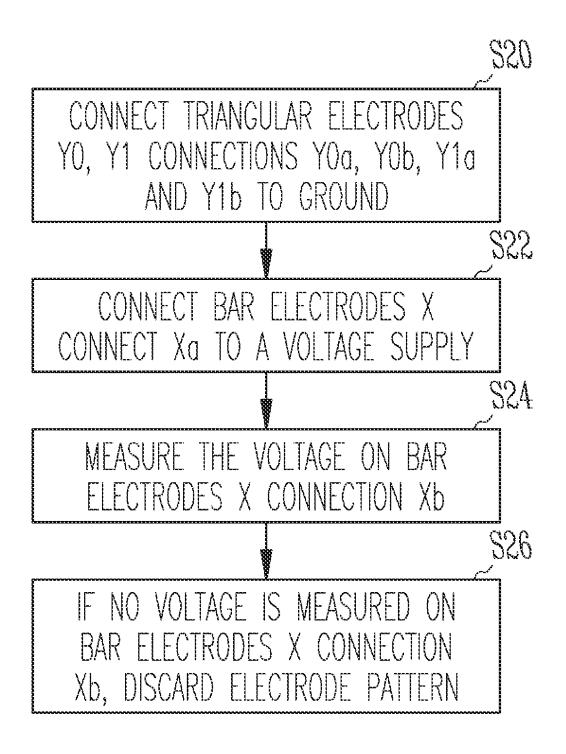


Fig.2D



## DOCKET A L A R M



# 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.