Electronic Product Assembly Case Study Overview including

• SMT production lines

• Hand assembly lines for
  – Adding large/irregular components to SMT boards
  – Sub-Assemblies (electronic/electronic & mechanical)

• Final Assembly lines for
  – Electrical, electronic & electro-mechanical assembly

• Additional lines, cells, benches or specialists for:
  – Incoming quality control
  – In process quality control
1. Auto-scan each board loaded onto the line
2. Scan material (reel) traceability data and boards onto machine as required
3. Record test failures, fault descriptions & repairs made to any board
4. Scan each board off the line
5. Display line performance on shop-floor monitor
Example Shop-Floor Line Monitor Display

Progress Report 2012/09/17

Work Order: WO-00021 [A]  
Product: Blue Ray Player : OEM : V1.1


<table>
<thead>
<tr>
<th>Time</th>
<th>Line Input</th>
<th>Test Fails</th>
<th>Repair Passes</th>
<th>Line Output</th>
<th>Tact Time</th>
<th>Total Output</th>
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<tbody>
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<td>08:00 to 09:00</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.00 Secs</td>
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<td>0</td>
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<td>0</td>
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<td>0</td>
<td>202</td>
<td>17.82 Secs</td>
<td>1489</td>
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</table>
1. Auto-scan each board loaded onto the line
2. Scan component & sub-assembly traceability data as required
3. Record In Process Quality Control (IPQC) data
4. Record test passes or fails and error codes
5. Record reworks, fault descriptions & repairs made to any board and timestamp off the line for boards that pass test
6. Display line performance on shop-floor monitor
1. Auto-scan each chassis loaded onto the line
2. Scan component & sub-assembly traceability data as required
3. Record test passes or fails and error codes
4. Record reworks, fault descriptions & repairs made to any board
5. Map internal manufacturing id to product unit serial number (if different)
6. Map boxes to cartons, unload units from the line
7. Display line performance on shop-floor monitor
- Display test, inspection or calibration procedure
- For batch testing; Counts and timestamps passes & fails against batch id
- For unique item testing; Scans each item and timestamps pass or fail
- For any fail, records symptoms or error code with operator id if required
- Optionally record test measurements or calibration data for passing items
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