ASTRONICS
TEST SYSTEMS

WaferNav

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PURPOSE

Astronics Test Systems is a complete test and measurement systems provider, where custom test systems are created to verify their most critical systems. Their mission is to utilize test solutions that deliver innovative technology, engineer-to-engineer technology, and exceptional quality.

OBJECTIVE

WaferNav Routing Assistance is a mobile application that provides information to allow the proper transfer of testing materials to a correct location through the use of a mobile device. The ActivATE WaferNav Controller is a desktop application which allows an administrator to configure routing information used by the mobile application.

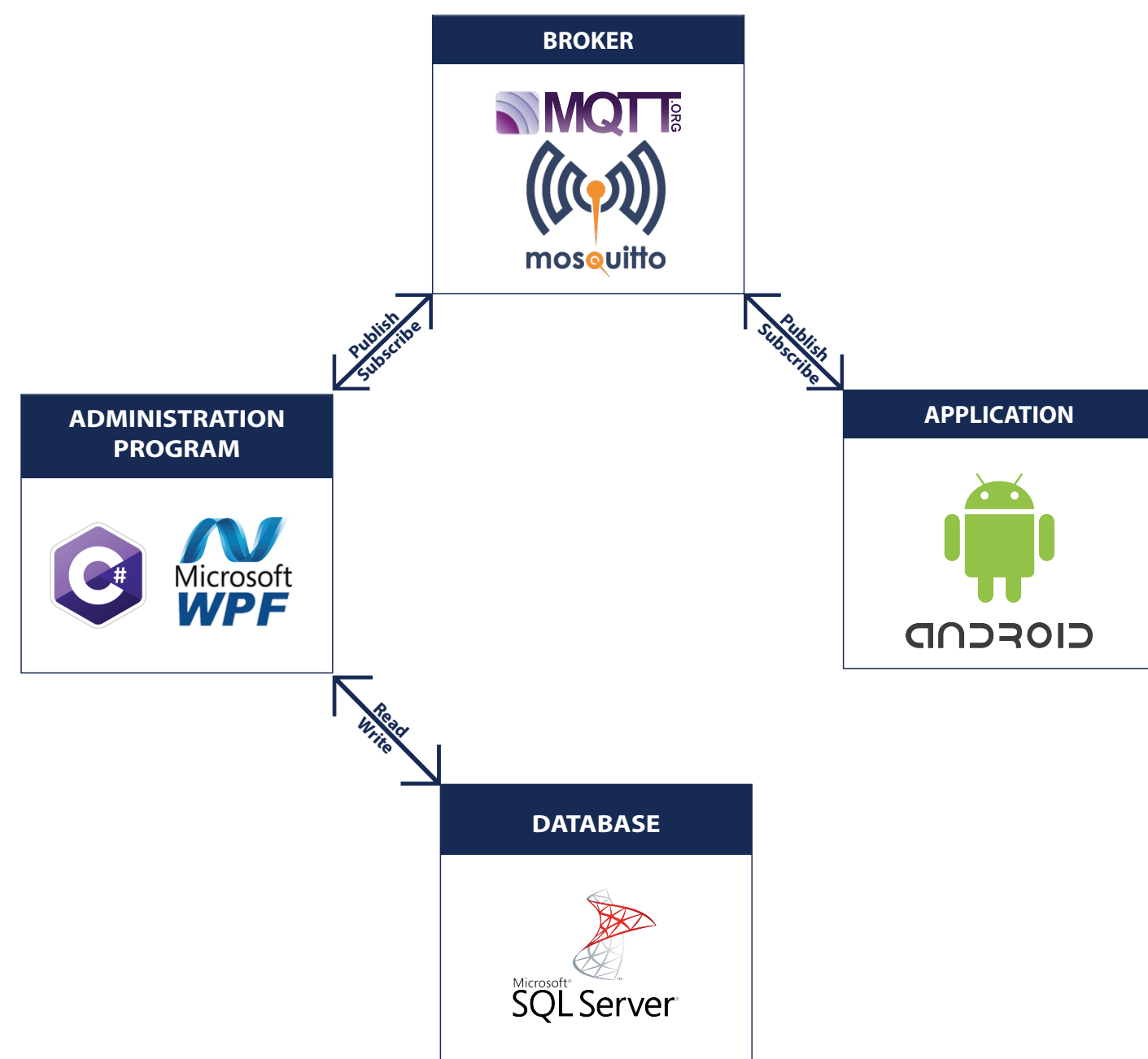### WaferNav High-Level System Diagram

Figure 1. High-level System Diagram for WaferNav Routing Assistance Application

MQTT PROTOCOL

MQTT or Message Queuing Telemetry Transport, is an extremely simple and lightweight messaging protocol designed for constrained devices and low-bandwidth, high latency or unreliable networks, making it ideal for the emerging "Internet of Things" world of connected devices.
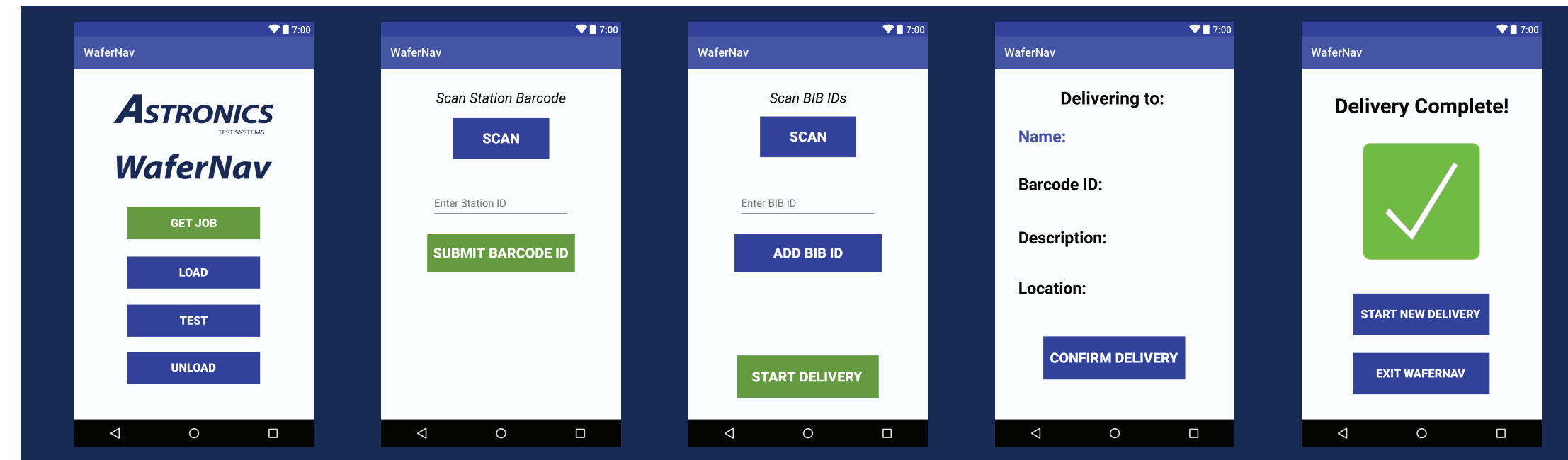
MOBILE APP

Figure 2. WaferNav Screen Sequence

CONTROLLER

Figure 3. ActivATE WaferNav Login/Logout Screen

Figure 4. ActivATE WaferNav Log Screen

Figure 5. ActivATE WaferNav Add New Screen

Figure 6. ActivATE WaferNav Status Screen

BENEFITS

• Increase efficiency for semiconductor testing facilities
• Operators spend less time delivering test materials
• Administrator application tracks historical data for process improvement
• Supervisors can update wafer routing data manually or algorithmically
• Easier analysis of testing stations for load balancing
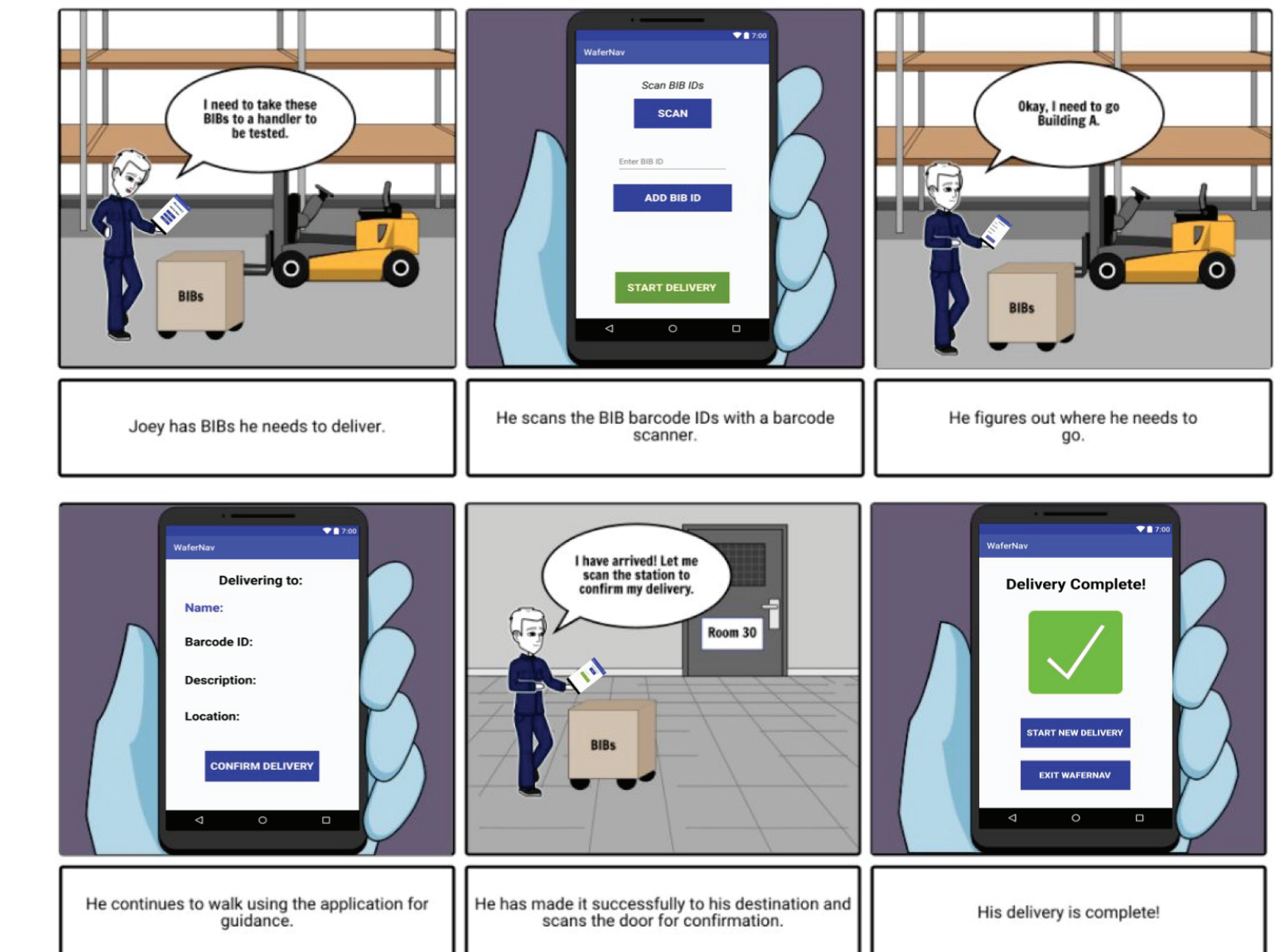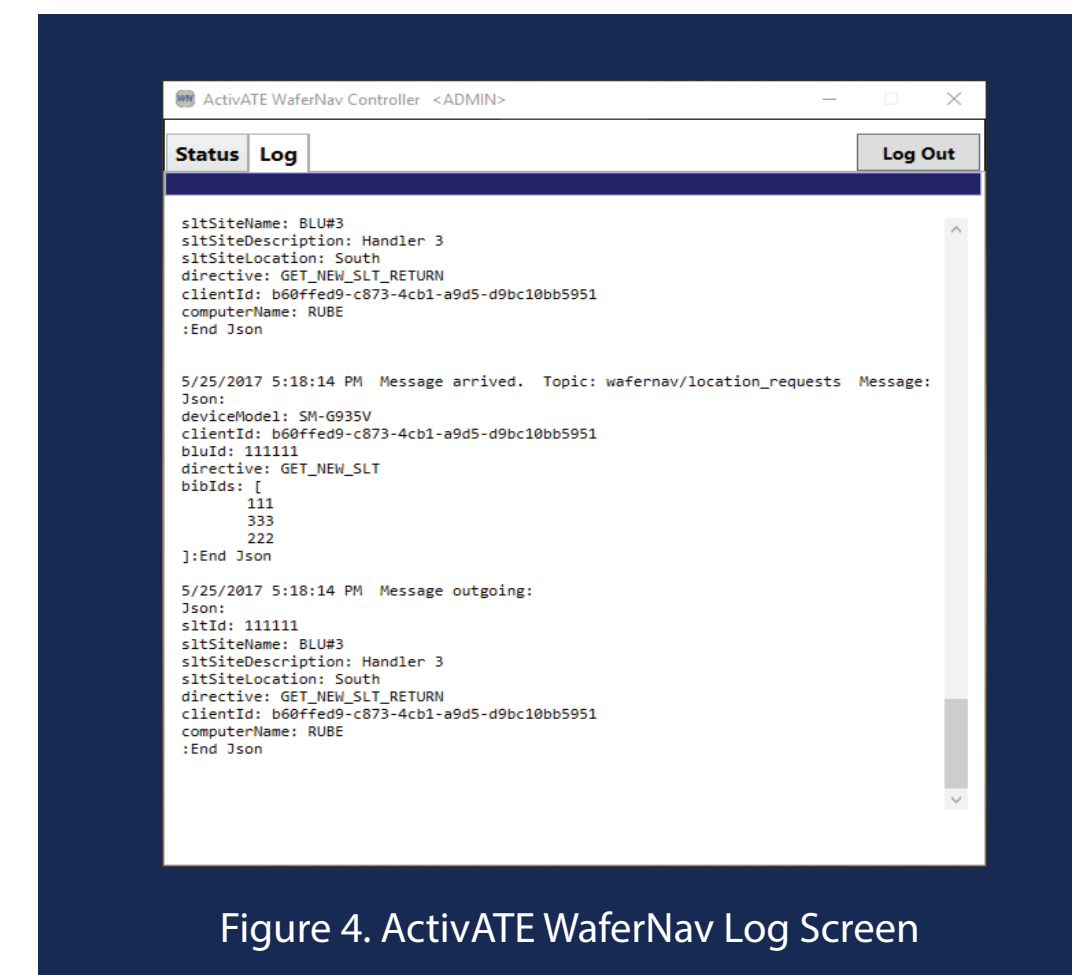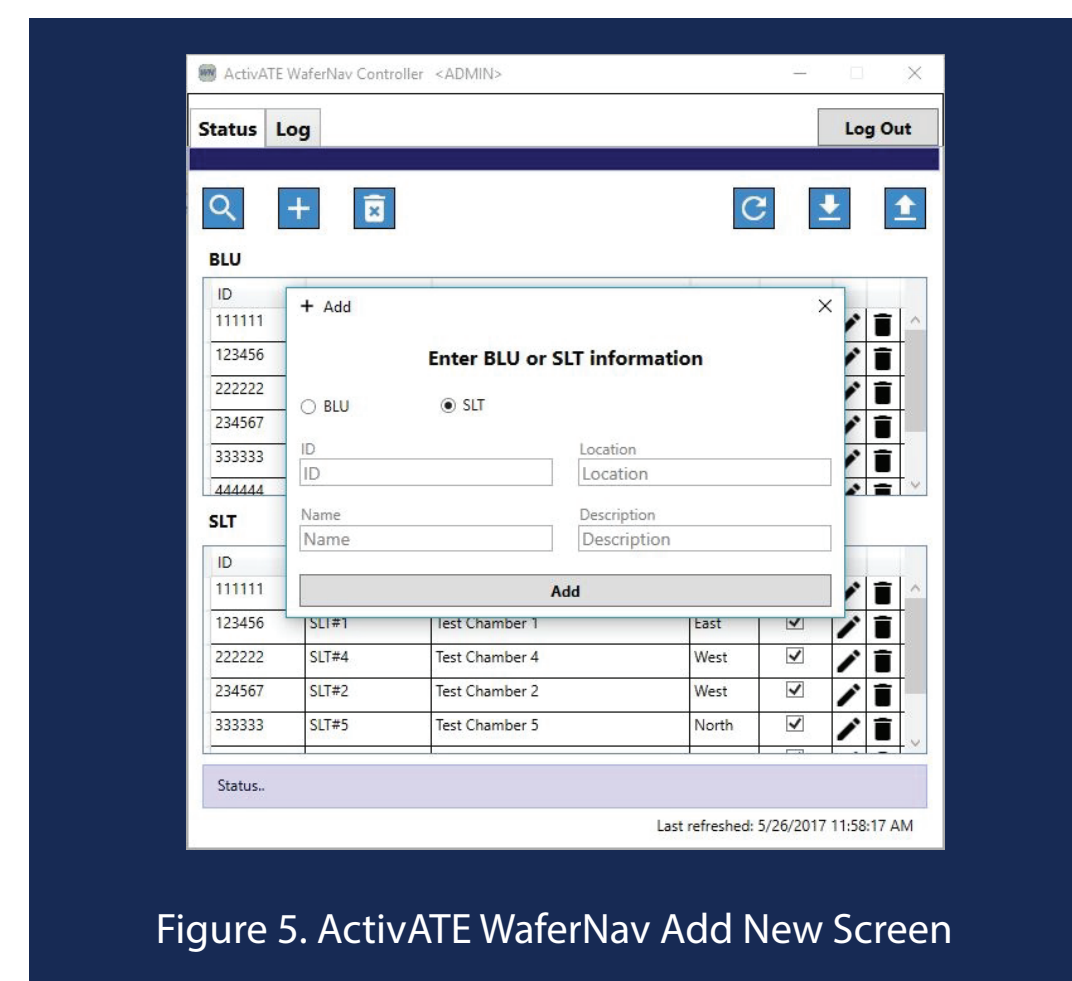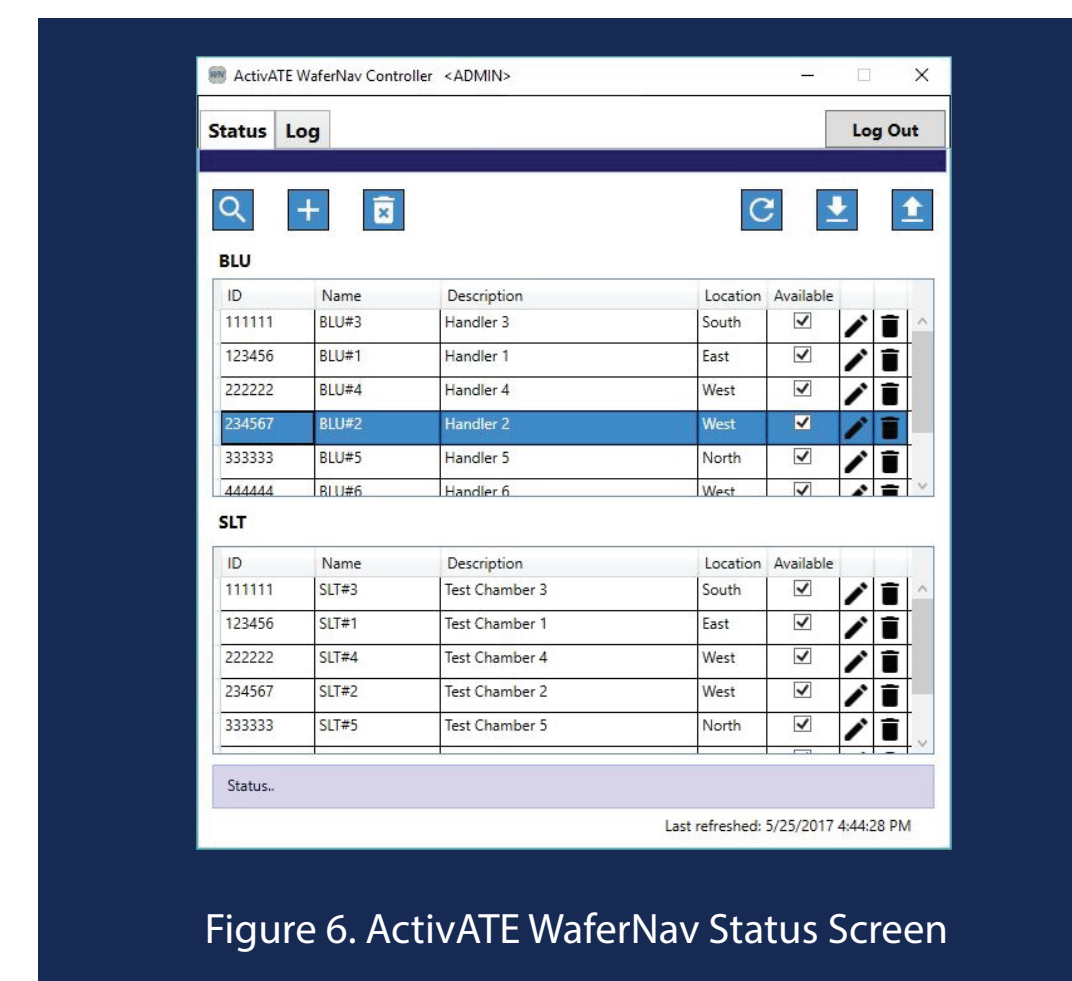• Generate reports for management
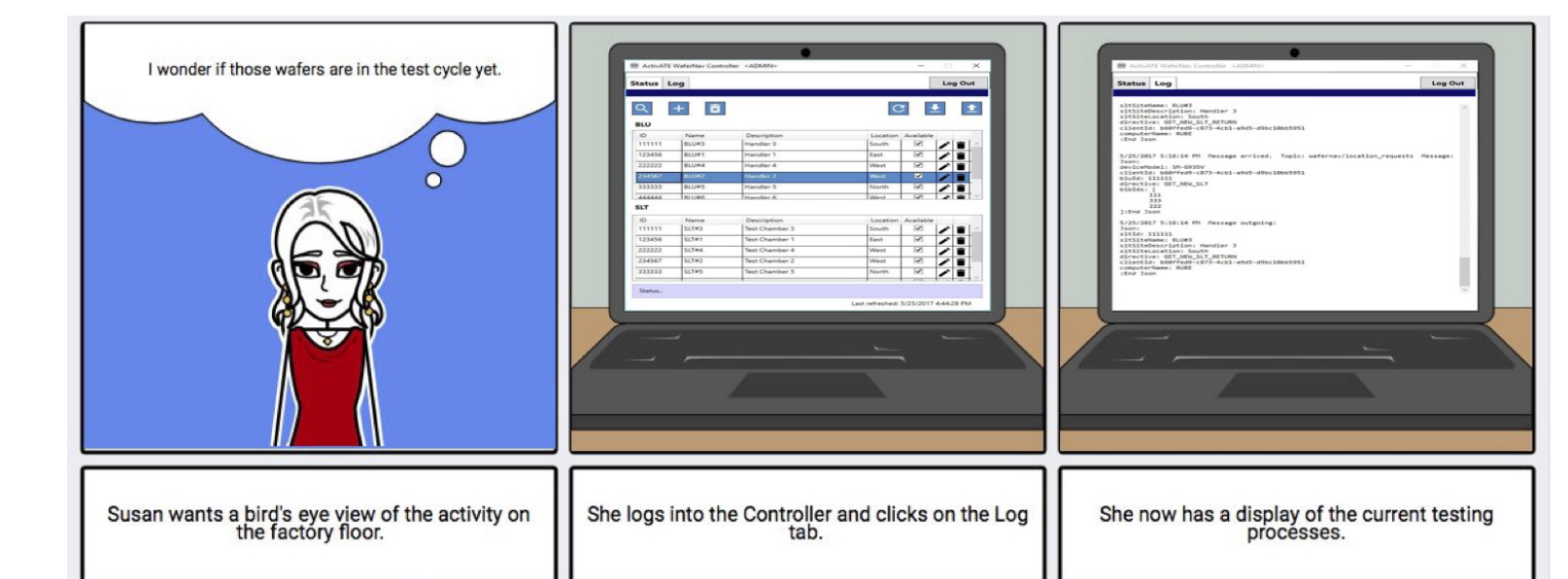
USE

Figure 7. Storyboard for WaferNav Routing Assistance Application

Figure 8. Storyboard for ActivATE WaferNav Controller

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