

MBD Implementation DOs and DONTs

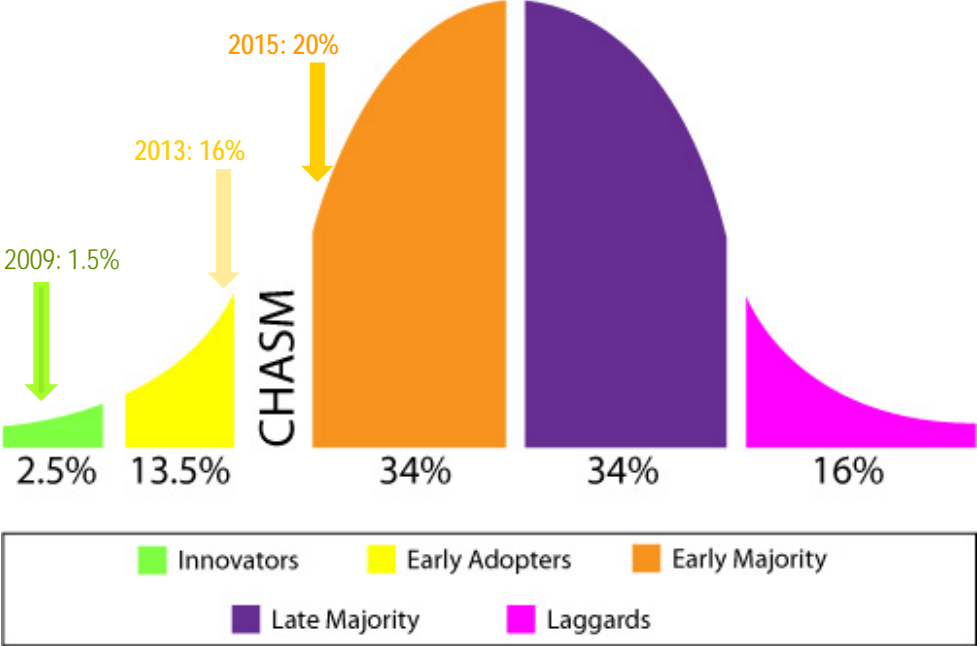


3DEXPERIENCE

Oboe Wu
DS SOLIDWORKS

MBD Is Gaining Traction

Do you define or plan to define 3D annotation in 3 years?



Source: SOLIDWORKS customer base surveys in 2009 (n=700), 2013 (n=847) and 2015 (n=524).

How Did They Do It?

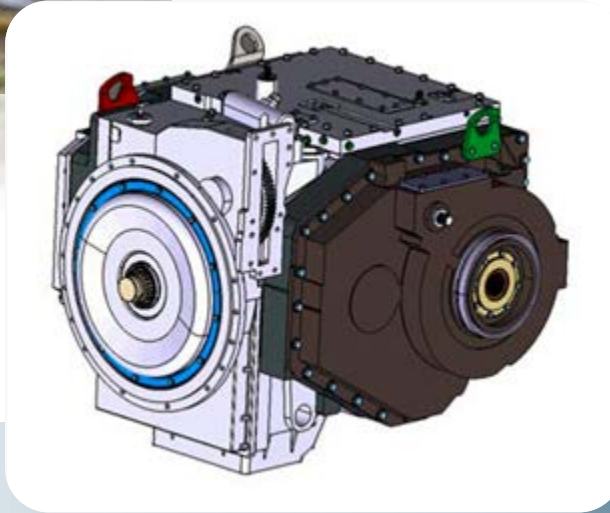
Implementation Aspects	DOs	DONTs
People	Secure the leadership support	Don't take too big a bite at first
Process	Automate workflows	Don't exclude printouts
Product	Organize and present annotations clearly	Don't skip calling out critical annotations

People Aspect

Secure The Leadership Support.

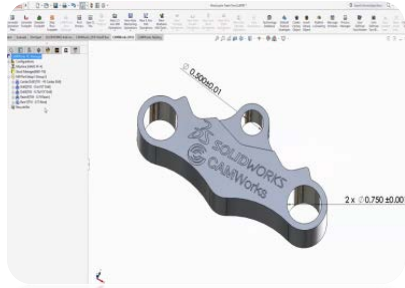


Don't Take Too Big A Bite At First

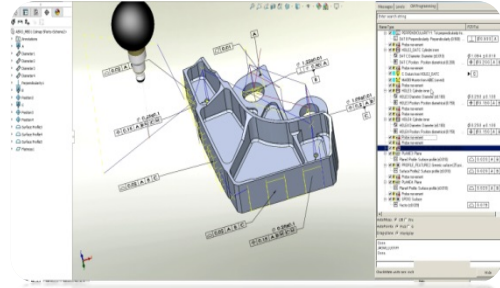


Process Aspect

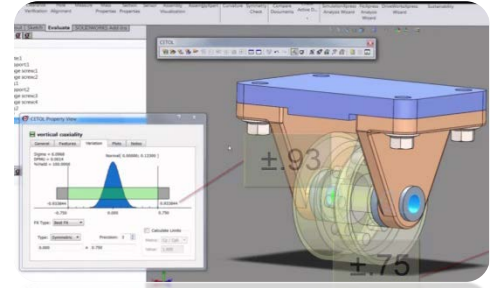
Automate Workflows



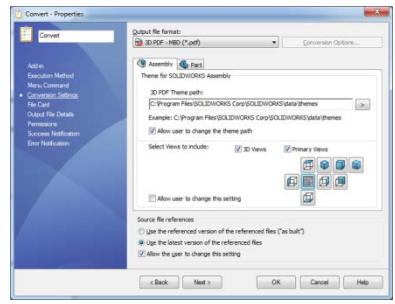
Tolerance-Based Machining



Model-Based CMM Programming and Quality Heat Map



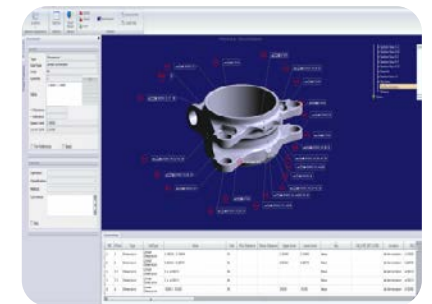
Tolerance Optimization



3D PDF Batch Publishing



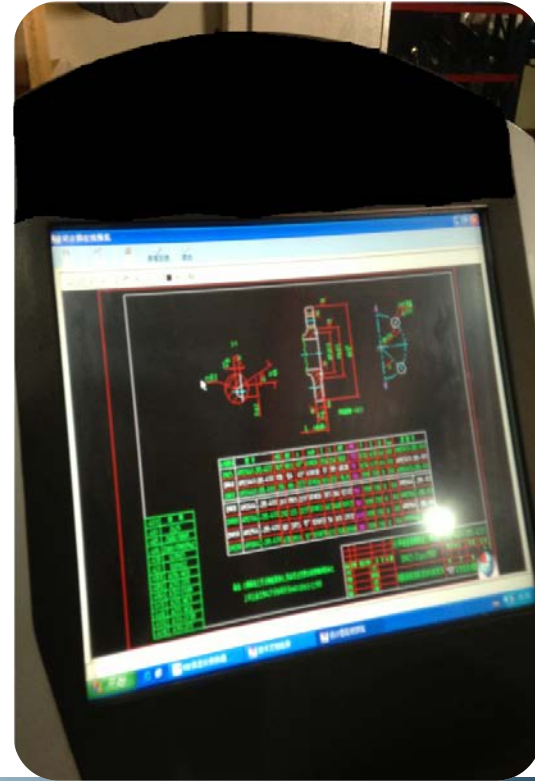
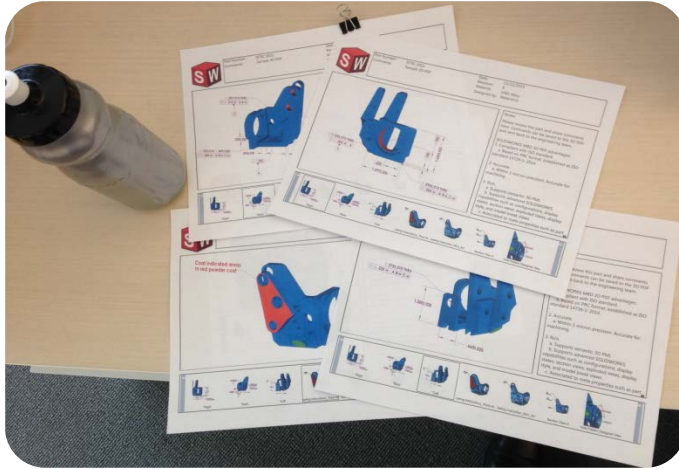
PMI Change Report



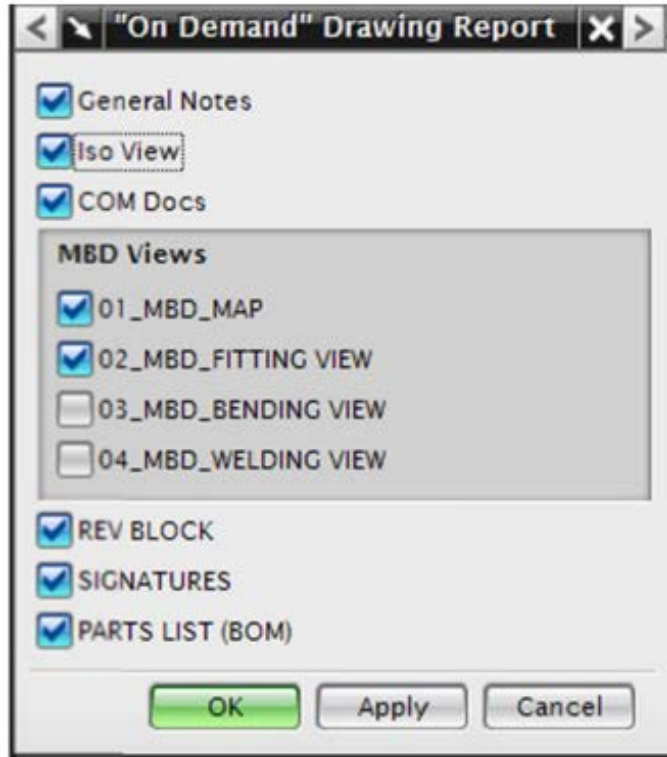
Model-Based Inspection

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Don't Exclude Printouts

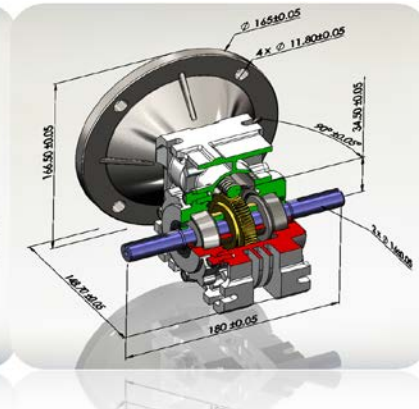
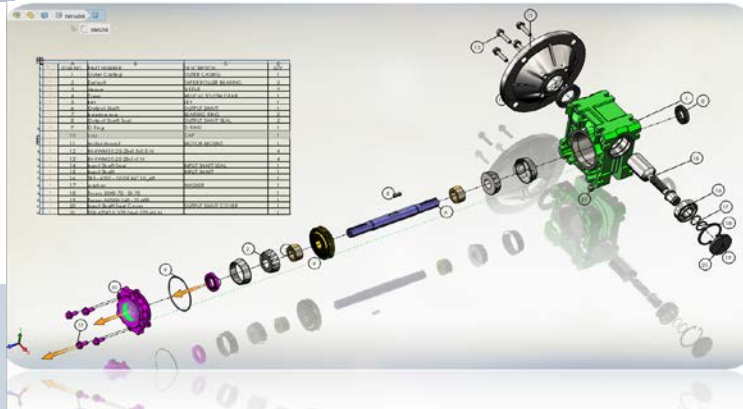
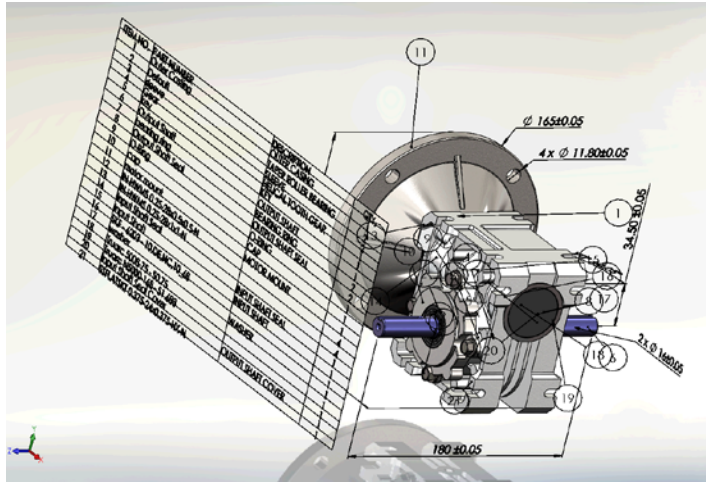


Don't Exclude Printouts



Product Aspect

Organize And Present 3D PMI Clearly



Don't Skip Calling Out Critical To Function 3D PMI

Table 1: Wrong and Right Results Using Adobe Reader

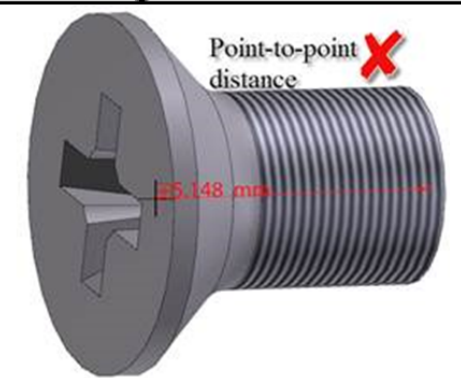
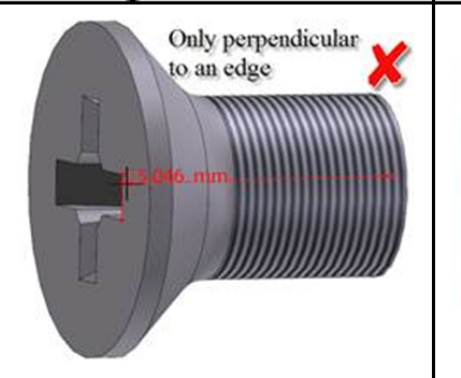
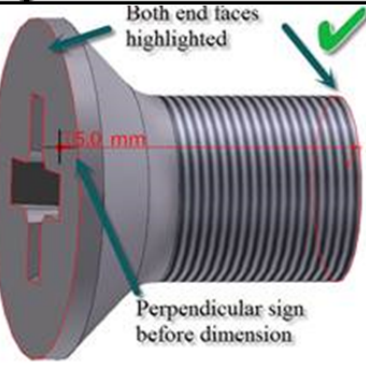
Result	Wrong	Wrong	Right
Measurement	 <p>Point-to-point distance ❌ 25.148 mm</p>	 <p>Only perpendicular to an edge ❌ 23.046 mm</p>	 <p>Both end faces highlighted ✅ 25.0 mm Perpendicular sign before dimension</p>



Figure 2: Two important settings in Adobe Reader

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Key Aspects	DOs	DONTs
People	<ul style="list-style-type: none">• Drive from top down• Establish a core implementation team• Motivate all involved	<ul style="list-style-type: none">• Don't hesitate (Part 1 and Part 2)• Don't take too big a bite at first• Don't be confined to Design department alone
Process	<ul style="list-style-type: none">• Measure progress• Automate workflows• Update infrastructure	<ul style="list-style-type: none">• Don't rely on 2D drawings as the master any more• Don't send only 3D PDF to supply chain• Don't overlook MBD over the web
Product	<ul style="list-style-type: none">• Organize and present 3D PMI clearly• Customize and standardize templates	<ul style="list-style-type: none">• Don't skip calling out critical to function 3D PMI (Part 1 and Part 2)• Don't stop at graphical PMI (Part 1 and Part 2)• Don't exclude printouts

MBD Resources

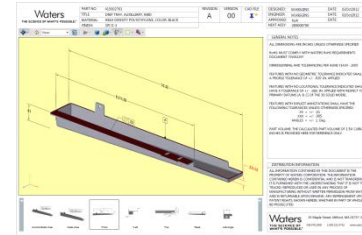


Local helping hands

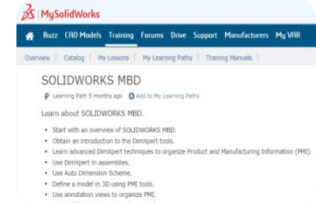
Table 1: 10 DOs and DONTs in MBD implementation

Key Aspects	10 DOs	10 DONTs
People	<ol style="list-style-type: none"> 1. Drive from top down 2. Establish a core implementation team 3. Motivate all involved 	<ol style="list-style-type: none"> 1. Don't hesitate 2. Don't rush 3. Don't be confined to Design department alone
Process	<ol style="list-style-type: none"> 4. Measure progress 5. Automate workflows 6. Update infrastructure 	<ol style="list-style-type: none"> 4. Don't rely on 2D drawings as the master any more 5. Don't send only 3D PDF to supply chain 6. Don't overlook MBD over the web
Product	<ol style="list-style-type: none"> 7. Pilot with one manufacturing document 8. Organize and present 3D PMI clearly 9. Customize and standardize templates 10. Validate models, PMI, and derivatives 	<ol style="list-style-type: none"> 7. Don't skip calling out critical to function 3D PMI 8. Don't settle on graphical 3D PMI 9. Don't exclude printouts 10. Don't be limited by rudimentary 3D PDF

Implementation Recommendations



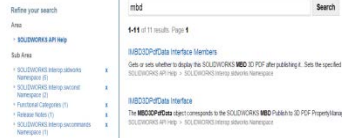
Manufacturer's Experiences



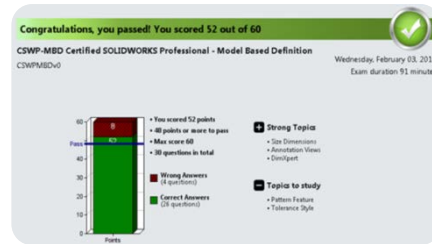
Online Learning



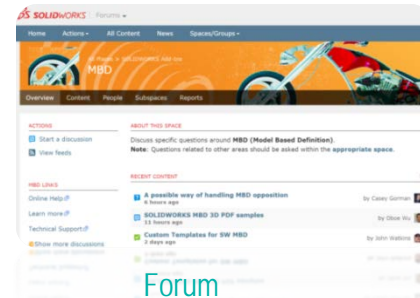
SOLIDWORKS API Help



Software Customization



Certification



Forum



Social Media Resources

MBD Resources

Manufacturing Needs	Resources
Adopt Implementation Recommended Practices	MBD Implementation 10 DOs and 10 DONTs
Consult other manufacturer's experiences	Automatic handling , Wuzhong Instrument and Viecelli Moveis .
Learn SOLIDWORKS MBD Skills	Free online tutorials
Catch Software Tips and Tricks	SOLIDWORKS technical blog and Engineersrule.com
Exchange MBD Experiences	SOLIDWORKS MBD Forum
Measure Team Skills	SOLIDWORKS MBD Certification
Customize Software to Enterprise Practices	SOLIDWORKS open API

