

Fairchild Fasteners Aichach GmbH

Special Logistic Services – Direct Line Feed



IT Solution:



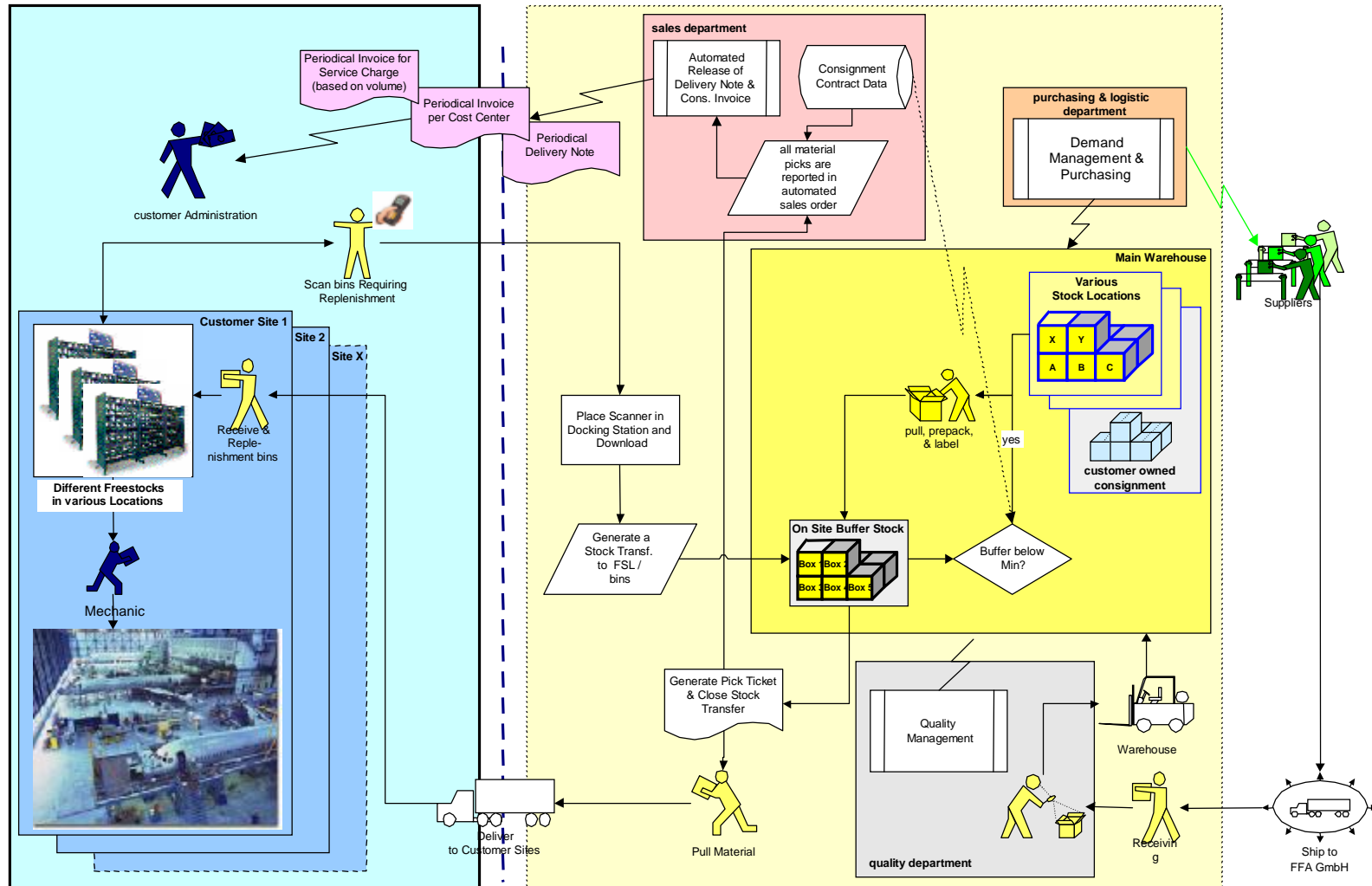
**Alcoa
Fastening
Systems**



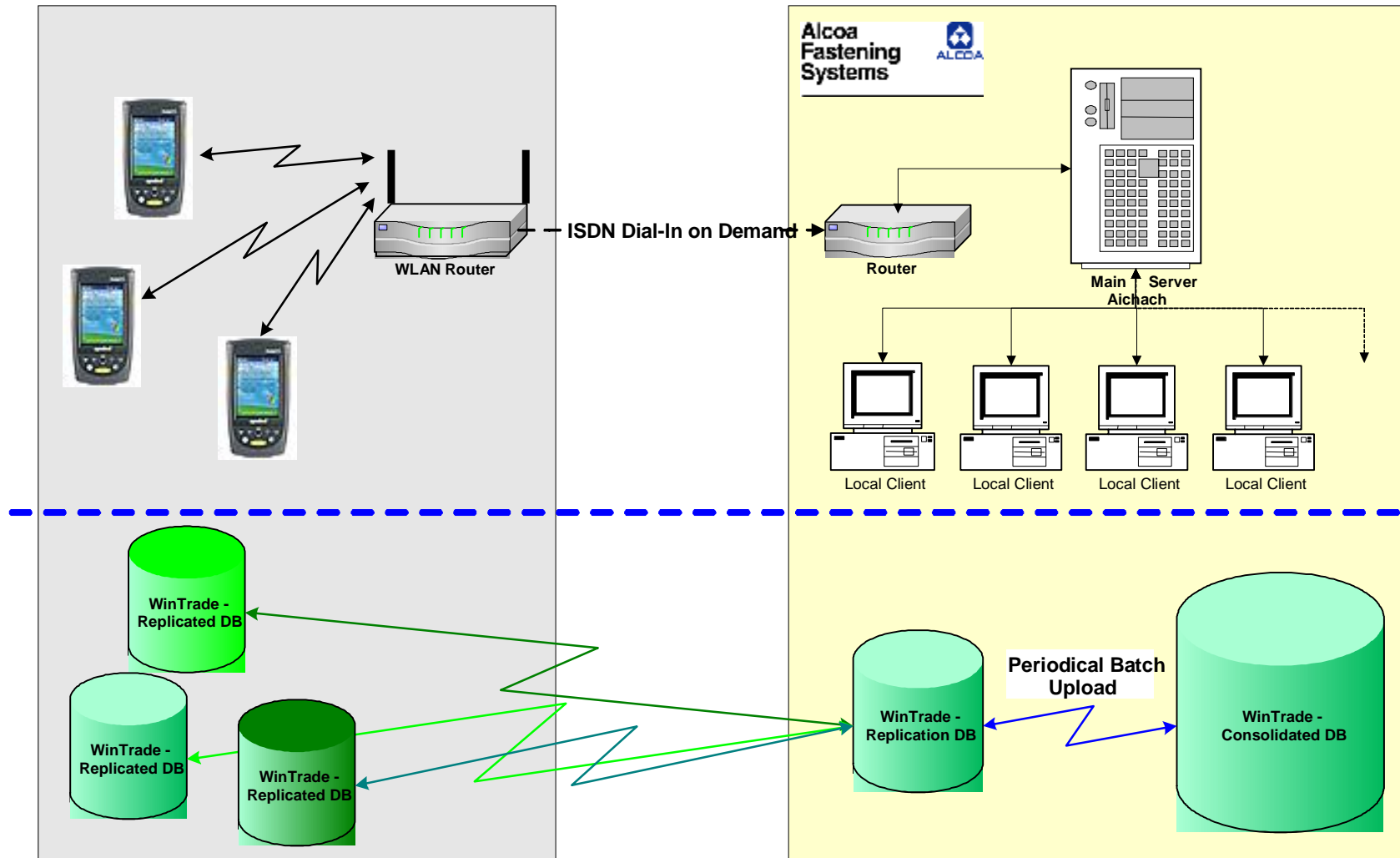
- Q The Direct Line Feed (DLF) process
- Q Technical details:
 - Ø synchronizing of data
 - Ø equipment
- Q Tasks of the responsible logistics representative
- Q Documents
- Q Benefits
- Q Contact

The DLF Process

AFS Aichach's Logistic Solution & Services - Direct Line Feed



Technical details: synchronization of data



Technical details: Equipment (1)

KanBan storage locations



- Twin – Bin System
- bins available in various sizes
- availability of parts can be viewed very easily, due to transparent bins

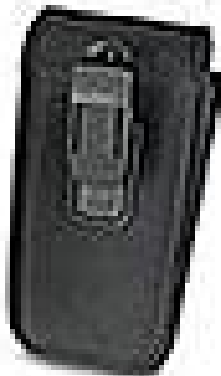
KanBan storage locations



- No need for WLAN at each Bin System location
- No need to connect Bin Systems
- Mobile devices support offline operation

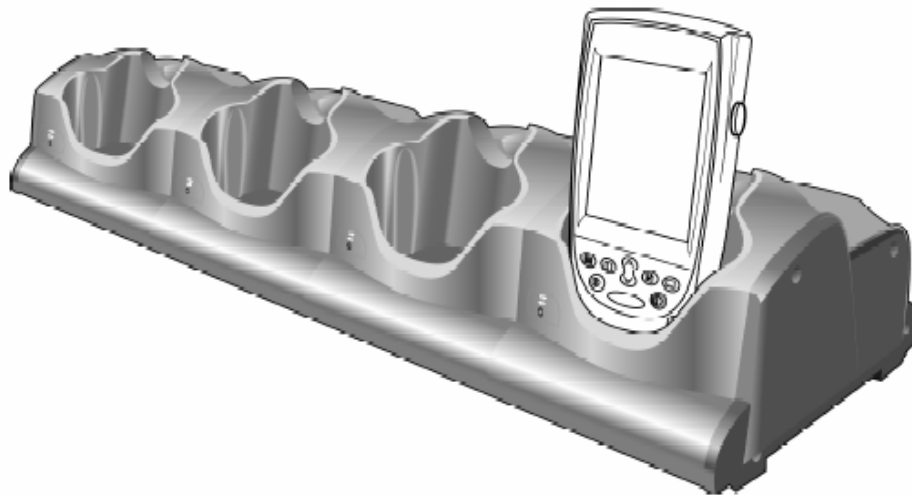
Technical details: Equipment (3)

Pocket-PC Symbol PPT8846



- small and easy to handle
 - can be carried at the waist
- the display is large and with a high contrast
 - display can be read even under bad lighting conditions
- very robust
 - extreme resistant against heat and mechanical exposure
- Sealed casing according to the IP54-Norm
 - water proof and protected against dirt
- Integrated laser to scan bar codes
 - immediate and accurate method to collect data
- WLAN or Bluetooth
 - secure mobile transmission
- MS Windows CE
- replaceable Lithium-Ion-battery
 - long lasting power cell ensures efficient working
- console
 - flexible hot keying
- accessories (spare power cell / carry case)

Docking station for Pocket-PC CRD8800-4000S



- Power Supply for Pocket-PC's when rested in cradle
- Simultaneous recharging of up to four Pocket-PC's
- Synchronization between Pocket-PC and Host-PC or with other components

WLAN Router



- 10/100 MBit LAN-Network
- DSL access
- integrated DHCP-Server
- integrated Firewall
- settings can be adjusted via Browser or Telnet
- remote maintenance possible
- interoperable with Mac OS, Mac OS X, Win95/98/NT/2000/XP, Linux and all other operating systems equipped with a browser and TCP/IP

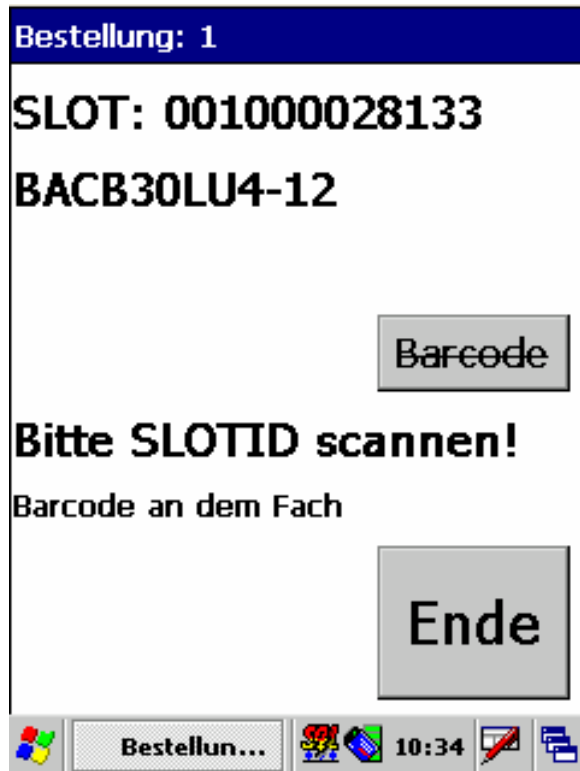
Technical details: Development (1)

Mobile Database SQL Anywhere



- Market leader
- Full featured SQL Database
 - Transaction-safe
 - Stored in buffered memory area
 - à Definitely no loss of data
 - Constraints
 - Trigger
 - Stored Procedures
 - à Ensures consistent data all the time
- Low memory footprint
 - Devices are *cold-boot-enabled*
 - Fast user experience
- Mobilink synchronization
 - Secure
 - Tested and reliable
 - Complete resync after cold boot
- Platform-independent format
 - Fast support results

Mobile Development Windows CE and .NET Compact Framework



- Full featured development environment
 - Visual Studio
 - Programming language C#
 - Excellent integration of Symbol extensions (scanner engine)
 - Leverage of skill investments
 - Development close to standard Windows programming paradigm unter .NET
 - Mobile 4GLs cannot deliver the user interface we want to provide
 - Scan-only-transactions
- à Highly productive development
- à Excellent user experience

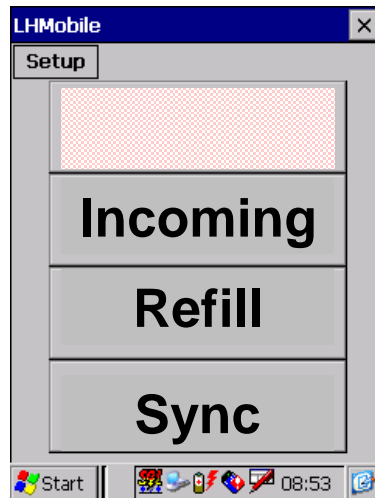
Tasks of the responsible logistics representative (1)



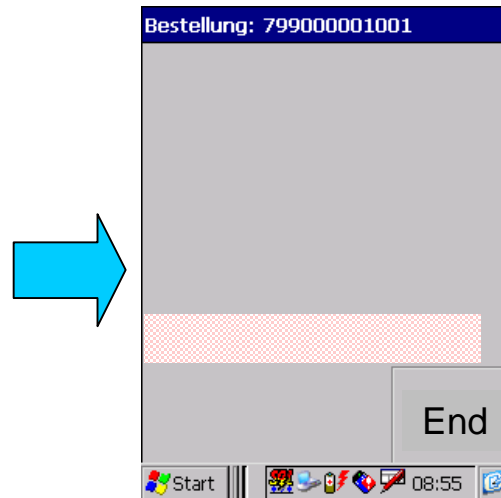
- **The designated logistics representative performs three basic tasks**
 1. control stock level in bins. If an upper bin is empty, new material for this bin has to be ordered
 2. verify incoming goods and accompanying documents
 3. refill empty bins with new supplies
- **Ensure data synchronization with Aichach, Germany**
 4. synchronize the collected Pocket-PC data with Aichach, Germany

Tasks of the responsible logistics representative (2)

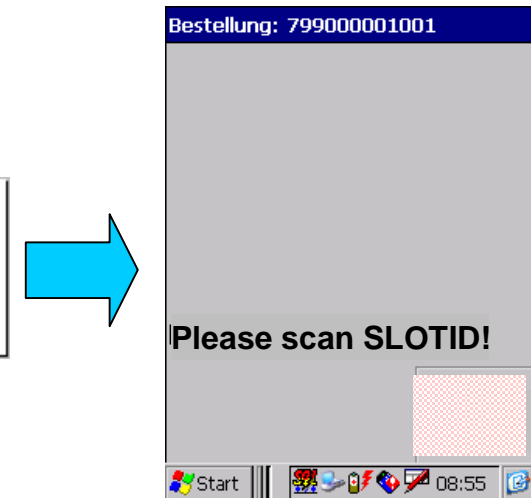
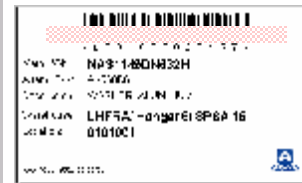
1. Check inventory and initiate an order if required



? select relevant button on the user interface



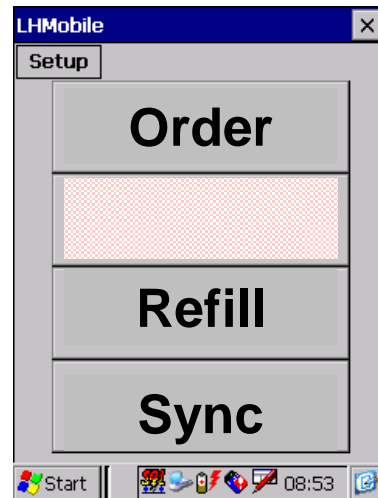
- ? A note appears to show **what** has to be scanned
- ? Info: It is possible to scan several bins in sequence
- ? If the data has been scanned correctly, a short beep can be heard
- ? In case of an error during the scanning process, a lasting beep with a fading tone is heard



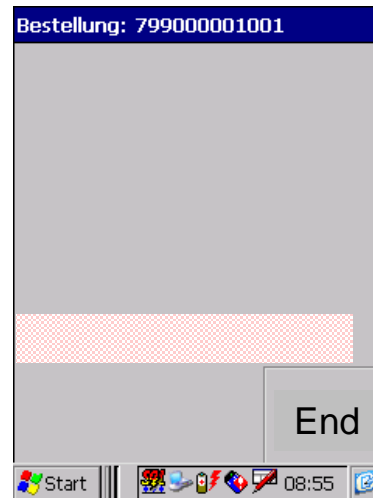
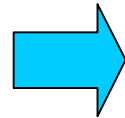
? When this step is completed OR a new task is to be done, this procedure is closed by touching the 'End' button

Tasks of the responsible logistics representative (3)

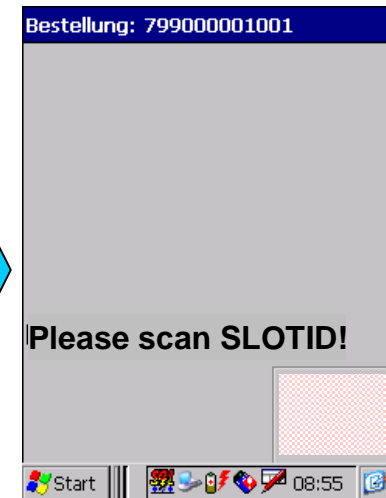
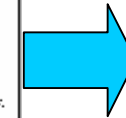
2. Incoming goods (optional step)



? select relevant button on the user interface



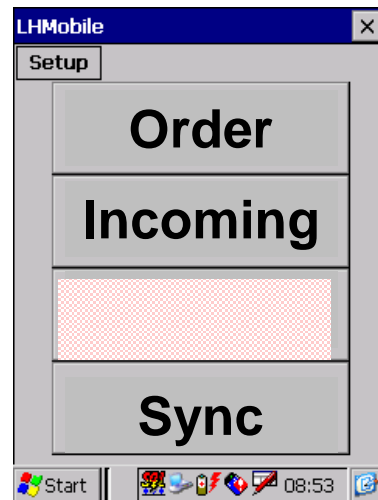
- ? a note appears to show **what** has to be scanned
- ? 1. bar code BINID = upper bar code on the material label (starts with a „B“)
- ? 2. bar code STOCKID = bar code below, on the material label (starts with an „S“)
- ? incoming goods can be scanned in sequence
- ? if the data has been scanned correctly, a short beep can be heard
- ? in case of an error during the scanning process, a lasting beep with a fading tone is heard



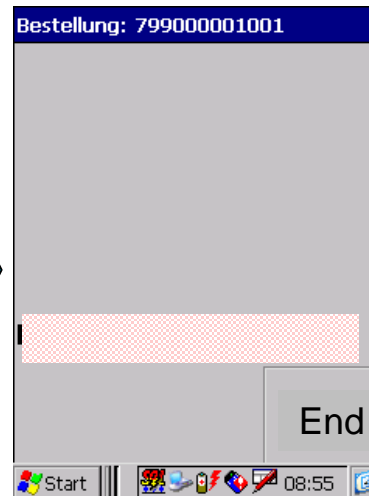
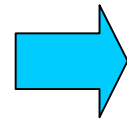
? when this step is completed OR a new task is to be done, this procedure is closed by touching the ‚End‘ button

Tasks of the responsible logistics representative (4)

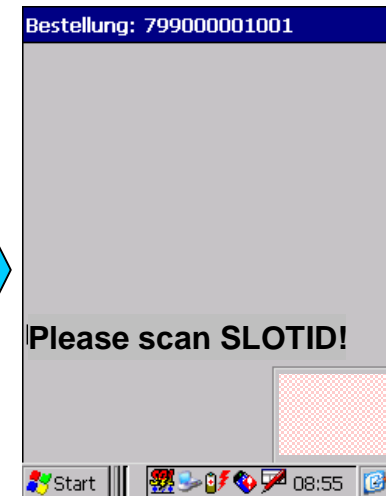
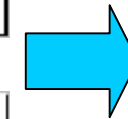
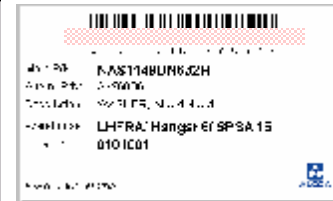
3. Refill bin



? select relevant button on the user interface



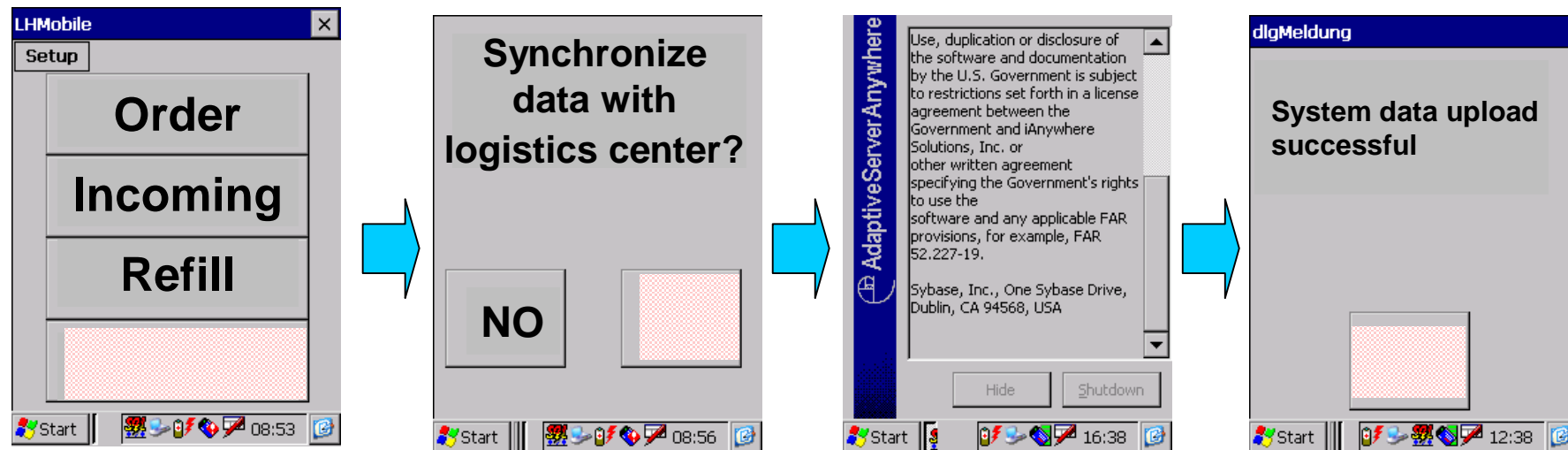
- ? a note appears to show **what** has to be scanned
- ? 1. bar code SLOTID = bar code on bin label (starts with an „L“)
- ? 2. bar code BINID = upper bar code on the material label (starts with a „B“)
- ? 3. bar code STOCKID = bar code below, on the material label (starts with an „S“)
- ? during the refill procedure, several bins can be refilled one after another
- ? in case of an error during the scanning process, a lasting beep with a fading tone is heard



? when this step is completed OR a new task is to be done, this procedure is closed by touching the 'End' button

Tasks of the responsible logistics representative (5)

4. Synchronize data



- ? synchronization should be done at least once a day
- ? the synchronization procedure can be started in between the individual steps (1 to 3)
- ? before a synchronization is initiated, make sure the Pocket-PC is in reach of the Router signal
- ? select relevant button on the user interface

- ? confirm synchronization or abort
- ? when confirmed, the data is uploaded by the server in Aichach/Germany
- ? the display returns into the main menu, when the transfer has been executed successfully
- ? In case of an unsuccessful or incomplete transmission, an error message appears on the display

- ? when this step is completed OR a new task is to be done, this procedure is closed by touching the 'OK' button

Bin label

* L 0 0 1 0 0 0 0 2 7 6 5 7 *

Main P/N: **NAS1149DN632H**
Altern. P/N: AN960D6
Description: WASHER, ALUMINIUM
Warehouse: **LHFRA/ Hangar 6/ SPSA 16**
Location: **0101001**

Form No. A-9062-01 10/03



- necessary for the exact identification of the bins at the location
- includes bin-specific information
 - specific bar code for bin
 - part number for the material in this bin
 - alternative P/N, when agreed upon
 - description of parts
 - warehouse/depot where the bin is set up
 - bin number
- any changes concerning the label, have to be approved by the Quality Department of FFA
- if bin details are changed (for example if a different part is to be stored in this bin) the label has to be replaced by a new one from FFA

Material label

- this label is necessary to identify the contents, i.e. the parts in a plastic bag
- includes all part- and bin-specific information
 - identification bar codes
 - internal bin code of FFA
 - internal inventory code of FFA
 - part-number of delivered good
 - **Note:** this can be an alternative P/N. In this case...
 - primary part-number
 - description of the part
 - lot number of the specific parts
 - quantity and unit per package
 - designated storage location (e.g. *LHFRA/Hangar6/SPSA16*)
 - target-bin (e.g. *0203004*)
- any changes concerning the label, have to be approved by the Quality Department of FFA

ALCOA

* 8 0 0 1 0 0 0 0 0 0 0 7 5 *

* 5 0 0 1 0 0 0 2 1 3 7 2 9 *

SHPD P/N: **NAS1149D0416H**

Description: WASHER, ALUMINIUM

LOT#: 7373-1/9/03 QTY: 100,00 EA

Warehouse: **LHFRA/ Hangar 6/ SPSA 16**

Location: **0203004**

Form No. A-9064-10/03

- Easier handling and time savings for operators. Bin system can be placed near the aircraft. This means all fasteners are available at the point of use, resulting in a reduction of assembly time
- Saved manpower in the planning and quality department of our customer
- Less waste. Workers take only the quantity and parts they need, due to a high confidence in the availability of material
- 100% availability of parts, due to precise planning and a safety stock on site

Consulting & IT-Implementation



FISCHER & CONSULTANTS

www.appfact.de

mifi@appfact.de

- Lutz Eckert, Project Leader
 - Lutz.Eckert@appfact.de
- Rüdiger Kardel, Mobile Development
 - Ruediger.Kardel@appfact.de