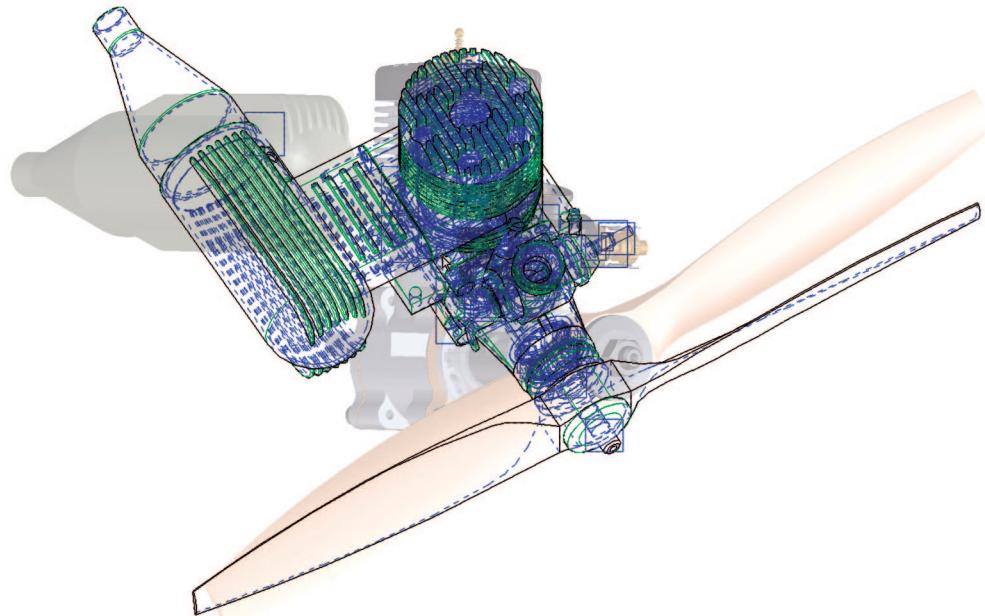


OneSpace Designer

# Annotation Course



## Customer Training

**Student Kit  
C190T**

Professional Development by CoCreate Software  
2006 / V14

Co|Create

# OneSpace Designer Modeling Annotation

## Customer Training

©2006 CoCreate GmbH & Co. KG

Co|Create

## **Legal Notices**

Use, duplication, or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Software clause in DFARS 252.227-7013. Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19 (c) (1,2).

CoCreate Inc.  
3801 Automation Way #110  
Fort Collins, CO 80525 U.S.A.

## **Notice**

The information contained in this document is subject to change without notice. CoCreate makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. CoCreate shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

## **Warranty**

A copy of the specific warranty terms applicable to your CoCreate product and replacement parts can be obtained from your local Sales and Service Office. UNIX® is a registered trademark in the United States and other countries, licensed exclusively through X/Open Company Limited. Microsoft® is a U.S. registered trademark of Microsoft Corporation.

© Copyright CoCreate Software GmbH & Co. KG 1997 – 2006. All rights reserved. Reproduction, adaptation, or translation without prior written permission is prohibited, except as allowed under copyright laws.

## **Annotation Course Goals**

The Annotation course is focused on quickly making you productive and successful at producing 2D drawings from OneSpace Designer Modeling parts and assemblies. As a prerequisite, you should be familiar with the Designer Modeling Base product.

At the end of this course, you will be able to

- Create 2D drawings in Annotation.
- Create and arrange 2D views derived from 3D models.
- Dimension and modify 2D views derived from 3D models.
- Customize and save text, dimension, hatching, and symbol settings to meet various drawing standards.

# Table of Contents

Legal Notices .....	ii
Course Goals .....	iii
<b>Module 1: Annotation overview.....</b>	<b>1–1</b>
What is Annotation?.....	1–2
Start Annotation .....	1–4
The Annotation user interface.....	1–6
Activity 1: Use help .....	1–8
The Show menu.....	1–9
Activity 2: The Show menu .....	1–10
Browsers in Annotation .....	1–12
The Template Browser.....	1–13
3D–2D association.....	1–14
Activity 3: Load a 3D file .....	1–15
Module 1: Annotation overview review .....	1–16
<b>Module 2: Create a drawing.....</b>	<b>2–1</b>
Three methods to create a drawing .....	2–2
Activity 1: Create a drawing without views.....	2–3
Activity 2: Create a new drawing with 2D information.....	2–4
The Measure tool .....	2–7
Activity 3: Create a drawing with 3D view information .....	2–9
Create additional sheets .....	2–12
Change the active sheet .....	2–13
Modify and delete sheets .....	2–14
Modify frames .....	2–15
Activity 4: Drawing .....	2–16
Delete and reset drawings .....	2–19
Transfer a drawing to a copied part .....	2–20
Set a view profile .....	2–21
Redraw settings .....	2–22
View types .....	2–24
View types: Detail and Section .....	2–25
Activity 5: Add views .....	2–26
Module 2: Create a drawing review .....	2–36
<b>Module 3: More about views.....</b>	<b>3–1</b>
Update Views.....	3–2
The update colors .....	3–3
The Remote Server Update module .....	3–4
Update modes .....	3–5
Econofast update mode .....	3–6
Ignore face part update mode.....	3–7
Transfer 3D documentation .....	3–8
Transfer docuplane annotations .....	3–9

Transfer free annotations.....	3–10
Transfer coordinate systems .....	3–11
Modify views .....	3–12
Change view settings.....	3–13
Hidden and tangent lines .....	3–14
Isometric mode .....	3–15
3D annotations transfer mode .....	3–16
Copy the properties of existing views .....	3–17
Activity 1: Views and view properties.....	3–18
Manage parts in views .....	3–25
Filter parts in views .....	3–26
Change the contents of views.....	3–27
Activity 2: Change the contents of views .....	3–28
Activity 3: Create aligned and broken views .....	3–34
Section views: Surfaces and secured parts.....	3–41
Move, scale, and rotate detail borders.....	3–42
Module 3: More about views review.....	3–43

## **Module 4: Hatching ..... 4–1**

Manual hatching .....	4–2
Hatch settings .....	4–3
Define a hatch border .....	4–4
Set hatch patterns.....	4–5
Define hatch subpatterns .....	4–6
Activity 1: Hatching .....	4–7
Module 4: Hatching review.....	4–9

## **Module 5: Draw geometry ..... 5–1**

The geometry owner .....	5–2
The active owner .....	5–3
The Move/Gather/Copy tool.....	5–4
The types of geometry .....	5–6
Activity 1: Create geometry.....	5–8
Modify geometry .....	5–10
Geometry properties .....	5–12
Activity 2: Split and merge geometry .....	5–13
Auxiliary geometry .....	5–16
Center lines.....	5–17
Symmetry lines .....	5–18
Modify existing center and symmetry lines .....	5–19
Center/Symmetry line settings .....	5–20
Activity 3: Slot centerlines.....	5–21
Activity 4: Auxiliary geometry .....	5–23
Module 5: Draw geometry review .....	5–26

## **Module 6: Dimensions ..... 6–1**

Dimension text and geometry .....	6–2
The Catch tool .....	6–3

Apply a grid to the viewport.....	6–4
The Select tool .....	6–5
Box-selection .....	6–6
The types of dimensions .....	6–7
Edit chained dimensions .....	6–8
Create projected dimension reference points .....	6–9
The elements of dimensioning .....	6–10
Fix texts .....	6–11
Tolerances .....	6–12
The Fix Text and Tolerance tables .....	6–13
Dimension settings .....	6–14
Orient dimensions .....	6–15
Angle dimensions .....	6–16
Circular dimensions .....	6–17
Activity 1: Create dimensions.....	6–18
Modify dimensions: Adjust the text .....	6–25
Modify dimensions: Lines and values .....	6–26
Modify dimensions: Fixes and tolerances .....	6–27
Activity 2: Modify dimensions.....	6–28
Module 6: Dimensions review .....	6–29

## **Module 7: Add text and symbols.....** **7–1**

Add text.....	7–2
Modify text.....	7–3
Draw reference lines: Sources.....	7–4
Draw reference lines: Targets.....	7–5
Text references: variable text.....	7–6
Text reference types and update functions.....	7–7
Text settings: Set defaults .....	7–8
Text settings: Change existing text.....	7–9
Reference line settings .....	7–10
Activity 1: Create text.....	7–11
The Template browser .....	7–13
Default symbols .....	7–14
Create symbols .....	7–15
Edit and move symbols.....	7–16
Symbol settings .....	7–17
Define new symbols.....	7–18
Activity 2: Symbols.....	7–19
Module 7: Add text and symbols review .....	7–23

## **Module 8: Sketches .....** **8–1**

What is a sketch? .....	8–2
Create a new sketch .....	8–3
Modify sketches .....	8–4
Activity 1: Sketches.....	8–5
Module 8: Sketches review .....	8–6

## **Module 9: Bills of Materials .....** **9–1**

Scan a model .....	9–2
Draw a BOM table.....	9–3
Create position flags .....	9–4
Number position flags .....	9–5
Module 9: Bills of materials review.....	9–6
<b>Module 10: Printing .....</b>	<b>10–1</b>
Print a drawing .....	10–2
Print standards.....	10–4
Pen transformations.....	10–5
Activity1: Define a pen transformation and a print standard .....	10–6
Module 10: Printing review.....	10–7
<b>Module 11: Save and export files .....</b>	<b>11–1</b>
File handling .....	11–2
Settings files .....	11–3
Export and import file types .....	11–4
Activity 1: Save and load a sketch .....	11–6
Module 11: Save and export files review .....	11–8
<b>Module 12: Customize Annotation.....</b>	<b>12–1</b>
The am_customize file .....	12–2
Activity 1: Copy the am_customize file .....	12–3
Customize configuration functions.....	12–4
Example: Customize hatch patterns .....	12–5
Customize initialization functions .....	12–6
Example: Customize the reference viewport .....	12–7
Activity 2: Modify the am_customize2 file .....	12–8
Module 12: Customize Annotation review.....	12–10