Does GS1 architecture accommodate digital fabrication products?

A trial of information management system of digital fabrication products in campus

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Motivation

Digital fabrication technology changes the way we design, make and distribute products. Unique ID based product management, rather than SKU and quantity based management, is should be employed. We design and operate a product life cycle information management system based on GS1 architecture, which can navigate from automatic identification to trusted data sources of the product of interest.

Problems experienced

- Issuance of SGTIN
  Digital fabrication products have large variety of items and a limited serial number which is contradictory to the current SGTIN structure. We devise a dot-separated serial number which is conformal to GS1 AI and SGTIN198. The serial number can provide subdomain of serial number.

- Service discovery
  Product master data should be maintained by the creators themselves. A query for services with a SGTIN is automatically forwarded to ONS to discover services associated with the ID.

Implementation

- Portable implementation with sinatra and sequel
- Unique ID issue by administrator

![Internet Trusted Data Source](image)

![Trusted Data Source](image)

![Service Discovery](image)

![Item Information Page](image)