

# PlantTalk: BUILD

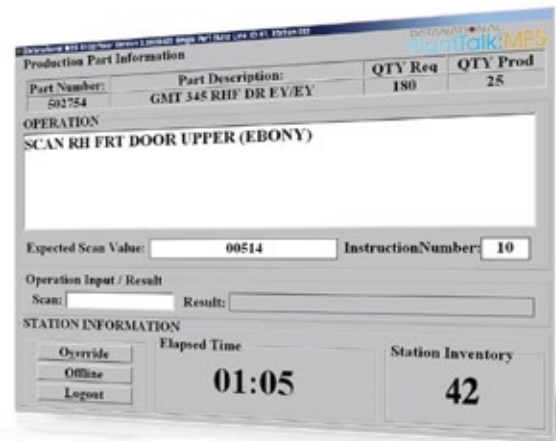
Automate

Optimize

PlantTalk®:Build module provides the production line operators with step-by-step work instructions at each applicable assembly/build station. It also provides for scanning and machine interfaces for part/component validation, work-in-process and finished good part labeling, as well as rack completion and shipment verification with the rest of the PlantTalk®:MES modules. This process allows for full lot traceability of all applicable parts and components to the final finished good part.

and the production run is not complete, the quantity will automatically increment to ensure that the run is completed for the final desired quantity. In the event that the production run has completed, the production scheduler can create a new production run that will be started before the next one on the schedule to take care of scrap or defect issues.

In a sequenced operation, the build order process is determined by the sequenced data from the customer, such as a broadcast pulse or the 866 EDI transaction. If needed, the actual build process can be done out of sequence to accommodate line efficiencies, and the actual sequencing of parts will take place at the time of racking and shipping.



## Sample Production Flow

First, the operator places the part in the assembly machine and scans its substrate (WIP) label. After the part is assembled in the machine (for example, clips are added, etc.), the machine will cycle. This process repeats at every applicable work cell until the final station is reached. At that point in time, the EOL tester or final poka-yoke interface is performed. The finished part will then be placed in the shipping rack and be ready for scanning for verification.

## Build Process Traceability

As the parts are built, the components used to create the parts are validated at the appropriate stations for replenishment. The license plate label is scanned when a new container of components is started. From this label, the starting quantity of the components will be known and as a part is processed at the station that uses the tracked component, the available parts remaining will be shown on the screen. When the quantity available goes negative, it shows an alert on the screen with a red background, along with an audible alarm.

## Production Schedule

In a non-sequenced (batch) program, the application has a production schedule entry, which determines the sequence of different variations of parts to be built, as well as their associated quantities (for example, 100 of part X, then 200 of part Y, etc.).

The production quantity is validated against a multiple of the standard pack, and if a part is scrapped in the build process

## Handling of Repair and Reporting of Scrap

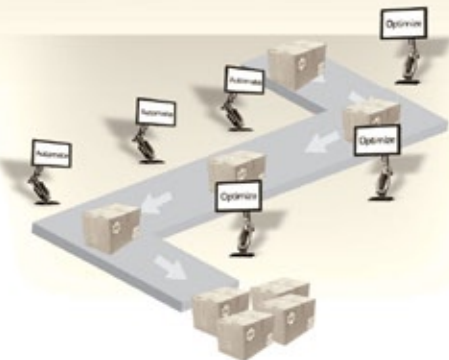
Typically, there is a dedicated PC station (kiosk) on the floor running a scrap reporting application. A damaged part will be brought to the repair area and a line supervisor will make the determination whether it can be repaired or not.

**Repair process:** If a part is off-lined, it will be taken to the repair area. The sequential part number will be entered/ scanned and all of the components presently used for that part will be displayed on the monitor. They will all have check marks next to each component, indicating everything to be scrapped. If any components are salvageable, the operator will un-check those components (they won't be scrapped) and proceed to enter the reason code for the scrapped part.

**Rework Process:** If the part can be re-introduced to the build process, the operator will report any components to be scrapped along with the appropriate reason codes, and then the part will be re-introduced to the build process at the station where it was pulled off. There is a re-entry program at each applicable station for repaired parts.

## Reporting

Reports and displays will be created for traceability. By entering the container (rack) number for a finished goods part, the operator can view all of the lots of the components used to create the parts. By entering a lot of a component, the operator has the ability to view and print a list of all of the parts and the finished goods containers where the parts were used. Since the application requires a user login into the system (PC or hand held), the system has the ability to provide basic machine and user efficiency report.



Datanational's PlantTalk®:PLC Connect module provides for monitoring of your machine activity through a PLC interface. PLC interfaces with PlantTalk®:MES are established using a variety of common middleware tools, including RSLinx and I/Gear. Monitoring for errors and production statistics can include the collection of basic production data such as the part number, quantity, run time, work order number, release and operation sequence. We can trigger events and update the software based on completed activity (such as cycle complete) or schedule the next machine event to take place after a required predecessor event has taken place (such as a correct scan).

## Software Built Around You

Shop floor automation means enabling collaboration between your shop floor machines and equipment, your business systems, suppliers, customers, and people. This can be achieved by focusing on a very specific area of your operation, or can be implemented across your entire plant floor or extended enterprise.

Datanational specializes in design, development, implementation and support of complete solutions for your shop floor. Solutions of this type require the skills to integrate the machines, tools and production report and alert systems with communications equipment and ERP/MRP systems to inform and guide your employees. Our system is field-tested and customer-endorsed. PlantTalk®:MES is supported 24/7 by Datanational's support & development team

