

# **TOTAL ASSET MANAGEMENT**

## **Working with Advance Shipping Notices (ASNs)**

**A Management White Paper by:**

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## **HIGHLIGHT**

Capturing asset financial and purchasing information is important to most ITAM solutions, but such capture is often spotty due to the nature of having to forward shipping/purchasing documentation to the asset manager for data entry. Many vendors can now offer electronic versions of shipping notices, called Advance Shipping Notices (ASNs). ASNs carry highly accurate data which includes such coveted purchasing data elements as purchase order, invoice number, purchase price, order date, ship date, as well as serial numbers. ASNs also carry software items and can be used to automate the capture of purchased license information. The use of ASNs, however, is not without challenges, which are described in this paper. When the challenges are overcome, however, ASNs offer a highly accurate and automated way of sourcing important data elements to your ITAM repository.

## **THE ADVANCE SHIPPING NOTICE (ASN)**

Most IT hardware and software vendors, when asked, are capable of submitting electronic copies of all items that have been shipped to your company. Generally the electronic copy is either in Microsoft Excel or Comma Separated Value (CSV) format, and typically contains such information as:

- Order number and date
- Customer purchase order number
- Ship-to address and contact
- Invoice number and date
- Ship date
- Line item price as well as total order price
- Part number and description
- Manufacturer and model number
- Serial number
- Software publisher, title, and version

Much of the information contained in the ASN is important to capture for IT Asset Management, and has often been captured manually from shipping documentation. Unfortunately, often times the hard copy shipping documentation does not get forwarded to the ITAM data entry staff, and that which does suffers from common data entry errors. The result is often spotty capture of purchasing and warranty information. By being able to accept electronic ASNs from vendors, both the omission and accuracy problems of the past can be practically eliminated. Additionally, the ASN can be used as an independent source for reconciliation of equipment ordered (for ITAM solutions that start the asset's life at time of order), and/or for equipment received. Also, since

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<http://www.veriam.com>

ASN information originates from the vendor's or manufacturer's fulfillment systems, the accuracy is generally quite high.

## THE CHALLENGES

Capturing asset financial and purchasing information is important to most ITAM solutions, but such capture is often spotty due to the nature of having to forward shipping/purchasing documentation to the asset manager for data entry. Many vendors can now offer electronic versions of shipping notices, called Advance Shipping Notices (ASNs). ASNs carry highly accurate data which includes such coveted purchasing data elements as purchase order, invoice number, purchase price, order date, ship date, as well as serial numbers. ASNs also carry software items and can be used to automate the capture of purchased license information. The use of ASNs, however, is not without challenges, which are described in this paper. When the challenges are overcome, however, ASNs offer a highly accurate and automated way of sourcing important data elements to your ITAM repository.

Unfortunately, it is not as easy as taking the CSV or Excel spreadsheet sent by the vendor and importing the information into your repository. There are several challenges to using ASN data that must first be overcome. Such challenges include:

- Different spelling and reporting formats for different vendors
- Changes to spelling for same product from same vendor
- Ancillary line items which must be filtered out (shipping and receiving, consumables, etc)
- Mapping of software to autodiscovery spelling
- Software purchased in multi-license packs
- Identifying software media versus actual licenses

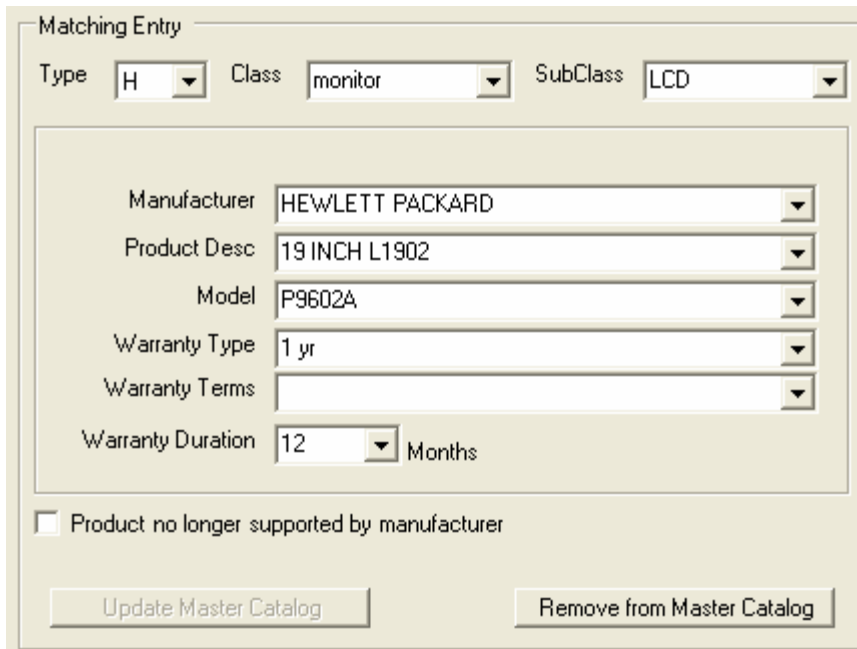
Each of these challenges will be described in further detail below.

**Challenge 1 – Different spelling and reporting format for different vendors**

If you purchase from multiple vendors, chances are high that their spelling standards will differ from each other. Therefore, in order to use the information from each of their ASNs, you will need a means to map various spellings to one common spelling. The common spelling is typically the master product catalog from your repository. Figure 1 shows two vendors’ spellings for the same L1902 monitor. Figure 2 shows the corresponding entry from the master product catalog to which each has been mapped.

Manufacturer	Product Description
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT-PACK	HP L1902 19 inch TFT Monitor
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY

**FIGURE 1. TWO VENDORS’ DIFFERENT SPELLINGS FOR THE SAME L1902 MONITOR**



**Figure 2. Corresponding Master Catalog Entry**

**Challenge 2 – Different spelling and reporting format for same vendor**

Even if you purchase from one vendor, it is entirely possible the vendor will change their spelling over time. Figure 3 shows the same vendor’s different spelling for the same product. One entry appears to be the normal order item and one was from when the item was offered through a special promotion. Both entries, however, are for the same L1902 monitor.

Manufacturer	Product Description
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT PACK	L1902 19IN LCD-TFT MON US EN LOCAL - SBY
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US
HEWLETT-PACK	Promo HP L1902 19in TFT Monito US

**Figure 3. Different spellings for same product by same vendor**

**Challenge 3 – Ancillary items that must be filtered out**

A typical ASN will contain line items for everything that will also show up on the invoice. Many of these line items do not relate to assets that are being tracked, or to assets at all. For instance, shipping and receiving is a service charge, not an asset, but it will be a line in a typical ASN. Other examples include consumables such as ink cartridges and internal components such as memory modules. Therefore, in order to make the ASN information useful, such line items must be automatically identified and ignored. Figure 4 shows multiple line items for configuration/customization.

Manufacturer	Product	Model
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES
CUSTOM EDGE	(null)	CUSTOMIZATION SERVICES

**Figure 4. ASN line items that are not assets**

### Challenge 4 – Mapping of software to autodiscovery spelling

This is probably the largest challenge in working with ASN data. Many ITAM solutions have a goal of being able to report on organization software compliance – “are we in compliance with software licensing”? In order to answer that question in an automated fashion, two separate data sets must be maintained and compared. The two data sets are:

1. All software installed (generally discovered by an autodiscovery agent)
2. All software purchased

ASN information can be used to populate the second data set, while your autodiscovery tool is generally used to populate the first. In order to perform a matching of what was discovered to what was purchased, the way publisher, title, and version are spelled in one data set must exactly match how those same fields are spelled in the second. Since there is generally no unique key, such as asset tag or serial number, to match when comparing software, the uniqueness is formed via the combination of the publisher, title, and version fields. Therefore, spelling must match exactly in those fields in both data sets in order to perform automated comparisons.

Figures 5 and 6 demonstrate a typical example. The challenge actually grows deeper when you study the figures. Figure 5 shows how Adobe Acrobat 7.0 Pro is received via ASN. Figure 6 shows how Tally TS.Census (now Novell Zenworks Asset Management) discovers Adobe components. Notice that the product name is Adobe Acrobat 7.0 Pro, and that’s basically what the ASN entry calls it. However, Tally finds Adobe Reader 7.0 and Adobe Distiller 7.0, but it does not recognize that the two are really components of Acrobat. Adobe Reader is free to anyone who wishes to install it, but Distiller – part of Acrobat – is licensed. Therefore, a mapping must be made between how the ASN will report Acrobat Pro and how the autodiscovery package will report it – in this case Adobe Distiller. As you can see, actual knowledge of the software package was required to determine the best way to make the mapping.

Manufacturer	Product Description
Adobe - License	Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts
Adobe - License	Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts
Adobe - License	Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts
Adobe - License	Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts
Adobe - License	Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts
ADOBE SYSTEM	GLP ACROBAT PRO V7-WIN LIC 450P

**Figure 5. ASN reporting of Adobe Acrobat 7.0 Pro**  
(notice the different spellings from the same vendor)

Master Catalog - 4331 record(s).

	Publisher	Title	Version	Class
	Adobe	Adobe InDesign	2.0	Software/Graphics
	Adobe	Adobe Gamma	1.3	Software/Utility/Ot
	Adobe	Adobe After Effect	5.5	Software/Graphics
	Adobe	Adobe Audition	1.0	Software/Multimed
▶	Adobe	Acrobat Distiller	7.0	Software/Publishin
	Adobe	ImageReady	7.0	Software/Publishin
	Adobe	Adobe Gamma	1.2	Software/Utility/Ot
	Adobe	Adobe After Effect	6.0 (FR)	Software/Graphics
	Adobe	Adobe Reader	7.0.0	Software/Publishin
	Adobe	Adobe After Effect	4.0	Software/Graphics
	Adobe	Adobe Type Mana	4.1	Software/Publishin
	Adobe	Adobe Acrobat Pr	6.0	Software/Publishin

Refresh     H/W     S/W

Figure 6. Tally TS.Census software catalog entries of software discovered in environment

### Challenge 5 – Software purchase in multi-license packs

When purchasing software, it is possible to purchase a single part number that contains 10, 25, or any number of licenses. The ASN will report the entry as a single line item with a description that might say “25 lic pak”. The quantity field that goes with the entry, a standard field in ASNs, will actually report the number of those part numbered items purchased. For example, if ten 25-license packs were purchased, the quantity column would contain the number 10. However, for licensing purposes, actually 250 licenses were purchased, in this example. Therefore, to make ASN software information useful, you must not only have the ability to map ASN line items to how the autodiscovery tool will both discover and spell the software, but you must also be able to calculate the actual number of licenses purchased – being able to differentiate between a single license of Adobe Acrobat 7.0 Pro and a 10-license pack of Adobe Acrobat 7.0 Pro, for example.

### Challenge 6 – Identifying software media versus actual licenses

It is possible to have negotiated an enterprise license agreement which is invoiced and paid in one transaction, then continuously order media and documentation kits against that agreement over time. The ASN will contain line items for media and documentation kits, and care must be taken not to confuse these items with actual purchased licenses, so as not to overstate the number of licenses purchased. When in doubt, usually the price of a media kit is substantially less than the price of the license, therefore the ASN item price column can be used. Again, knowledge of the software item is required to help make the correct determination. Figure 7 shows an example.

Product Description	
Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts	
Govt. TLP Acrobat 7.0 Pro Level 1 Win 450 pts	
Corp. Acrobat 7.0 Standard Mac Media	
Corp. TLP Acrobat 7.0 Pro Media Win	
Corp. TLP Acrobat 7.0 Pro Media Win	
Govt. TLP Acrobat 7.0 Pro Level 1 Mac 450 pts	
Photoshop CS 2 (9.0) for Win	
GLP ACROBAT PRO V7-WIN LIC 450P	
GLP PHOTOSHOP CS 2 V9-MAC LIC UPG	150P
GLP PHOTOSHOP CS 2 V9-WIN LIC UPG	150P

**Figure 7. License information interspersed with media kits**

## SECURING ASNs FROM YOUR VENDORS

In this day and age, for a vendor to claim they cannot offer ASNs is like saying that can't take orders over the telephone – only by postal mail. ASNs are table stakes for most of today's vendors – all you need to know is what to ask for (because some will resist at first). Furthermore, vendors will offer ASNs for no additional charge – if you are flexible enough to accept their standard format. Even small vendors with whom you do a small volume can offer their information via a standard Excel template, which is essentially an ASN. Small vendors that do a large volume are often sourcing from Tier 1 manufacturers, such as HP and Microsoft. If the vendor does not have the systems to support automated ASNs, often the ASNs can be secured directly from the Tier 1 manufacturer. HP and Dell both offer ASNs, for example.

Most vendors can source all of the information mentioned earlier except warranty information. For whatever reason, the fulfillment/shipping systems are not knowledgeable about the warranty and therefore that information simply is not available on an ASN. However, if standard warranties are purchased, such information can be “injected” by the intermediary mapping tool required to overcome the challenges described in this paper. For example, if a 12 month standard warranty is always purchased on L1902 monitors, then the L1902 monitor entry to which the various ASN entries are mapped can contain the warranty information, and that information can be injected into to standard feed that is forwarded to the repository.

## About the Author

Brett Husselbaugh has over 20 years of experience primarily in the IT industry. He has consulted with over 25 of the leading Fortune 500 companies on strategies for optimizing the IT investment. With experience as both a CIO and a CEO, Brett brings a unique and practical perspective to IT management, promoting the concept of operating as a "business within a business" to deliver measurable value. Brett is a proven business leader, an innovative thinker, a highly effective writer, and an enthusiastic and motivational public speaker.

Brett has experience as founder and CEO of TOBEK Technical Services, an IT Asset Management firm which he started with no outside investment and grew to 80 people in three years. He then positioned the firm and sold it to Inacom, a Fortune 500 company. Brett also has experience as a CIO, Managing Partner for Managed Services, VP of Strategic Development, VP of Services R&D, Principal Consultant, Industry Analyst, and Program Manager.

Brett has published several magazine articles as well as over 50 industry white and position papers. He has spoken on numerous occasions to audiences of senior and executive management teams on optimizing IT investment, developing strategy, and effective IT management.

Brett holds a Masters of Science in Electrical Engineering from the University of Texas at Arlington and a Bachelors of Science in Electrical Engineering from the University of Maryland at College Park. He is currently a member of American Mensa.



### ASN PROCESSOR

Screen shots used in this paper were captured from eTelligent Solutions' ASN Processor tool, which was designed to address and overcome the challenges presented herein. The tool is available for a 30 day free trial and can be found at <http://www.husselbaugh.com>.

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<http://www.husselbaugh.com>