



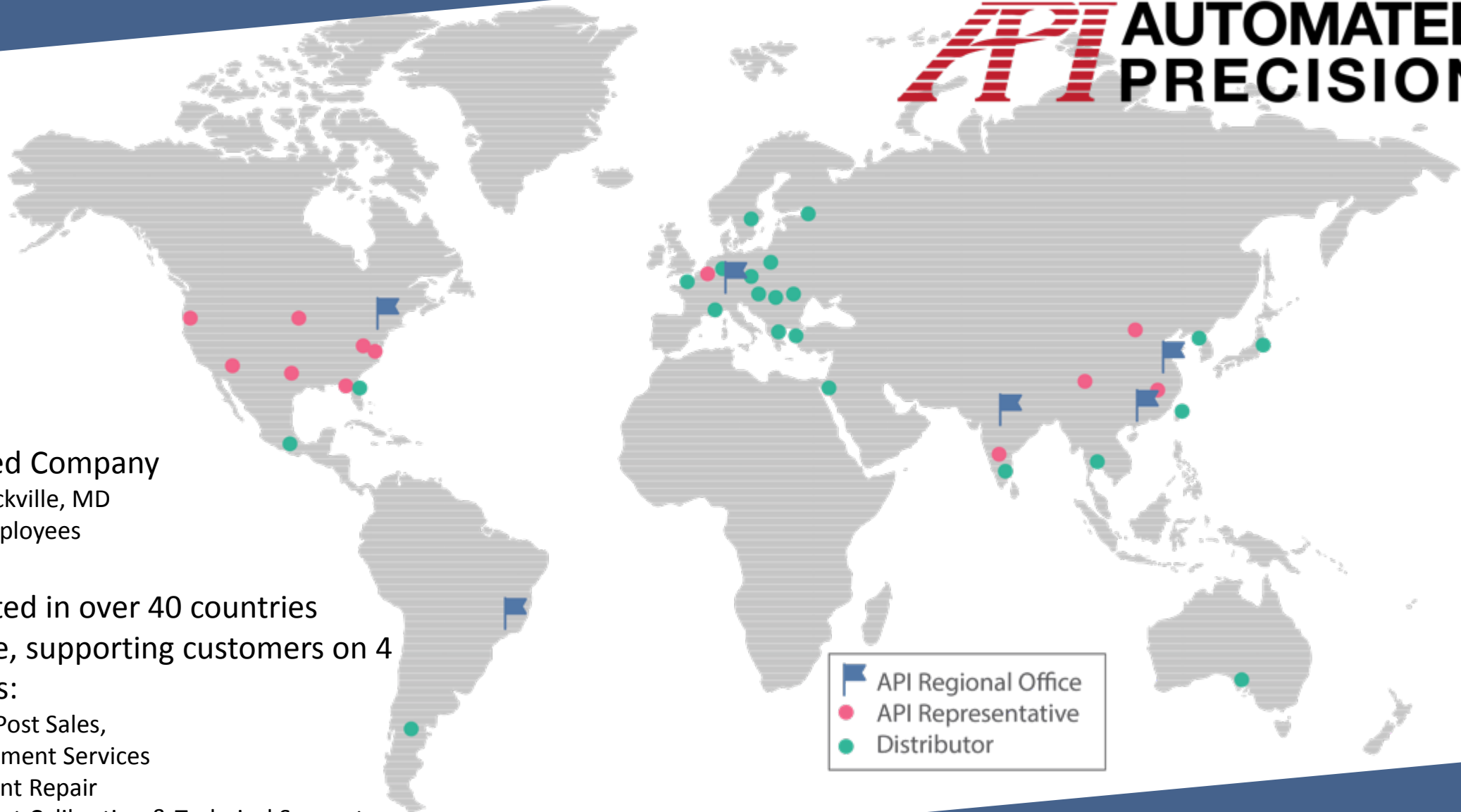
AP **AUTOMATED
PRECISION**

** Dimensional Metrology Solutions
Product & Service offerings*

** Next Generation Non-Destructive Inspection Technology*

Joe Bioty – President

API Global Foot Print



USA owned Company

- HQ – Rockville, MD
- 300+ employees

Represented in over 40 countries worldwide, supporting customers on 4 continents:

- Pre and Post Sales,
- Measurement Services
- Equipment Repair
- Equipment Calibration & Technical Support

	API Regional Office
	API Representative
	Distributor

Worldwide responsiveness



Vision

To achieve 100% customer satisfaction in providing advanced digital information for industry.

Mission

Create a corporate environment that continuously seeks and invests in state-of-the-art sensor technologies and artificial intelligence meeting current and future industry needs.



Global Customers & Partners

Serving customers worldwide within a wide range of industries and applications.

 Aviation		 Heavy Industry	
 Automotive		 Research & Education	
 System Integrations		 Machine Tool	
 Energy		 Transportation	

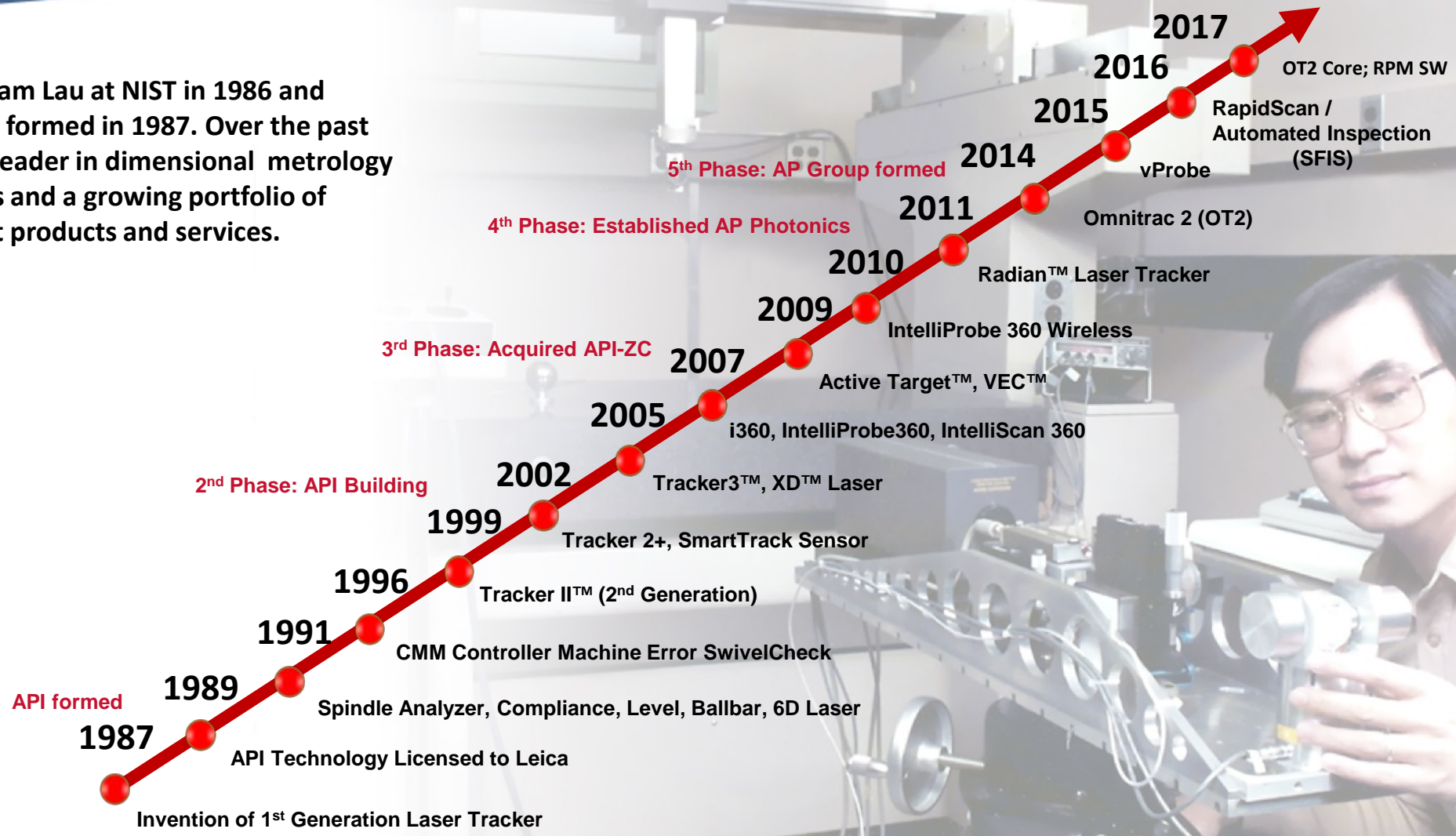
Over 2,600 Customers Worldwide

Continuous Innovation over 30 Yrs.

Laser tracker was invented by Dr. Kam Lau at NIST in 1986 and Automated Precision Inc (API) was formed in 1987. Over the past thirty years, API continues to be a leader in dimensional metrology with enhanced sensor technologies and a growing portfolio of innovative precision measurement products and services.



Dr. Kam Lau at NIST Museum of History with one of the first laser trackers invented.



Growth in Technology

Diverse Offerings

Equipment & Services



3D Tracker Systems



Automation



Equipment & Services



**3D Non-Contact
Systems**



Services



Machine Tool Health



CMM / Robotic Machine



Next Generation Non-Destructive Sensor Development

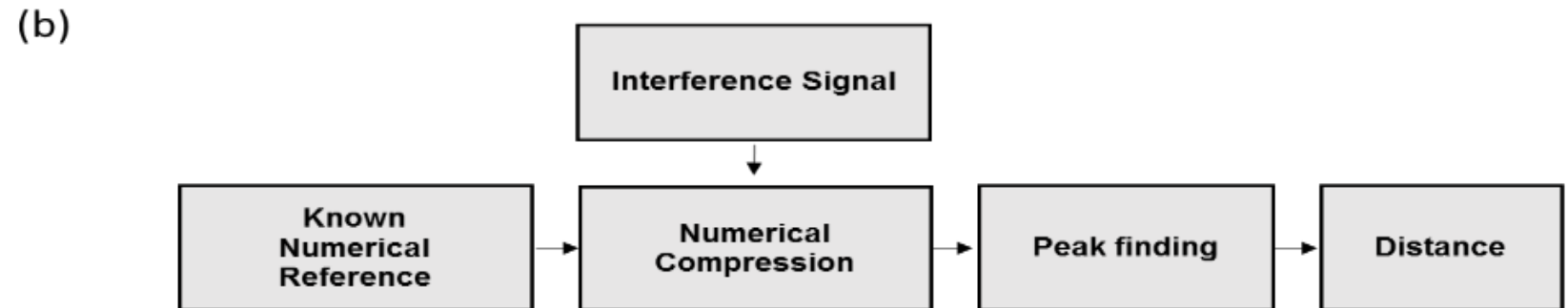
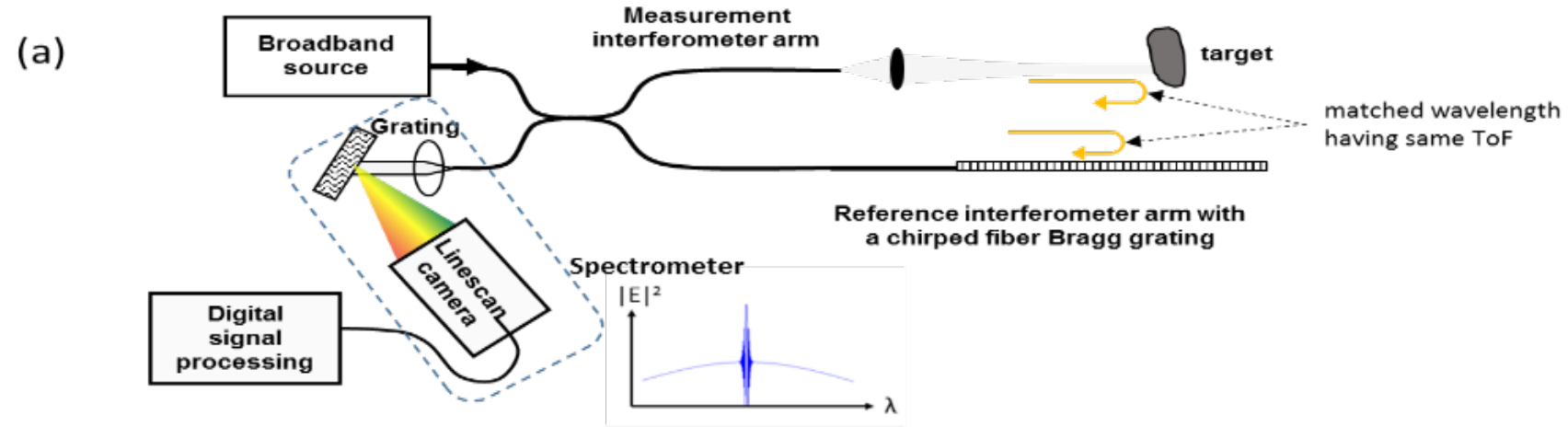
Next Generation Non-Destructive Sensor Development

Measurement speed
50 times faster than FM
laser radar

Submicron repeatability

No refocusing

Absolute Laser Interferometry (Patents Pending)



Next Generation Non-Destructive Sensor Development

Based on 'absolute' interferometry (no triangulation, no fringe counting)

- High speed (up to 80,000 measurement points/sec) with high precision accuracy (sub-micron/range dependent)
- Adaptable Ranging - from short (0.02m) to long range (>20m) measurement
- Used as single point, line or area measurement
- Insensitive to ambient lighting conditions

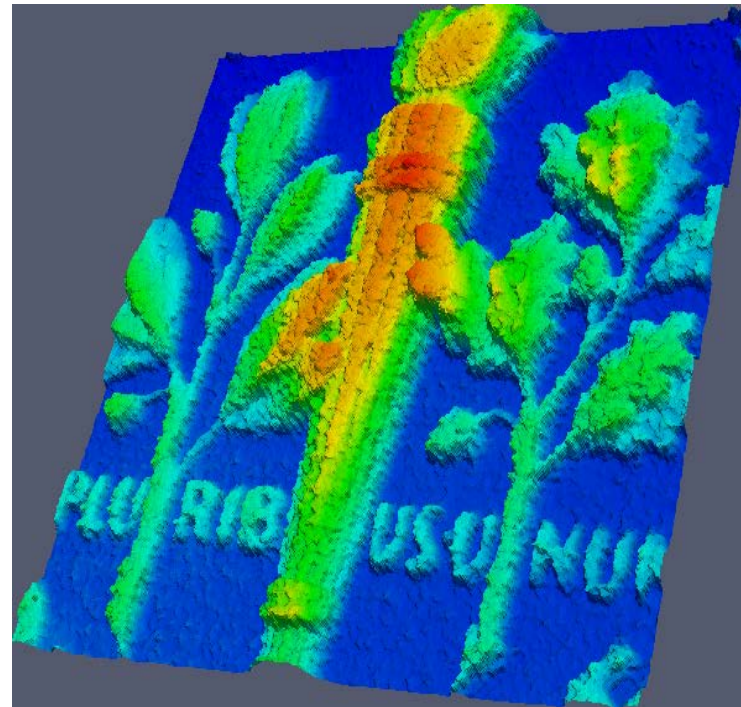
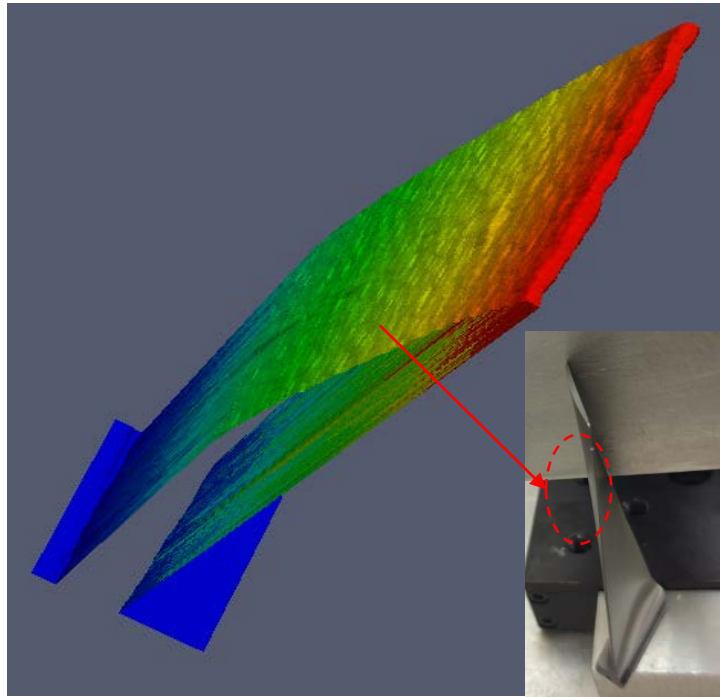


Figure 1-3 - Proof of Concept Results – Absolute Interferometry

Potential Surface Engineering Applications at Boeing

Inspection Processes:

1. 3D Scanning of machined / welded parts (CMM Augmentation)
2. In-Situ Measurement on machine tools (CMM Augmentation)
3. Precision measurement for transparent (glass) and translucent coatings
4. Precision measurement of molds

Predictive Diagnosis

1. 3D Scanning for Predictive Corrosion detection on critical parts surfaces
2. 3D Scanning for Micro-cracks - early detection predicting potential catastrophic failures on high stress parts

Surface Measurement

1. Dimensional deformation or excessive wear on critical parts/surfaces
2. Detection of delamination on composite parts

Additive Manufacturing

1. Control the geometric monitoring in micron accuracy, closed loop, measuring the entire process before, during and after sintering (from powder to solid)

Ground Collision Avoidance



Thank You ... Questions?