

Global Monitoring System - Frequently Asked Questions

What is the Global Monitoring System (GMS)?

What are the benefits of joining the GMS?

What is RFID technology?

How does RFID work?

What is the difference between active and passive tags?

Why are the tags provided for the GMS so inexpensive?

How much does it cost to join the GMS?

Can I get financial assistance to join the GMS?

Which countries are currently participating in the GMS?

What is the difference between the data provided by the UPU's continuous testing programme and the data provided by the GMS?

What technical requirements are needed for a postal operator to join the GMS?

Who is AIDA Centre?

Who is Quotas?

Do I have to use the RFID equipment and tags supplied by AIDA Centre to be part of the GMS, or can other RFID technology be used?

What do the panellists do?

What is GMS STAR?

What is the data from the GMS used for?

What is the Global Monitoring System (GMS)?

The UPU GMS is a state-of-the-art RFID quality measurement system for letter mail applicable to all UPU members. It is being developed with a primary focus on measurement of the performance of the destination country, and the linking of this performance to terminal dues payments. The plan is that this system will eventually be applied to all UPU member postal operators. To achieve this objective, the GMS is designed to be simple, affordable and reliable

What are the benefits of joining the GMS?

Modern postal operators cannot afford not to have a performance-measuring system in place to monitor the quality of its operations and services in order to improve efficiency, remain competitive and retain customers.

Joining the GMS, postal operators will receive quality performance reports useful not only for the calculation of their terminal dues but also for evaluation of the achievements of their QSF projects. The diagnostic information provided by the system will facilitate actions to improve quality performance.

GMS users will be equipped with state-of-the-art RFID solutions. This means that, in the long run, if they so wish, they will be able to use the same technology for their domestic letter mail quality measurement, and even for quality measurement tailored to the specific needs of their large customers.

What is RFID technology?

The GMS uses passive radio frequency identification (RFID) technology. RFID stands for Radio Frequency Identification. The acronym refers to small electronic devices that consist of a small chip and an antenna. The chip typically is capable of carrying 2,000 bytes of data or less.

The RFID device serves the same purpose as a barcode or a magnetic strip on the back of a credit card or ATM card; it provides a unique identifier for that object. And, just as a bar code or magnetic strip must be scanned to get the information, the RFID device must be scanned to retrieve the identifying information.

How does RFID work?

A radio frequency identification system has three parts:

- a scanning antenna
- a transceiver with a decoder to interpret the data
- a transponder (the RFID tag) that has been programmed with information.

The scanning antenna puts out radio frequency signals in a relatively short range. The radio frequency radiation does two things:

- It provides a means of communicating with the transponder (the RFID tag)
- It provides the RFID tag with the energy to communicate (in the case of passive RFID tags).

When an RFID tag passes through the field of the scanning antenna, it detects the activation signal from the antenna. That "wakes up" the RFID chip, and it transmits the information on its microchip to be picked up by the scanning antenna.

In essence, that is how RFID works.

What is the difference between active and passive tags?

- The passive technology involved follows global standard (EPC Global GEN-2), allowing its use all over the world. The same tag or transponder can also be globally read on an open-standard basis.
- The price of passive technology is extremely low
- Since the passive transponder does not need a battery, it is very thin. The tag can be easily concealed in a regular standard envelope.

Why are the tags provided for the GMS so inexpensive?

Passive RFID tags do not require batteries. Hence, they can be much smaller and have a virtually unlimited life span.

How much does it cost to join the GMS?

GMS estimated costs vary depending on group classification (from level E with < 250 tons mail per annum to level A with > 10'000 tons of inbound mail per annum) and on equipment requirements. The GMS team will be pleased to assist you to appraise them on request.

Can I get financial assistance to join the GMS?

Countries needing help to finance their participation in the GMS may apply to the UPU's Quality of Service Fund (QSF) to use their QSF resources for this purpose. The GMS team has developed a process to facilitate such applications.

Which countries are currently participating in the GMS?

The countries taking part in the GMS pilot are: Aruba, Chile, Greece, India, Korea (Republic), Malaysia, Mexico, Netherlands Antilles, Norway, Peru, Qatar, Romania, Saudi Arabia, Singapore, Slovakia, Spain, Switzerland, Togo, Tunisia, United Arab Emirates and Venezuela.

What is the difference between the data provided by the UPU's continuous testing programme and the data provided by the GMS?

The main differences are as follows:

- The objective of UPU continuous testing is to measure the transmission times of international priority mail, from posting to delivery (end-to-end testing). GMS focuses on the inbound stretch.
- UPU continuous testing is based on sampling (test letters sent by post). To keep costs as low as possible, both internal and external panelists are used. In the case of GMS, only external panelists are used.
- No link to terminal dues payments is possible with UPU continuous testing. This is possible with GMS.

What technical requirements are needed for a postal operator to join the GMS?

To join GMS, a postal operator needs to have RFID gates and ancillary equipment installed in their facilities where inbound international mail is received. The UPU GMS solution developed and executed by the International Bureau operates on passive RFID technology. The International Bureau will be pleased to assist postal operators that currently do not have RFID equipment install passive RFID equipment in their facilities.

Thanks to a design architecture based on open standards, the GMS will be compatible for interfacing with the current semi-active RFID system of the UPU Quality Link Measurement System. This means that postal operators that already have RFID systems can participate in the GMS using their existing RFID technology.

Concerning inter-connectivity with the GMS STAR, used to process and validate test item data, calculate performance results and produce reports, as prescribed in the GMS design specifications, a dedicated ADSL line is ideal but other solutions can be implemented (internal network for instance).

Who is AIDA Centre?

AIDA Centre of Spain is the company selected by the UPU, through an open tender process, to be the supplier of the RFID infrastructure for the GMS. This engineering company is owned by Philips and has so far implemented the largest RFID passive technology network for letter mail measurement in Europe.

Who is Quotas?

Quotas of Germany is the company chosen by the UPU, through an open tender process, as the panel management and test letter production supplier. Quotas is an experienced panel management firm providing quality measurements for postal operators since 1994. With participants in more than 80 countries, the company recruits individuals through a number of channels like internet banners, direct mail, newspaper advertisements, international organizations or local field services.

Do I have to use the RFID equipment and tags supplied by AIDA Centre to be part of the GMS, or can other RFID technology be used?

Other equipments (antennas and tags) can be used. However, they need to meet GMS technical specifications. In the case of tags, Quotas is already dealing with tags manufactured by several suppliers for the GMS.

What do the panellists do?

The posting and delivery process of test letters is as follows:

- Based on defined allocation rules, the panellist manager draws up a posting programme for test letters sent from a specific country to a designated destination country. Let's take a test letter from Florence (Italy) to Nice (France) as an example. After the arrival of the letter at the OE in France it should take a prescribed number of days to be delivered to the addressee in Nice corresponding to domestic delivery standard.
- The panellist manager allocates the resources to respond to this need. Information is passed onto the dropper panellist in Florence.
- The dropper panellist sends the test letter and provides the posting details to the panellist manager
- Once the test letter has been delivered, the receiver panellist notifies the arrival to the panellist manager

What is GMS STAR?

GMS **S**tatistical System for **A**nalysis and **R**eports is used to measure, monitor and control the test letters and the external entities (RFID supplier and panel management company) involved in the GMS project in order to:

- Execute calculations on the test letters.
- Perform analysis and produce reports concerning the delivery on time performances of each postal operator.
- Measure the performances of the panel management company and the RFID supplier.

What is the data from the GMS used for?

The GMS data received by the GMS STAR will be used to calculate the delivery on time performances of each postal operator participating in the GMS, perform analysis and produce reports and measure the performances AIDA Centre and Quotas.