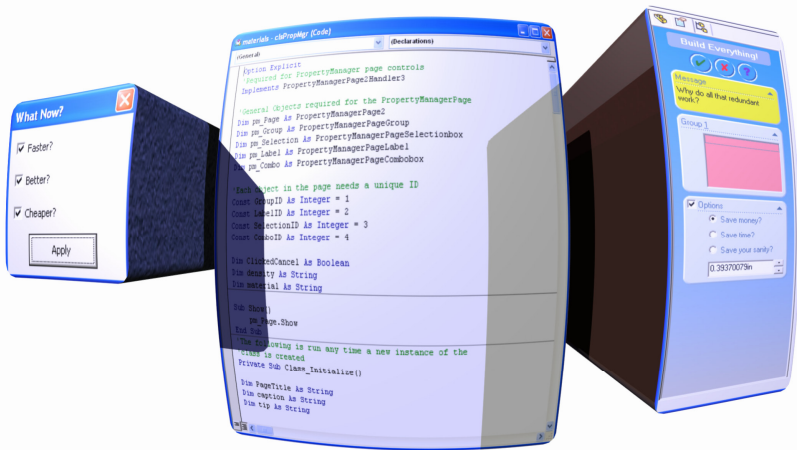


Automating SolidWorks 2006 using Macros



***A Visual Basic for Applications tutorial for
SolidWorks users***

Now Includes PDMWorks

Written by Mike Spens

Table of Contents

Macro Basics	1
Introduction.....	2
Recording the Macro	2
Code Description	3
Modifying the Macro	11
Running Macros	12
Conclusion.....	16
Model Parameters Using Excel VBA	17
Introduction.....	18
Dimension Parameters	18
Using Excel's VBA.....	22
Selection Methods	27
Conclusion.....	30
Controlling Options	31
Introduction.....	32
Getting and Setting Options.....	32
SolidWorks Constant Type Library	40
Conclusion.....	43
Material Properties	45
Introduction.....	46
Part 1: Basic Material Properties	46
User Forms.....	47
Arrays	51

Table of Contents

Part 2: Working with Assemblies 56

Selection Manager..... 57

Verification and Error Handling..... 61

Conclusion..... 63

Custom Properties 65

Introduction..... 66

Part 1: Setting Properties 66

Part 2: Adding the Ability to Modify Properties..... 72

User Interactions 78

Part 3: Add and Delete Properties 83

Part 4: Save and Copy Between Files 89

Conclusion..... 93

Model Creation 95

Introduction..... 96

Part 1: Geometry Creation..... 96

Thin Feature Extrusions 102

Extruded cuts..... 108

Hole Wizard Interface 110

Adding Fillets 112

Finishing Touches 113

Part 2: Feature Traversal and Editing..... 116

Feature Editing 116

Feature Traversal 124

Conclusion..... 128

Data Import	131
Introduction.....	132
3D Points.....	132
Code Changes.....	133
Code Modules and Portability.....	136
3DCurves.....	138
Conclusion.....	140
Drawing Automation	141
Introduction.....	142
Creating Drawings	142
Code Changes – Using the FileSystemObject	148
Working with Notes.....	156
Conclusion.....	160
Working with File References	163
Finding File References.....	164
Functionality Additions.....	171
Saving the References List.....	171
Conclusion.....	176
PropertyManager Pages	177
Introduction.....	178
Building a PropertyManager UI.....	178
Building Classes	181
PropertyManager Page Objects	187
Using PropertyManagerPage2Handler3.....	195
Conclusion.....	198

Table of Contents

Using Notifications (Events) in SolidWorks Macros 199
Introduction..... 200
Initial Code..... 200
Classes..... 200
WithEvents Declaration 201
Creating the Notification Functions..... 202
ActiveDocChangeNotify..... 203
FileSaveAsNotify2 205
Starting SolidWorks including Macros 207
Conclusion..... 209

PDMWorks API Basics..... 211
Introduction..... 212
Connecting to PDMWorks 212
PDMWorks Objects 214
Conclusion..... 217

Extract PDMWorks Documents 219
Introduction..... 220
Working with PDMWorks Documents..... 222
Extracting Document History 226
Conclusion..... 237

PDMWorks Check In 239
Introduction..... 240
Establishing the Connection 240
Lifecycle Statuses..... 242
Looping through a Project's Documents..... 242

Table of Contents

Renaming Documents 247

Checking In Documents 248

Refreshing the PDMWConnection Object 252

Conclusion..... 253