



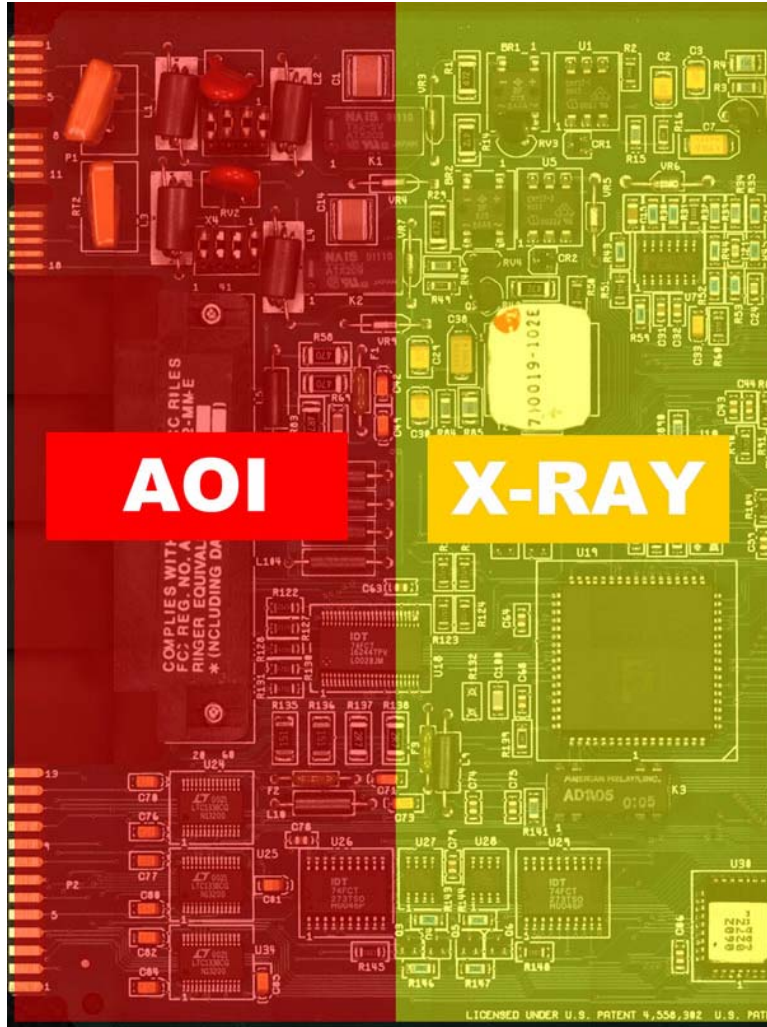
Exploring the Complimentary Technologies of AOI and X-Ray



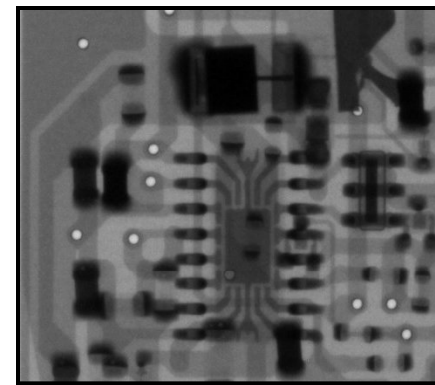
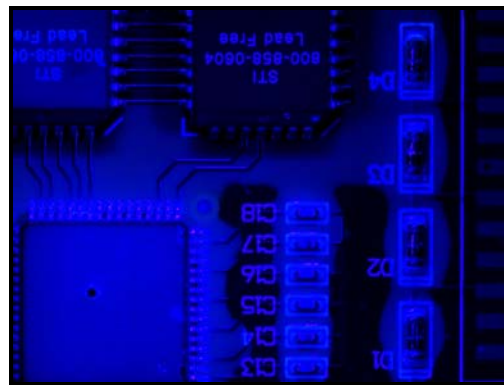
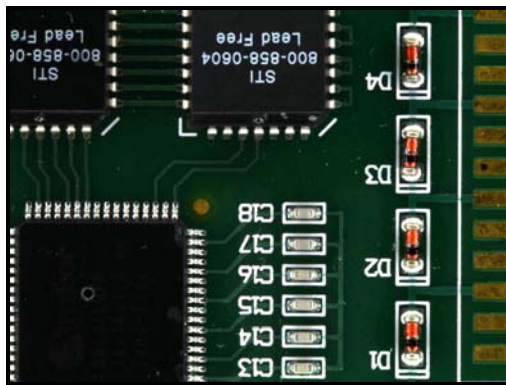
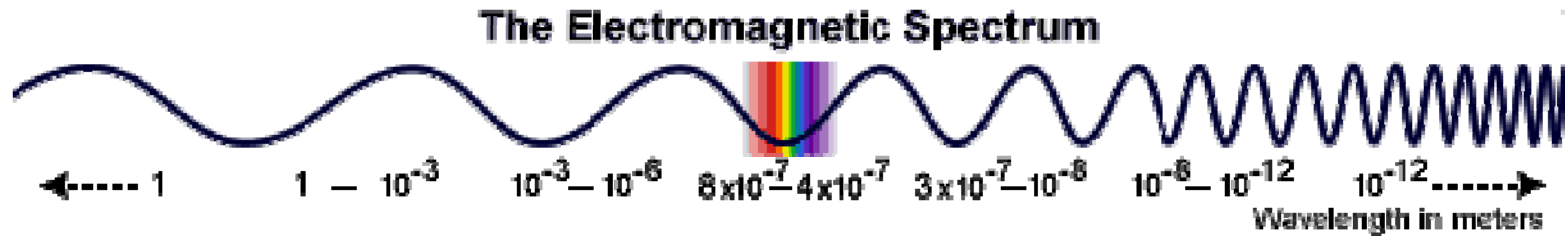
Inspection Markets

- Populated PCB's
- Semiconductor Packages
- Advanced Micro-electronics
- Sealed Electronic Assemblies
- Conformal Coat

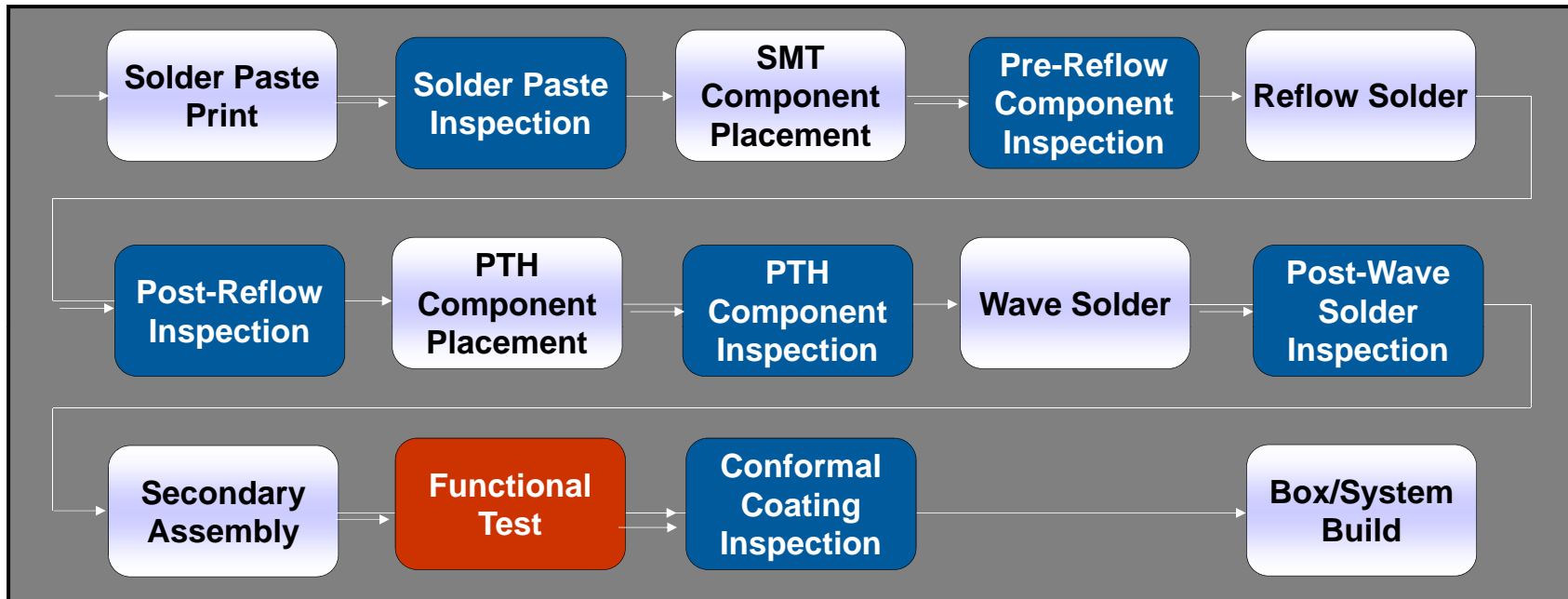
A Balanced Test Strategy



AOI or X-Ray Choose Your Wavelength



Printed Circuit Board Assembly Process



 Fabrication/assembly steps

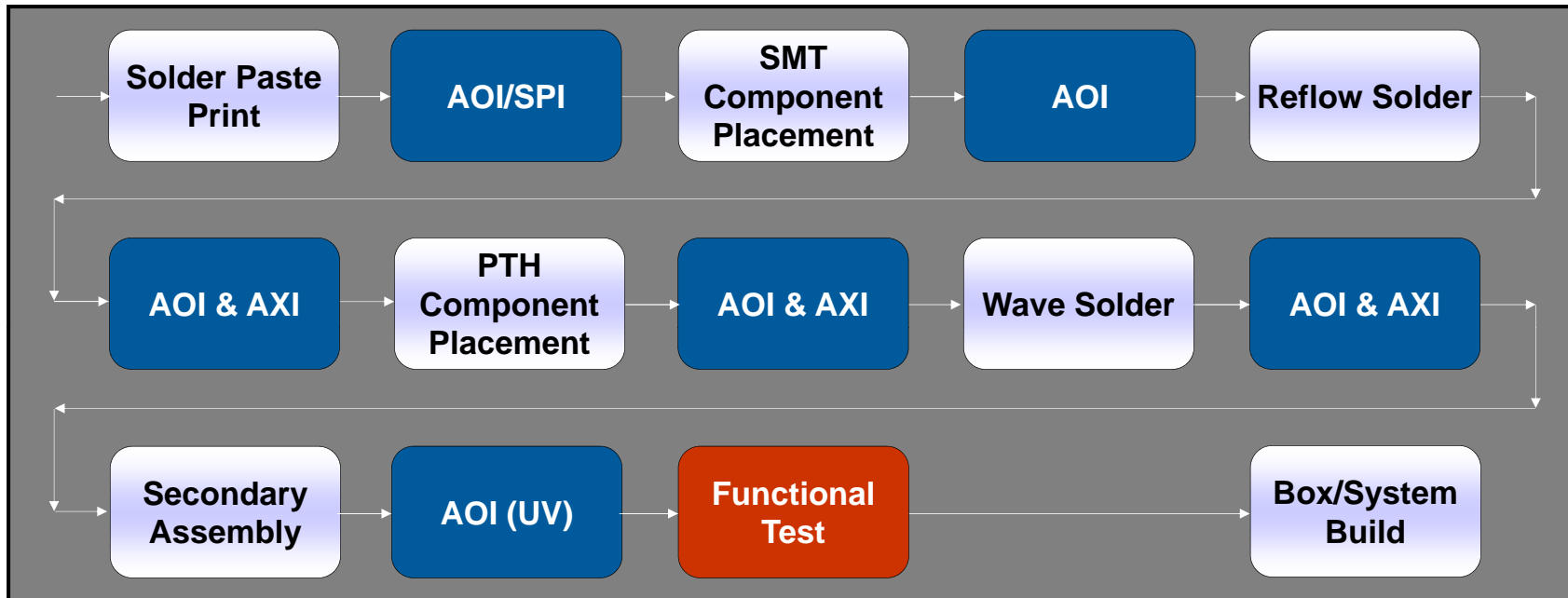
 Indicates steps that use inline AOI or X-ray systems

 Indicates other yield management steps/opportunities

Excludes:

- Repair/rework steps/opportunities
- Offline/analytical AOI and X-ray opportunities

Printed Circuit Board Assembly Process



Integrated backbone for ...

- Library/Set-up Parameter Control
- Statistical Process Control (SPC)
- Consistent Defect Classification
- Data Management and Mining
- Process & Tool Control
- Process & Tool Optimization



Prevention vs. Detection

The two guiding philosophies for the implementation of test and inspection equipment are prevention and detection.

Prevention places the priority on process control and the elimination of defects by implementing corrective action. Detection, on the other hand, focuses the inspection efforts on ensuring that no defective product will escape from the factory floor.