

Smart IP Delivery Manager - IPMS™

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A Microchip Technology Company

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Introduction

Goal :

- Enhance Productivity
- Increase Delivery and Support Quality
- Objectives
 - Customer Satisfaction increase
 - Provider can concentrate on the design efforts while benefiting of the **most advanced (web-e-commerce flavor)** Delivery infrastructure

How ?

- **A Cooperative process:**
- **Make available for Release Manager , Sales Manager, Delivery and Support Manager :**
 - **Comprehensive Synchronized Management Views**
 - **On a dedicated Enterprise Portal**
 - **Advanced Management Features**

Outline

– Level 1: IP Delivery Manager (Study Case 1)

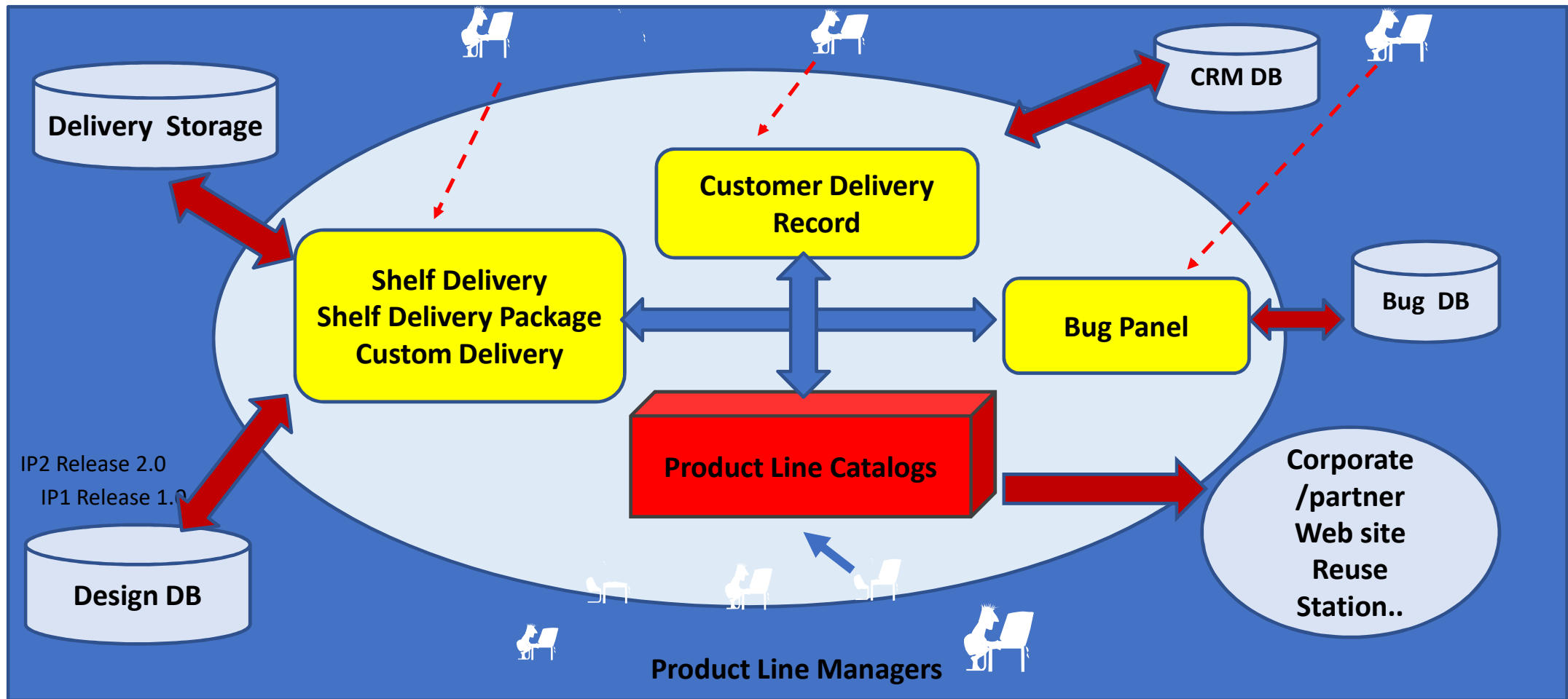
- Information (meta data) sharing corporate portal In Sync with the corporate global environment
- Answers 3 questions:
 - **Which** Product Release (configurations, target process node ..) is available and **Put on a shelf** (Shelf Delivery)
 - Which product Release has been **delivered to which client**
 - **Which bug affects which client ?**

– Level 2 : Full IP Delivery Manager (Study Case 2)

- Adds more features
 - Delivery Storage
 - Actual Delivery Process

Smart IP Delivery Manager

Communication Platform between Release Manager, **Delivery Manager**, Support Manager



Starting Point: Multiple Product Catalog Station

The screenshot displays the Ali Baba Product Portal interface. The top navigation bar includes links for Home, Product Search, Enter Data, Reports, and Export. A left sidebar contains several expandable categories: High-Resolution Converters (with sub-items Audio Converters and Measurement Converters), Power Management (with sub-items Linear regulators, Composite regulators, Companions for regulators, and Switching regulators), Libraries of memories, and Libraries of Standard Cells (with sub-items Power gating library and Standard Cell Libraries). The main content area is titled 'How Do I ?' and features a search bar with the placeholder text 'Enter Shelf Deliveries' and a 'Go' button. Below the search bar, there are two tabs: 'Shelf Delivery' (selected) and 'Customer Delivery'. The product detail view for 'IP identification' shows the following information:

Field	Value
Product Name	.sCOD103-R.01-Xenon
Part Number	.sCOD103-R.01-Xenon.SAMSUNG.65.LP
Taxonomy	High-Resolution Converters->Audio Converters

Below the table, there are 'Modify' and 'Delete' buttons. The 'Introduction' section provides a brief description of the product:

Introduction

mCODa-MT1-LR.01 is an audio CODEC which provides the insurance of the best sound quality after integration into a SoC for IP Camera or Car dash Camera applications. It benefits from unique features, such as the AGC to automatically adapt the voice level and a wind noise filter

IP Shelf Delivery Release

What is an IP Shelf Delivery Release ?

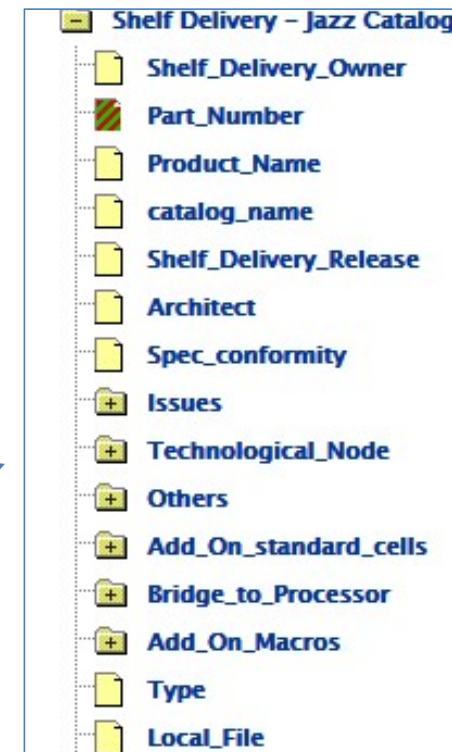
- Released, non modifiable IP version/configuration "customer ready"
- Frozen version with unique identifier

Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis R6.2
Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis R111
Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis R1.0
Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis R1.2

❖ Interface between the Design world and the Delivery world

Key items

- Naming convention
- Documentation (configurable format)
- Hierarchy Support :
 - A shelf delivery release can include other shelf Delivery
 - "Add On" such as standard cell /add on macro...



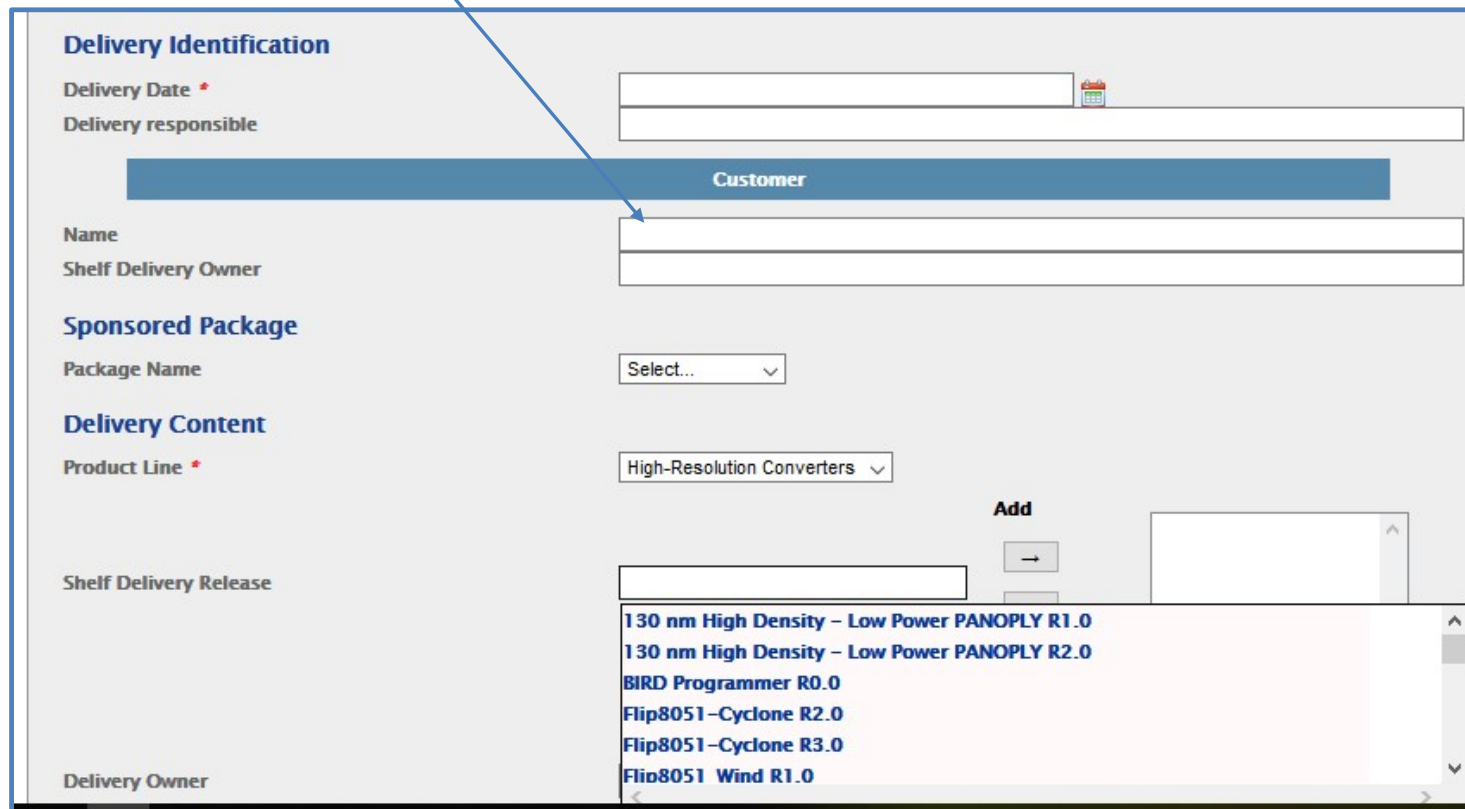
Predefined Shelf Delivery Package or Delivery Kit

- Predefined Shelf Delivery Packages reused for several customers
 - Easy on line Assembly of Shelf Delivery by the Delivery Manager (ecommerce style)

The screenshot shows a web application interface for managing shelf delivery packages. The interface is divided into a left sidebar and a main content area. The sidebar has two sections: 'Shelf Delivery' with links for 'Registration', 'Format', 'Upload', and 'Listing'; and 'Shelf Delivery Package' with links for 'Registration', 'Format', 'Upload' (with sub-links 'Enter Item', 'Upload from Excel', and 'Purge'), and 'Listing'. The main content area has a top navigation bar with 'Shelf Delivery' (selected), 'Customer Delivery', and 'Product'. Below this, the 'Shelf Delivery Package' form is displayed. It includes fields for 'Package Name', 'Shelf Delivery Release', and 'Description'. To the right of the 'Shelf Delivery Release' field is an 'Add' button and a list box containing several items: '130 nm High Density - Low Power PANOPLY R1.0', '130 nm High Density - Low Power PANOPLY R2.0', '1PRFile BDS AuraTSMC65LP R1.0', 'Flip8051-Cyclone R2.0', 'Flip8051-Cyclone R3.0', and 'HD BTF R1.0'. A right arrow button is positioned between the release field and the list box.

Customer Specific Delivery

- Assembling a specific set of Shelf Delivery
- Connection to CRM DB



The screenshot shows a web form titled "Customer Specific Delivery". The form is divided into several sections:




- Delivery Identification**
 - Delivery Date *
 - Delivery responsible
 - Customer** (highlighted with a blue bar and a blue arrow pointing to it from the bullet point "Connection to CRM DB")
 - Name
 - Shelf Delivery Owner
- Sponsored Package**
 - Package Name (Select... dropdown)
- Delivery Content**
 - Product Line * (High-Resolution Converters dropdown)
 - Add** button
 - Shelf Delivery Release
- Delivery Owner**

Below the "Add" button, there is a list of items that can be added to the delivery:




- 130 nm High Density – Low Power PANOPLY R1.0
- 130 nm High Density – Low Power PANOPLY R2.0
- BIRD Programmer R0.0
- Flip8051–Cyclone R2.0
- Flip8051–Cyclone R3.0
- Flip8051 Wind R1.0

Synchronized Bug panel

Bug Declaration associated with Shelf delivery - Affected client automatically inherited !!!!!

Part Number ▲▼	Shelf Delivery Release	Bug Status	Bug Criticality	Bug Details
auxADC-12x8-GP.01.TSMC.180.bis	auxADC-12x8-GP.01.TSMC.180.bis R3.2 	Confirmed	Critical	Bug Details
mCODa-MT1-LR.01.TSMC.55	mCODa-MT1-LR.01.TSMC.55 R1.0 	Confirmed	Minor	Bug Details
mCODa-MT1-LR.01.TSMC.55	mCODa-MT1-LR.01.TSMC.55 R1.2 	Delivered	Minor	Bug Details

Warning on Bug in Shelf Delivery when creating Client Delivery

Part Number ▲▼	Shelf Delivery Release	Bug Info	
		Pending Bug	Bug Details
auxADC-12x8-GP.01.TSMC.180.bis	auxADC-12x8-GP.01.TSMC.180.bis R3.2 	Yes	Bug Details
mCODa-MT1-LR.01.TSMC.55	mCODa-MT1-LR.01.TSMC.55 R1.0 	Yes	Bug Details
mCODa-MT1-LR.01.TSMC.55	mCODa-MT1-LR.01.TSMC.55 R1.2 	Yes	Bug Details
mCODa-MT1-LR.01.TSMC.55	mCODa-MT1-LR.01.TSMC.55 R2.2	No	Bug Details
Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis R6.2	No	Bug Details
Metro-Jade-PM-mono.05.GSMC.130bis	Metro-Jade-PM-mono.05.GSMC.130bis	No	Bug Details

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– Level 2 : Full IP Delivery Manager (Study Case 2)

- Adds more features
 - Delivery Storage
 - Actual Delivery Process
- Innovative “Duplex “infrastructure

Innovative Duplex Infrastructure

Why ?

- **In Intranet** :IP Files collection and packaging
 - Performed in intranet - Cooperation between Designer and Delivery manager
 - Secure Private Delivery Storage - No customer access
 - All Delivery tagged and archived
- **In Extranet** :Replaces “Old style” ftp server
 - Synchronized with the Shelf Delivery Station
 - Finalize delivery (encryption ,customer specific documentation)
 - Controls delivery process ‘: quite hectic worldwide transfer of large files
 - Customer access (Download Request or on line “Free Download for certain customers)
- **Innovation**
 - **Synchronization features between both stations**

Duplex - Intranet/Extranet IPMS Delivery Station

IPMS - Delivery Packaging Station

IP Version Catalog
Shelf Delivery Packages or Full Kit
Customer Specific Delivery

Intranet

Extranet

Trigger Fast & Secure Download

IPMS - Customer Delivery Station

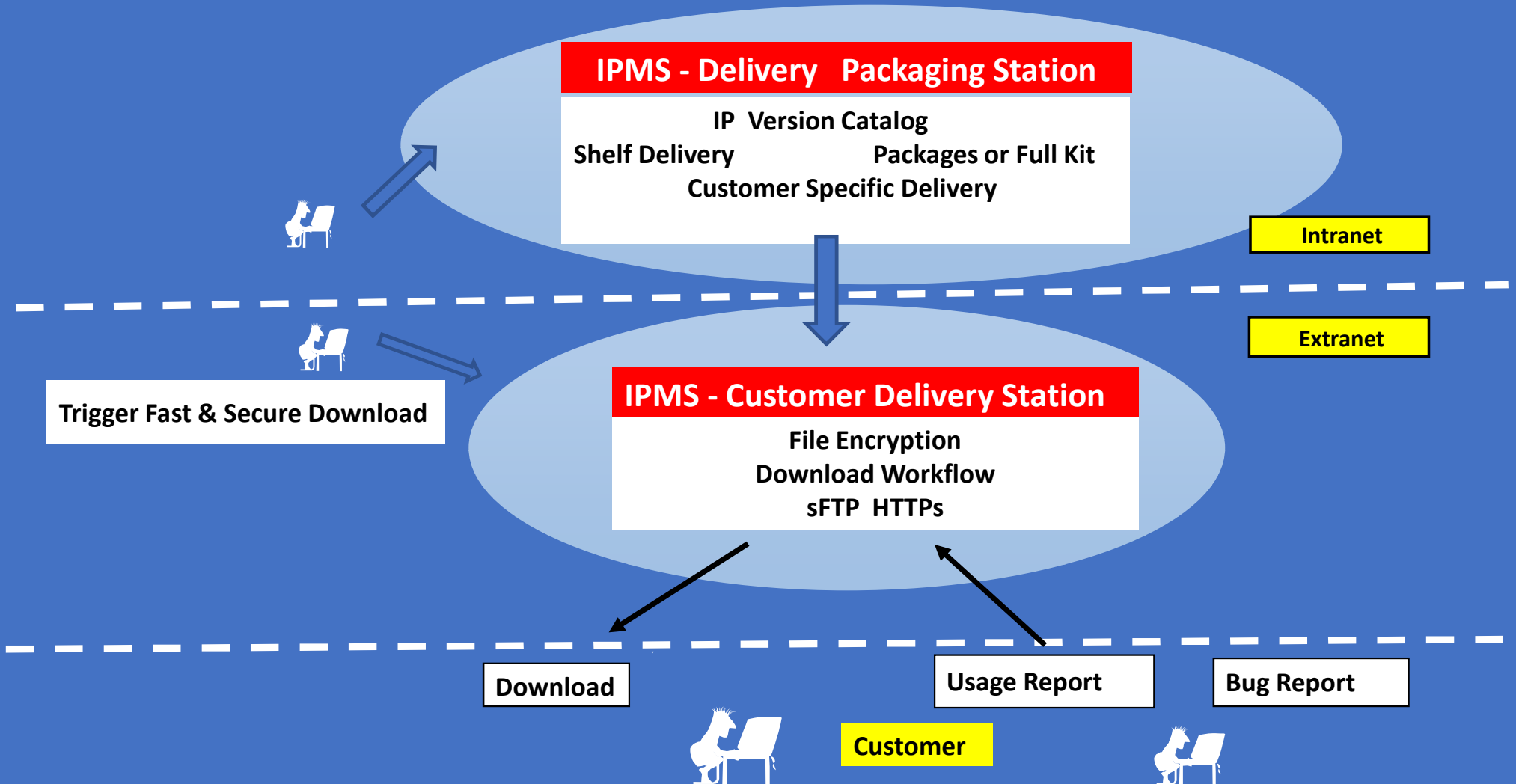
File Encryption
Download Workflow
sFTP HTTPs

Download

Usage Report

Bug Report

Customer



Release Delivery

4 Types of delivery :

- Basic Shelf Delivery
- Generic (Reusable) Package or Customer specific Package of Shelf Delivery
- **Full Custom** (Script based Delivery generation for complex delivery) - not Shelf Delivery based

The screenshot shows a web application interface for 'Release Delivery'. At the top, there is a navigation bar with three tabs: 'Enter Data', 'Report', and 'Delivery Report'. Below the navigation bar, the main content area is titled 'Select a Function'. Under this title, there are two main sections. The first section is 'Enter Shelf Delivery', which contains two blue buttons: 'Add Shelf Delivery' and 'Add Generic Package'. The second section is 'Enter Customer Delivery', which contains two blue buttons: 'Add Customer Specific Package' and 'Add Full Custom Delivery'. On the left side of the interface, there is a vertical sidebar with three links: 'Enter Bug', 'Enter Delivery', and 'Enter Product'.

Shelf Delivery Storage

Shelf Delivery (Catalog) IP centric

- **Identifier:** Part Number for Customer - “Private “IP Release ID” - “Shelf Delivery ID”
- Flexible format - Documentation
- Zipped delivery uploaded
- Specific Delivery for specific customer

Home	Product Search	Enter Data	Report
<div>Shelf Delivery Delivery Package</div> <div>IP identification</div> <div> <div>Product Name</div> <div>Part Number</div> <div>Release ID</div> </div> <div> <div>..SST ESF3-55 SuperFlash 32K x 72 Bits Flash IP</div> <div>pfm_355gf32kx72_v1</div> <div>v1a2</div> </div>			

Creation Date ▲▼	Shelf Delivery Release	IP Identifier ▲▼	Deliverable Type ▲▼	Zipped Delivery File full for Foundry	Reduced Zip for Customer
2016-11-09	DESIGNKIT_pfm_355gf32kx72_v1a2_20161109	pfm_355gf32kx72_v1 v1a2	Design Kit	DESIGNKIT_pfm_355gf32kx72_v1a2_20161109.tgz (Refresh)	DESIGNKIT_pfm_355gf32kx72_v1a2_20161109.tgz (Refresh)
2016-11-21	MERGEKIT_pfm_355gf32kx72_v1a2_20161121	pfm_355gf32kx72_v1 v1a2	Merge Kit	MERGEKIT_pfm_355gf32kx72_v1a2_20161121.tgz (Refresh)	N/A
2016-11-21	MERGEKIT_bias_355gf32kx72_v1a2_20161121	pfm_355gf32kx72_v1 v1a2	Merge Kit	MERGEKIT_bias_355gf32kx72_v1a2_20161121.tgz (Refresh)	N/A
2016-11-30	DESIGNKIT_bias_355gf32kx72_v1a2_20161130	pfm_355gf32kx72_v1 v1a2	Design Kit	DESIGNKIT_bias_355gf32kx72_v1a2_20161130.tgz (Refresh)	DESIGNKIT_bias_355gf32kx72_v1a2_20161130.tgz (Refresh)

Generic Package versus Customer Specific

- Composition of Basic Shelf Delivery : Design Kit (pfm and Bias) or Merge KIT (pfm and Bias) or both
- **Identifiers and content automatically reported**
- Package Type

Creation Date ▲▼	Delivery ID	IP Identifier	Package Type ▲▼	Package Identifier ▲▼	Shelf Delivery Release	Global Delivery
2016-12-01	PACK4	pfm_355gf32kx72_v1 v1a2	Typical IP engagement ▼	DK_pfm_20161109-DK_bias_20161130	DESIGNKIT_pfm_355gf32kx72_v1a2_20161109 DESIGNKIT_bias_355gf32kx72_v1a2_20161130	Upload
2016-11-30	PACK3	pfm_355gf32kx72_v1 v1a2	Mask Shop ▼	MK_pfm_20161121-MK_bias_20161121	MERGEKIT_pfm_355gf32kx72_v1a2_20161121 MERGEKIT_bias_355gf32kx72_v1a2_20161121	Upload
2016-12-12	PACK5	pfm_355gf32kx72_v1 v1a2	Custom IP engagement ▼	MK_bias_20161121-DK_bias_20161130-MK_pfm_20161121-DK_pfm_20161109	MERGEKIT_bias_355gf32kx72_v1a2_20161121 DESIGNKIT_bias_355gf32kx72_v1a2_20161130 MERGEKIT_pfm_355gf32kx72_v1a2_20161121 DESIGNKIT_pfm_355gf32kx72_v1a2_20161109	Upload

- Customer Specific (Customer attribute)

Creation Date ▲▼	Customer Name ▲▼	Delivery ID ▲▼	Customer Attribute	Package Identifier	Shelf Delivery Release ▲▼	IP Identifier	Global Delivery
2016-12-23	Client1	Company1-20161223	Beta	MK_pfm_20161121-MK_bias_20161121	MERGEKIT_pfm_355gf32kx72_v1a2_20161121 MERGEKIT_bias_355gf32kx72_v1a2_20161121	pfm 355gf32kx72 v1 v1a2 pfm 355gf32kx72 v1 v1a2	Upload
2017-01-10	Client2	Company2-20170110	Foundry	DK_pfm_20161109-DK_bias_20161130	DESIGNKIT_pfm_355gf32kx72_v1a2_20161109 DESIGNKIT_bias_355gf32kx72_v1a2_20161130	pfm 355gf32kx72 v1 v1a2 pfm 355gf32kx72 v1 v1a2	Upload

Duplex - Intranet/Extranet IPMS Delivery Station

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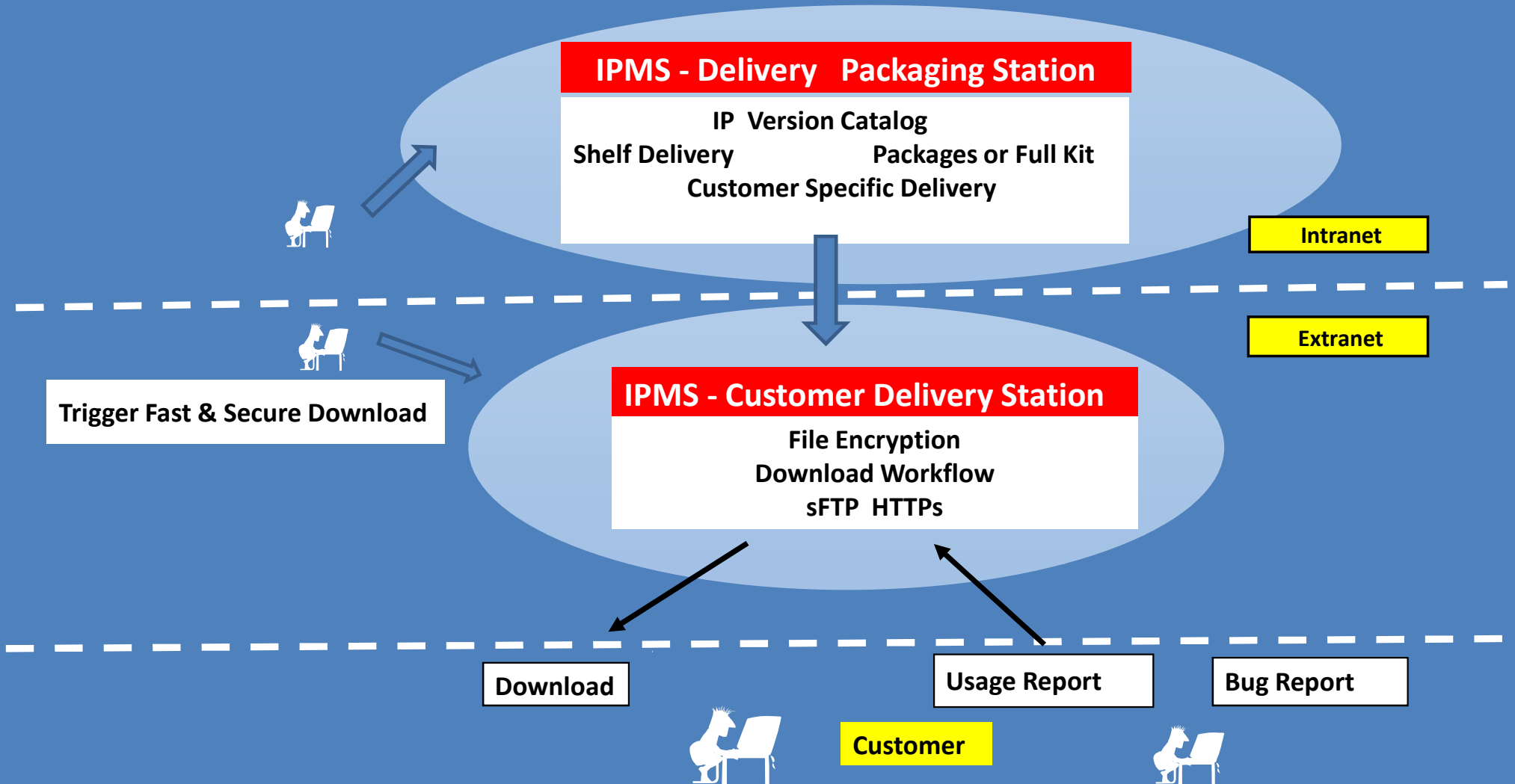
File Encryption
Download Workflow
sFTP HTTPs

Download

Usage Report

Bug Report

Customer



Companion Customer Delivery Station

- Focus on Delivery Features
 - Generate Global Delivery
 - **Synchronized with Shelf Delivery Package defined in the the Shelf Delivery Station**
 - Possibly customer specific Release Note
 - File Encryption
 - Download Protocol selection (sftp, HTTPs) Transfer checking .. Resume..
 - Tracking- Delivery Report (**Copy into the Shelf Delivery station**)

Generate Global Delivery		Encrypted File	Delivery Options			Approve and Alert client		IP Delivery	
			Limited Duration	NO of Hours	Download Protocol	Download Authorized	Approval Date	IP Download	Client CheckSum St
<input type="button" value="Generate"/> es_pfm_355gf32kx72_v1_v1a3_20180703.tar.gz		<input type="button" value="Upload"/>	<input type="text" value="No"/>	<input type="text" value="0"/>	<input type="text" value="HTTPS"/>	<input checked="" type="button" value="Allow"/>		<input type="button" value="Download"/>	<input type="text" value="Select..."/>
<input type="button" value="Generate"/> pfm_355gf32kx72_v1_v1a3_20180703.tar.gz		<input type="button" value="Upload"/>	<input type="text" value="No"/>	<input type="text" value="0"/>	<input type="text" value="HTTPS"/>	<input checked="" type="button" value="Deny"/>	2018-07-26 10:44:19	<input type="button" value="Download"/>	<input type="text" value="Select..."/>

2018 Best User of IPMS™

“We had been looking at different solutions to improve the IP release flow to our customers .

We were immediately interested in the tool as it addressed our requirements, including a web-based user interface, bug reporting capability, packaging and delivery combined solution, security, and customizable features for added flexibility. Our experience with Gabriele’s team has been very positive once we started working out the implementation details. In short, we are very happy with the collaboration between SST and D&R and with the results.”

Pascal Adam SST Product Marketing Manager
SST Licensing Division





CERTIFICATE OF APPRECIATION

2018 Best User of IPMS™

D&R IP Management System

Presented to



A Microchip Technology Company

Date : December 5-6th, 2018

Gabrièle Saucier, CEO, D&R

