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MABUG 2019

SCANNING INTERFACE

SCANNING INTERFACE

- You have RF equipment
- But you can't use it in this facility

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SCANNING INTERFACE

Click for RF terminal photo

Click for old warehouse
Wifi in an old building can be difficult

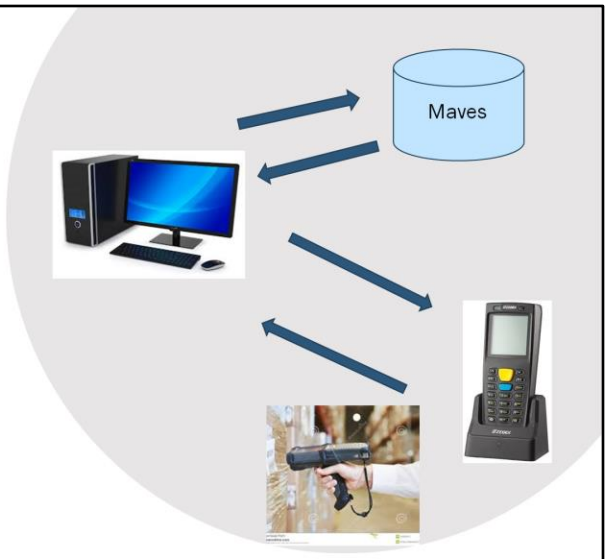
Click for yard
Longer distance wifi helps – having a large area to cover can be an issue

-> Ask audience if they have situations like this

This has been brought to our attention on a few occasions but we had no viable solution
Finally a customer decided it was important enough that they wanted to proceed with a project

SCANNING INTERFACE

- What is it?
  - Standalone desktop system
    - Database
    - Communication software
  - Cradle
  - Scanner
  - A.K.A “Batch Collector”



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SCANNING INTERFACE

Components of the interface

Computer – has a small database and comm software
Data cradle
The scanner

The scanner does not communicate directly with Maves
It has software with the necessary programs to receive and pick. This was developed by a separate company

Data would be downloaded to the cradle unit e.g. picking instructions
Warehouse operators would remove the scanner then pick goods and scan
Operators replace the scanner in the cradle
Data would be uploaded to the host computer

Click for Maves icon

Click for first arrow
Data from Maves updates the SI

Click
Data from the SI updates the cradle

Click
Operator uses scanner

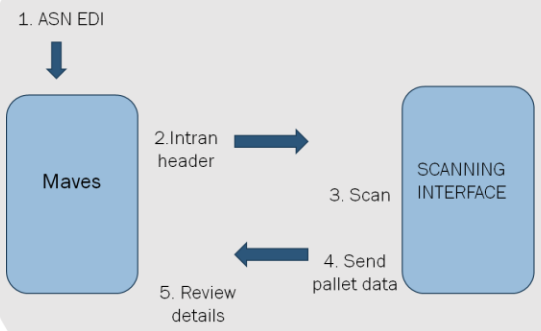
Click
Cradle sends data back to SI

Click
SI updates Maves

SCANNING INTERFACE

- How it works – Inbound

1. ASN arrives via EDI, creates intransit
2. When truck arrives RE21 creates receipt header. This sends the intransit header sent to the SI
3. Data collector (DC) units obtain data from the docking cradle, scan pallets
4. SI sends data back to Maves
5. Review detail lines in RE21



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Operational requirement

An ASN will be received containing item, Lot and pallet ID data. The scanning system will scan the product code, the pallet ID and location.

Technical requirement

1. Click

Maves EDI will process the ASN as an intransit receipt.

2. Click

In RE21, ASN data with only header references will be made available to the scanning system in an XML file.

3. Click

The operator will receive by scanning each pallet ID and product code and location.

4. Click

After one or more inbounds have been received the scanned data will be sent to Maves in a csv file and an import program will process the file. The import program will validate against the intransit and report any discrepancies similar to the RE80

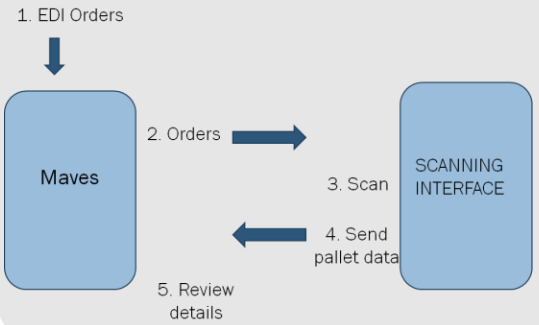
variance report.

5. Click
The operator can make edits if required in RE21. If no discrepancies exist a receipt update complete message will display and the receipt lines will be updated.

SCANNING INTERFACE

- How it works – Outbound

1. Orders arrive via EDI
2. Orders to be picked are printed in OE03, and transmitted to the SI.
3. Data collector (DC) units obtain data from the docking cradle and scan pallets being picked
4. DC is placed back in the cradle and SI uploads actual pallets shipped to Maves
5. Review details in OE20



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Operational requirement
To allow the picker to pick any pallet located in a range of preferred locations containing the oldest or close to oldest lot.
The client is setup to use unallocated lots and the final choice of lot to be made by the picker

Technical requirement

1. Click
Orders coming in via EDI

2. Click
When OE03 is run Maves will create a file containing order header references, each order line with product code, quantity and list of possible locations that contain the oldest lots according to the picking window setup in RF93. The file will be exported in XML format and made available to the batch system eg via a mapped drive.

3. Click
The scanning system will record the order number, order line and pallet ID of each

pallet picked. An order complete message should indicate to the picker that all order lines have been fully picked.

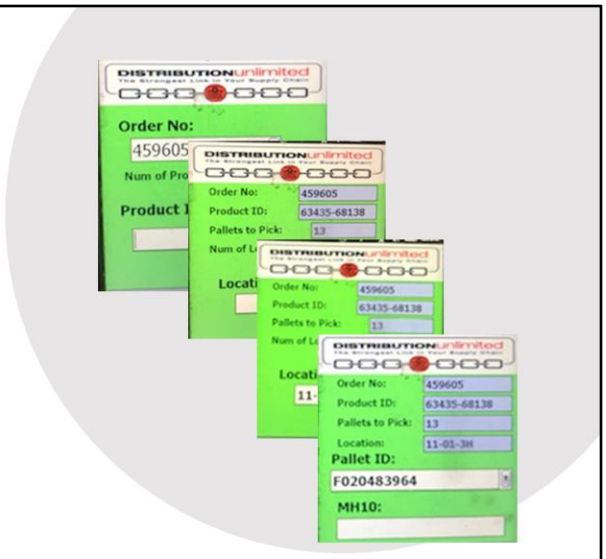
4. Click
The data will then be transmitted in a csv file to Maves after one or more orders have been picked.

5. Click
OE20 retrieves the scanned file from the SI and processes it so order is ready to be ship confirmed

If discrepancies exist an error report will be produced eg. Invalid pallet ID, incomplete pick quantity and the CSR would manually edit the order in OE20 to make corrections. If there are no discrepancies an order update complete message will display and the order lines will be updated. As long as the pallet IDs match the product code on the order they will be considered valid.

SCANNING INTERFACE

- Outbound scanning
  - Enter order
  - Scan product
  - Scan location
  - Scan Pallet ID



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After entering order it tells operator how many products

Click

After enter product it tell them how many pallets to pick and how many locations available to pick from

Click

Scan location

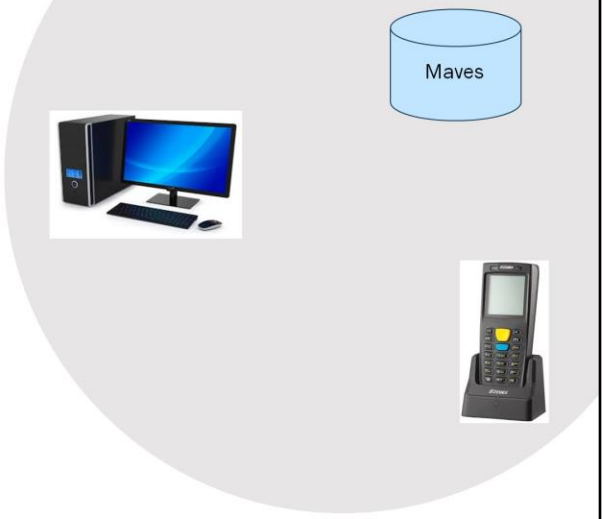
Click

Scan pallet

MH10 process – the labels are preprinted then scanned during picking

SCANNING INTERFACE

- Requires conveyance IDs
- Full pallet picking
- Requires coordination of receiving and shipping operation
- Vendor supplied scanning system



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Project all items on conveyance

Full pallet picking

24 hour cycle – receive goods later in the day,
Picking first thing in morning

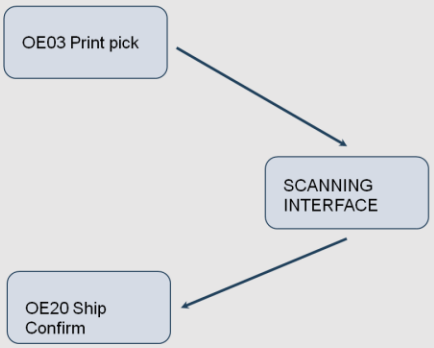
Inventory is “fixed” while picking is in process

Another vendor was contracted by our customer to write the program logic for the scanner – it isn’t running Maves.

Which probably leads to the next point which you are probably thinking, which is

SCANNING INTERFACE

- How does this help me?
  - Enables an external system to obtain picking instructions, pick the goods then send back what was actually picked
- Separation of data functions
  - Similar to no RF picking
  - OE03 sends data to the SI
  - SI scanner picks the goods
  - SI sends back data to OE20



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So why the SI?

(SI of relief)

You may say, well how does this help me – that looks like a very customized application

Click
Separation of data function – explain this

Consider how you do picking without RF today – you print the pick dock, then you send paperwork to the warehouse and they pick the order and return the document when done.
What does the computer know about what you are doing during this time?

Same with the SI – OE03 will generate the data to the SI and OE20 will import and update it

Next slide with examples

SCANNING INTERFACE

- What else can this do?
  - Enables an external system to obtain picking instructions, pick the goods then send back what was actually picked
- Separation of data functions
  - Similar to no RF picking
  - OE03 sends data to the SI
  - SI scanner picks the goods
  - SI sends back data to OE20
- Examples
  - Voice system
  - Carousel / ASR

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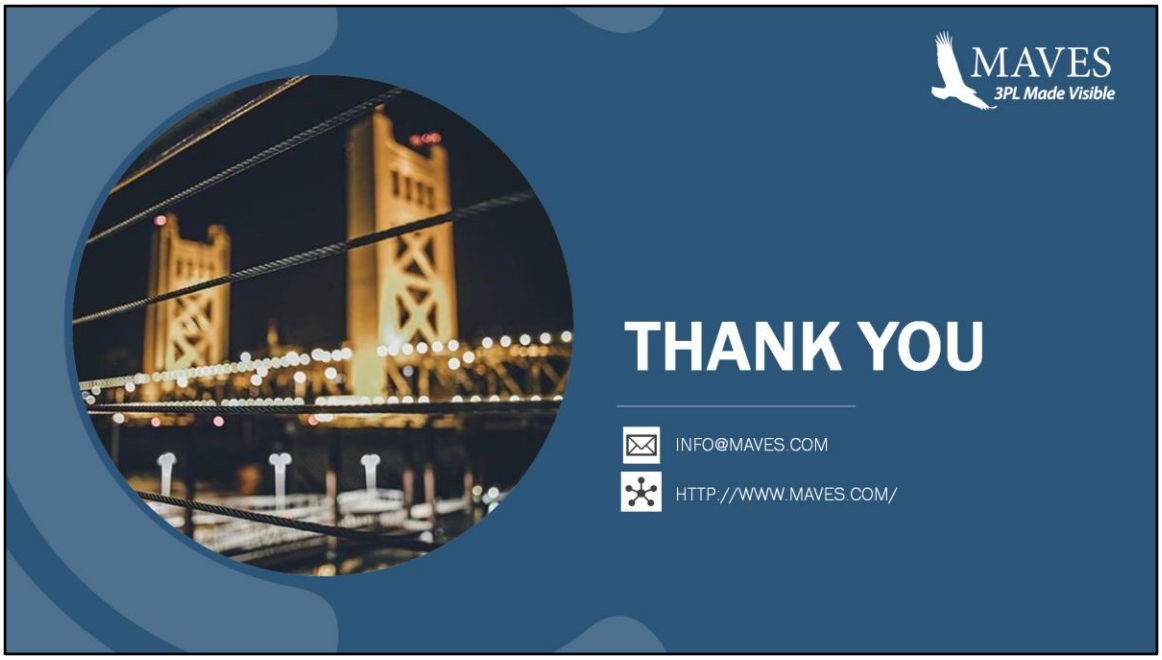
We could use the same approach for interfacing to other warehouse systems

Voice picking is an obvious one. We have done this before

There is configuration involved here so if you are interested let us know!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