210223 DHSB Technical Update

Unique Identifier (UID) Decisions

We need to determine the UIDs which Open 3P will use. Unique IDs are critical to a well functioning standard as they allow interoperability between different systems. It is important that they are universally unique, not just unique to an organisation or a single software or system. If duplicates exist within the data it will cause issues with data quality, could cause software to 'break' and create opportunities for obfuscation and therefore potentially fraud.

Because some of the data being shared will be confidential or proprietary we also need to ensure that it's not easily possible to reverse engineer the UID to determine details about the data it refers to, such as the manufacturing company, material type, customer etc.

UIDs are not something we can make changes to later as they are so critical to the functioning of the standard.

There are a number of possible routes we could go down to generate UIDs.

Minted UIDs

One option would be that the Standard Holding Body would 'mint' them. This would require a repository of all issued UIDs and a process to oversee their issuing and management. In this model we would probably need to charge users for the UIDs creating a revenue stream to cover the costs of managing the process. This is essentially what GS1 do. Their data standard for barcodes is open, but to ensure that your barcode is universally unique you need to purchase the prefix (or a range of them) from GS1.

> Pros: revenue stream, control over all UIDs so can ensure unique, could include identifiable info in the ID which makes them more human readable
>
> Cons: administrative burden, identifiable elements may mean the ID could be reverse engineered, prevents truly 'open' use of the standard

Another option under minted IDs is that certain organisations were granted the authority to mint IDs. Again, there would likely be some cost for those organisations to be authorised, but then those organisations could offer 'their' UIDs to the market on whatever basis they saw fit.

> Pros: revenue stream, potentially less admin burden
>
> Cons: burden of oversight of authorised organisations, less control over UIDs, potential for clashes, 'battle of the minters' (ie different users use different minters, how does it work together?)

Self-created UIDs

Another option would be for the standard to layout a process for creating a UID. There is already an Open Standard, UUID, which exists to support exactly this process. This option provides no revenue generation opportunities, but it also requires no management or effort.

> Pros: uses existing open standard, no creation or admin burden, easy for software systems to implement, chances of duplications extremely small

Cons: UUIDs are not human readable so if being used in low tech (e.g. spreadsheet) systems more room for human error

Alternatively we could devise our own methodology to create a UID. This option provides no revenue generation opportunities, but it also requires no management or effort.

Pros: complete control and monopoly over the ID creation methodology

Cons: would take a lot of effort to come up with robust methodology to ensure anonymity and uniqueness

Our recommendation, after much discussion, is to go down the UUID route, because the generation of the standardised UUID is a function built into most modern programming languages meaning implementation into existing system is relatively easy. There is no additional training or documentation needed. For spreadsheets there are formulas and external UUID generators available for no additional cost.

The Open 3P Standard Development Path

Having reviewed the standard following the 7 material specific workshops (Aluminium, Glass, Paper and Card, Fibre-based Composite, Wood, Other x 2. We had no one engage with the steel workshop, so are taking aluminium as a base to develop from.) there are a number of changes that need to be made to the current plastic Open 3P standard. None of the changes are major, but because there are a number of them we are recommending that the extended standard for all materials will be a version 2 (not a version 1.1).

The changes can be summarised as:

- Moving data fields from one schema to another, e.g. materialVolume move from Materials Catalogue to Materials

  Having reviewed against other materials it makes sense for this data to be captured in a different schema.

- Renaming some schemas

  Some schema titles are confusing, especially given the changes we are making in the point above

- Adding in a new data field

  There are a couple of new attributes required to be included in the standard so as to accommodate the new materials

- Updated guidance

  To make it easier for people to use the standard and to allow us to highlight any areas where a field may be more useful for one material over another.

Work to update the standard is currently under way. We aim to have this work completed by end of February/early March and will be scheduling expert review sessions for each material type with a small group of material specific experts to check that the revisions work for each material. Note that we will also need to review for plastic as well as all the new material types. These sessions will be scheduled for mid-end of March. If any changes are required we will be doing rapid iterations and re-reviewing with experts if needed.

Once finalised we will organise a series of webinars to socialise the standard with the industry. These will be aimed at training potential users and stakeholders and gathering some feedback, rather than aimed purely at feedback.

We will aim to have the changes finalised, ready to present to the iSCB to go through the approval process for the May meeting.