

Mobile Payment Technology Patent Portfolio Available for Licensing

Summary

- 200+ Worldwide Patents/Applications Available
- Pioneer High-Frequency (e.g., 2.4 GHz) Mobile Payment Technologies
- Faster, More Secure Than Other Technologies (e.g., NFC)
- SIM-Card Based

Nationz Technologies
Syncoda Technologies

Representative US Patents/Applications

- US8002196 (B2) RADIO FREQUENCY IC CARD DEVICE WITH VERY HIGH FREQUENCY
- US8061625 (B2) RADIO FREQUENCY IC CARD DEVICE WITH VERY HIGH FREQUENCY
- US8369819 (B2) DOUBLE FREQUENCY-CONVERSION RECEIVING CIRCUIT AND METHOD USED FOR RADIO-FREQUENCY SIM CARD
- US2011227707 (A1) - METHOD AND COMMUNICATION SYSTEM FOR CONTROLLING COMMUNICATION DISTANCE OF RF SIM CARD WITH THE AID OF TAG IDENTIFICATION
- US2011241840 (A1) - METHOD AND DEVICE FOR IMPROVING COMMUNICATION DISTANCE ACCURACY OF A TRANSACTION SYSTEM VIA TEMPERATURE COMPENSATION
- US2011151900 (A1) - SYSTEM, METHOD, AND DEVICE FOR RADIO FREQUENCY COMMUNICATION



Representative US Patents/Applications – Continued

- US2011165862 (A1) - RF SIM CARD, CARD READER, AND COMMUNICATION METHOD
- US2011210828 (A1) - Method for Card-Reading Anti-Collision with Automatic Frequency Hopping
- US2012057701 (A1) - MOBILE TERMINAL WITH ENCRYPTION CHIP AND RELATED NETWORK LOCKING/UNLOCKING METHOD
- US2012297210 (A1) - INTEGRATED CIRCUIT (IC) CARD SYST



Technology Overview

- Plug-and-play technologies (e.g., SIM-Card-Based Mobile Payment Add-On Capabilities)



Competitive Advantages

- Instead of getting a new phone with mobile payment capability, users can simply replace a SIM card, or plug in an add-on card, to add such capability to existing mobile phones

**Replace your SIM/SD card
with RCC payment card**



**Turn your cell phone
into an E-Wallet!**



Competitive Advantages

RCC – Fast Deployment

◆ **Users - Just Switch Card**

- No need to change cell phone.
- No need to change phone number
- No need to install software (SIM card mode)




◆ **POS – Fast Alteration**

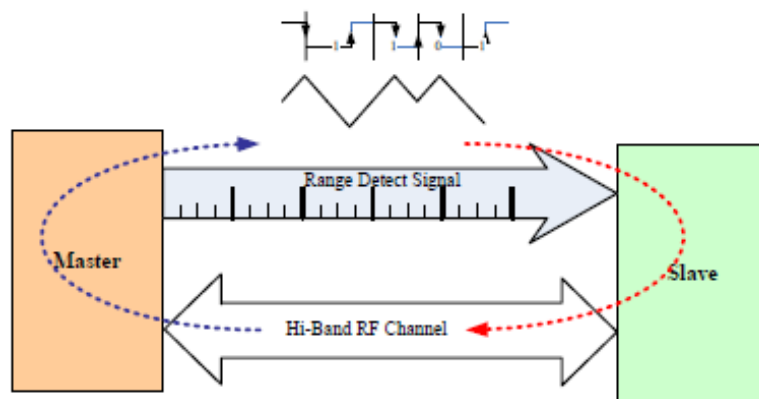
- Does not change billing system
- Does not affect other applications



Competitive Advantages

- Achieving Range Control with Magnetic Field
- Fast Data Flow with RF (e.g., 2.4 GHz)
- Extra Layer of Security

Palm	10cm	ULF /LF	Contactless Payment Power Charging	
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➤ ULF: 2KHz magnetic signal has better penetrating power

➤ LF: 100K~125KHz magnetic signal has good penetrating power



Applications:

Online Payment

Users can switch on Mobile Payment accounts through text messages, internet or mobile operators' counters.

*Online Shopping
& Public Services*



Nearfield Payment

Realized by tapping RFID-SIM/SD card with POS.

*Public Transportation
& Convenient Stores*



Applications:

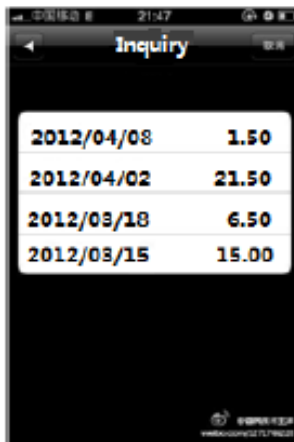
- Mobile Credit Cards
 - Large Transactions
- Mobile Payments
 - Small Transactions
- Mobile Banking
 - Mobile Remittance
 - Mobile Bill-Pay



Applications:

City Pass

- Public Transportations
- Convenient Stores
- Parking
- Over-the-air Recharges



Inquiry	
2012/04/08	1.50
2012/04/02	21.50
2012/03/18	6.50
2012/03/15	15.00



Applications:

Company/Campus Cards

- Attendance Management
- Cafeteria/Convenient Stores
- Parking
- Facility Management



Applications:

Mobile Ticketing

- Online/Telephone Order System
- Download & Store Tickets on Cell Phone
- On-spot Ticket Checking



Transportation Tickets, Movie Theaters, Tourist Attractions, Exhibitions, Concerts...



Applications:

Coupons & Advertisements

- **Send out Coupons**

- On-spot Terminals, Text Messages, Online

- **On-Spot Ads**

- Push Messages within 10 M Radius



Product Line

- Full Range of SIM, SD Products

- Chips: Security Chips , SD Controller
- Firmware: SIM COS, SD Control, Finance COS
- Cell Phone Software
- Issue System
- Independent Intellectual Property Rights

- Reader Module

- Chip: Security Chip
- Firmware: Reader Firmware



Mobile SHENZHENTONG

Mobile SHENZHENTONG

- Launched in June 1st, 2011.
- Covers all city bus lines and subway system
- SHENZHENTONG and China Mobile have issued more than 800,000 cards

Applications

- Public Transportations, Retails, Parking, Gas
- Company Card, Reading Card, Retail Membership Card(Shopping Mall)
- Coupons, Mobile-Tickets

A screenshot of a mobile application interface titled 'Inquiry'. It displays a table with transaction history. The status bar at the top shows the time as 21:47. The bottom of the screen has a small logo and the text 'SHENZHEN TONG' and 'www.szszhentu.com'.

About Nationz

- Founded in March 2000, stock symbol: sz.300077
- Engage in information security and communication IC design and solutions
- Headquartered in Shenzhen
 - ◆ Beijing Branch
 - ◆ Shanghai Branch
 - ◆ Silicon Valley R&D Center, CA
- With a team of 700 employees
- By 2011, applied over 600 patents, including more than 430 related to Mobile Payment



www.nationz.com.cn



Product Lines



**Network Authentication
(Online Banking/USBKEY)**



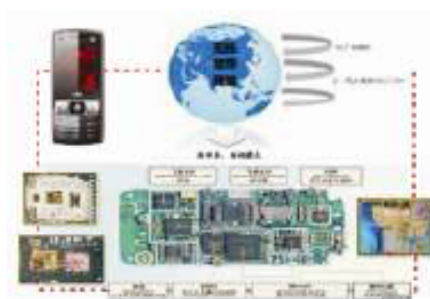
Mobile Payment Solutions



Smart cards



Trusted Computing Solutions



**TD-LTE(4G) , PA Chips &
Solutions**



Mobile TV Solutions



Core Competence

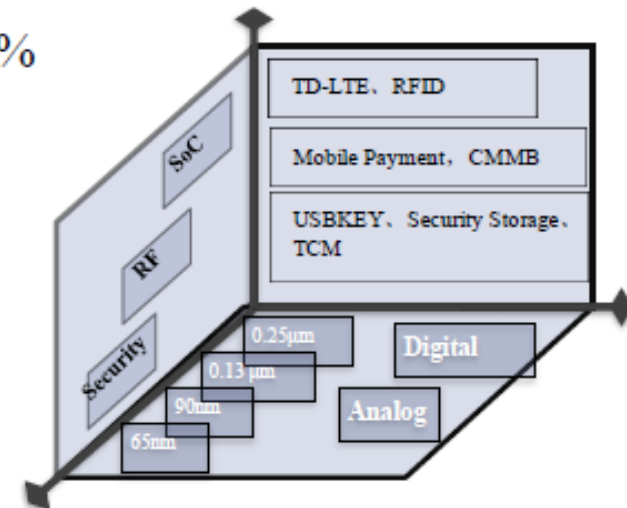
◆ **Leader** in e-Bank security chips market

- Sold over 300 million chips, account for 80% market share.
- Biggest Supplier in China.

◆ **Innovator** for Mobile Payment

- Ground-breaking technologies & Business Solutions

◆ **Pioneer** in 4G Mobile Network RF technology



CONTACT

- Please forward all inquiries to: FMA@syncoda.com
- Or call Dr. Finn (Feng) Ma (608)334-4315
- www.syncoda.com

About Syncoda:

- All-PhD Level Patent Professionals/Engineers
- Worldwide Patent Filing, Prosecution, and Licensing Services
- Provide Service For Equity Starting with Patent Filings
- Strategic Partner with Nationz Technologies and Top Universities and Research Institutes in China



Smart Wireless Mesh Network Technology Available for Licensing

Summary

- Best-in-class Complete Wireless Synchronous Mesh Network Technology
- Available for licensing or M&A
- 20 km communication range
- Applicable to smart grid, city-wide wireless coverage, emergency coverage, telecom subsystems, enterprise applications

TLYH Ltd.

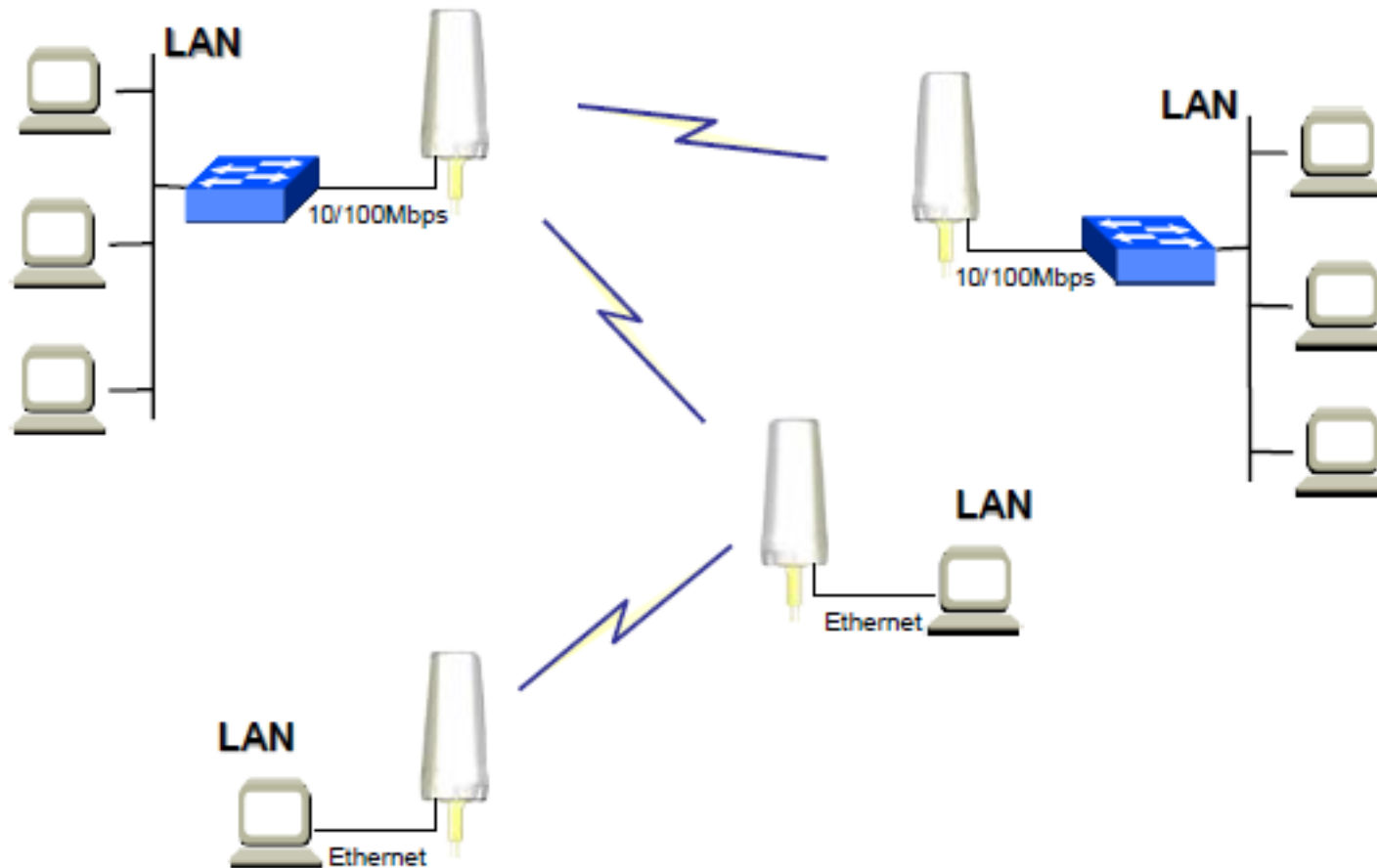
Syncoda Technologies



System Overview



Network Construction As Simple As Layer 2 Ethernet Switches – Transparent Technology

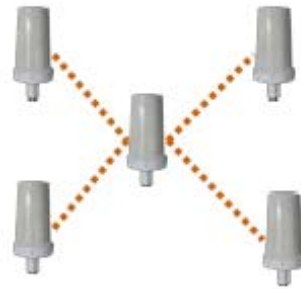


Distributed Routing Technology

- Robust Networking Capability



a) one-hop network



b) Star network



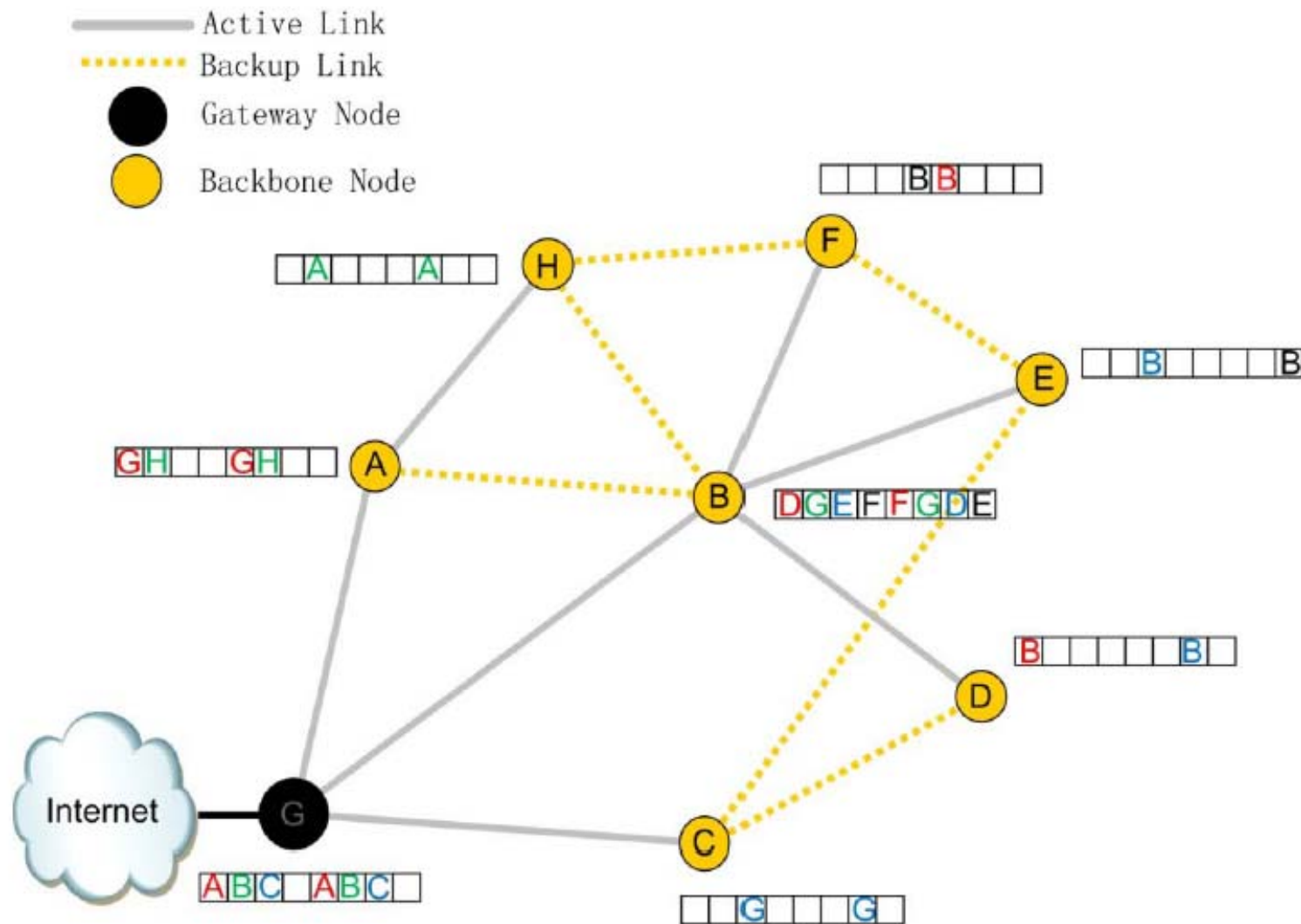
c) tree network



d) chain network



High Bandwidth Capacity



Competitive Advantages

- Directional Time Division Multiple Access Protocol
- Maximizing space domain and frequency domain with smart antenna array
- Low bandwidth deterioration after multiple hops
- Capable of large-scale network deployment
- Half the cost of systems of similar capabilities



Specs

- Frequency Band: 5.8/3.5 GHz etc.
- Channel Width: 20 MHz
- Range: 20 km
- Modulation Rate: 6—54 Mbps
- Encryption: AES-128 for all wireless links
- Weight: ≤ 10 kg
- Power: ≤ 20 W
- Input Voltage: DC 24 V



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About Syncoda:

- All-PhD Level Patent Professionals/Engineers
- Worldwide Patent Filing, Prosecution, and Licensing Services
- Provide Service For Equity Starting with Patent Filings
- Strategic Partner with TLYH and Top Universities and Research Institutes in China

About TLYH Ltd.:

- Spin-off from top electronics research institute of China



Other Technologies for Transfer/Licensing

Summary

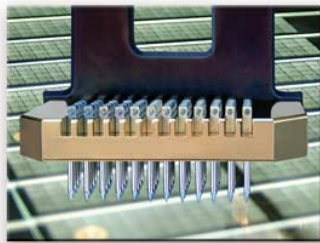
- 3-D Biochip
- Higher-Sensitivity CT Imaging
- Inter-Facing Solar Panels
- Improved Monte Carlo Simulation Algorithm
- Canned Vacuum

1. 3-D Biosensor Chips

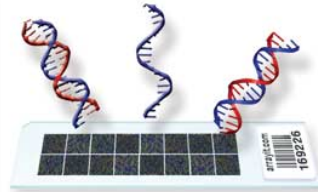
State of the Art

- Biosensor chips are 2-dimensional:

1. Manufacture CGH microarrays



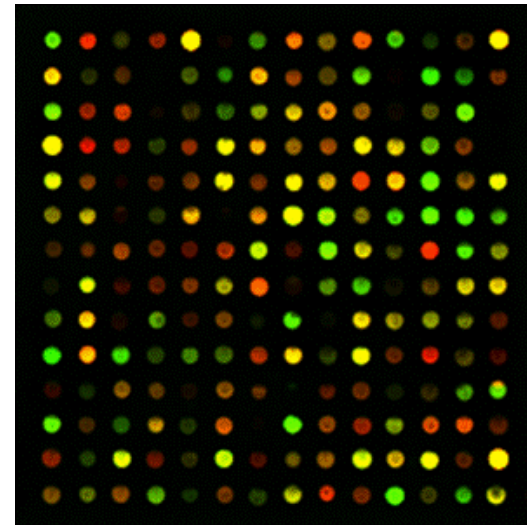
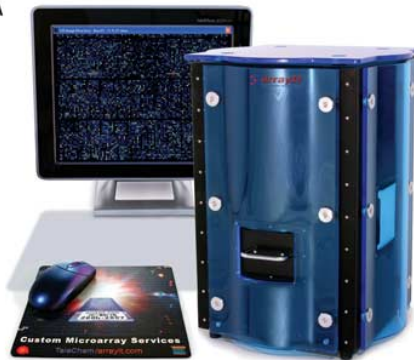
2. BACs Oligos cDNAs



3. Hybridize genomic DNA
two (2) color

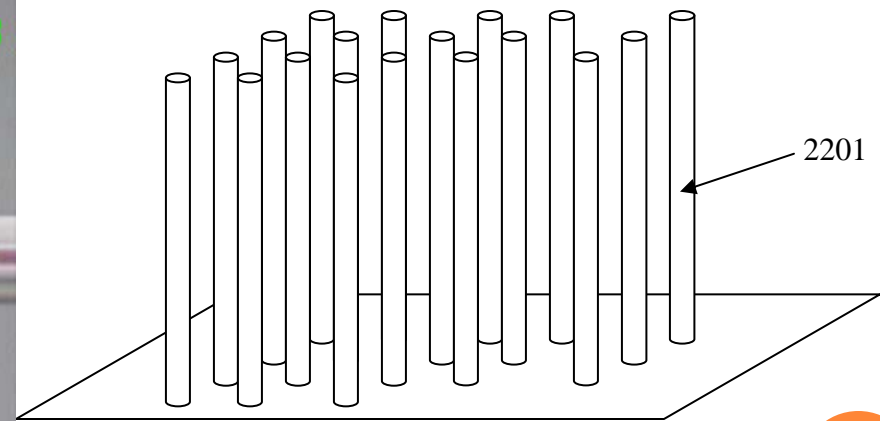


4. Scan and analyze



Syncoda's 3-D Biosensor Chip Technologies

- 1-D micro channels having fixed probes in the inner surfaces to react with sample droplets
- 2-D and 3-D arrays assembled with the 1-D channels



Competitive Advantages

- Much lower cost as the building blocks are 1-D micro channels
- Much faster reactions using 3-D arrays
- Can perform 3-D bio-computation

IP Status

- PCT and U.S. patent applications filed in 2011/2012; CN patents issued 2012



2. Higher Sensitivity CT Imaging

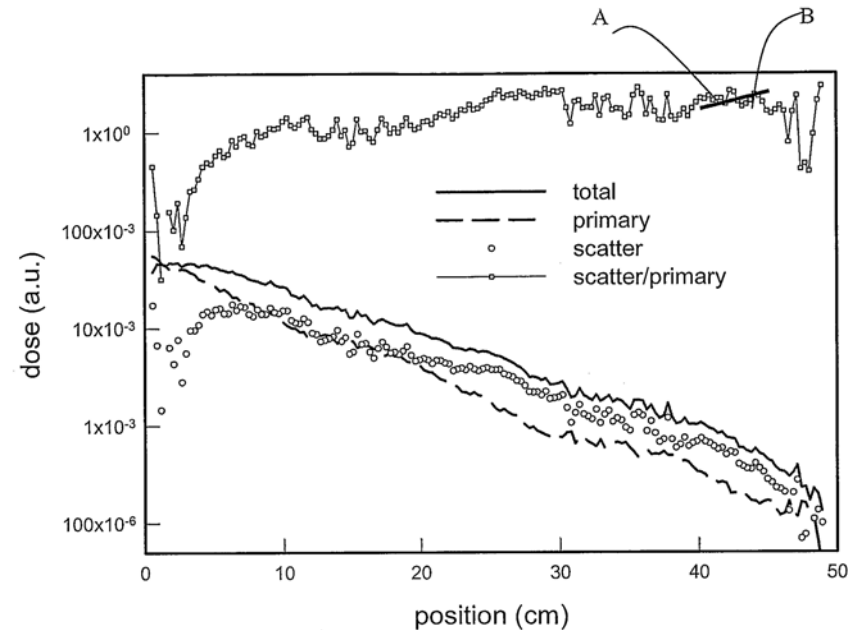
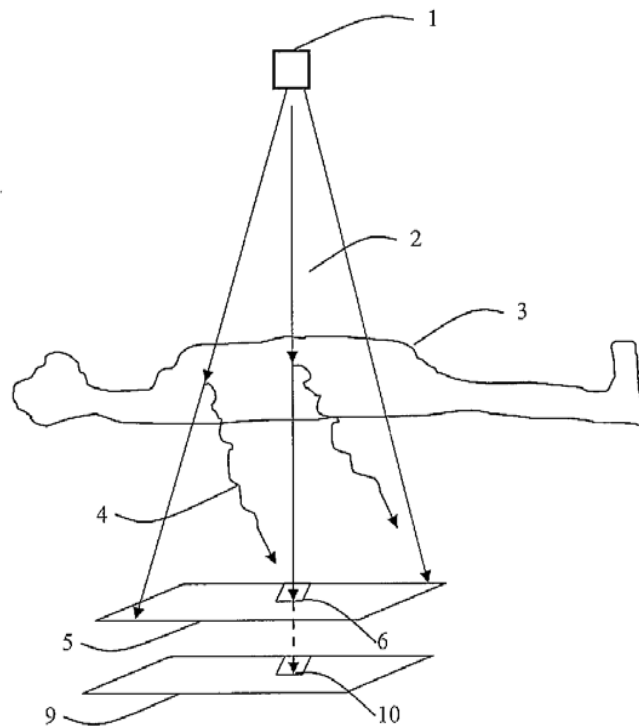
State of the Art

- Imaging with mixed primary and scattered radiation
- Less sensitivity, lower resolution, higher radiation dosage to the patients



Syncoda's Separate Primary-Scattered Radiation Technology

- Using image reconstruction techniques and multiple-layer detector arrays to separate primary and scattered radiation



Competitive Advantages

- Higher sensitivity, higher resolution, lower radiation dosage to the patients

IP Status

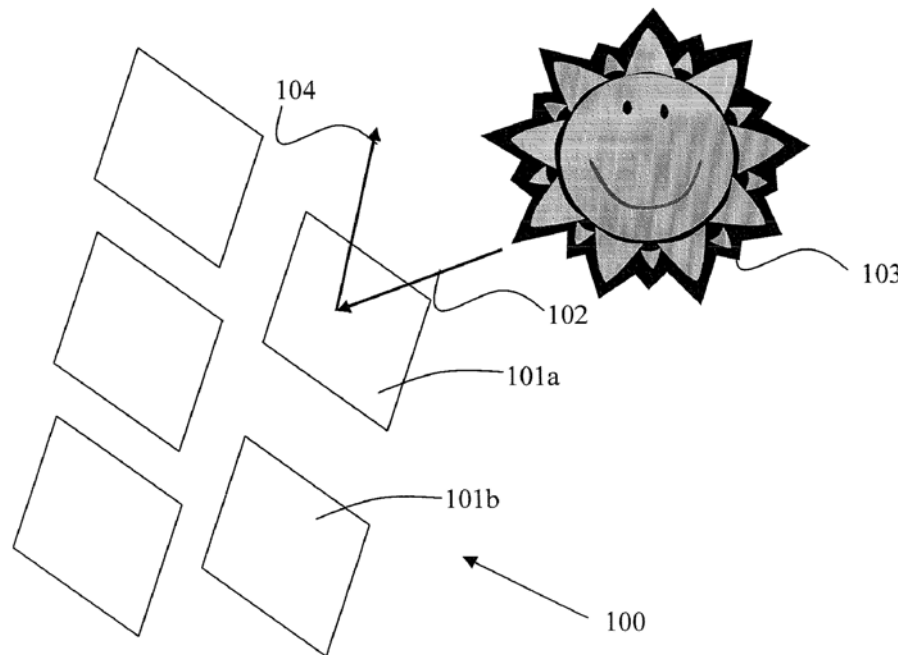
- U.S. Patent No. 8,238,513 issued in 2012; continuation application filed in 2012



3. Inter-Facing Solar Panels

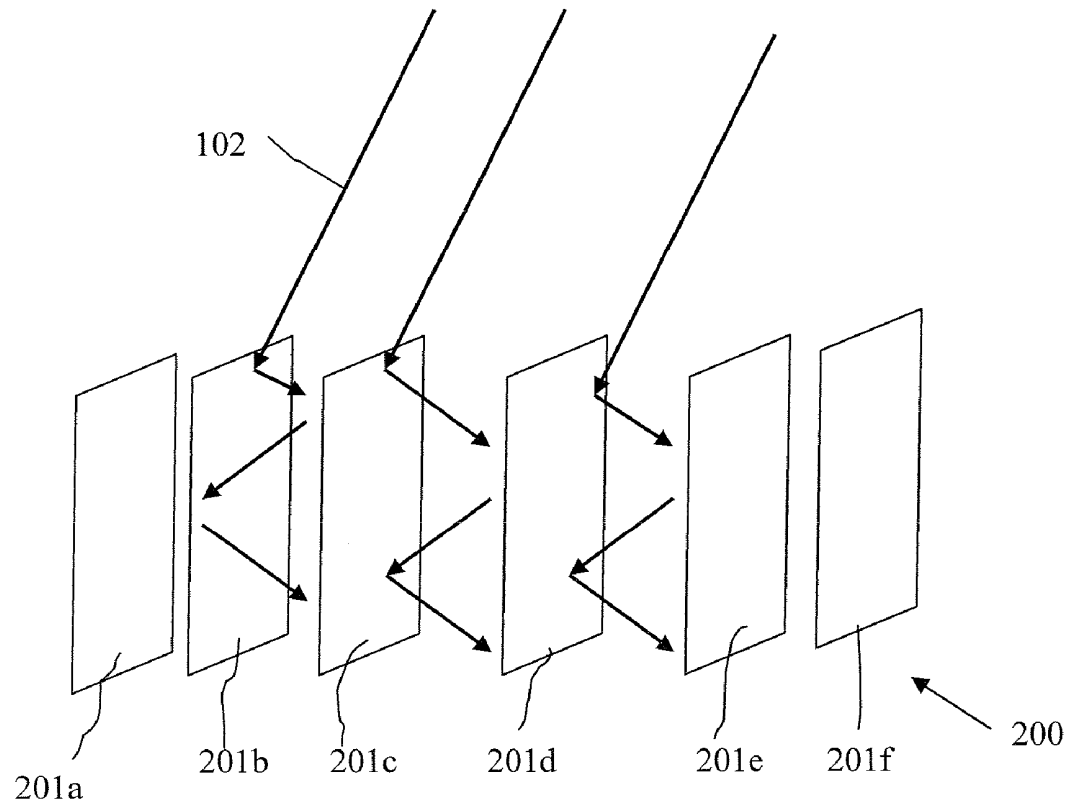
State of the Art

- Solar panels facing the sun
- Reflection reduces efficiency



Syncoda's Inter-Facing Solar Panels

- Vertical solar panels reflect sunlight back to each other



Competitive Advantages

- Higher efficiency, lower surface area, especially for low-cost organic photovoltaic materials

IP Status

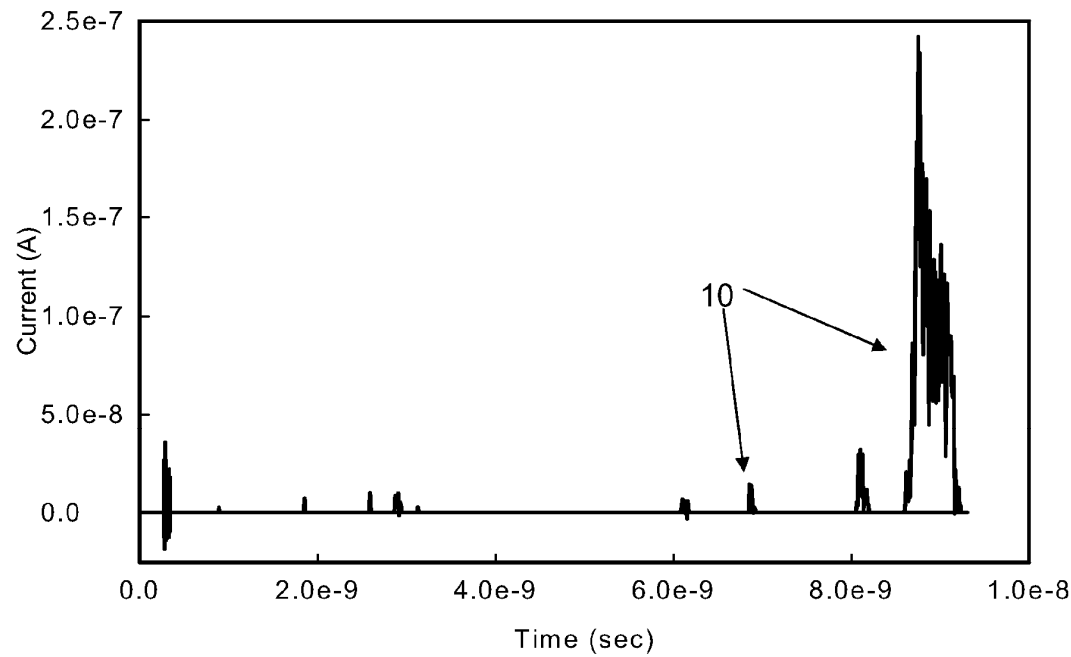
- U.S. Patent Application being prosecuted



4. Improved Monte Carlo Code

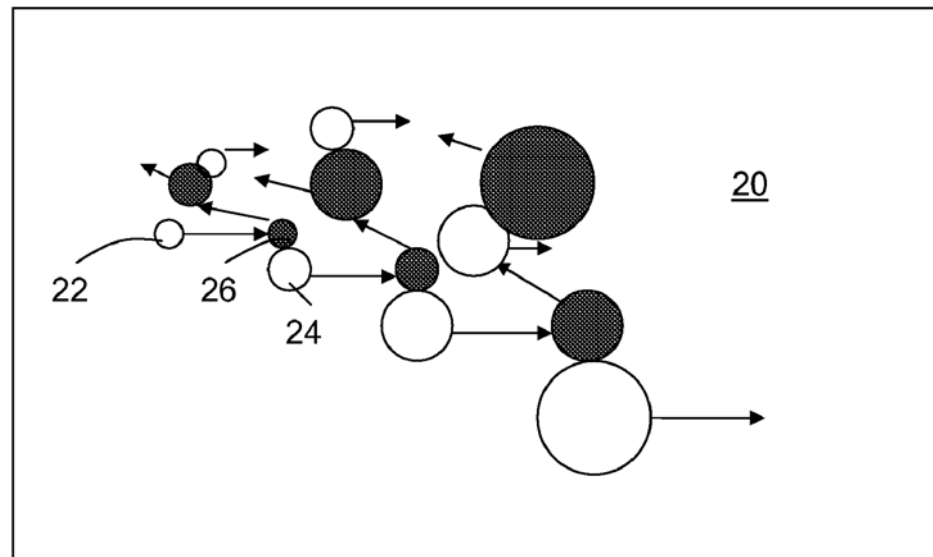
State of the Art

- Monte Carlo simulations slow
- Individual “histories” being simulated



Syncoda's Monte Carlo Simulation Model

- Variance reduction techniques to improve speed; applicable to
- New business model of a central company with supercomputers contracting simulation works



Competitive Advantages

- Higher computing efficiency
- Reduce cost for individual companies who need simulation resources

IP Status

- U.S. Patent No. 8,239,176 issued in 2012



5. Canned Vacuum

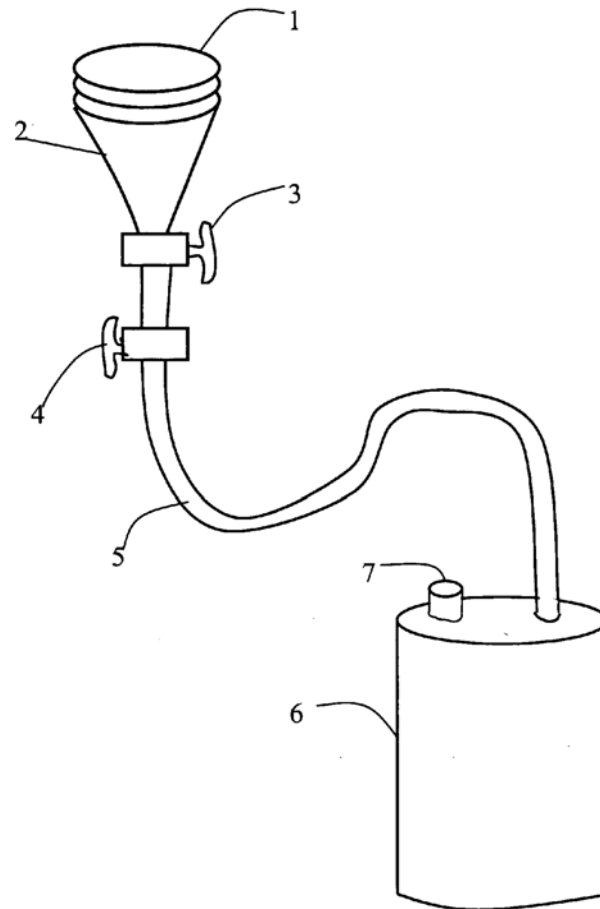
State of the Art

- Pumps are needed to generate vacuum
- Vacuum very useful in many applications



Syncoda's Canned Vacuum Technology

- Pre-evacuated container provides vacuum
- Applicable to many fields



Competitive Advantages

- Disposable, low-cost vacuum source
- Can be used as disposable pee bags for travel needs

IP Status

- U.S. Patent Application Notice of Allowance received in April, 2013



CONTACT INFORMATION

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Syncoda brings together experienced intellectual property professionals and inventors through an equity-based arrangement to develop intellectual properties for the technology transfer market.

