### **Technical White Paper**

# Universal Personalization Services: UPSResetSN web method



A Basic Guide

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# **UPS Console**

Universal Personalization Services (UPS) supports on-site operations with a versatile solution called UPS Console. This solution provides the manufacturing site to integrate with HP custom integration services. This document illustrates one proposed method to save time and money on operator training at manufacturing sites. The reduced ramp-up eliminates the need for significant operator re-training that would normally ensue from a full-fledged integration of UPS with the factory shop-floor automation system.

#### Introduction

UPS offers extensive capabilities to support unit personalization in conjunction with support for Custom Integration Services (CIS) by HP in close cooperation with manufacturing sites across the world. A standard approach to supporting CIS services envisages that all factory sites process data in a service-oriented manner that relies on industry standards and best practices for an efficient manufacturing supply chain.

#### Goal

This document illustrates a web method to reset a Serial Number in UPS DB.

#### **Objective**

The use of this web method will permit the factory site to completely clear a Serial Number used in case it has problems and cannot be shipped at that moment.

This web method will basically perform three tasks:

- 1. Remove relationship between SN and Asset Tag.
- 2. Return Asset tag number back to HPPO range so it can be used by another SN.
- 3. Remove relationship between SN and USI so it can be used again.

#### Key Operation

The key operation is:

Update UPS Site database to link the asset tag number and the Serial Number used, and, if requested by site, have the
possibility to save the Tag info so it can be printed later by UPS Client or UPSGetATRP methods.

#### **Important Assumption and Limitation**

This document is not the comprehensive reference guide for any UPS activity. You should contact the UPS Development team for more detailed information on UPS. This document is limited to the illustration of the key operation described in the following sections.

## **Key Definitions**

The proper consideration of the following terms will lead to a better understanding of the proposed web method:

#### HPPO

Order reference number that was previously communicated to UPS Site server using a SendBOM method.

#### Serial Number

UUT unique identifier used at production line. A string that defines the bar code scanned value from the UUT being processed.

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#### **Web Method**

#### **Method Syntax**

```
[WebMethod]
public ResetStruct UPSResetSN(string SerialNumber)
```

#### **Parameters**

The following table lists the parameters for the proposed UPSResetSN method:

Parameter	Туре	Description
SerialNumber	String	UUT Serial Number. If empty or null, method will return code -1.
		i.e. "SHG1234567, CZC4362L1Z, etc"

#### **Return Value**

Type: ResetStruct

#### Structure

The following figure illustrates the general response from the proposed UPSResetSN method:

```
public struct ResetStruct
{
     public string version;
     public int retcode;
     public string message;
}
```

#### **Field Values**

The following table explains the data values in the response object:

Parameter	Туре	Description
version	string	The web service version number
retcode	int	The return code from the web service in response to the current parameters submitted by the client application. Typical return codes are:  0 = success -1 = failure  1 = Partial Success — some warnings will be displayed when this return code appears. However, site should not consider this as an error to stop order
		workflow.
message	string	Error or success message

#### Risk

Wrong calls to the proposed UPSGetATM method not passing the correct info specified in the Parameter table mentioned in previous section of this document may result on not getting the expected results, for that reason, Site must configure the web method accordingly in case they want to use - or not - the UPS printing solutions (UPS Client or UPSGetATRP) or their own print solution.

#### **Assumptions**

This method has the following underlying assumptions:

- Site will be responsible to manage excpetions that can be thrown by web service call.
- Examples provided in this document are exclusively for .NET and C# if site decides to use other programming language or Framework is OK as soon as the values returned are not changed.

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The following code snippet illustrates the client side operations to:

- Submit the request to the UPS Site server
- Process the response data

The code snippet **does not** exhaustively illustrate all the operations needed in the client application for robust handling of shopfloor practices.

#### CODE Example C#

```
using System;
using System.Collections.Generic;
using System.Text;
using System.Data;
using System.Data.SqlClient;
using System.IO;
public struct ResetStruct
  public string version;
 public int retcode;
  public string message;
namespace UPS ATRPConsumer
  class Program
    static void Main(string[] args)
      localhost.ATRP atrp = new localhost.ATRP();
      string serialNumber = "SHG1234567";
      UPS ATRPConsumer.localhost.ResetStruct retval = atrp.UPSResetSN(serialNumber);
      if (retval.retcode == 0 || retval.retcode == 1)
          //Success or Partial Success read messages to know the situation
         //Continue processing
      else
      {
          //Error condition - read retval.message
    }
```

## **Summary**

This document provides a brief description on the use of a proposed feature in the UPS solution for manufacturing sites — Retrieve Asset Number list. This feature will permit manufacturing sites to ramp up quickly on behalf of HP to deliver asset tag services to global customers. The UPS team cannot guarantee the delivery of any proposed feature without further consultation with the business teams responsible for delivery of the services. The manufacturing sites will have to integrate their current shop floor system to this new feature. There are many additional features in the UPS solution that can assist the manufacturer to improve its TAT and Quality. Analysis of these features and their corresponding integration into the shop floor computer application can occur after the initial adoption of UPS at the manufacturing site.

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