Start with an identifier

Dataspaces and Semantic Interoperability

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Since early 70s
More data

GTIN 09506000134352
Batch/lot ABC
Serial No. 1234
Expiry 30 June 2023
GS1 Element String syntax

(01)09506000134352(17)230630(10)ABC(21)1234
GS1 Digital Link syntax

GTIN

https://example.com/01/9506000134352
GS1 Digital Link syntax

https://example.com/01/9506000134352/10/ABC
GS1 Digital Link syntax

https://example.com/01/9506000134352/10/ABC/21/211234
GS1 Digital Link syntax

https://example.com/01/9506000134352/10/ABC/21/211234?17=230630
GS1 Digital Link cf. GS1 Element String syntax

(01)09506000134352(17)230630(10)ABC(21)1234

https://example.com/01/9506000134352/10/ABC/21/211234?17=230630
(01)09506000134352(17)230630(10)ABC(21)1234

GTIN  Batch  Serial  Expiry

/01/9506000134352/10/ABC/21/211234?17=230630
Offline

Point of sale

Supply/stock
Item identifier URI

https://example.com/01/9506000134352/21/211234
"linkset": [
{
  "anchor": "https://id.gs1.org/01/09506000134352",
  "itemDescription": "Dal Giardino Risotto Rice with Musrooms 411 gr",
  "https://gs1.org/voc/hasRetailers": [
    {
      "href": "https://dalgiardino.com/where-to-buy/",
      "title": "Where to buy",
      "hreflang": ["en"]
    },
    {
      "href": "https://dalgiardino.com/where-to-buy/index.html.es",
      "title": "Donde comprar Dal Giardino",
      "hreflang": ["es"]
    }
  ],
  "https://gs1.org/voc/pip": [
    {
      "href": "https://dalgiardino.com/risotto-rice-with-mushrooms/",
      "title": "Product information",
      "hreflang": ["en"]
    }
  ]
}
"linkset": [
  {
    "anchor": "https://id.gs1.org/01/09506000134352",
    "itemDescription": "Dal Giardino Risotto Rice with Mushrooms 411 gr",
    "https://gs1.org/voc/hasRetailers": [
      {
        "href": "https://dalgiardino.com/where-to-buy/",
        "title": "Where to buy",
        "hreflang": ["en"]
      },
      {
        "href": "https://dalgiardino.com/where-to-buy/index.html.es",
        "title": "Donde comprar Dal Giardino",
        "hreflang": ["es"]
      }
    ],
    "https://gs1.org/voc/pip": [
      {
        "href": "https://dalgiardino.com/risotto-rice-with-mushrooms/",
        "title": "Product information",
        "hreflang": ["en"]
      },
      {
      }
    ]
  }
]
Item identifier URI

https://example.com/01/9506000134352/21/211234?linkType=gs1:pip
Summary

• GS1 Digital Link encodes *existing* identifiers in a URI
• Identifiers are *independent* of the resolver service
• Resolver associates URI with one or more typed links (similar to HATEOAS)
• Identifiers are ordered in the path, attributes unordered in the query string
• Therefore, links can be inherited from higher up (Linked Data style)
• Resolver can
  - redirect to a specific type of link if asked
  - return the full linkset if asked
  - just redirect to a default (no app required)
• Aiming for ISO standard (SC31/WG2)
Start with an identifier

Get a common basic API for every thing

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