Gulmen Digital

DIGITAL PRINTING & CUTTING ON DEMAND

THE CODER
CORPORATE PROFILE

Image Coding | Sound Coding

Now Scanning: Every Surface, Every Sound
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THE CODER

Now Scanning: Every Surface, Every Sound

- THE CODER is specialized in marketing/Security and big data consulting base on unique coding technology of image and sounds.
- THE CODER provides differentiated marketing experience, linking data to mobile and web space by inserting data into all objects and sounds.
- Through THE CODER's technology, information can be delivered conveniently and extensively as such as IOT platform.

Flexibility
Through Invisible Digital Encoding Technology, become a frontier company to lead the Fourth Industrial Revolution, Instead of exist solution as like Barcode, QR, NFC and RFID

Accessibility
Invisible Code market base on device and Smart Phone will forward to huge big data market in near future

Feasibility
The Coder continues to be innovative by using its adaptive developments to create new applications and uses
THE CODER
We Make Your Products Smarter

VISION
IOT Platform leader through digital coding on all object and sound

Cloud + Mobile + IoT = “Reality and Internet convergence makes your life better”

THE CODER prepare totally new smart market through IOT technology what market needs
Technology

- Image coding Technology (Security, Web)
- Sound coding Technology
Mobile Application

App Store Download the "The Coder Scanner" Application

Support Embedded & S.D.K to all application

- Size: 6.1MB (Android), 11MB (iOS)
- Available: iOS7.1 Version.
  - iPhone, iPad & iPod touch, Android, etc.
- 98.8% Stability. (Failure rate: 0.78% with iOS)
  (Failure rate: 1.3% Android)

Available on the iPhone App Store
Available on Google Play
**Technology**

**Image Coding**

**About image coding**
Insert encryption digital code on every object surface.
Achieve information with simple scanning.

**PROCESS**

1. **Encoding**
   [Code]
2. **Transmit**
   [Print]
3. **Installing**
   [THE CODER App]
4. **Scanning**
   [Image]
5. **Enjoying**
   [Variety contents]

**BENEFIT**

- **Using Big Data**
  Insert code on every object surface,
  Using or edit achieved information

- **Efficiency**
  No need extra cost

- **Variety Information**
  Multi coding available

- **Communicating information with image**
Marketing
Image coding technology is an industry that predicts future demand from customers who need innovative advertising and sales.

Security
Image coding technology is a perfect solution to Certificate of authentication without any concerns of duplicate.

Traceability
Through individual code and GPS, supports optimum logistics management and distribution solution.
Technology

Image Coding

Business area

THE CODER supports auto-connecting & pairing between product and mobile device with simple label scan

Auto connecting
Right after read label, support auto connect wireless devices

Marketing
Right after read label, link to shopping site for simple purchase

New business area
Available to apply audio coding technology into several business area
Technology

Image Coding (Security)

About Certificate of authentication

Through invisible encryption code, protect brand images and value from imitation

PROCESS

01 Encoding [Encryption code]
02 Printing
03 Installing [THE CODER App]
04 Scanning [Certificate of authentication]
05 Certification

BENEFIT

- Companies can prevent product duplication or imitation products through the image coding solution, enabling consumers to make sure they are purchase authentic product with simple step.
- Expect to enhance Brand Loyalty and assign a unique serial number to each product.
- Image coding protect companies benefit from imitation product, and it also support management system interface as like distribution management and inventory management.
Technology

Image Coding (WEB)

About Web coding Tech
- Insert invisible encryption code on Web image and verifying information transfer and authenticity

PROCESS
- Assign and insert individual codes to the product information image.
- Through scanning product information on the web, verifying genuine product.
- Prevent product images from being falsely used, customers purchase the product on on-line without doubt

BENEFIT
- Copyright protection
  Solutions to prevent damage and copyright issues caused by image theft of Internet shopping malls
- Marketing
  Various events can be performed on image scanning on the web
- Beyond advertising
  Support Virtual Shop with simple scanning
Technology

Image Coding

Image Coding process

Insert invisible code into every object
One simple step is all that is required to enhance packages as part of the digital prepress workflow.

Normal print process (Zero – Cost)
No special inks or print processes are necessary, and most substrates are supported.

THE CODER Tech
“THE CODER” code is imperceptible and covers the entire surface of any media it’s applied to.

Convenience to use
Product information and exclusive digital content from national and private label brands.
**Technology**

**Image Coding**

**Image coding effect**

Through data coding technology without image modify, varies service are supported such as promotion, event and Copyright protection.

- **Superb security**
  - Image copy protection
  - Trace copied image

- **High recognition rate**
  - High speed scanning with unique code
  - High recognition rate

- **Save cost**
  - Using exist process
  - Support Embedded & S.D.K to all application

- **Information change**
  - Overcome limit of RFID/NFC/QR Code
  - Link information change flexibly
Technology
Sound Coding

About sound coding
Insert encryption digital code into sound, achieve information with simple scanning.

PROCESS
01 Encoding [code] 02 Transmit [Audio]

< Key points of sound scan >
03 Installing [THE CODER App]
04 Scanning [Sound]
05 Enjoying [Varies contents]

BENEFIT
Communicate information with Sound

Practicality
Sound coding is able to insert sound without any change

Marketing
High recognition rate and not affected by ambient noise

New business
LIVE SOUND CODING is available
Technology

Sound Coding

Business area

Convenience
Easily receive product information through sound, and easy buy

Information
Supply more information as like catalogue and manual through BGM

Encourage participation
On real time interview and research

Marketing
Information change flexibly

Link to shopping site
High recognition rate and not affected by ambient noise

BUY
02

Business Strategy
Business Strategy

- By purchasing convenience, businesses enable greater revenue from big data analytics and GPS analytics.
- Companies prevent damage caused by imitation and duplicate products.
- Expect to enhance Brand Loyalty and assign a unique serial number to each product.
- Image coding protect companies benefit from imitation product, and it also support management system interface as like distribution management and inventory management.
Business Strategy

Global IT/DATA Market Status

- Recently, all of object is turn to digital as like as Cloud + Mobile + IOT
- Global enterprise are interest of TRANSACTION DATA
  (Enhance global data market)

Features of THE CODER

- Extensibility + Global
  1. Basically, Technology of THE CODER is not necessary to add more process.
  2. Technology applicable to various objects
  3. Able to connect with varies technologies

Enter the global market

- Enter the global BIG DATA market
  1. DNA information insertion in various fields
  2. Collect various TRANSACTION data with DNA information inserted into each object
03
Comparison
## Comparison chart
(Image Coding)

<table>
<thead>
<tr>
<th>Item</th>
<th>THE CODER Invisible Digital Encoding</th>
<th>Hologram</th>
<th>BAR CODE</th>
<th>QR CODE</th>
<th>NFC / RFID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visibility</td>
<td>Invisible</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tech level</td>
<td>High</td>
<td>Middle</td>
<td>low</td>
<td>low</td>
<td>High</td>
</tr>
<tr>
<td>Duplication</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Falsification</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Traceability</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Trace method</td>
<td>Smart phone</td>
<td></td>
<td>Device</td>
<td>Smart Phone</td>
<td>Device</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Application scope</td>
<td>Every object surface</td>
<td>Label</td>
<td>Print surface</td>
<td>Print surface</td>
<td>Every object</td>
</tr>
<tr>
<td>Durability</td>
<td>Highest</td>
<td>Middle</td>
<td>Low</td>
<td>Low</td>
<td>Lowest</td>
</tr>
<tr>
<td>Price</td>
<td>Cheapest</td>
<td>Expensive</td>
<td>Cheap</td>
<td>Cheap</td>
<td>Most Expensive</td>
</tr>
</tbody>
</table>
## Comparison chart
(Image Coding)

<table>
<thead>
<tr>
<th>Item</th>
<th>THE CODER</th>
<th>B Company</th>
<th>N Company</th>
<th>C Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Invisible Digital Encoding</td>
<td>S-Code</td>
<td>M-Tag, K-Tag</td>
<td>Hidden-Tag</td>
</tr>
<tr>
<td>Type</td>
<td>Invisible</td>
<td>Invisible</td>
<td>Hologram (QR Insertion)</td>
<td>Hologram (Water mark)</td>
</tr>
<tr>
<td>Duplication</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Falsification</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Coding Method</td>
<td>Smart phone App</td>
<td>Smart phone App</td>
<td>Smart phone App</td>
<td>Smart phone App</td>
</tr>
<tr>
<td>Recognition rate</td>
<td>High (Include light reflex)</td>
<td>High (Include light reflex)</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Unique code</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Traceability</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Application scope</td>
<td>Every object and sound</td>
<td>Paper</td>
<td>Special paper</td>
<td>Paper</td>
</tr>
<tr>
<td>Data size</td>
<td>Highest</td>
<td>Middle</td>
<td>Middle</td>
<td>Middle</td>
</tr>
<tr>
<td>Label print</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Label design</td>
<td>No limit</td>
<td>Limit</td>
<td>Hologram only</td>
<td>Hologram only</td>
</tr>
<tr>
<td>Label cost</td>
<td>Cheap</td>
<td>Cheap</td>
<td>Expensive</td>
<td>Middle</td>
</tr>
<tr>
<td>Print method</td>
<td>Digital</td>
<td>Digital</td>
<td>Hologram</td>
<td>Special ink</td>
</tr>
<tr>
<td>Connectivity</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tag Print</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Min size</td>
<td>4mm x 7mm</td>
<td>15mm x 15mm</td>
<td>14mm x 14mm</td>
<td>23mm x 23mm</td>
</tr>
</tbody>
</table>
## Comparison chart
**(Sound Coding)**

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Sound search with pairing method</th>
<th>Encoding method to High/Low frequency</th>
<th>Information transplanting method Into Time/Subtitle track</th>
</tr>
</thead>
</table>
|              | ◆ Method to search for sound sources that match the frequency stored on the server  
              | ◆ If data volume is increased, the search speed drops. Takes 6sec for pairing only.  
              | ◆ Unable to distinguish for remake sound source | ◆ Through encryption code insertion on Inaudible Sound frequency, sometimes fail to transmit when speaker doesn’t support High or Low frequency  
              |                                                                 | ◆ Being sensitive to life’s noise, coding rate is lower than 5% | ◆ Only speaker base on digital video player is able to transmission |
| THE CODER    | Sound coding technology is code insertion method to recognized in 2 seconds  
              Also, able to distinguish for remake sound source | Sound coding is able to insert sound directly, it’s not relate with other noise  
              * Coding verification range 60mbase on 10kw speaker | Sound coding technology is using the same existing transmission method |
Appendix
Appendix

Patent

Patent Status

- Patent 10-2015-0050386
  - HOW TO CREATE AN AUDIO DATA GENERATED BY AN INSERTED AUDIO SOURCE GENERATED AUDIO DATA GENERATED
- Patent 10-2015-0050381
  - METHOD OF IMAGE INSERTED DATA AND APPARATUS PERFORMING THE SAME
- Patent 10-2015-0052535
  - METHOD OF PROVIDING ADVERTISEMENT DATA AND SYSTEM PERFORMING THEREOF
- Patent 10-2015-0052516
  - METHOD OF GENERATING IMAGE INSERTED INFORMATION AND APPARATUS PERFORMING THE SAME
- Patent 10-2015-0092997
  - METHOD OF AUTHENTICATING GENUINE GOODS AND APPARATUS PERFORMING THE SAME
- Patent 10-2015-0092987
  - PRODUCT IMAGE INSERTING IP TRACKING MODULE, METHOD OF AUTHENTICATING GENUINE GOODS USING THEREOF AND APPARATUS PERFORMING THE SAME
- Patent 10-2015-0101761
  - VIDEO/AUDIO DATA PROCESSING METHOD AND APPARATUS PERFORMING THE SAME
- Patent 10-2015-0101790
  - METHOD OF AUTHENTICATING GOODS USING IDENTIFICATION CODE IMAGE AND APPARATUS PERFORMING THE SAME
- Patent 10-2016-0171559
  - HOW TO ACCESS DATA INTO A DUAL COMPONENT AND HOW TO DETECT DATA IN A DOUBLE CONFIGURATION
- Patent 10-2016-0171607
  - HOW TO VERIFY THE AUTHENTICITY OF THE IMAGES AND HOW TO VERIFY THE AUTHENTICITY OF THE PRODUCT PRODUCED BY USING IT
- Patent 10-2016-0171661
  - HOW TO LOAD DATA ON METAL PRODUCTS AND DETERMINE WHETHER THEY ARE GENUINE OR NOT
- Patent 10-2016-0171690
  - HOW TO CREATE A MATERIAL THAT IS INSERTED USING THE MOLD
- Patent 10-2017-0015294
  - HOW TO APPROACH VIRTUAL NFC METHODS AND HOW TO USE THEM
- Patent 10-2017-0015298
  - HOW TO ESTATE BROKERS AND SERVER IMPLEMENT
- Patent 10-2017-0015313
  - IDENTIFICATION CARD INFORMATION USING SCNA CARDS FOR IDENTIFICATION CARDS AND EXECUTION OF TERMINAL DEVICES
Appendix

Milestone

- Nov. 2016 Launched new subsidiaries in Indonesia & Thailand
- Oct. 2016 Apply image coding on Samsung CI & badge = (SECA. Samsung Easy Connector application system)
- Aug. 2016 Apply sound coding on CF, Drama what made by RCTI (Indonesia)
- Jul. 2016 Conclusion of a contract with YES24(SM Entertainment) for ticket verification.
- Jun. 2016 Launched new subsidiaries in USA
- May. 2016 Mattel : Registration customer information of My dolls, Hot wheel and image coding for marketing material. (NDA and proceed)
- Apr. 2016 Conclusion of a contract with the Central bank in Indonesia
- : Authentication of bill and a fiscal stamp
- Mar. 2016 Michelin tire, Kumho tire and Hankook tire : Verification & ID system
- Mar. 2016 Business agreement with SSG, E-Mart
  = (Verification of gift card and catalogue sticker image)
- Feb. 2016 Conclusion of a contract with the Fair Trade Commission
- Feb. 2016 Business agreement with Nielson Korea and Tulumi
- Feb. 2016 Business agreement with MLP group in Indonesia
  (Verification of ID Card, Business Card, Car registration certificate and Credit card)
- Nov. 2015 Cooperation development with Amore pacific : Security coding of package
- May. 2015 Business agreement with JTBC for apply sound coding on broadcast
- Apr. 2015 Marketing support for 7th World water forum : Image and sound coding
  Broadcast over than 80 countries around the world through Aripang TV
- Dec. 2014 Partner agreement with Donga Science : AR & image coding
- Nov. 2014 Conclusion of a contract with the Ministry of Oceans and Fisheries :
  Authentication of solar salt.

Award

- Oct. 2016 Fintech Center DEMO-DAY. promising Fintech technology award
- Dec. 2015 Ministry of science, ICT and future planning, Smart media X camp award
- Nov. 2015 Excellence award Start up company on IOT Security Contest 2015
CONTACT US
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