



SAM Standards

The Story today: Choosing the lesser of two Evils?

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Let's Meet Sam

- SW Compliance manager
- Hard worker
- Knows right and wrong
- Understands licensing
- Wants to mitigate risk
- Recognizes business value
- Works to save the business money



Sam's asked to find a tool

Sam,

This is Frank I manage purchasing for our company - we just got hit with a major bill from ACME DB Co. because we were out of compliance with our software licensing. We need a tool to help with this - and fast! Please help us find something that stops this from happening again!

Most tools give Sam a choice

- Sam starts to look
- She finds there are generally two types of common tools
- Neither choice appeals to her!



Sam goes on a mission



- Kuantan - next ISO Plenary
- She learns of a secret group of do-gooders
- They go by the obscure code name of
ISO-IEC-SC7-WG21
(WG21 for short)
- Sam learns that IAITAM is involved with WG21

Sam learns about ISO SAM standards



- Internationally approved
- Can be included in Government purchasing requirements
- They can take years to review and approve primarily because of the distributed nature of the developers and reviewers
- WG21 has 22 countries involved & 5 class C Liaison orgs (including TagVault.org and IAITAM)

Her Mission Continues Online



Pieces start to come together

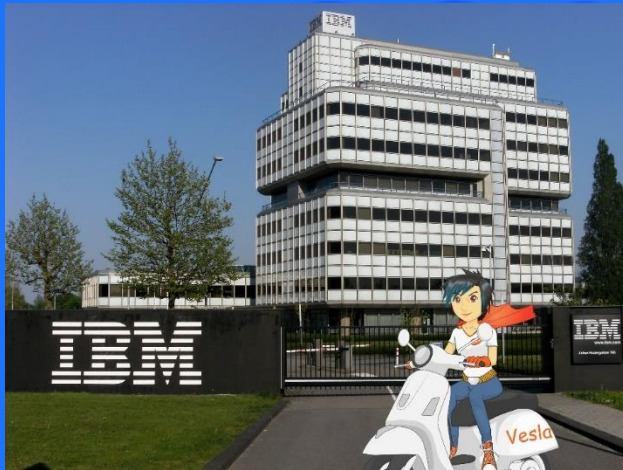
- 19770-1 - Process for SAM
- 19770-2 - Software Identification (SWID)
- 19770-3 - Software Entitlements (Ents)
- 19770-4 - Resource Usage Measurement (RUM)
- 19770-5 - Overview and Vocabulary (FREE)

(<http://standards.iso.org/ittf/PubliclyAvailableStandards/>)

(http://standards.iso.org/ittf/PubliclyAvailableStandards/c068291_ISOIEC_19770-5_2015.zip)



Learning from leaders (IBM)



- Every product includes SWID tags (2015 format)
- Supplemental tags identify bundles
- Usage will move to ISO standard

SWID Tag - Exists today!

```
<?xml version="1.0" encoding="UTF-8"?>
<SoftwareIdentity
  name="IBM BigFix Protection RVU"
  tagId="ibm.com-34d3cf5206724fcabae19bdb355ff851-9.2.0"
  version="9.2.0"
  versionScheme="multipartnumeric" >
  <Meta persistentId="34d3cf5206724fcabae19bdb355ff851"/>
  <Meta taxonomyCode="SSKLMV"/>
  <Meta taggingProcess="4-1-20151125"/>
  <Entity name="IBM"
    regid="ibm.com"
    role="licensor tagCreator softwareCreator"/>
</SoftwareIdentity>
```

RUM Data - IBM is moving to this format

```
<?xml version="1.0" encoding="UTF-8"?>
<ResourceUtilization>
  <AssetIdentification>
    <Link
      href="swid:ibm.com-34d3cf5206724fcabae19bdb355ff851-9.2.0"
      rel="asset" />
    </AssetIdentification>
    <Measurement logTime="2014-11-25T09:31:10+06:00"
      startTime="2014-11-24T09:30:10+06:00"
      endTime="2014-11-25T09:30:10+06:00"
      metricName="AUTHORIZED_USER">
      <Meta subtype="EMPLOYEE" />
      <Value type="number">12</Value>
    </Measurement>
    <Measurement logTime="2014-11-26T09:31:10+06:00"
      startTime="2014-11-25T09:30:10+06:00"
      endTime="2014-11-26T09:30:10+06:00"
      metricName="AUTHORIZED_USER">
      <Meta subtype="EMPLOYEE" />
      <Value type="number">11</Value>
    </Measurement>
  </ResourceUtilization>
```

19770-4 is
in final
stage of
review and
will be
published
in 2017

Retrieving the data

- For Accuracy, the IBM catalog relies on SWID tags first (especially for IBM software)
- ILMT and BigFix Inventory both utilize SWID tag data
- SWID Tag data is available for 3rd party tools to reference (1E uses this data for example)

Learning from leaders (MSFT)



- Many products include SWID tags (2009 format)
- SCCM collects SWID tag data
- MAP supports collection of SWID Tag data

Using SCCM with SWID Tags

G	H	I
DisplayVersion00	Entitlement	ProductName00
15.0.4420.1017	1	Microsoft Project Professional 2013
10.0.10011.16384	1	Windows 10 Enterprise
16.0.4266.1001	1	Microsoft Office Professional Plus 2016
15.0.4420.1017	1	Microsoft SharePoint Designer 2013
10.0.10011.16384	1	Windows 10 Enterprise
15.0.4420.1017	1	Microsoft SharePoint Designer 2013
10.0.10011.16384	1	Windows 10 Enterprise

- Enable SMS_SoftwareTag
- Data in SOFTWARE_TAG_DATA
- More authoritative than any software recognition library

NOTE: - We'll also have a schooling of vendors near the end of this session

Learning from leaders (NIST)



- NIST focuses on support for Cybersecurity requirements
- Publicly available document to help the market incorporate tags
- Includes usage scenarios
- Has extensions to Meta data



NIST-IR 8060 Free download

Cybersecurity Focus

- High level of interest in package manifest
 - Increases data available in manifest to ID if files are mutable, path separators, patch details, etc.
- High level of interest in SWID Tag Signing
- SWID Tags provide viable industry specified canonicalization of application and vendor names and consistent delivery of manifest data

<http://csrc.nist.gov/schema/swid/2015-extensions/swid-2015-extensions-1.0.xsd>

Leaning from leaders (DISR)



- Standards take a long time to be applied by Governments
- Focus is Cybersecurity and canonicalization of names

<http://www.dsp.dla.mil/Specs-Standards/List-of-DISR-documents/>

DISR Standards and Guidance as of January 5, 2017				
1	Standard Identifier	Standard Title	Standard Class	DoD Status
2				
933	ISO/IEC 19770-2: 2015	Information technology -- Software asset management -- Part 2: Software identification tag, 2015-09-30	DISR	Mandated

Learning from leaders (WiX)



- WiX was the first installer tool to support the 2015 version of SWID tags
- Automatic inclusion of tags with one line of code
- Open source and freely available
- FireGiant is the support organization for WiX

Learning from leaders (1E)



- AppClarity Entitlement library is built on 19770-3
- Entitlement data can be imported and exported in standardized format (and used elsewhere)
- No lock-ins! Customer data is available for any use by the customer (purchasing, disaster recovery planning, etc)
- Allows import of industry provided Ents

Learning from leaders (TagVault.org)



- SWID Tag Signing Guidelines - freely available for review (published April 2017)
- Follow news about vendor support for SAM standards
- Two tag signing tools available (one for members, one is open source)
- Join to work on definitions for repository or support further efforts of interoperability for SAM standards
- Learn more about and get engaged in stds development
 - TNG - IF-M Standards (<https://trustedcomputinggroup.org/tcg-updates-m-segmentation-enable-efficient-information-exchange/>)
 - DMTF Software Entitlement Working Group Standards (<https://www.dmtf.org/standards/sewg>)

Sam can change the world

- Even countries can't avoid ISO standards
- Standards allow for interoperability
- Standards ensure minimization of lock-ins (i.e. lower cost in the long run)
- Standards provide vendor supplied canonical information
- Standards ensure links from one item to another are pre-defined by vendor
- Standards can and do make SAM easier, more accurate, less expensive and significantly more automated!
- Standards for SWID support Cybersecurity requirements meaning - wider support within any company



What frustrates Sam?



- IBM is the only vendor thus far using SWID tags to identify bundles & suites - Props to IBM!
- Microsoft is not consistent with their SWID Tags
- Microsoft and Adobe have not adopted the 2015 version of tags
- Microsoft has at least 3 different portals of entitlement data - all using different data structures - **that change regularly** (none using 19770-3)
- Adobe has been told repeatedly what to fix in their tags and has not resolved the issues (i.e. not enough version details, removing tags when SW uninstalled, etc)
- Oracle continues to make discovery incredibly opaque (good news - they are at least engaging with WG21)

What frustrates Sam (2)?



- Tool vendor's who don't want transparency and openness (you've heard their arguments)
- Customers who are not making their frustrations known to tool and software vendors
- Software vendors have free resources to incorporate SWID tags, but have not seen management of software as a priority (see reference to customers above)

Tool requirements



- Must discover and use SWID Tags (2009 and 2015 versions)
- Must support 19770-3 for import and export of entitlements (in an interoperable manner)
- Must use canonical vendor names (not proprietary library names)
- Must be committed to support the use of RUM data when published

Sam starts software requirements

- Must include meta data via SWID tags (2015 revision)
- Must be willing to provide entitlements via 19770-3 Ent format
- When published, vendors must commit that when they provide usage data it will be done via 19770-4 RUM data format



Sam is a hero

- Be like Sam



- Research the standards
- Raise your frustrations to your vendors
- Don't take "no" for an answer
 - Vendors will say the standard costs money (no need to buy if tools are used, and there are free documents and tools available)
 - Remind your vendors there is an enormous cost of conformance that your company pays - often for multiple different vendors being managed by different teams
 - Vendors will say their software is more complicated (details have been tested by Microsoft and IBM - just say'n)
 - **Use lack of support to improve your negotiation position**
- Work with vendors that are aligned with your best interests
- Get involved in the standards development efforts

Reference Materials

- Freely accessible copy of 19770-5 (note - go to first reference if there is an update)
(<http://standards.iso.org/ittf/PubliclyAvailableStandards/>)
(http://standards.iso.org/ittf/PubliclyAvailableStandards/c068291_ISOIEC_19770-5_2015.zip)
- NIST-IR 8060
(<http://nvlpubs.nist.gov/nistpubs/ir/2016/NIST.IR.8060.pdf>)
- NIST-IR 8060 Schema for extensions
(<http://csrc.nist.gov/schema/swid/2015-extensions/swid-2015-extensions-1.0.xsd>)
- DISR Reference to require SWID tags
(<http://www.dsp.dla.mil/Specs-Standards/List-of-DISR-documents/>)
- Trusted Computing Group - IF-M Standard
<https://trustedcomputinggroup.org/tcg-updates-m-segmentation-enable-efficient-information-exchange/>
- DMTF - Software Entitlement Working Group
<https://www.dmtf.org/standards/sewg>
- Minnesota User Group comments on Adobe SWID tags and SCCM
(<https://mnscug.org/blogs/sherry-kissinger/419-gather-some-adobe-serial-numbers-and-version-using-configmgr-compliance-settings-and-hardware-inventory>)



Additional Reference Material

<http://tagvault.org/2017/04/02/iaitam-reference-material-2017/>



Thank You

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