



GS1 Tagged Item Grading (TIPP) Tests with Voyantic Tagformance

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Grading

Grades are used in many industries in defining performance and quality: Engine oils, steel types, car tyres, batteries (AA, AAA)...

Now grades are coming to RFID

Idea of grading: User only needs to know which grade is suitable for them – buying is easy. Technology providers know what the code means and use standardized test methods to test which grades their products fulfill.



Grading

EXAMPLE – WITH GRADING

I need for my camera
an AAA battery.



With grade it is easy to
communicate requirements and
buy batteries.

EXAMPLE – NO GRADING

I need for my camera:

A battery with voltage of 1.5 V.
Cylindrical shape, 44.5 mm in length
and 10.5 mm in diameter. Length
shall include the positive terminal
button with a minimum of 0.8 mm
height and 3.8 mm in diameter,
located to one end of the cylinder;
the flat negative terminal has a
minimum diameter of 4.3 mm,
located to other end of the cylinder.

RFID Tagged Items in Retail

Items in Retail

- All shapes and sizes
- Different materials
- Displayed in different ways



Several types of readers in use

RFID tag should function well

- With all readers
- In all shelves and racks, boxes and pallets



Grading helps in finding right tags for each system

No Grading: Problem with tag lists

Supplier

Tag model S1

Retailer 1

Tag model FF

Retailer 2

Stock of tag models

Tag model
AE45

Retailer 3

Tag model
...

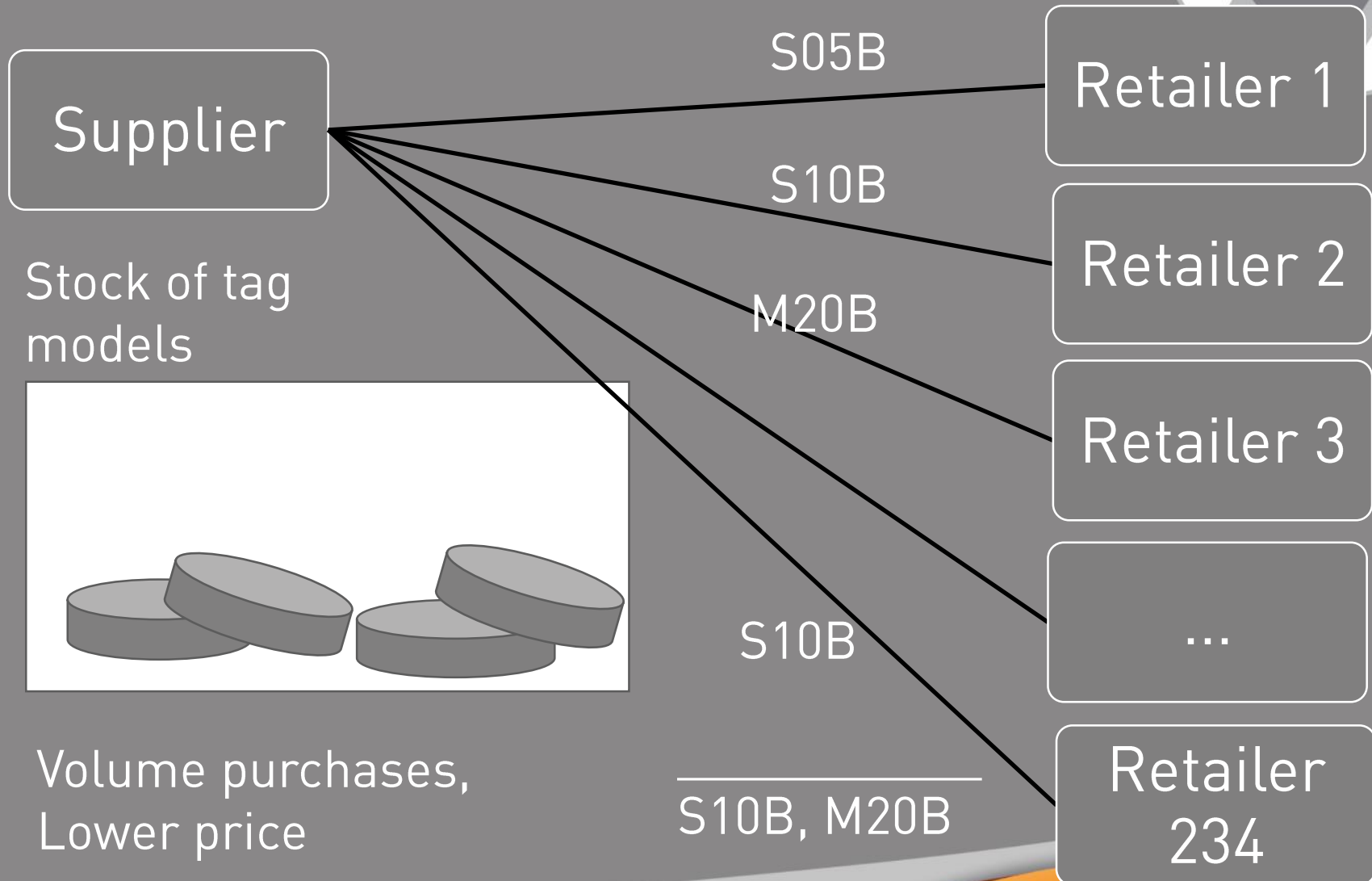
...

Tag model
AA

Retailer
234

Small purchases, lot of stock

Solution with TIPP grading



GS1 tagged Item grading (TIPP)

With retailers, manufacturers and technology providers GS1 developed Tagged Item Performance Protocol (TIPP) and standardized test method. GS1 looked how other industries worked and decided to apply grading to RFID.

- Communication tool: TIPP grades simplify tag buying and selling.
- Standardized test methods: Easy to test and verify.
- Grades: Easy to manage and optimize required tag models



Using TIPP grades in practice

1. A system integrator (or retailer themselves) defines which performance grade is needed for a retailer's RFID system.

RFID system at user Z requires grade S05B tagged items

2. Retailer can then buy tags according to the grade.

3. With standardized method supplier can test that required grade definition is passed.

4. With standardized test methodology user can verify that requirement is met.



Tagged-Item Grading

Grade defines how easily a tagged item is read from different angles



Different grades for different items and systems

Single items

S05B

S15B

S15D

S20B

Stacked items

M05B

M10B

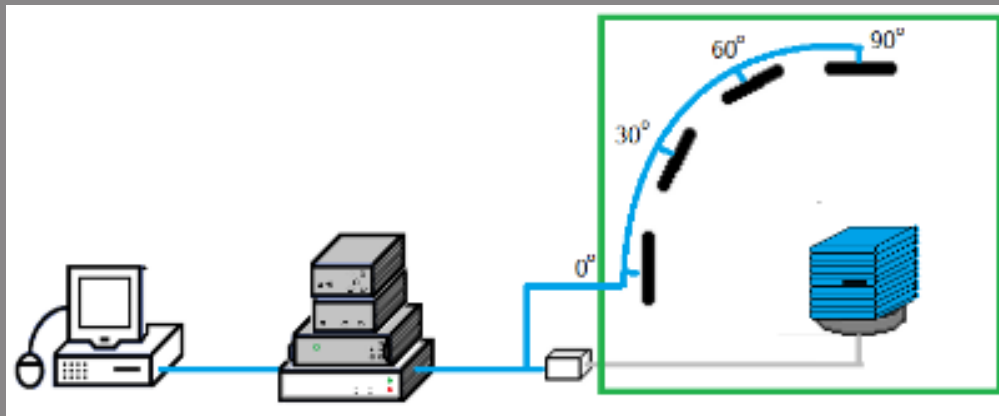
M15B

M20D

New grades will be added

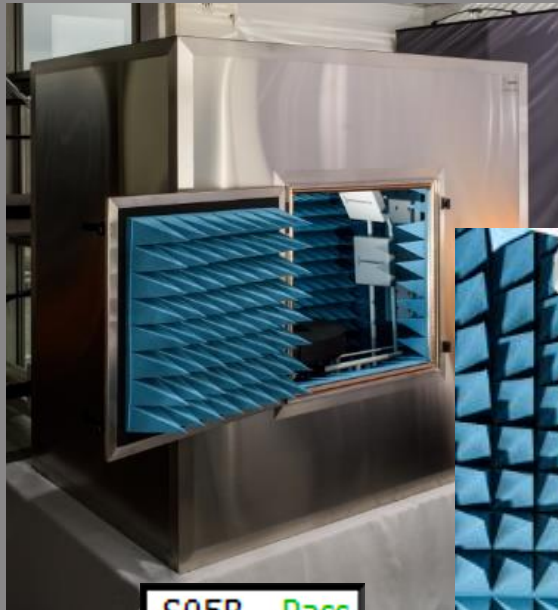
Tagformance Tagged-Item Grading System Overview

- 100% aligned with GS1 TIPP methodology
- Fully automated tests
 - Easy to use, easy to share results
- Turn-key system deliveries including test chambers
 - Existing Tagformance systems can be upgraded for TIPP



Easy to use

Tagged item is placed to the test cabinet. One button press starts the test and result is clear pass/fail for each grade.



S05B	Pass
S15B	Pass
S15D	Pass
S20B	Fail
M05B	N/A
M10B	N/A
M15B	N/A
M20D	N/A



TIPP tests as a service



Standardized test methodology has enabled testing as a service.

There are already test service providers offering TIPP grading and verification tests as a service.

These service providers help RFID tag providers, system integrators and RFID users.





Thank you!

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