IDEX ASA

Enabling the mass market for secure ID

IDEX
THE ID OF YOU

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CEO

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IDEX VISION

Secure and Simple ID by biometric authentication of every device you own

IDEX MISSION

To be the leading supplier of best in class fingerprint sensors for mass markets

IDEX BUSINESS PROPOSITION

1. Mobile device adoption driving $multi-billion fingerprint sensor market
2. Core patents & Apple X-licence protection for low cost sensors
3. Industry consolidation: market addressable by IDEX and 2 key vendors
4. Imminent product insertion; mass production via established partners

IDEX' OFFERING:

SMARTFINGER®

LOW COST

ACCURATE & SECURE

THIN & FLEXIBLE

IDEX POSITIONED FOR GROWTH

Pioneering sensor IP	*Core patents*	*SmartFinger® Technology for Smartcards*	*Commercialisation for mobile devices*
1996-1999	**2000-2007**	**2008-2012**	**2013-**
Capacitive sensor patents	**Key patents** **Cross licensing ST, UPEK & IDEX**	**Silicon & Polymer sensors** **Oslo Axess listing**	**Expanded 13 to 25 staff: Norway and US** **Mobile comms partner & increased scope** **$14M raised including WWTT strategic**

>$60M invested in **best in class** fingerprint sensor technology

Key originators:
IDEX, AuthenTec, ST, UPEK, Fingerprint Cards, Infineon, Fujitsu, Sony, Atmel, Hitachi, NEC, Atrua, Veridicom, Validity, PicoField

Remaining vendors:
Apple acquire Authentec (UPEK)
IDEX (acquire PicoField),
Fingerprint Cards, Validity (Synaptics)

Multiple sensor technologies:
Capacitive, optical, thermal, pressure

Surviving mass market technology:
Capacitive deployed in volume
(Laptops, ID terminals and touchscreens)

FINGERPRINT SENSOR MASS MARKET: VALIDATION FOR IDEX

- **IDEX 21 core patent families for capacitive sensors from 1997**
  - Cross licence with Apple: won through litigation with STM/UPEK 2007
  - UPEK acquired by AuthenTec/Apple
- **Comprehensive agreement with global mobile comms partner May 2013**
  - Important scope expansion Oct 13 demonstrating further traction
  - Provides strong channels to market and mass industrialisation
- **Worldfair $9M strategic investment September 2013**
  - Invested in two fingerprint sensor competitors previously
  - Experienced Asian based biometric product business
- **Validity & PicoField founders join IDEX America September 2013**
- **Significant activity with strategic industry players due to compelling IP & product roadmap and only 2 principal independent vendors**



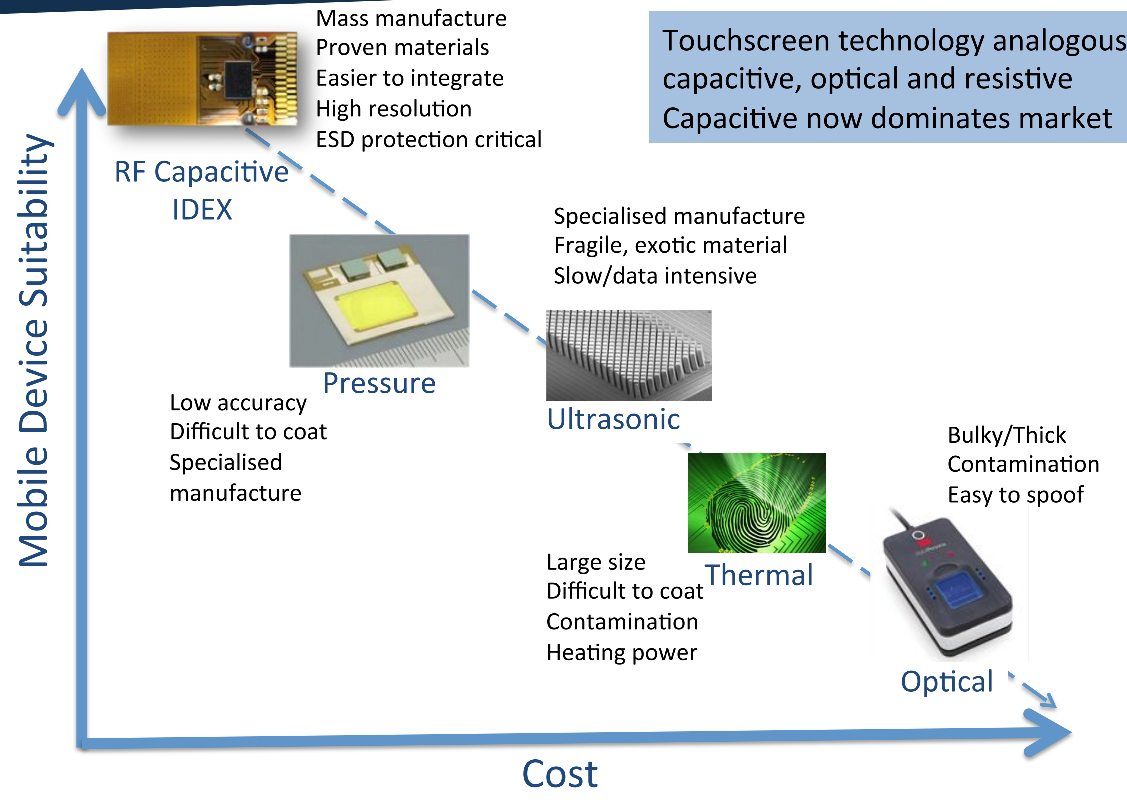

IDEX MARKET STRATEGY

Diverse multi-billion unit MASS markets enabled by low cost secure biometric authentication

- Leverage strong technology & patent portfolio: safe haven
- Low cost, thin, secure, accurate sensors and algorithms
- Strengthened team to deliver commercial exploitation
- Developing global partners for mass market scaling
- Limited competitors with high barrier to entry

SENSING TECHNOLOGY FOR MOBILE APPLICATIONS

Touchscreen technology analogous: capacitive, optical and resistive
Capacitive now dominates market



FINGERPRINT SENSOR MASS MARKET: VALIDATION FOR CAPACITIVE TECHNOLOGY

Microsoft

"We investigated every single biometric trait, the only solid technology is fingerprint"

"Capacitive readers are going to be the choice"

Apple → AuthenTec

Apple acquisition of AuthenTec >$350M Q4 2012
Iphone 5S capacitive touch sensor launch Q3 2013

Synaptics ↔ validity

Synaptics acquisition of Validity >$250M Q4 2013
"Two part capacitive sensor e.g. chip on flex makes sense"

Capacitive sensors deployed in laptops, ID terminals >100 millions
Capacitive swipe sensors launched in Android mobile devices H2 2013

IDEX PATENT STRENGTH: CAPACITIVE SENSORS

Extensive first to file patent portfolio in ACTIVE RF capacitive fingerprint sensing

21 patent families granted, 5 in filing: capacitive swipe, touch, IN-glass and Livefinger™

Patents verified in a litigation (UPEK/ST-M) and cross licence recorded with Apple

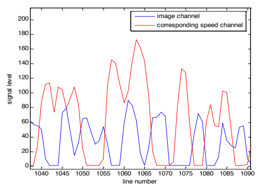
IDEX fundamental patent coverage is highly attractive and important to OEM customers

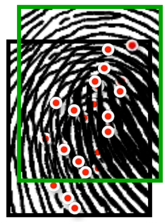
CORE PATENTS	APPLICATION
IMAGE RECONSTRUCTION ON-THE-FLY-IMAGING	High performance fingerprint authentication with swipe sensor Navigation functionality
ANY MATERIAL SENSOR	Lowest cost touch sensor Fingerprint scanner separated from small, low cost silicon chip Flexible form factors for swipe and touch
THROUGH MATERIAL SENSING	Sensor IN cover glass e.g. touchscreen Most compact sensor
ACTIVE CAPACITIVE SENSING	Fundamental to low cost swipe and touch sensors Anti-spoof – electrical sensing not optical LiveFinger™ detection

IDEX HIGH PERFORMANCE SOLUTION: HARDWARE AND SOFTWARE VALUE ADDED

- **IDEX SmartFinger®** sensors and algorithms offer best in class biometric performance
- **IN SCREEN "BUTTON FREE"** integration: sensing through material for highest quality
- Swipe sensor: unsurpassed user experience from imaging patents and >9mm width
- Touch sensor: disruptive cost leveraging **patented two part sensing in low cost material**

SmartFinger® capacitive sensor	Image Algorithm Wide angle & speeds	Low power Processing	Secure local matching	
Acquire fingerprint data →	Reconstruct image →	Extract features →	Match vs. template →	YES/NO





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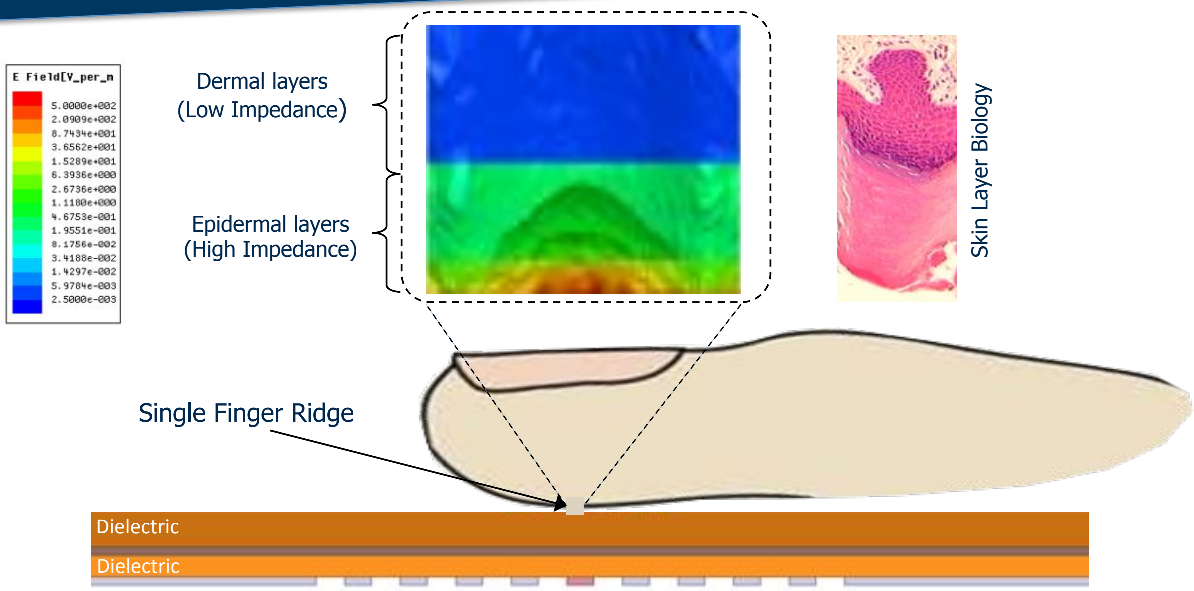
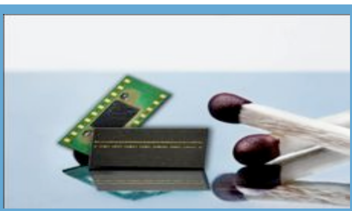
ELECTRICAL SENSING

Dermal response enables Anti-spoof measures

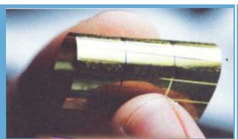
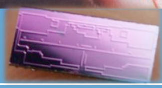


IDEX Livefinger patent: bio-impedance sensing

IDEX COMPELLING PRODUCT ROADMAP

Swipe Sensor	Touch Sensor	In Display
		
Qualification phase: End 2013 sample mobile market Q2 2014 Product Insertion Volumes H2 2014 Durable Polymer sensor with miniature Silicon ASIC Best in class performance Mass production partner	Development phase: Mid 2014 market launch Durable Polymer sensor with extended small Silicon ASIC Disruptive price with high performance Mass production partner	Technology phase: Swipe and touch Unique IN glass sensing: Ultimate solution Convergence of capacitive touchscreens with fingerprint sensing

IDEX TWO PART CAPACITIVE SENSOR ADVANTAGE

	IDEX: polymer swipe	IDEX: polymer touch	Competitive Silicon touch	Apple Silicon touch sensor
PROPRIETARY SENSOR OVERCOMES COST DRIVEN BY SILICON AREA	 	 		
MOBILE DEVICE SENSOR SIZE	9mm Typical Silicon only 7mm swipe	8x8 or 10x10mm Optimum for secure mobile devices	8x8 or 10x10mm **3x area vs. Apple**	<5x5mm Acceptable user experience
SILICON ASIC SIZE	10sq. mm	20 sq. mm	100 sq. mm	36 sq. mm
MASS VOLUME SELLING PRICE	**$1-$2**	**Major reduction vs. competitors**	**$5-$8 H1 2014**	**COST $7-$10**
	Low cost flex polymer sensor thin cosmetic coating	100 sq. mm low cost flex polymer sensor thin cosmetic coating	Cost scales vs. IC area **Existing size secure ID niche market 200 sq. mm >$12** Fragile silicon IC	Reduced biometric security due to size Protection: expensive sapphire glass lens

FINGERPRINT SENSOR MOBILE DEVICE VALUE CHAIN

Handset Manufacturers

SAMSUNG NOKIA SONY MOTOROLA HUAWEI

Semiconductor Integrators

ATMEL CYPRESS PERFORM maxim integrated QUALCOMM intel MARVELL Synaptics

Sub-Module & Packaging Integrators

SEMTECH CrucialTec DreamTech partron

Fingerprint Sensor Component Vendors

AuthenTec IDEX THE ID OF YOU FINGERPRINTS validity

Silicon Semiconductor Manufacturers

tsmc SMIC UMC SAMSUNG

IDEX positioned strongly as one of two independent vendors

IDEX MASS MARKET OPPORTUNITY

2015 Consumer Electronics Cards Other markets **2017**

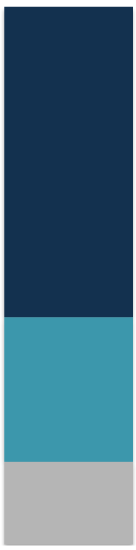
Touch sensor adoption >4 times average price vs. swipe greatly increases market

1 billion Consumer Electronics with fingerprint sensors sold, Swipe sensors ASP 1,1 USD

150 million cards, ASP 2,5 USD

130 million other devices, ASP 4,5 USD

Total Industry Revenue 2,0 billion USD



1,5 billion CE with fingerprint swipe sensors sold, ASP 0,9 USD

700 million cards, ASP 2 USD

400 million other devices, ASP 3 USD

Total Industry Revenue 3,95 billion USD

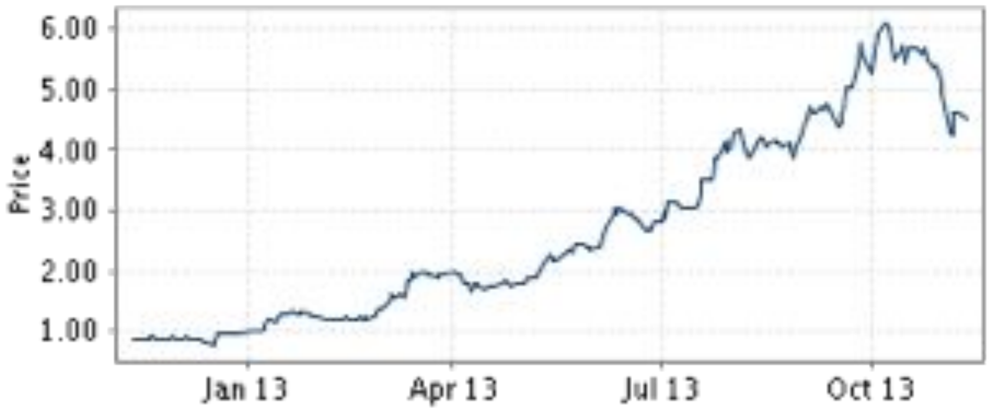
IDEX volumes expected H2 2014: significant market across three key vendors
3.4B biometric users on mobile devices by 2018 generating $8.4B (GI Oct 2013)

IDEX PROPOSITION

Cusp of significant growth in $ multibillion opportunity for biometrics

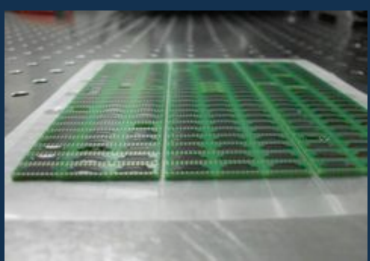
- IDEX $260 million USD market capitalisation November 2013
- Opex $1.8M Q3 2013 (10.8MNOK) – excludes subscription right costs (8.5MNOK)
- Cash balance $10.2M end Q3 2013 (60.5MNOK)
- $9M raised with strategic investor to fund rapid global R&D & sales expansion
- Picofield IP asset acquisition ($4.5M)

IDEX SHARE PRICE DEVELOPMENT (NOK)



IDEX OUTLOOK

- **Customer qualification of IDEX swipe sensor for mobile comms end 2013**
- **Dual sourced volume supply chain in preparation for Q2 2014 product insertion**
- **Accelerate touch sensor sampling mid 2014 leveraging IDEX/Picofield assets**
- **Implementing compelling product cost and technology roadmap**
- **Establishing global sales and support in America and Far East**
- **Strategic partnerships driving IDEX swipe & touch insertion and market share**



SUMMARY

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- High barrier to entry: core patents for low cost, compact capacitive sensors
- Expanding swipe & touch patents & IP: Apple Cross license, PicoField IP acquired
- Launching swipe for mobile devices & implementing disruptive cost touch sensor
- Mass market sensor adoption in mobile devices underway, sparked by Apple
- Validation of IDEX & capacitive sensors towards a multi-billion dollar opportunity
- M&A activity: only 2 principal independents with capacitive fingerprint sensors
- Value upside: mobile market now; smart cards, wearables & IOT the future…