

# WHAT'S NEW IN CMM-Manager Version 3.3



March 21, 2013

**Nikon Metrology, Inc.**

Nikon Metrology is pleased to announce the release of CMM-Manager version 3.3. This release adds the following major new features/functions/enhancements:

- Path Planning Enhancements
- Handheld / Portable Enhancements
- New Reporting Functions
- CAD Display Enhancements
- Improved Renishaw Probe Rack Support
- Added Internal Gear Support to Existing Gear Module
- Automatic Teach / Run Mode Selection
- New Device Support - BIG 3D CREATOR & Baces 3D Arm
- SP25 Enhancements

## 1. Path Planning Enhancements

- Path Calculation Speed Improved up to 30x faster
- Improved Path Efficiency – Probe changes can occur places other than ceiling – Blended moves for OD circular features
- Added New Path Planning Preferences
- More Useful Message / Prompt for Failed Paths
- Show Paths for Selected Program Operations

The screenshot shows two panels of settings. The top panel, titled 'Tip Selection & Path Creation', includes radio buttons for 'Fully Auto; Collision Detection' (selected), 'Use Current Tip; Collision Detection', and 'Use Current Tip; NO Collision Detection (Feature Local Path)'. It has a 'Clearance Distance' input field with the value '0.4000'. Below this are 'Use Tangent Paths' radio buttons: 'For All Features' (selected), 'Round Features Only', and 'Never'. There is also an 'Avoidance Zone' input field with '0.25' and a checked 'Circular Paths' checkbox. The bottom panel, titled 'Probe Retract Ceiling', has checked boxes for 'At Entry of Path', 'At Exit of Path', and 'Dynamic Tip Changes'. It includes radio buttons for 'Machine Table Normal' (selected) and 'User Defined' with a '+Z' button. A 'Clearance Distance' input field shows '0.7874'.

## 2. Handheld / Portable Enhancements

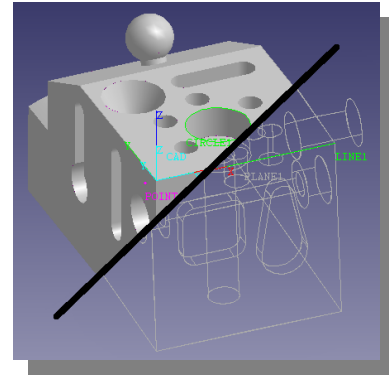
- Immediate Form / Fit Deviation for Measured Features or Best-Fit Alignments
  - Deviation Results are Displayed in Fly-by Window
- Live Deviation Enhancements
  - Display Deviation of CAD Points as well as Surfaces
  - Display (+/-) Deviation instead of Absolute Deviation
- Allow out of Sequence Point Measurement for Point Clouds
- Allow selection of iSpace / iGPS Active Frame from Status Bar

### 3. Reporting Enhancements

- T Deviation – Option to Report Point / Cloud Normal Deviation Only
- Allow In / Out of Tolerance Reports to be Saved in Unique Locations

### 4. CAD Display Enhancements

- Option to automatically Display CAD as Wireframe on Rotation, Pan and Zoom
  - Improves CAD Manipulation for Large CAD Model
- Mouse / Web Wheel now Zooms on Cursor Location not Screen Center



### 5. Rack Enhancements

- Allow use of all compatible Renishaw probe racks and components
  - ACR3, FCR25, MCR20, SCR200
  - All SP25 components
  - Auto-Joint Extension Bars
  - User setting to adjust nominal rack port location(s)

### 6. Gear Module Enhancements

- Added Internal Straight and Spiral Gear
- Report – Lead, Profile, Pitch, Tooth Thickness, Runout, 3D Topography

### 7. Automatic Teach / Run Mode Selection

- Automatically switch to Teach Mode when editing operation in Run Mode
- Eliminates extra mouse clicks to edit a program while in Run Mode

### 8. New Device Support

- Added support for Baces3D Articulated Arm
- Added support for BIG 3D CREATOR



### 9. SP25 / I++ Enhancements

- SP25 support for I++ / UCC Server
- Improved Tip Calibration for SP25
  - Improved path for quicker calibration on LK CMM
  - Controller dependant parameter control – touch speed, backoff, approach, deflection, etc.



## **11. Additional Enhancements**

- Added BestFit Construction Open, Square and Round Slot
- Added a utility for calculating probe mounting vectors
- Enhanced Picking ID Sphere for CAD Teach Measure
- Added Live Deviation functionality for CAD points
- Added Variable definition of BestFit Alignment XYZ Points
- Added DataPage+ <sup>TM</sup> Report Output

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