**20/20 Delivery 8.0**

**Software Requirements Document**

**Requirement 328**

***“Revised Order Entry”***

**Document Revision 1.2**

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# General Information

## Purpose

This document lists new software requirements for a revised version of 20/20 Delivery Order Entry system.

## Scope

This document contains requirements for an external, web-based system that will interact with 20/20 Delivery. It will use the 20/20 Delivery business subsystem.

## References

|  |  |
| --- | --- |
| BR175.doc | Functional requirements for the original Order Entry subsystem. |
| 175-UseCase.doc | Use cases for BR175. |
| SRD175.doc | Software requirements for BR175. |
| Order Entry User Guide | User manual for Order Entry r1.0 |
| BR328 | Business requirements for this Order Entry system. |
| UC328 | Use cases for BR328 |

# Overview

This document describes software requirements for a new attempt to productize Order Entry for 20/20 Delivery.

20/20 Delivery Order Entry System 1.0 was an external, web-based system described in BR175, SRD175, UC175 and Order Entry User Guide. Order Entry 1.0 was developed in early 2007 but there were no sales and the product was never made Generally Available. A Release Candidate was deployed briefly at Wilson Supply Company but was used for dispatch (i.e. to modify promise dates and re-sequence orders in routes) rather than for order entry and order management. The last Release Candidate build was 15 April, 2008 and end-of-life was announced December, 2008.

Order Entry 1.0 was not embraced by our user community, it did not target the needs of a particular user group, it contained features that were not-essential to order entry and yet lacked core features that kept it from providing a complete solution.

The next generation of Order Entry shall be biased towards customers that do not have Enterprise Adaptors. These customers have poorly automated order management systems; e.g. where verbal or FAX requests are currently transcribed into spreadsheets for execution by operations. These are small companies that need 20/20 Delivery but have no other means to create, edit or cancel 20/20 Delivery orders, customers and items. Order Entry shall be the sole entry point for order creation and 20/20 Delivery shall serve as the order management system of record and the means for controlling execution of services.

Workflow shall be optimized for rapid order creation. Users shall be required to enter as little data at the time of order creation as possible using lookup lists of products and customers and configurable defaults wherever feasible. The product should look and feel generic, suitable for a range of industries and support both same-day and next-day service models. Where possible, the system should limit the number of screens offered; reuse and connect them dynamically with links, depending of context. Wherever possible, the system shall limit the number of fields offered to data elements that appear on the mobile computer.

The system shall add the concept of Bill-To and Ship-To customers as required by couriers and other service-oriented, third party logistics providers.

Order Entry must be two way to be successful. It shall add generic reporting capabilities, optimized to support rapid manual data entry from 20/20 Delivery to backend accounting packages.

The system shall exclude all non-essential features such as location, dispatch and routing, many of which are now adequately served by product features such as Dispatch Board. In first release, the system shall exclude payments and item pricing. While powerful, payments processing adds considerable additional complexity and may be added to Order Entry in the future, once the product has proven itself in the market place.

# Pre-existing System Summary

See Overview and References.

# Assumptions and Constraints

We assume that Order Entry is designed for SaaS deployments only.

# Software Requirements

## General Requirements

1. The system shall support internationalization.
2. The first product release shall support US English and UK English.
3. The system shall be able to be deployed in all SaaS deployment environments that 20/20 Delivery supports.
4. The system shall be usable via Microsoft Internet Explorer 7.0 or later.
5. The system shall provide an Order Entry option as a component of the 20/20 Delivery License so that system components can detect if 20/20 Delivery is configured for Order Entry.
6. The system shall provide a way for authorized users to log on by providing a valid user name/password pair.
7. The system shall provide contact sensitive Help.

## Processing Customers, Addresses, and Contacts

1. The system shall provide a means to add a new customer to the database.
2. The system shall provide a means to edit a customer to the database.
3. The system shall provide a means to delete a customer from the database, so long as that customer has no orders.
4. The system shall provide a configurable means to automatically generate a unique Customer Number when adding a new customer.
5. The system shall provide a means to set the customer name, the customer number, and delivery confirmation email flag for a customer being added or edited.
6. The system shall provide a means to add a customer address to a customer being added or edited.
7. The system shall provide a means to edit a customer address to a customer being edited.
8. The system shall provide a means to delete a customer address that is not being used for an order from a customer being added or edited.
9. The system shall provide a means to select an alternate customer address for a customer being added or edited.
10. The system shall provide a means to set Address Lines 1, 2, and 3, City, and ‘State’, ‘Postal Code’, and Country for an address that is being added or edited.
11. The system shall provide a configurable means to automatically populate the State and Country for an address that is being added.
13. The system shall provide a means to add a contact to a customer address being added or edited.
14. The system shall provide a means to edit a contact for a customer address being added or edited.
15. The system shall provide a means to delete a contact that is not being used for an order from a customer address being added or edited.
16. The system shall provide a means to select an alternate contact for a customer address being edited.
17. The system shall provide a means to set the Contact First Name, Middle Initial, and Last Name, the Contact Location, zero or more Contact Email Addresses, and zero or more Contact Phone Numbers for a contact.
18. The system shall prevent a user from saving a customer if it does not contain the customer name, number and at least one address.
19. The system shall prevent a user from saving a customer address if it does not contain address line 1, the City, ‘State’, ‘Postal Code’, Country and at least one contact.
20. The system shall prevent a user from saving a contact if it does înot contain the first name and last name.
21. The system shall prevent a user from adding a new customer if it has the same customer number as an existing customer.
22. The system shall prevent a user from changing the customer number of an existing customer to the same name as another customer.
23. The system shall prevent a user from adding a new customer addresses if it is identical to an existing address for the same customer.
24. The system shall prevent a user from changing an existing customer address so that it is identical to another address for the same customer.
25. The system shall prevent a user from adding a new contact if its first name, middle initial, and last name are identical to an existing contact for the same address.
26. The system shall prevent a user from changing an existing contact so that its first name, middle initial, and last name are identical to another contact for the same address.
27. The system shall be able to present a list of customers that matches the criteria when an authorized user provides part of a customer name and an indication of whether the fragment should match the beginning, end, middle, or whole customer name.
28. The system shall be able to present a list of customers that matches the criteria when an authorized user provides part of a customer number and an indication of whether the fragment should match the beginning, end, middle, or whole customer number.
29. The system shall provide a means to edit a customer that is listed as the result of the user providing search criteria.
30. The system shall provide a means to delete a customer that is listed as the result of the user providing search criteria, so long as the customer has no orders.

## Processing Items

1. The system shall provide a means to add a new item to the database.
2. The system shall provide a means to edit an existing item to the database.
3. The system shall provide a means to delete an existing item from the database.
4. The system shall provide a means to set the name, description, default purpose, and one or more barcodes for an item being added or edited.
5. The system shall prevent a user from adding an item with the same item name as an existing item.
6. The system shall be able to present a list of items that matches the criteria when an authorized user provides part of an item name and an indication of whether the fragment should match the beginning, end, part, or whole item name
7. The system shall be able to present a list of items that matches the criteria when an authorized user provides part of an item description and an indication of whether the fragment should match the beginning, end, part, or whole item name.

## Processing Orders

1. The system shall provide a means to add a new order to the database.
2. The system shall provide a means to edit an order with order status of open, under-fulfilled or exception.
3. The system shall provide a means to close an order with order status of open, under-fulfilled or exception.
4. When a new order is created, system shall provide a means to generate a unique order number automatically using a predefined pattern.
5. When a new order is created, user will be provided a means to manually create or modify the order number.
6. When a new order is created, the system shall automatically set the Order Date to today.
7. When a new order is created, the system shall provide a means to select an existing customer as the Bill-To Customer for the order.
8. When a new order is created, the system shall provide a means to create a new customer on-the-fly and designate it as the Bill-To Customer for the order. Adding a new customer includes creating a new customer address and a new contact for that customer address.
9. When a new order is created, the system shall provide a means to select an existing customer as the Ship-To Customer for the order.
10. When a new order is created, the system shall provide a means to create a new customer on-the-fly and designate it as the Ship-To Customer for the order. Adding a new customer includes creating a new customer address and a new contact for that customer address.
11. System shall provide configurable option to automatically set Ship-To customer to the Bill-To customer once the Bill-To customer is selected for a new order.
12. The system shall provide a means to set or edit the Center for an order.
13. The system shall provide a configurable option to automatically set a default value for Delivery Date (TripDate). Three options shall be provided: Today, Next Workday, and Cutoff Time.
    1. If Today option is enabled, the Delivery Date will be set to the current date.
    2. If Next Workday option is enabled, the Delivery Date will be set to the next day in the sequence of workdays of the week (see Administration).
    3. If Cutoff Time option is enabled, the Delivery Date will be set based on both a Cutoff time and workdays of the week. If the time that the order is saved is earlier than the cutoff time, the Delivery Date shall be set to Today, else the Delivery Date shall be set to the next workday as defined by workdays in the week .
14. The system shall provide a means for user to modify the Delivery Date for an order.
15. The system shall provide user a means to add or edit Service Instructions
16. The system shall provide a means to add order items to an order. An order item is composed of an item and the attributes line number, ordered quantity and purpose.
17. The system shall provide a means to select an existing item and add it to an order item.
18. The system shall provide a means to optionally create a new item of-the-fly as the basis of an order item.
19. The system shall provide a means to delete an order item from an order if the order item has not been fulfilled, partially fulfilled or over-fulfilled.
20. The system shall provide a means to generate a unique line number for each new order item being added to the order. Line number will be generated using a configurable pattern.
21. The system shall automatically set the quantity of each new order item added to the order to 1.
22. The system shall automatically set the purpose of each new order item added to the order to be the default purpose of the order items associated item.
23. The system shall provide a means to edit the line number, quantity, and purpose of a new order item.
24. The system shall provide a configurable option that allows a user to create an empty order, meaning an order that has no items.
26. The system shall prevent a user from saving an order if it does not have an order number.
27. The system shall prevent a user from saving an order if it does not contain a valid Bill-To customer.
28. The system shall prevent a user from saving an order if it does not contain a valid Ship-To customer.
29. The system shall prevent a user from saving an order if it does not contain the Center.
30. The system shall prevent a user from saving an order if it does not contain a Delivery Date.
31. The system shall prevent a user from saving an order if the order has any Email flags set but the corresponding customer does not have an email address.
32. If the system is configured to allow creation of empty orders, the system shall warn the user before saving an order that has no items.
33. The system shall be able to present a list of orders that matches the criteria when an authorized user provides at least part of an order number and an indication of whether the fragment should match the beginning, end, middle, or whole order number.
34. The system shall be able to present a list of orders that matches the criteria when an authorized user provides a date range and at least part of an order number with an indication of whether the fragment should match the beginning, end, middle, or whole order number.
35. The system shall be able to present a list of orders that matches the criteria when an authorized user provides a customer, at least part of an order number and an indication of whether the fragment should match the beginning, end, middle, or whole order number.
36. The system shall be able to present a list of orders that matches the criteria when an authorized user provides a customer, a date range and at least part of an order number with an indication of whether the fragment should match the beginning, end, middle, or whole order number.

## User Permissions

1. If system is licensed for Order Entry, 20/20 Delivery shall provide an Order Entry user role known as Order Entry Clerk. Order Entry Clerk shall have to following permissions:
   1. Permission to log on to Order Entry system.
   2. Permission to add new orders through the order entry system.
   3. Permission to edit existing orders through the order entry system.
   4. Permission to close orders through the order entry system.
   5. Permission to add new customers, customer addresses, and contacts through the order entry system.
   6. Permission to edit existing customers, customer addresses, and contacts through the order entry system.
   7. Permission to delete customers, customer addresses, and contacts through the order entry system.
   8. Permission to add new items through the order entry system.
   9. Permission to edit existing items through the order entry system.
   10. Permission to delete items through the order entry system.
2. If system is licensed for Order Entry, 20/20 Delivery shall provide a permission to configure Order Entry. By default, Administrators shall be given permissions necessary for this task.
3. Administrator shall have the ability to assign Order Entry Clerk role to any 2020 Delivery user.

## Administration

1. The system shall have the ability to generate customer numbers automatically when new customers are created.
2. The system shall provide a configurable pattern for controlling automatic custom number generation.
3. The system shall provide a configurable option to turn automatic customer number generation on or off. The default value shall be true.
4. The system shall have the ability to generate order numbers automatically when new orders are created.
5. The system shall provide a configurable pattern for controlling automatic order number generation.
6. The system shall provide a configurable option to turn automatic order number generation on or off. The default value for this option shall be true.
7. The system shall have the ability to generate order item line numbers automatically when new customers are created.
8. The system shall provide a configurable pattern for controlling automatic order item line number generation. The default value for this option shall be true.
9. The system shall provide a configurable option to turn automatic order item line number generation on or off. The default value shall be true.
10. The system shall provide a three-way switch to select the option that sets the default Delivery Date value for each new order (using one of three methods: Today, Next Workday or by Cutoff Time see order processing for details).
11. The system shall provide a time control to set the Cutoff Time.
12. The system shall provide a Days of the Week control to set the valid work days in a week. The default setting for this control shall be workdays set Monday through Friday.
13. The system shall provide Administrator an option to control the default setting for delivery confirmation email flag by default on any screen where the field is available to an Order Entry user. The default value for this option shall be true.
14. The system shall provide Administrator an option to set a default Country value to be inserted into each new customer address.
15. The system shall provide Administrator an option to set a default State value to be inserted into each new customer address.

## Reporting

1. System shall provide a Billing Report capable of listing complete order details for many orders at a time with a single query. The purpose of Order Report is to provide the user with a means to enter completed service data back into their host billing systems as efficiently as possible by manual order entry.
2. Bill Report shall provide a means to query for orders by a combination of order status, order date range, center, route and driver.
3. Order status control shall offer All Orders (any order status), Completed Orders (‘Fulfilled, Over-fulfilled and Under-fulfilled order status), “Exception” Orders (Exception order status), and “Active” Orders (Open and Scheduled order status).
4. Center control shall offer selection for “All Centers” and individual centers.
5. Route and Driver controls shall only be active only if an individual center has selected.
6. Billing Report shall return a header containing the query settings.
7. Billing Report shall return a list of orders. For each order, Billing Report cites the orders’s Center, Route, Driver, Bill-To customer, customer address, customer phone, customer contact, Ship-To customer, customer address, customer phone, customer contact, order number, order status, scheduled delivery date, actual service date and time, service instructions, driver order note, customer signature, customer signed name. For each order, report shall list each item. For each item report shall list item line number, ordered quantity, fulfilled quantity, purpose, status, reason code, name, description, driver item note, mobile forms data.
8. Orders shall be presented in the Billing Report sorted first by service date, then by Center, then by Route and then by Driver.
9. System shall provide a means for user to output the Billing Report in PDF file format. PDF output shall ideally present each order on a separate page so that output can be shared with customers and yet support non-disclosure of other customer’s data.
10. System shall provide a means for user to output the Billing Report in CSV file format. The purpose of CSV file output is to provide data suitable for bulk input to back office accounting systems such as QuickBooks.
11. System shall provide a Customer Report capable of outputting a listing of customers in the system. The purpose of the Customer Report is to provide user with a way to reconcile and/or transfer his customer database in 20/20 Delivery to or against his customer databases stored elsewhere.
12. Customer Report shall provide a means for user to select the sort order of the report output: by customer number or by customer name.
13. Customer Report shall return a list of customers. For each customer, report shall list customer name, customer number, and a complete address for each associated with the customer. For each address, Report shall list a complete contact for each contact associated with the address.
14. System shall provide a means for user to output the Customer Report in PDF file format.
15. System shall provide a means for user to output the Customer Report in CSV file format.
16. System shall provide an Item Report capable of outputting a listing of all items in the system. The purpose of the Item Report is to provide user a means to validate/reconcile his product database in 20/20 Delivery with his actual product database stored elsewhere.
17. Item Report shall provide a means for user to select the sort order of the report output: by item number or by item name.
18. Item Report shall return a list of items. For each item, report shall list item name, description, default purpose and barcodes.
19. System shall provide a means for user to output the Item Report in PDF file format.
20. System shall provide a means for user to output the Item Report in CSV file format.

# Risk Assessment

Unknown.

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Revision** | **Description** | **Author** |
| 9 September, 2009 | 1.0 | Initial Draft suitable for initial review | Thom Gallie |
| 1 October. 2009 | 1.1 | After final reviews. | Thom Gallie |
| 22 October, 2009 | 1.2 | Moved from TCS to AirVersent template and renumbered section 5. | Thom Gallie |
| 26 October, 2009 | 1.3 | Deleted 328.6 | Thom Gallie |
|  |  |  |  |
|  |  |  |  |

# Approvals

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| **Approval Signatures** | | |
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| Engineering Manager: | Date | Comments: |
|  |  |  |
| Product Manager: | Date | Comments: |
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