

In June 2006, GS1 announced a global sunrise date of January 1, 2010 for a new bar code called the GS1 DataBar™ (formerly RSS). This marks the first time since the EAN/UPC bar code was adopted that GS1 has endorsed a bar code for global, open (unrestricted) trade item identification.

The announcement followed a compelling business case review by a global task force comprising twenty-six companies, including retailers, fast moving consumer goods manufacturers, pharmaceutical companies, GS1 member organisations (MOs), and trade associations.

This document is an executive-level briefing of that business case. The complete version is available for download at www.gs1.org/barcodes/databar/

Why do we need GS1 DataBar symbols?

The growing sophistication of IT technology and management systems has led to demands for additional information to be carried by GS1 bar code symbols. The GS1 DataBar provides the path for our industry's embedded infrastructure and equipment investment to respond to these new requirements and not be marginalized over time.

EAN/UPC provided the industry with a solid foundation for the high ROI associated with stock-keeping unit (SKU) management systems. **The GS1 DataBar, along with RFID, will provide the industry with a new ROI foundation** that goes beyond singularities to management systems associated with a multiplicity of SKU attributes (e.g., traceability, product authentication, category management).

Potential benefits

There are **two primary benefits** to the adoption of the GS1 DataBar:

- GS1 DataBar's ability to provide **automatic identification data not available today**, providing retailers greater visibility and accuracy about what they are selling and in which quantities
- GS1 DataBar's **smaller size**, providing **more space for consumer communication** or providing the option to **reduce packaging** in an effort to reduce cost of goods, also provides an option to the current "small symbol" options (EAN-8 and UPC-E) where numbering capacity may be an issue in some markets

Other benefits may include:

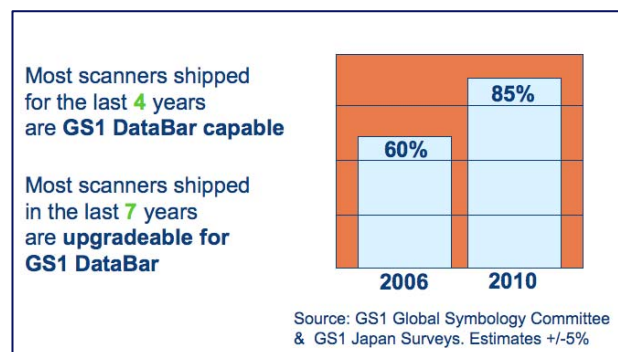
- Traceability and product recall possibilities
- Significantly improved coupon functionality and management
- Better sell by/expiration date management
- Better understanding of consumer buying habits
- Better variable product weight management
- Sales area identification, by identifying the difference between specific service case sales and regular counter sales
- Data synchronisation for variable weight items
- Improved accuracy and speed at POS for fresh produce, by eliminating PLU-entry errors by cashiers or at self-checkout
- Identification of vendor for fresh produce
- Cost avoidance for books & periodicals, by eliminating the need to re-ticket over ISBN bar code
- Easier bar coding of inhabitually-shaped products, such as those that are curved or spherical
- Multi-lingual labelling
- Category management, enabling departments such as meat, poultry or produce to have access to the same level of category management utilized in the centre of the store
- Shrink reduction
- Capture of additional data for books & periodicals, with data such as title and volume
- The end of 4-digit (99.99) price limitations and related revenue losses
- The GS1 DataBar will perform at equal or greater speeds per transaction as EAN/UPC

Possible Costs

- Scanner upgrades or replacement
- Operational costs to make application use of new data
- On-line printing capabilities
- Marketing, communication and education
- Packaging changes, though most are expected to happen in a natural product life cycle
- Deli/meat printer and scale upgrades
- Costs and barriers to traceability across applications

Operational Readiness

Scanners. The majority of scanners developed since 1998 are upgradeable (field programmable) with updates installed either locally or by download. The cost varies from free to around \$300. Since 2001 most scanners have GS1 DataBar capability installed but it has not been turned on: activation occurs by a switch or software flag. In 2005, GS1 Global Symbology Committee members agreed that approximately 90% of their scanners will be GS1 DataBar capable by the end of 2007.



Concerning Small to Medium Enterprises (SMEs): For SMEs who have GS1 DataBar capable scanners and do not know it: they should contact their scanner vendor to determine how to “switch on” the GS1 DataBar. For those who have equipment that can be upgraded for the GS1 DataBar: they will weigh whether upgrades or replacements make sense. For those who have equipment that cannot support the GS1 DataBar, replacement will be necessary.

Direct on-demand printing technologies are available and in-use for both small run package printing and very high-speed very large capacity items such as magazines. Similar technology is now emerging for in-line printing processes such as flexography. The GS1 DataBar 2010 Program includes one research project to further investigate the technology and costs for industry in this area to anticipation of mandates for the need.

The only application where **dual symbols** are currently planned is in the US Coupon replacement project where the GS1 DataBar Expanded replaces the current GS1-128 add-on symbol.

EPC and GS1 DataBar

There are a number of major differences between RFID and bar codes:

- RFID can be read without line of sight
- Some RFID tags can be re-written
- An RFID label is more expensive than a bar codes label
- Both have barriers to implementation on packaging and on products but for different reasons (e.g., water or metal interference for RFID, irregular contours for bar codes)
- Bar code scanning hardware is pervasive while RFID is an evolving technology

	Point of Sales Use?	Logistics Use?	Carries all Data?	Read-Write?
 EAN/UPC	✓	✓	✗	✗
 GS1-128	✗	✓	✓	✗
 RFID	✓	✓	✓	✓
 GS1 DataBar	✓	✓	✓	✗

Key questions on the link between the GS1 DataBar and EPC have been treated in a [Frequently Asked Questions \(FAQ\)](#) document which can be found on the GS1 DataBar website.

Further information

More information on GS1 BarCodes and GS1 DataBar can be found on the GS1 web site at www.gs1.org/barcodes. Check back often for updates and new material. You may also contact your local GS1 Member Organisation (www.gs1.org/contact).

GS1 DataBar Task Force Roster (as of March 2006)

Task Force Member	Company	Company Type
Tsuyoshi Miyazaki	Aeon Company	Retailer
Jack Gridley	Dorothy Lane Market	Retailer
Pat Walsh	FMI	Industry Association
Roberto Matsubayashi	GS1 Brazil	Member Organization
Diane Taillard	GS1 France at the request of Carrefour	Member Organization/ Retailer Liaison
Ilka Machemer	GS1 Germany at the request of Metro	Member Organization/ Retailer Liaison
Ulrike Kreysa3	GS1 Global Office on behalf of GS1 HUG™	GS1 Global Office
Kazuya Sato	GS1 Japan	Member Organization
Greg Rowe	GS1 US	Member Organization
Akikazu Sato	Kao Corporation	Manufacturer
Doug Naal	Kraft	Manufacturer
Kevin Koehler	Loblaws	Retailer
Duane Judd	Nestlé	Manufacturer
Bud Babcock	P&G	Manufacturer
Terry Mochar	Reckitt-Benckiser	Manufacturer
Joe Spreitzer	Target	Retailer
Lela Tripp	Tyson Foods	Manufacturer
Joe Andraski	VICS	Industry Association
Mark Mohler	Wal-Mart	Retailer
Daniel Kochanowicz	Woolworths	Retailer