### **Technical White Paper**

# Universal Personalization Services: UPSUpdateHPPO 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 replace an HPPO in UPS DB.

#### **Objective**

The use of this web method will permit the factory site to change an HPPO assigned to a UUT Serial number, so it can be shipped within another HPPO in case the UUT fails and shipment date/time is compromised.

Key Operation

The key operation is:

 Update UPS Site database to link the UUT Serial Number to the new HPPO, but the Range used and the asset tag number won't change at all.

#### **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.

#### New HPPO

Order reference number that was previously communicated to UPS Site server using a SendBOM method, which will be used to change the current HPPO of a UUT, it must correspond to the same PartNumber/Asset Number combination, otherwise, the Masks won't match.

#### Part Number

This is the Asset Tagging UPS specific AV sent through the BOM which identifies the Chassis/Box tags and the template to be used for printing.

#### Asset Number

A code that uniquely identifies an asset in UPS for a specific customer, it also contains the Mask information of an asset tag number.

#### Serial Number

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

#### **Web Method**

#### **Method Syntax**

[WebMethod]

public ResetStruct UPSUpdateHPPO(string SerialNumber, string PartNumber, string
AssetNumber, string HPPO, string newHPPO)

#### **Parameters**

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

Parameter	Туре	Description
Serial Number	String	UUT Serial Number. If empty or null, method will return code -1. i.e. "SHG1234567, CZC4362L1Z, etc"
PartNumber	string	Customer specific AV asset tagging part number found on BOM
AssetNumber	string	Name of the asset number as defined by CS Engineering
НРРО	string	Order reference number that was previously communicated to UPS Site server using a SendBOM method
NewHPPO	String	Order reference number that will be replacing the current HPPO used

#### **Return Value**

Type: ResetStruct

#### Structure

The following figure illustrates the general response from the proposed UPSUpdateHPPO 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 UPSUpdateHPPO 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 exceptions 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.

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";
      string partNumber = "YJ227AV";
      string assetNumber = "YJ227AV";
      string HPPO = "HPPO-001";
      string newHPPO = " HPPO-002";
      UPS ATRPConsumer.localhost.ResetStruct retval = atrp.UPSUpdateHPPO(serialNumber,
partNumber, assetNumber, HPPO, newHPPO);
      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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