CK&B’s Key Technologies and Services Vision

Base of Technology (Digital Watermarking & Contents DNA)

Service Platform (Mobile & Server)

Digital Watermarking & Image and Contents Search
- Data Hidding technology
- Broadcast info services.
- Object Recognition
- Advertisement Monitoring
- Extracting & Matching special features
- Image Search

Service Platform
- Anti-counterfeit and genuineness certificate
  - genuineness certificate
  - Prevent document forgery
  - Protect contents copyright
  - Prevent ID falsification
  - Mobile platform
  - Monitoring & Administration

Intro

<CK&B предоставляет услуги сертификации подлинности продукции с помощью технологии цифровых водяных знаков.>
Intro

HiddenTag Service Summary

Products with HiddenTag labels

Consumers scan the labels

CI&B servers analyze data

Distinguish between original from fake

*Fabrication Impossible HiddenTag Label
- O2O Label with innate ID
- Product with HiddenTag label carries its own data code.

• Customer information verified by encrypting server
  - Distinguish original from fake
  - Provide statistic data
  - Various mobile services provided to end-users.
<Вы можете проверить информацию по каждому продукту, прикрепив ярлыки с разными идентификаторами.>

HiddenTag Service Process

- **HiddenTag Creator**
  - Create labels
  - Share information

- **HiddenTag verification system**
  - Request verification (HiddenTag code, user GPS, time)
  - Report counterfeit (Bought product, location, date etc.)

- **Produce & deliver labels with hidden data. Seems identical with naked eye but have all different data code**

- **Clients apply labels on products**

- **End-users scan labels**

- **Send result whether the product is real or fake**
Various Types of HiddenTag Labels

Intro

Various Label Materials

- Security two-layered label
- Transparent seal [medicine/ etc]
- Hang tag [clothing/fashion]
- PVC card type [fashion/luxury]
- Metal material [fashion / luxury]
- Care label (clothing)
- Printed on package [cosmetics/medicine/food]
- Leather material (miscellaneous goods)

Various Label dimension

- 16*16mm general type
- 12*12mm micro type
- 16*32mm general+ appendix type
- 12*34mm wide type
- 20*8mm micro-wide type
- Special wide appendix type
- Crash type
- Random number scratch type

Care

label(clothing)

Printed on package
[cosmetics/medicine/food]

Leather material
(miscellaneous goods)

Special wide appendix type

Crash type

Random number scratch type

< Мы предлагаем скрытые теги (HiddenTag) разного дизайна и из различных материалов. >
<Более 520 компаний по всему миру, включая государственные корейские организации, используют систему HiddenTag.>

**Reference**

China Trade Association for Anti-counterfeiting

520

For each field, CK&B has most references

‘World leading companies and public departments are with differentiated service of CK&B’

**Major HiddenTag Clients**

- LOTTE DUTY FREE
- A.H.C
- AGE 20's
- CLIO
- ABOUT ME
- HUROM
- BOMTECH ELECTRONIC CO. LTD
- moonshot
- FORENSYS
- stéphane CHRISTIAN
- Oh, Scent!
- SHANGPU E-SPAC SYSTEMS
- WEBZEN
- by-fulldesign
- JAYJUN
- 2years old
- S.C.E
- Dr. Althea
- GAMSUNGTEX
- VELLA
- neblab
- BENTON
- POLATAM
- p:rem
- LG생활건강

**Major Solution Clients**

- SAMSUNG
- SBS
- SHINHWA
- HANOOK
- SBS
- LG ELECTRONICS
- LG CHem
- LG
- BORING
- CORNING
- ULTRAMARINE
- TONGDONG
- SPECTRUM

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Factors of HiddenTag’s rise in foreign markets

- Evaluated as #1 in genuineness certificate application field.
- #1 accumulative download
- Available for free at Google Play, Appstore, Chinese 360 market etc.
HiddenTag’s growth factors in foreign markets

Best for global advertisement services

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>No.</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>China</td>
<td>11</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>2</td>
<td>Vietnam</td>
<td>12</td>
<td>Singapore</td>
</tr>
<tr>
<td>3</td>
<td>South Korea</td>
<td>13</td>
<td>Australia</td>
</tr>
<tr>
<td>4</td>
<td>Indonesia</td>
<td>14</td>
<td>Canada</td>
</tr>
<tr>
<td>5</td>
<td>Thailand</td>
<td>15</td>
<td>Cambodia</td>
</tr>
<tr>
<td>6</td>
<td>Malaysia</td>
<td>16</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>7</td>
<td>Taiwan</td>
<td>17</td>
<td>Russia</td>
</tr>
<tr>
<td>8</td>
<td>United States</td>
<td>18</td>
<td>India</td>
</tr>
<tr>
<td>9</td>
<td>Japan</td>
<td>19</td>
<td>Myanmar (Burma)</td>
</tr>
<tr>
<td>10</td>
<td>Philippines</td>
<td>20</td>
<td>Macau</td>
</tr>
</tbody>
</table>

- Lots of government-supported export countries use HiddenTag
- China, ASEAN [Vietnam, Indonesia, Thailand etc.], USA, JAPAN etc.
- Total 150 countries using HiddenTag.
Footings of growth of HiddenTag in foreign countries.

Distribution of counterfeit products by country

- China: 63.2%
- Hong Kong (China): 21.3%
- Turkey: 3.3%
- Singapore: 1.9%
- Thailand: 1.6%
- India: 1.2%
- Morocco: 0.6%
- United Arab Emirates: 0.5%
- Pakistan: 0.4%
- Egypt: 0.4%

*Current state of affairs of counterfeit market in major importing countries*
- Very high chance of occurrence of counterfeit issue → importance of genuineness certificate getting bigger in local area
- Consumer goods like cosmetics, food, electronics are being massively produced and distributed.
- The need of anti-counterfeit solution service is increasing to earn customer’s trust.

source: icorating.com(2018)
Factors of HiddenTag’s rise in foreign markets

World counterfeiting Market

<table>
<thead>
<tr>
<th>Country</th>
<th>Market Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>2,250$</td>
</tr>
<tr>
<td>Mexico</td>
<td>750$</td>
</tr>
<tr>
<td>Canada</td>
<td>300$</td>
</tr>
<tr>
<td>Russia</td>
<td>290$</td>
</tr>
<tr>
<td>Germany</td>
<td>322$</td>
</tr>
<tr>
<td>Korea</td>
<td>140$</td>
</tr>
<tr>
<td>UK</td>
<td>216$</td>
</tr>
<tr>
<td>Brazil</td>
<td>150$</td>
</tr>
<tr>
<td>China</td>
<td>600$</td>
</tr>
<tr>
<td>Japan</td>
<td>750$</td>
</tr>
</tbody>
</table>

Source: havoscope.com(2012)

- Estimated piracy market runs $600 billion dollars
- Including USA, developed countries formed different counterfeit market.

The economy impacts of counterfeiting and piracy

- Counterfeit markets of medical marijuana, electronics, food, clothing and miscellaneous goods are huge.
- These markets are even bigger than Hiddentag’s major client market, cosmetics.

Potential Market for HiddenTag.

Source: Frontier economy(2015)
Current Situation of HiddenTag in Foreign Market

Oversea sales profit progress

*Oversea sales figure soared by 233% in 2018
- Founded oversea brances
- Expansion of local sales agencies

Estimated Exporting countries

*Client countries increased by 2 times in 2018
- Increase of new exporting countries and number of reorder

Delivery Ratio

<table>
<thead>
<tr>
<th>Major Exporting Countries</th>
<th>Major Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>Cosmetics</td>
</tr>
<tr>
<td>China</td>
<td>Clothing, Pharmaceutical</td>
</tr>
<tr>
<td>USA</td>
<td>Pharmaceutical, Fashion</td>
</tr>
<tr>
<td>Canada</td>
<td>Pharmaceutical, Fashion accessories</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>Cosmetics</td>
</tr>
<tr>
<td>Singapore</td>
<td>Fashion accessories</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td></td>
</tr>
</tbody>
</table>

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Expectation of Sales Figure Increase of CK&B

*Increased 172% contrast to 2017*
- Sales outcome achievement in 2016~2017
- Sales/Production/Operations/Development expanded labor power.
*Released genuineness certificate service, HiddenTag, in 2014*
Global Business

HiddenTag Clients & Category

Client increase ratio
until 2019/03, 528 Clients introduced HiddenTag to their product

- New Clients and reorder increase at the same time
  - Average order number of one client 3.8
  - Disperse risk of dependence on current clients by making new contract.
  - Increase number of safe clients from being a partner of KFTA and KOTRA

Sales Figure ratio analyzezation
Sales figures ratio contrast to total sales figure
Beauty etc Export

- Tendency of increase in beauty field.
- Increase of exporting ratio and expanding market additional to beauty baby/ food/medicine/ clothing
  - Since first exporting in 2016, after 2017 the sales figure of exporting ratio soared.
  - After 2017, beauty/etc./exporting growing even.
Appendix
Achievements

Intellectual Property

Brand Registration
Patent no. 5202123
HiddenTag (US)

Brand Registration
Patent no. 4-2017-13294
HiddenTag (VN)

Reg. No. 4008448500000
(CN)
Genuineness certificate label & system

Brand Registration
Patent no. 21457274
HiddenTag (CN)

Brand Registration
Patent no. 1279510
HiddenTag (JP)

Brand Registration
Patent No. US8488837
(Apparatus and Method for Creating Constructive Multi-Pattern Watermark, Apparatus and Method for Embedding Watermark by Using the same, Apparatus and Method for Extracting Watermark by Using the same

Patent No. 10-1019632
Contents transmission system for tracking illegal copy of contents and digital set-top box, using the same method

Patent No. 10-0971221
The adaptive watermarking method for converting digital to analog and analog to digital

Patent No. 400844839
HiddenTag (CN)

Patent No. 5539348
(JP)
Apparatus and Method for creating constructive multi-pattern watermark, Apparatus and method for embedding watermark by using the same, Apparatus and method for extracting watermark

Patent No. 10-1131565
Apparatus for embedding and/or extracting additional information in image contents

Patent No. 10-0967080
System and Method to connect On/Offline Media through Watermarking

<У нас более 30 прав на интеллектуальную собственность, включая глобальные торговые марки и патенты.>

Holding over 30 intellectual property rights.

Copyrights reserved @CK&B since 2007
<Мы получили множество наград и сертификатов от корейских государственных организаций и иностранных компаний.>

**Achievements**

**Awards**

The 18th Mobile Technology Awards Prime Minister Prize (2018)

Exemplary Small Business Minister Commendation MMS (2018)

SW Enterprise Competitiveness Awards special prize, Etnews (2018)

Certificate of Software Quality TTA

Grand Prize for New Software MSIP (2014)

Day of Electronics and IT President’s Prize KEA (2013)

HAG-AWARD German Special Prize FIIRI (2013)

Certified Venture Business Company KBO

Korea Invention Patent Exhibition KIPO (2012)

WPO Award for Best Inventor KIPO (2012)

Korea Invention Patent Exhibit Silver Award KIPO (2011)

Appointed as INNOBIZ SMBA

Holding a number of awards and certifications

Copyrights reserved @CK&B since 2007
Achievements

History

2007
12 Establishment (New Company Name: CK&B Co., Ltd.)

2008
11 Recognized as a Research Institute (No. 2008110989)
10 Provided Product Image Copyright Protection Watermarking Solution to Danawa Co., Ltd.
05 Approved as a Software Company (No. 2008-06504)
04 Developed and Provided Internet Monitoring System for Literary works to KBS (Korea Broadcasting System)

2009
12 Supply Contract on Automation Monitoring System with Samsung SDS
06 Acclaimed as a Technology Development Company by the Ministry of Knowledge and Economy
05 Provided solution to INDIESTORY Co., Ltd. for copyright protection of Independent films
03 Excellent IT performance for National IT Industry Promotion Agency
02 Performed CT Technology Development for Korea Creative Content Agency

2010
12 Completed the Transmission of Terrestrial broadcasting connecting with UCI for SBS
12 Signed MOU of Business Partnership Cooperation with Samsung SDS
08 Acclaimed as a technology development company by the Ministry of Culture, Sports, and Tourism
06 Provided Multimedia Equipment Monitoring System to Samsung Electronics
05 Provided Solution for the protection of Cultural Heritage Information Resources to Korea Cultural Heritage Administration

2011
12 Awarded at Korea Invention Patent Exhibition by the Korean Patent office for Intellectual Property Protection
10 Best Entrepreneur among Small and Medium Sized Enterprises
06 Provided Test Automation Solution to Hynix Semiconductor Co., Ltd.
07 Carried out G-MES project for Samsung Electronics Co., Ltd.
06 Acclaimed as a Patent Star Company by Seoul Business Agency
02 Selected as a UCII Diffusion & Dissemination Support Company by Korea Creative Content Agency

2012
12 WIPO award for the best Inventor at Korea Invention Patent Exhibition (KIFO)
11 Electronic IT Patent Management Award
10 Provided Mobile Solution for LG Electronics
07 Provided Watermark Solution to SBS
06 Provided Smart Device Test Automation Solution to Samsung Electronics

2013

2014
12 HiddenTag® C.O.P. provided to Claiirs
12 HiddenTag® C.O.P. provided to LG Care
09 HiddenTag® C.O.P. provided to Cell Cosmetics
07 Linkage to ScanHit® mobile service once the ad is scanned from Digital times
06 ScanHit® Rights -Provided ScanHit® Rights Service to Deloitte
05 ScanHit® Mobile Service Support at PHILAKOREA 2014 World Stamp Exhibition
02 ScanHit® awarded the “Grand Prize for New Software” in the multimedia section
02 Acquired the “GS” certification for ScanHit®
01 Developed the ‘Tire Cross-section Profile Recognition Solution’

2015
12 HiddenTag® C.O.P. provided to Dr. Jart
12 ScanHit® for Video Module provided to SBS
11 Acknowledged as an official brand protection mark of KITA
11 HiddenTag® C.O.P. provided to JAYJUN
09 Provided 4K content storage and metadata generation solution to SBS
09 HiddenTag® C.O.P. provided to Copan Global
08 HiddenTag® C.O.P. provided to Stylenanda
08 HiddenTag® C.O.P. provided to Raphas
07 Provided 4K image analysis system to SBS
06 Awarded as a leading brand of Korea 2016
05 SBS joined exhibition for non-transcription system, KOBA exhibition
04 HiddenTag® C.O.P. provided to Recycle Cosmetics
02 HiddenTag® C.O.P. provided to Modeun Hightech
01 HiddenTag® C.O.P. provided to MISKOS
### Achievements

<p>&lt;После появления на рынке сертификации подлинности продукции, многие клиенты выбрали систему Hidden Tag.&gt;</p>

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
</tr>
</thead>
</table>
| 2016 | 12 HiddenTag® C.O.P. provided to AEKYUNG  
12 HiddenTag® C.O.P. provided to Korea Breiller Council  
12 Provided video forensic mark for Content Platform  
11 HiddenTag® C.O.P. provided to Waters  
11 HiddenTag® C.O.P. provided to KFD  
11 Certified by Anti-Counterfeiting Trade Association of China  
11 HiddenTag® C.O.P. provided to Hurom  
10 HiddenTag® C.O.P. provided to YG Entertainment  
09 HiddenTag® C.O.P. provided to Play No More  
09 HiddenTag® C.O.P. provided to Benton Korea  
09 HiddenTag® C.O.P. provided to Bikit  
08 HiddenTag® C.O.P. provided to LG Chem  
08 HiddenTag® C.O.P. provided to Hyundai X–Teer  
08 HiddenTag® C.O.P. provided to Bomtech  
07 HiddenTag® C.O.P. provided to PHARMA Research  
07 HiddenTag® C.O.P. provided to Carver Korea (A.H.C.)  
06 HiddenTag® C.O.P. provided to Fion Tech  
05 HiddenTag® C.O.P. provided to PBS Korea  
04 HiddenTag® C.O.P. provided to Moonshot  
04 HiddenTag® C.O.P. provided to Vant365  
03 HiddenTag® C.O.P. provided to Dr. Althea  
02 Adding SBS OPS, DNA search module  
01 HiddenTag® C.O.P. provided to CLIO |
| 2017 | 12 HiddenTag® C.O.P. provided to Jenny Sweet  
12 HiddenTag® C.O.P. provided to EVSU  
12 HiddenTag® C.O.P. provided to Proudex  
11 Provided Scanhi Light solution to Denby Korea  
10 HiddenTag® C.O.P. provided to ALLBIT GLOBAL  
10 HiddenTag® C.O.P. provided to Pi.GENE GLOBAL  
09 HiddenTag® C.O.P. provided to Falkniven  
08 HiddenTag® C.O.P. provided to NERDY  
08 HiddenTag® C.O.P. provided to MLB  
07 HiddenTag® C.O.P. provided to THESKINFACE  
07 HiddenTag® C.O.P. provided to SNP  
07 HiddenTag® C.O.P. provided to SANGJU  
06 HiddenTag® C.O.P. major update, Launch of HiddenTag Store  
05 Selected as an official brand protection solution of “Export Voucher” program by KITA  
04 HiddenTag solution integrated into Chinese 360 app market as an in-app menu  
04 HiddenTag® C.O.P. provided to SHIN PHARMA  
03 Provided content protection solution to Poop  
03 HiddenTag® C.O.P. provided to iriver  
02 Establishment of our fist overseas subsidiary in China  
02 HiddenTag® C.O.P. provided to WIZGLOBAL  
01 HiddenTag® C.O.P. provided to skybio  
01 HiddenTag® C.O.P. provided to lapalette |
| 2018 | 12 Mobile Technology Awards Prime Minister Prize  
11 2018 Hong Kong Cosmobeauty Convention participation  
11 Saudi Mobile Contents Road Show 2018 Participation  
10 HiddenTag® C.O.P. provided to Smilegate  
10 HiddenTag® C.O.P. provided to BSKOREA  
09 HiddenTag® C.O.P. provided to Mefactory  
08 HiddenTag® C.O.P. provided to EXOCOBIO  
08 HiddenTag® C.O.P. provided to Dr. BOB—Snow Buddy  
08 HiddenTag® C.O.P. provided to SR biotek  
07 HiddenTag® C.O.P. provided to reBorn  
07 HiddenTag® C.O.P. provided to Jessi Steele  
06 HiddenTag® C.O.P. provided to DAEJOO MEDICAL  
05 HiddenTag® C.O.P. provided to ALICE MARTHA  
05 HiddenTag® C.O.P. provided to M.O.I  
04 HiddenTag® C.O.P. provided to RINNAI  
03 HiddenTag® C.O.P. provided to BONSHE S KOREA  
02 Received a special prize from 17th Korea Software Enterprise Competitiveness Awards  
02 HiddenTag® C.O.P. provided to LOUIS QUATORZE  
02 HiddenTag® C.O.P. provided to JEJUWOODA  
01 HiddenTag® C.O.P. provided to Mugavero  
01 HiddenTag® C.O.P. provided to TangleAngel  
01 Developed and launched HiddenBiz data analytic service |
<CK&B делает все возможное ради своих деловых партнеров.>

Inquiry

Directions

4 min walking distance from exit 4 of Tukseom Station

6 min walking distance from exit 1 of Seongsu Station

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