

## GS1 HUG recommends investing in Camera-Based bar code scanners to address specific needs for Automatic Identification in Healthcare

Because of the increased capabilities of camera-based bar code scanners, the GS1 HUG™ (Global Healthcare User Group) strongly recommends to invest in such scanners when introducing bar code scanners or when replacing existing laser bar code scanners. This will facilitate the future adoption of global standards for automatic identification in the Healthcare supply chain.

Global standards for automatic identification provide the opportunity to make the Healthcare supply chain more efficient and accurate, and thus safer. It will also help enable the patient to receive the five patient rights: *the right patient gets the right product at the right time, in the right dose, and using the right route.*

GS1 HUG promotes the adoption and implementation of the GS1 System of standards to automatically identify patients, products, caregivers, and locations. It is the most widely used system worldwide, with more than 5 billion transactions per day based on GS1 standards. The system is built on a scheme of identification keys (such as the GTIN, Global Trade Item Number) and attributes (such as the expiry date), which remains the same independent of the data carrier. Identification can be based on GS1 BarCodes (such as the GS1-128 bar code symbology) and on GS1 EPCglobal (using an RFID tag).

Compared to product coding in for example, a grocery retailer environment, pharmaceuticals and medical devices coding has very specific requirements, including:

- a large amount of data (product ID, batch/lot number, expiry date, date of manufacture, serial number, ...) to be stored on a small space
- variable information (such as unique identification number at unit dose level) to be marked at high production rates
- direct marking (e.g. surgical instruments and implants)
- unscannable bar codes do not only impact supply chain efficiency, but more importantly, patient safety

The above requirements may not always be achieved with the 'traditional' linear bar codes, but a solution is available:



The two examples contain identical data

### GS1 DataMatrix

This is a 2-dimensional (2-D) data matrix symbology enabling, in an efficient way, all of the above requirements:

- enables coding more fixed and variable information, while maintaining a small size
- technologies are available for direct part marking
- allows error correction to circumvent some degree of physical damage

To read the GS1 DataMatrix symbology, camera-based bar code scanners are required. Laser bar code scanners cannot read data matrix bar codes. Camera-based bar code scanners can read both linear and 2-D bar codes.

Furthermore, current generation camera-based bar code scanners offer distinct advantages in terms of cost-performance versus laser scanners:

- investments are comparable
- more reliable, as they have less moving parts than laser scanners, decreasing the total cost of ownership
- deliver application flexibility, being able to read and decode both 2-D data matrix and linear bar codes, eliminating the need for multiple devices
- provide resolutions (up to 1,024x1,280 pixels) to support image capture, allowing imaging of a product or an identification card, or even a document up to 21.6 x 28 cm (8"x11")
- can scan as fast as laser scanners
- can easily be stored as they come in a compact format

*Note:*

*Since 2005, GS1 HUG (Global Healthcare User Group) has been primarily focused to develop global standards for automatic identification in Healthcare. The GS1 HUG consists of participants from all stakeholders of the Healthcare supply chain: manufacturers, wholesalers & distributors, as well as hospitals and pharmacy retailers. GS1 HUG also maintains close contacts with regulatory agencies and trade organizations worldwide.*

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**GS1 HUG™ Global Healthcare User Group  
Organisation and Activity Chart - May 2007**

**HUG Leadership Team**

Ulrike Kreysa, GS1 Healthcare (Project Management & Coordination)  
 Rich Hollander (Co-Chair), Pfizer & Mark Hoyle (Co-Chair), Tyco Healthcare  
 Frank Brüggemann, Comparatio Health - Jackie Elkin, Medtronic - Nicolas Florin, GS1  
 Steve Hess, Merck - Joe Pleasant, Premier - John Terwilliger, GS1 - Peter Tomicki, Baxter  
 Mark Walchak, Pfizer - Tom Werthwine, J&J - Volker Zeinar, B.Braun



**HUG Membership Support Team**

Volker Zeinar, B.Braun



**HUG Communication Support Team**

Jim Willmott, Smiths Medical



**HUG Work Teams**

**Public Policy**

Jackie Elkin, Medtronic

**Business Case**

Ed Dzwil, J&J Pharma

**Auto-ID Data**

Mark Walchak, Pfizer  
 Mark Hoyle, Tyco Healthcare

**Serialisation**

Steve Hess, Merck

**Data Carrier**

To be established on completion  
 of Auto-ID & Serialisation work

**Data Synchronisation**

Tom Werthwine, J&J  
 Joe Pleasant, Premier

**Classification**

Leighton Hansel, Abbott  
 Dave Turner, Novation

**HUG Local Teams**

Australasia

Austria

Canada

Chile

France

Germany

Malta

Serbia & Montenegro  
 Macedonia

Switzerland

United Kingdom

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