

**Version 1.1**

**Date: 2019/02/22**

Abstract

**Claims by Engineparts / customers on suppliers represent a complex set of business rules and processes. The intent of the system is to track ALL events end to end**

*POD Scanning*

*Automate process of imaging POD’s*

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# Document approval and distribution list

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | **Name / Title** | **Signature** | **Date** |
| **Document Type / purpose** | | | |
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| Reviewed by |  |  |  |
| Approved by |  |  |  |

# Introduction

The POD image recording has gone through 3 iterations since inception. Each iteration was necessitated due to off the shelf software components becoming redundant and / or unsupported.

A decision was made to develop a POD scanning solution to eliminate 3rd party components. The development was completed using a combination of Java and HTML5 where the Java based graphical components is used to interpret barcode images and OMR interpretation on the hours and minute markings

The existing persistent infrastructure is retained

By design the solution is web based and can permit multiple users to process un-interpretable POD pages

To note: Multi-page POD documents are not catered for and awaits such an enhancement. The current implementation OVERWRITES any existing POD image. This should be changed to APPEND with additional functionality to selectively remove incorrect / poor quality images.

***The documentation is limited to basic narrative. Screen images etc not included due to time and financial limitations.***

# Audience

Despatching

Debtors

Administration

Software developers

# Functionality Narrative

Prior to delivery vehicles departing, all supporting documentation must be produced. This is part of the despatching system in that departure documentation will not print until specific processing steps are completed

Included in these steps, is the printing and manufacturing of delivery trip booklets that contain route cover sheets, route delivery schedule, PODs per customer delivery and if appropriate cash collection sheets.

The POD document contains a summary of invoices for goods being delivered. Per invoice there is an associated list of parcel references.

As part of the POD document related to this narrative:

* There is an area for hours and minute OMR marking blocks
* Barcode identifying the specific POD
* A signature area. The intent was to have the ability for the system to automatically detect if a document was signed or not and to report on ***unsigned*** POD’s. However, this is not used currently.
* The POD is a single landscape sheet with a centre micro-peroration. The customer signs for receipt on the left-hand side in the indicated space and detaches the right-hand side tearing along the micro-perforation.

As soon as the delivered goods POD documents reach the central office (Note that the system can be operated concurrently at remote locations), the booklets are de-stapled, and bulk scanned into a special sub-directory on a SYSTEM SHARE

The Tomcat server detects the arrival of now images automatically and starts interpreting the images. The region with OMR markers for hours and minutes is interpreted, and the delivery time derived automatically. It is expected that the customer will mark these OMR elements appropriately.

The barcode is interpreted and if all the other test succeeds, automatically electronically filed into another file server based persistent storage area. ***NOTE: Although there is no technical reason that prevents it, it is by design that POD images are NOT stored within the database for practical reasons***

If the Tomcat server application is unable to interpret the scanned image appropriately, these are automatically copied to a sub-directory for manual correction. The specific failing elements is also recorded

A browser-based user interface is provided for that will display a list of POD’s that cannot be interpreted. The user will select an item in the list to correct. The application displays the scanned image and the user is required to visually interpret what the Tomcat application is unable to automate.

After correction the image is auto filed electronically.

# Sub system solution status

Although the solution has bedded down, there are a couple of improvements that should be done eventually:

* Multi page POD’s
* Improve graphics edge detection to increase throughput
* Introduce location specificness that will allow branches to process their own sets of PODs

Due to the complexity and the engaged consultant at the time, the quality of work is not good and opinionated that a re-write should be a serious consideration.

# Database entities and relationships

# Programs

# MS Windows Executables

|  |  |
| --- | --- |
| **Name** | **Description** |
|  |  |

# SQL Stored Procedures

|  |  |
| --- | --- |
| **Name** | **Description** |
|  |  |
|  |  |
|  |  |
|  |  |

# Risks and mitigation

|  |  |  |
| --- | --- | --- |
| # | Risk | Mitigation |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |

# Requirements overview

|  |  |  |
| --- | --- | --- |
| # | Description | Action / By whom |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| 4 |  |  |
| 5 |  |  |
| 6 |  |  |
| 7 |  |  |
| 8 |  |  |
| 9 |  |  |
| 10 |  |  |
| 11 |  |  |
| 12 |  |  |

# Acceptance

I hereby confirm that I have been fully informed of the documents content and, received training to understand how the detailed instructions are to be applied

Name …………………………………………………………………………….

Job Title ………………………………………………………………………….

Signed ……………………………………………………………………………

Date ………………………………………………………………………………