GS1

Korea 2010

The Leading Global Supply Chain
Standards and Solutions Provider

Contents

On behalf of the Korean business community, I would like to welcome all of you to GS1 Korea, the Leading Global Supply Chain Standards and Solutions Provider.

During the past decades, Korea has achieved a remarkable economic growth becoming the 15th largest economy in the world. Among many factors, retail industry has been one of the growth engines which has led the development of other industrial sectors including manufacturing, distribution and logistics.

At the center of this progress, GS1 Korea has contributed itself to the development of the retail industry through enhancing the efficiency of supply chain management by disseminating GS1 standards as well as the improvement of consumers' living standards. As the most widely used supply chain standards in the world, GS1 standards have innovated the distribution and logistics landscape.

Currently, the global and domestic markets have been faced with more opportunities as well as challenges than ever before with the emergence of the digital era. Mobile Commerce has brought retailers and manufacturers new business opportunities to provide consumers with better services using global standards.

In this new business era, GS1 Korea will continue to deliver innovative, customized services and solutions to help its members make their way through challenges to a sustainable growth and to make people's lives better.

We are always open to your ideas and voices, and welcome new members and partners. Thank you.

Kyung-Shik Sohn
Chairman
Korea Chamber of Commerce & Industry / GS1 Korea

Message from the President

Over the past two decades since its launch in 1988, GS1 Korea has solidified its position as the provider of global standards and solutions for supply chain management in Korea with its expertise and experience. Our membership has grown remarkably from 50 in 1988, 7,564 in 1998 to over 21,000 in 2010. We have also broadened our business scope covering global issues on the rise such as consumer safety and mobile commerce and advanced into new business territories.

We do not stop but keep moving forward, striving to identify, evaluate and launch new, innovative member services based on KorEANnet, a GS1 compliant e-catalog. One of the meaningful achievements of GS1 Korea is the successful implementation of Unsafe Products Screening System(UPSS) in 2009, which has significantly enhanced consumer safety in Korea and it was introduced to all GS1 member organizations as a successful business case at the 2010 GS1 General Assembly in Malaysia. Furthermore, we have launched "BarMate" in September 2010, a free web-based barcode generating program which creates printable and scannable images of GS1 standard barcodes. With BarMate, our member companies can considerably reduce time and cost to design barcodes while enhancing efficiency of supply chain management.

GS1 Korea will continue to serve as an organization which is loved and trusted by its members by fulfilling its missions and providing innovative services. We appreciate your support and feedback which will guide us through to our vision of becoming "The Leading Global Supply Chain Standards and Solution Provider".

Seung-Sik Kim
President, GS1 Korea

What is GS1?
(Global Standards No.1)

GS1 is a not-for-profit global organization dedicated to the design and implementation of global standards and solutions to improve the efficiency and visibility of supply and demand chains globally and across sectors. GS1 standards provide a framework that allows products, services and information to move efficiently and securely for the benefits of businesses and the improvement of people's lives everyday, everywhere.

GS1 standards, such as barcodes and RFID (Radio Frequency Identification), bring together companies representing all parts of the supply chain – manufacturers, distributors, retailers, hospitals, transporters, customs organizations, software developers, local and international regulatory authorities, and more. The GS1 system of standards is now widely used by millions of companies in many industrial sectors including not only retail but also healthcare, logistics and transportation, defense, etc. GS1 has Member Organizations (MOs) in 109 countries around the globe. Member Organizations are usually national associations which provide tools and support that enable their own member companies to manage their supply chains and trade processes far more efficiently.

109 Member Organizations serving 150 countries:
Local services, global reach.

■ Countries with a GS1 Member Organisation

■ Countries served on a direct basis from GS1 Global Office

GS1's main activity is the development of the GS1 System, a series of standards designed to improve supply chain management. GS1 offers a full range of services and solutions, all built upon the foundation of the GS1 system of standards and its GS1 Identification Keys.

Major activities of GS1 include:
• Allocation of unique numbers – the basis for the complete range of standards
• Providing training and support for;

GS1 BarCodes	**Global standards for automatic identification** Rapid and accurate item, asset or location identification
GS1 eCom	**Global standards for electronic business messaging** Rapid, efficient & accurate business data exchange
GS1 GDSN	**The network for global data synchronisation** Standardised, reliable data for effective business transactions
GS1 EPCglobal	**Global standards for RFID–based identification** More accurate, immediate and cost effective visibility of information

• Supplying information on the standards and the continuing evolution of the GS1 System through the Global Standards Management Process (GSMP).
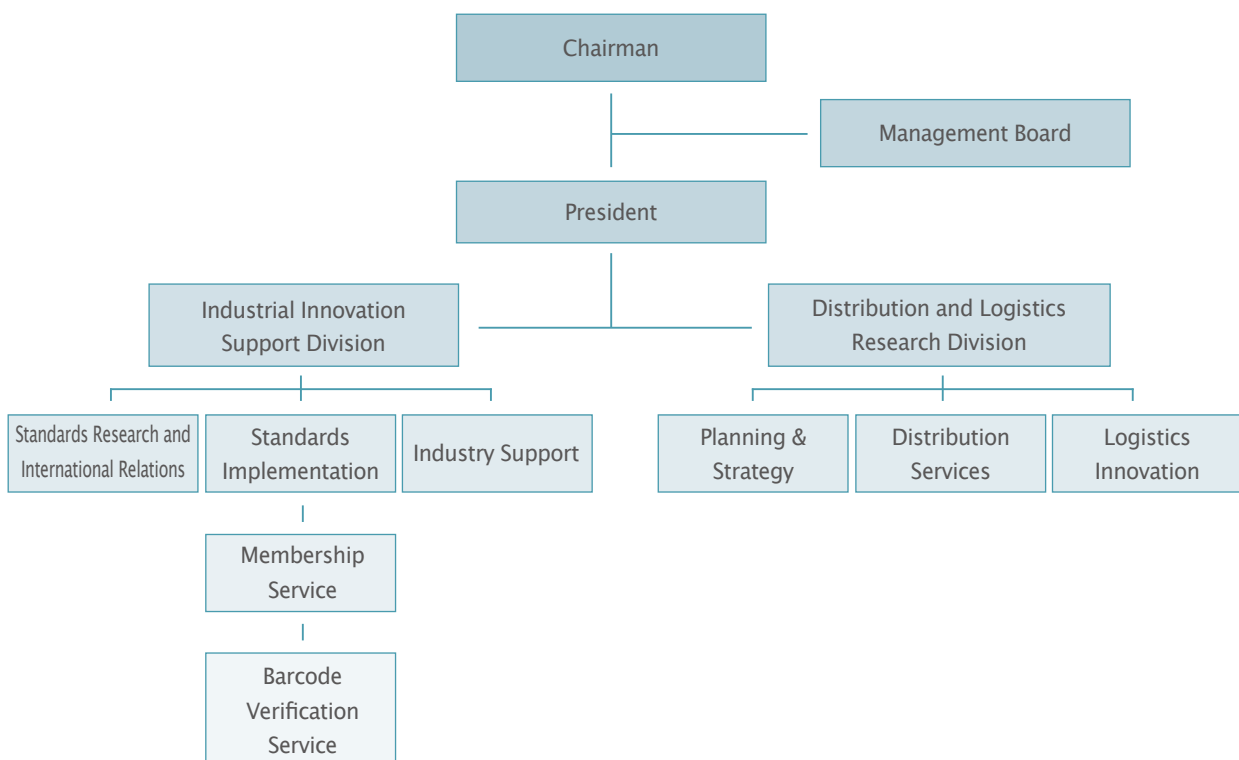
Introduction to
GS1 Korea

Ever since becoming a Member Organization of GS1 in 1988, GS1 Korea has been active in promoting implementation of global standards and solutions to improve supply chain management in Korea.

Our main activity is to conduct management of global standards including product identification codes, barcodes and RFID, and to provide a variety of services for broader adoption of global standards. We also offer the latest information on SCM-related issues and market trends through operating information databases, conducting research and issuing publications on supply chain management and related government policies. Furthermore, in an effort to enhance public awareness of the usefulness of GS1 system, GS1 Korea organizes seminars and conferences on a variety of issues and offers training programs to its members.

Organizational Structure

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                          Chairman
                             |
                             |----------------- Management Board
                             |
                          President
                             |
        ┌────────────────────┴────────────────────┐
 Industrial Innovation                    Distribution and Logistics
  Support Division                          Research Division
        |                                         |
  ┌─────┼─────────┐                       ┌────────┼──────────┐
Standards    Standards   Industry       Planning &   Distribution   Logistics
Research and Implementation Support      Strategy      Services     Innovation
International
Relations        |
             Membership
              Service
                 |
              Barcode
             Verification
              Service
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Leadership

GS1 Korea is led by a management board composed of leaders from a wide range of industries including retail, distribution, logistics, food manufacturing, cosmetics, healthcare and IT, academia and the government.

Chairman
Kyung-Shik Sohn Chairman The Korea Chamber of Commerce & Industry / GS1 Korea

| Governors		
Young-Ho Bae President & CEO Kolon Industries	**Jeong-Gy Baek** President Bokwang Family Mart	**Suk-Yong Cha** President / CEO LG Household & Health Care
Hong-Chang Kim President / CEO CJ GLS	**Won-Bae Kim** President Dong-Ah Pharmaceuticals	**Geon-Yeong Lee** President /CEO Binggrae Co.,Ltd.
Hwi-Sung Lee RGM(Regional General Manager) IBM Korea	**Byoung-Yong Noh** President Lotte Mart	**Sae-Jo Oh** Professor Business Dept. of Yonsei University
Chung-Won Park Director General for Policy Coordination Ministry of Knowledge Economy	**Geon-Hyun Park** President Shinsegae Department Store	**Jin-Sun Park** CEO Sempio Foods
Joo-Man Park President eBay Auction Korea	**Byung-Ryun Seo** Chairman Korea Pallet Pool	**Ki-Rak Yang** President Korea Yakult
Dong-Geun Lee Vice Chairman Korea Chamber of Commerce & Industry	**Seung-Sik Kim** President GS1 Korea	

Membership

Membership of GS1 Korea has dramatically increased since 1988 and reached more than 21,000 in 2010 (Figure 1). Our membership includes manufacturers, distributors and retailers from a wide range of industry sectors such as foods, apparel and textiles, pharmaceuticals, automotives, etc (Figure 2). Solution Providers – hardware and software companies, consultancies, systems integrators and training companies – who help the end user community implement the GS1 System are also active members of GS1 Korea.

<Figure 1. GS1 Korea Membership by Year>

<Figure 2. GS1 Korea Membership by Industry Sector>
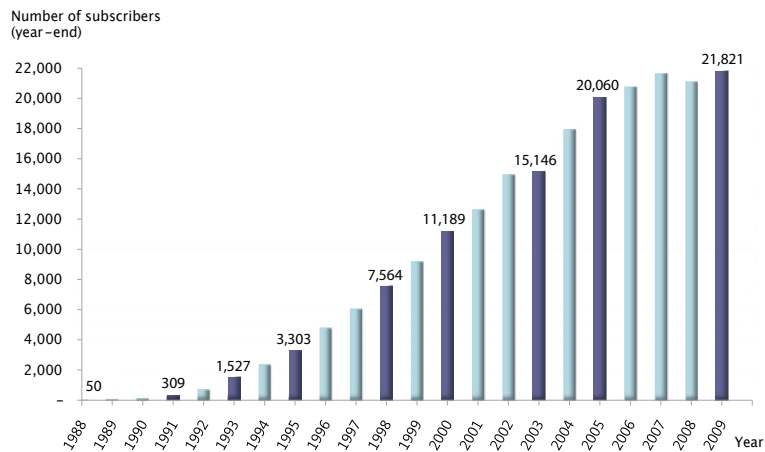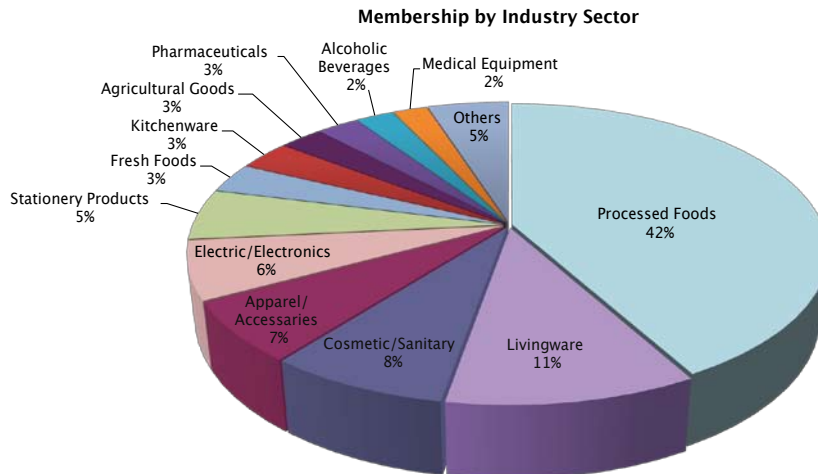
Major Activities

1. Standards Implementation

The primary role of GS1 Korea is the management of GS1 standards such as identification codes, barcodes and RFID, which serve as business languages that enable IT-based exchange of business information today. GS1 Korea is making its efforts to apply GS1 system of standards to a wider range of industries including healthcare, transport/logistics, automotive, apparel, steel and agro-fisheries. As of October 2010, GS1 Korea has more than 21,000 member companies benefiting from the use of GS1 standards.

To support our member companies to implement GS1 standards, we are providing a web-based electronic product catalog service, KorEANnet (www.koreannet. or.kr), which enables companies to efficiently share product information for e-commerce. Also, to ensure more stable use of GS1 standard barcodes, we offer barcode verification service for manufacturing companies when they register their products into KorEANnet. Barcode verification service is to ensure that member companies use barcodes on the products correctly by verifying scannability of the barcodes so as to prevent any scanning errors at retail stores.

Using GS1 system of standards is an effective and efficient way to ensure consumer safety, which is an emerging issue not only in Korea but also in the global market. Unsafe Products Screening System (UPSS) has been put in place by GS1 Korea since 2009. UPSS helps enhance consumer safety by effectively and efficiently blocking the sale of unsafe products. It can be done by using GS1 GTIN (Global Trade Item Number) as the product identifier along with KorEANnet as the communication channel throughout information sharing processes. For more information on UPSS, please refer to "GS1 Korea in Action 2010" (page 18).

2. Research and Publications

In today's ever-changing business environment, the future of national industries and businesses rely on proper policies and appropriate management strategies. GS1 Korea reinforces research work on both national and global supply chain management to help the government formulate policies for related industries.

Besides, GS1 conducts research and surveys on the market and technology issues in the retail, distribution and logistics industries and issues publications to provide the latest information to member companies.

Our periodicals include:
• Retail CEO Report
• SCM CEO Report
• Monthly Retail Industry Report
• Yearly Retail Industry Statistics
• Logistics Industry Statistics Pocket Book

Other recent publications include:
• Glossary on Global Standards Terms
• Mobile in Retail
  (GS1 MobileCom white paper)
• GS1 and ISO: Partnering for Standards

3. Education and Training

As part of our efforts to enhance understanding and expedite broader adoption of the GS1 system of standards and its benefits, we offer our member companies a variety of training and education programs on the following subjects:

- GS1 Standard Identification and Barcodes for Consumer Products
- GS1 Standard Identification and Barcodes for Logistics Units
- Supply Chain Management
- Barcode Printing and Verification Service
- RFID Technology Basics and Applications
- Barcode in Healthcare

Furthermore, we are running GS1's on-line training platform called "GS1 LEARN" (http://learn.gs1.org/). This internet-based training service provides all GS1 members and user companies with high-quality blended training courses on GS1 system of standards such as GS1 Identification keys, barcodes, RFID & EPCglobal Network, GDSN, etc. GS1 Korea also offers a certificate program consisting of 7 basic courses of GS1 LEARN.

4. Information Service

Information is the key competitiveness in today's rapidly changing business environment. Good quality data is the foundation of an efficient supply chain management, reducing cost and time and increasing customer satisfaction.

GS1 is making efforts to provide member companies with accurate and timely information on local and global retail industries through Retail Information Database. In addition, our RFID Database offers comprehensive news and information about the RFID industry. Also, POS Data Service (PDS), which is a sales trend information service based on sales data collected from retailers' POS (Point-Of-Sale) systems, helps manufacturers and retailers respond quickly to changes in consumer needs.

Visit our databases and get trustworthy information for your business.
- Retail DB: www.retaildb.or.kr
- RFID DB: www.rfiddb.or.kr
- POS Data Service: www.gs1kr.org

5. Seminar and Conference

GS1 Korea is making utmost efforts to represent the interest of its member companies as well as the whole Korean business community. To do so, GS1 Korea organizes seminars and conferences as a two-way exchange of information between the industry and GS1 Korea. We listen to opinions and difficulties that our customers have confronted in the process of adopting and using GS1 system and GS1 Korea services. Through participating our seminars and conferences, business leaders can establish a strong network in the industry and gather up-to-date information on current issues.

In particular, GS1 Korea has gained attention from industry representatives at home and abroad by presenting major business activities of GS1 and EPCglobal at conferences such as "RFID Week" and "Annual EPC/RFID Industry Forum." We also hold working-level seminars and workshops such as 'Barcode usage in Healthcare', 'GS1 standards and Customs', and 'KorEANnet Seminar' to help our members understand and use GS1 standards.

Other seminars and conferences held by GS1 Korea comprise the following:

- SCM Leaders' Forum
- CIO Seminar
- Future SCM Conference
- Global Green Logistics Conference
- Global Logistics Innovation Conference
- Seminar on Distribution Industry Outlook

제14회 아시아·태평양 소매업자대회
The 14th Asia-Pacific Retailers Convention & Exhib
Oct. 14(Wed) ~ 17(Sat), 2009 | COEX, Seoul

6. International Cooperation

As a GS1 Member Organization representing Korea, we try to bridge the Korean business community to the global GS1 community. Over the past decades, GS1 Korea has strengthened its ties with GS1 Member Organizations worldwide and has been actively engaged in the standardization projects and activities of GS1, participating in GS1's annual meetings and industry-specific meetings for Industry User Group, Interest Group, and so on.

Along with GS1's initiatives to promote and support standardization and efficient supply chain management not only at national level but also at global level, GS1 Korea offers training programs for government officials and business people from developing countries in the Asia-Pacific region upon request. Our training program consists of lectures and industrial site visits with an aim to assist developing countries to establish IT-based infrastructure and enhance the efficiency of their supply chain management through experiencing the usefulness of GS1 system of standards.

On the other hand, GS1 Korea spearheads efforts to support Korean businesses in discovering business opportunities to enter new foreign markets. GS1 Korea organizes and dispatches business delegations abroad to explore emerging retail and logistics markets and discover business opportunities. Through joining business delegations, our member companies have opportunities to gain information on the business environment and build network with local government officials and businesses relevant to trade and investment of in the country.

GS1 Korea
in Action 2010

● Free Barcode Generating Program, "BarMate"

GS1 Korea has launched a free web-based online barcode generating program named "BarMate" and opened it to member companies in September 2010.

"BarMate" program is a freeware which creates printable and scannable barcode images from GS1 standard barcode symbologies. GS1 standard barcode symbologies which can be generated by BarMate program include EAN/UPC, ITF-14, GS1 DataBar, GS1-128 and GS1 DataMatix and users can choose the image from the following fie syormat: EPS, BMP, PNG, GIF, JPG and EMP. With BarMate, creating barcode images has become easy and inexpensive for everyone.

The "BarMate" service is expected to help our member companies and users reduce their cost and time related to designing barcodes for their products. In addition, an innovative aspect of this program is that users can download multiple barcode images at once when they upload multiple identification numbers in an Excel file. On the other hand, as it is available both in Korean and English versions, "BarMate" will contribute to facilitate the use of standard barcodes not only in Korea but also across the globe, encouraging more retailers and manufacturers to adopt GS1 system and join GS1.

Visit our website and experience "BarMate" program at http://barmate.gs1kr.org and if you are interested in English version of BarMate program, please contact GS1 Korea(+82-2-6050-1502, sckim11@gs1kr.org).

● Improving Consumer Safety with GS1 System: Launch of Unsafe Products Screening System (UPSS)

In Korea, as well as throughout the world, there has been growing concern over consumer product safety. Our efforts to ensure consumer safety have been embodied by the launch of Unsafe Products Screening System (UPSS) in 2009. UPSS was initiated by the Ministry of Ketwledge Economy and GS1 Korea in collaboration with three relevant government bodies – Korea Food & Drug Administration, Ministry of Environment and Korean Agency oducT ghnology & Standards. UPSS is designed to erds. UPconsumer safety by using the GS1 system of standards to effectively and efficiently share information about unsafe products.

Under the UPSS, the government bodies communicate information about unsafe products to KorEANnet (the GS1-compliant e-Catalog run by GS1 Korea) as soon as they identify a product safety issue. KorEANnet in turn sends the information to retailers on a real time basis and retailers then block the sale of those products to consumers at their point-of-sale (POS) terminals. Throughout the information sharing process, the GS1 GTIN (Global Trade Item Number) is used as the product identifier.

As of September 2010, a total of 10,353 stores of 11 major Korean retailers ranging from major hyper-markets and department stores to small convenient stores have adopted UPSS in their retail system and 150 products have been reported as "unsafe" to participating stores.

Unsafe Products Screening System(UPSS)
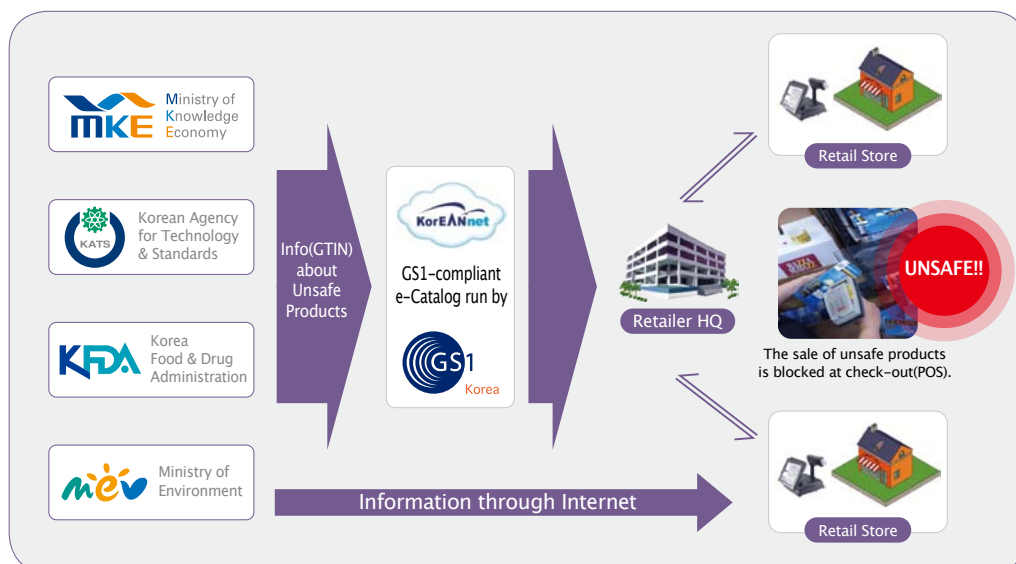
Furthermore, as a result of its efforts to support product and food safety and to expand the operation of UPSS not only at off-line retail stores but also in on-line merchandising, GS1 Korea has signed Memorandum of Understandings with major Korean hyper-markets, home shopping operators and internet-based shopping malls such as Lotte Mart, CJ O Shopping and Hyundai Home Shopping.

The adoption of UPSS by internet-based merchandising makes on-line shopping more trusted and safe. With UPSS system in place, the sale of unsafe products and including foods is automatically blocked, which in effect provides consumers with a sense of relief and confidence in purchasing at on-line shopping malls. On the other hand, it eventually reduces recalls, thus reduces cost for management and enhances brand image of the companies involved.
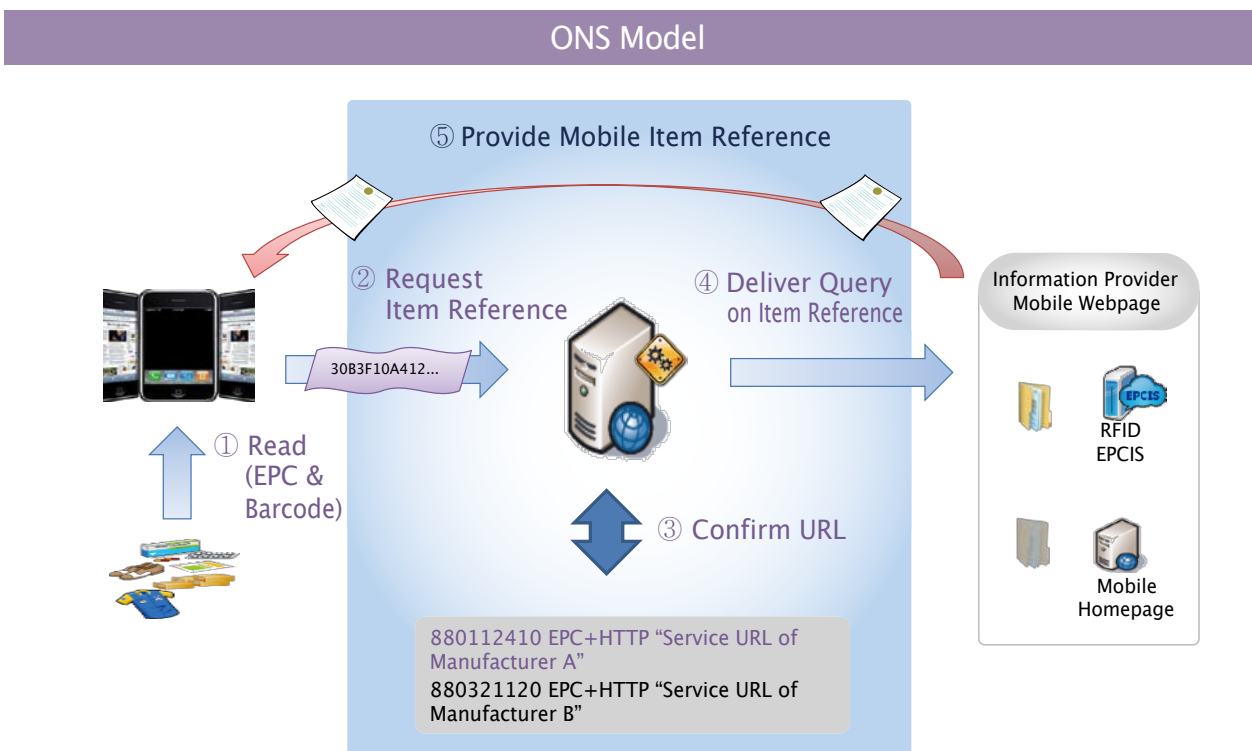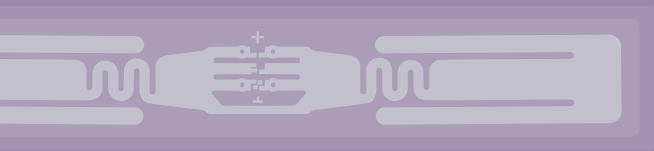
● Essential Infrastructure for Data Sharing Between Companies and Users of Mobile Devices: Mobile ONS

To meet the GS1 Korea members' needs to communicate in real-time with their potential customers using mobile phones, GS1 Korea launched Mobile ONS in 2010. All of the GS1 Korea member companies can connect to the service and communicate with their customers any time, any place via mobile phone or internet.

For example, if a customer reads the barcode or RFID tag attached on the commodities using the app of the smart phone, the related information can be provided by the manufacturing company. Thus the customers and enterprises are able to communicate with each other using GS1/EPC codes.

ONS Model

⑤ Provide Mobile Item Reference

② Request Item Reference

④ Deliver Query on Item Reference

Information Provider Mobile Webpage

30B3F10A412...

RFID EPCIS

① Read (EPC & Barcode)

③ Confirm URL

Mobile Homepage

880112410 EPC+HTTP "Service URL of Manufacturer A"
880321120 EPC+HTTP "Service URL of Manufacturer B"

● GS1-based Product Authentication System Conformance Certification

Anti-Counterfeiting has always been an important task for most of the manufacturers. In particular, those companies who own highly valued brands in the fields of apparel, electronic device and liquor want product authentication system more than any others.

Among these, there are ones who use EPC and EPC network along with their legacy systems and develop EPC-based authentication systems. This is where the Conformance Certificate Program that GS1 Korea guarantees is needed. The Certification will assure the interoperability of their authentication network with ONS and a certificate mark is given to those companies who pass the conformance program.

● Various Industries Adopt EPC/RFID to Improve Supply Chain

Despite the global recession, some of Korea's leading industries aggressively implement RFID in their supply chains. POSCO(POhang iron and Steel COmpany) started RFID project to tag the finished products. This project includes 17 related companies who reprocess the products of POSCO.

LG Electronics is trying to expand their successful RFID project which was awarded for the Presidential prize in electronic retailing in 2009. In addition, LG Electronics is expected to be claimed as the first company which has successfully established RFID-based full supply chain model from the supplier to the retailer in 2011.

Hanmi, the 2nd largest domestic pharmaceutical company, has implemented RFID for all products they manufacture at the production line and the inventories in pharmacies are being effectively managed. The industry will be notified of more detailed regulation of RFID usage for pharmaceutical products in 2011.

Many other industries, however, are still considering EPC/RFID as their solutions and GS1 Korea will continue supporting these potential members.

● Research on Retail Industry and Policy

GS1 Korea as well as the GS1 community has made a significant contribution to the improvement of the retail supply chain efficiency and the overall growth of the retail industry. As the business environment changes rapidly in today's globalized world, continuous observation of the market and timely strategy-making to deal with its changes are key elements to ensure a sustainable growth.

We carry out research projects on the business environment in retail industry on a regular basis to provide our member companies with broader perspectives and help develop strategies. The outcome of our research projects is widely used as a credible source for statistical analysis on retail industry.

Besides, the research conducted by GS1 Korea aims to assist government to formulate effective policies for sustainable development of Korean retail industry. Policy related issues covered in our research include conflicts between distribution channels, regulatory reform, win-win collaboration between large enterprises and SMEs, etc.

● Logistics Premium Consulting Service

"Logistics Premium Consulting Service" has been set by GS1 Korea in 2010 to help Korean businesses strengthen competitiveness through enhanced efficiency in logistics and supply chain management.

This service aims to provide selected member companies with one-to-one business consulting on logistics management as well as training or education service. As a part of the program, GS1 Korea is currently running Authorized Economic Operator (AEO) certification program. It is an international certificate program approved by Korea Customs Service on behalf of a government administration in complying with World Customs Organization (WCO) or equivalent supply chain security standards.

By next year, GS1 Korea is also planning to operate Logistics Advisory Service Center, which will provide advisory information services of contact points and the linkage to the consulting services to member companies.

● Conference on "Smartphone, Retail and MobileCom" in April 2010

GS1 Korea has signaled a new era of mobile commerce in Korea through successfully hosting a conference on "Smartphone, Retail and Mobile Commerce" on April 29, 2010 in Seoul.

Over 600 participants attended the conference, which showed the dramatic increase of interest in mobile commerce in Korea. Participants included representatives from retailers, handset manufacturers, mobile operators and solution providers.

The conference highlighted the rapid spread use of smartphone, its applications and the benefits for the retail industry. Four speakers from related industries – Daum Communications (a leading web portal service provider in Korea), KT Commerce (Korea Telecom's subsidiary which provides E-commerce service), KPT Center (Korea Patent Technology Practical Center) and GS1 Korea – shared their views on the recent trend of smartphone applications and smartphone-based mobile service strategies in the retail industry.

● Dispatch of Joint Investment Delegation to China

GS1 Korea organized and dispatched "Joint Logistics Investment Delegation to China" from June 28th to July 3rd, 2010 and investigated Chinese logistics market and explore business opportunities.

Comprised of 25 government officials and representatives of major Korean logistics companies including Hanjin Corporation, Korea Express, Hyundai Logiem and Pantos Logistics, the Joint Delegation visited four cities which are expected to become strategic centers of Chinese logistics market – Dalian, Shenyang, Dandong and Changchun.

During the visit, the delegates attended seminars arranged by the Chinese government bodies and exchanged dialogues with Chinese government officials, which provided a chance to understand related government policies and investment environment. In addition, the delegation visited a number of industrial sites and experienced logistics infrastructure of China.

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