



12d Synergy and 12d Model

Version 2.0

November 14



12d Solutions Pty Ltd

ACN 101 351 991

PO Box 351 Narabeen NSW Australia 2101

☎ (02) 9970 7117 📠 (02) 9970 7118

✉ support@12d.com 🌐 www.12d.com



DEVELOPED BY

12d[®] Solutions



12d Synergy V2 12d Synergy and 12d Model

V2.0 July 2014

Disclaimer

12d Synergy is supplied without any express or implied warranties whatsoever.

No warranty of fitness for a particular purpose is offered.

No liabilities in respect of engineering details and quantities produced by 12d Synergy are accepted.

While every effort has been taken to ensure that the advice given in this manual and the program 12d Synergy is correct, no warranty is expressed or implied by 12d Solutions Pty Ltd.

Copyright

This manual is copyrighted and all rights reserved.

This manual may not, in whole or part, be copied or reproduced without the prior consent in writing from 12d Solutions Pty Ltd.

Copies of 12d Synergy software must not be released to any party, or used for bureau applications without the written permission of 12d Solutions Pty Ltd.

Copyright © 1989 – 2014 by 12d Solutions Pty Ltd.
Sydney, New South Wales, Australia.
ACN 101 351 991
All rights reserved.



Table of Contents

1	Introduction	5
	1.1 Basic Concepts	5
	1.1.1 Versions	5
	1.1.2 Check Out / In	5
2	12d Model Projects inside 12d Synergy	6
	2.1 The Preview Window	6
	2.2 The 12d Model Project Structure	6
	2.2.1 Folder Structure	6
	2.2.2 Customization, Global Configuration and Setup Files	7
	2.3 Creating and Editing 12d Model Projects	7
	2.3.1 Creating New Projects	7
	2.3.2 Uploading Existing Projects	8
	2.3.3 Editing Projects	8
	2.3.4 Applying Permissions	8
	2.3.5 Locking a 12d Model Project	9
	2.4 Sharing Data	9
	2.4.1 Setting up Shares	9
	2.4.2 Setting up Share Permissions	9
	2.5 Opening a Project	10
	2.6 Viewing History and Rollbacks	10
	2.7 Viewing Access History	10
3	Working with 12d Model 11 and Beyond	11
	3.1.1 Opening a 12d Model Project	11
	3.1.2 Working with files stored in 12d Synergy	11
	3.1.3 Accessing Shared Data	13
	3.1.4 Attributes	13
	3.1.5 Checking in your project	13
	3.2 Taking 12d Model projects into the field	14
	3.2.1 Taking your 12d Model Project Offline	14
	3.2.2 Starting the Process	14
	3.2.3 Sharing data	14
	3.2.4 Pack and Go	14
	3.2.5 Opening an Offline 12d Model Project	14
	3.2.6 Bringing your Project back Online	14



4	Working with 12d Model 10	15
4.1.1	Opening a 12d Model Project	15
4.1.2	Working with files stored in 12d Synergy	15
4.1.3	Accessing Shared Data	15
4.1.4	Attributes	16
4.1.5	Checking in your project	16



1 Introduction

This document is intended to explain how 12d Synergy and 12d Model work together. To use this functionality and to read this manual, you should already be familiar with the basic concepts listed in the Getting Started manual for 12d Synergy.

1.1 Basic Concepts

1.1.1 Versions

12d Synergy requires at least a release version of 12d Model 10. Earlier versions of 12d Model, such as V9, or practise versions, are not supported and will not work.

1.1.2 Check Out / In

Like normal files in 12d Synergy, 12d Model projects operate under a similar check in/out process. However, the whole 12d Model Project is checked out for your use.



2 12d Model Projects inside 12d Synergy

2.1 The Preview Window

Selecting a 12d Model project in the client will bring up basic information about the project, including:

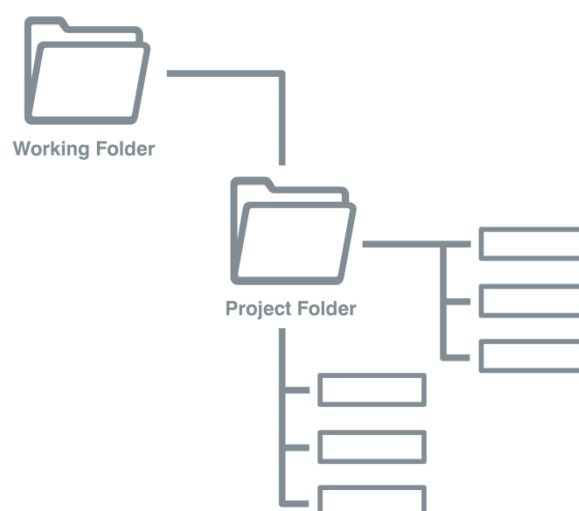
1. The project preview
2. The project description
3. The project details

This screen also gives you access to check out/in the project, or view the history.

2.2 The 12d Model Project Structure

2.2.1 Folder Structure

Following is a diagram of the 12d Model Project structure and represents how a 12d Model Project is stored inside 12d Synergy.



Even when uploading an existing project, 12d Synergy will rearrange the project to ensure each 12d Model project has its own unique working folder.

Working Folder: Typically contains all working files generated over the life of a 12d Model Project that are not part of the primary project database. Files generally include configuration for specific options or reports. Users may generally edit these at will in or outside of 12d Model.

Project Folder: The Project folder contains all files associated with the project database and should not be modified. Doing so is not supported by 12d Solutions.



2.2.2 Customization, Global Configuration and Setup Files

12d Model uses a number of different files for customization and configuration purposes. These includes file such as:

1. Env.4d – general environment settings
2. Linestyles.4d – describes how lines are drawn
3. Symbols.4d – describes how symbols are drawn
4. Drainage.4d – configuration for drainage options
5. Colours.4d – configuration for the colours to be used

And many more.

These can exist in several locations, including pre-configured and user defined locations, allowing complete flexibility and control for each user of 12d Model. Please consult your 12d Model Administrator for more information.

This guide is not intended to provide information on how to configure 12d Model, but at a very high level glance, this includes a search path that looks at:

1. The working path
2. The Customer User Folder
3. The User folder
4. The installation Set-ups folder

Or

1. The working path
2. The Customer Library Folder
3. The User_Lib folder
4. The installation Library folder

Which path 12d Model takes depends on the type of file.

Typical pre-12d Synergy installations will involve placing the User and Library folders on a network drive for live access or scripts that copy them down to the local PC at set up time.

Using the 12d Synergy and 12d Model integration, this may no longer be necessary; please see section 3.1.2.5 Storing Customization in 12d Synergy for more information.

2.3 Creating and Editing 12d Model Projects

When adding 12d Model Projects to a job, you can create new 12d Model Projects from scratch or you can upload an existing one.

2.3.1 Creating New Projects

To create a new 12d Model Project, simply select the job or folder you wish to add it to.

Right click and select 'Create 12d Model Project'



You will be prompted to configure the required details, including the name of the project, the version of 12d Model project you wish to create and any attributes.

Create a 12d Model Project

General | Users | Groups | Roles

Name:

☐ Locked? ☐ Upload existing project

Locked for:

Type:

Version:

Attributes

Name	Value
Surveyed by	
Designed by	
Approved by	

You may also be prompted to fill in required attributes.

2.3.2 Uploading Existing Projects

To upload a 12d Model Project, simply drag and drop the folder, including the working folder, onto your 12d Synergy Job in the client.

If you have more than one 12d Model Project inside the working folder, you will be prompted on how you wish to resolve this issue.

Note that 12d Synergy will attempt to preserve your shares, if you are using relative paths – it is best to upload shared data at the same time.

2.3.3 Editing Projects

To edit and change details for a 12d Model Project, simply select it on the job tree, right click and select 'Edit 12d Model Project'.

You can then modify attributes and permissions.

2.3.4 Applying Permissions

Once a 12d Model project is created, you can apply permissions to control who can access it. Right click and select 'Edit 12d Model Project'.

You can apply permissions to Users, Groups and Roles.

12d Model projects have the following permissions:

1. Can View 12d Model Projects
2. Can Share from 12d Model Projects
3. Can directly open 12d Model Projects

These can also be inherited from the job and folder levels.



2.3.5 Locking a 12d Model Project

You can also choose to lock a 12d Model project for a specific user; this prevents other users from gaining a checkout on it.

To lock a 12d Model project, simply Edit it and click 'Locked'.

You may then select who the 12d Model Project should be locked for.

2.4 Sharing Data

12d Synergy provides additional functionality to the standard sharing features provided by 12d Model.

2.4.1 Setting up Shares

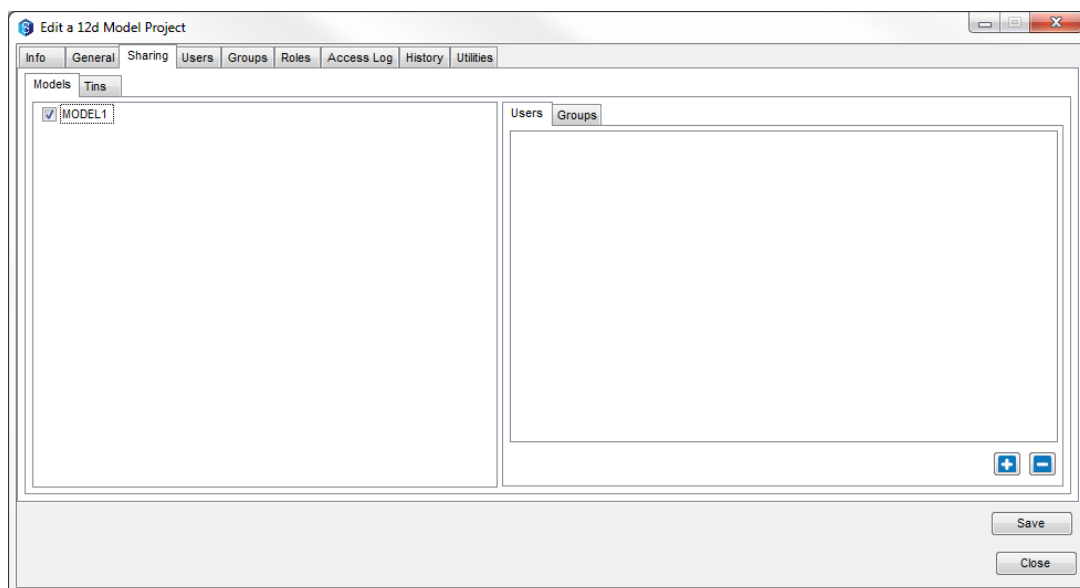
2.4.1.1 Setting up Shares in 12d Model 10

If you are working with a 12d Model 10 project, you must set up sharing from within the 12d Model Project.

2.4.1.2 Setting up Shares in 12d Model 11 and Beyond

In 12d Model 11 and beyond, you can set up shares by editing your 12d Model Project directly from 12d Synergy. Note that your models and tins must have been checked in at least once to be shareable.

To share data, simply right click and select '**Edit the 12d Model Project**' in the **12d Synergy Client**. Select the **Sharing** tab. From here, you can choose which models or tins you wish to share.



2.4.2 Setting up Share Permissions

If you are using a 12d Model 11 or later 12d Model Project, you can control who can access which shared model or tin. If no explicit users or groups are supplied, everyone can access them.

Sharing permissions are set up per model or tin, in the **Sharing** tab of the **12d Model Editor** – see section 2.3.1 for more information.



2.5 Opening a Project

12d Model Projects stored inside 12d Synergy can be opened from the 12d Synergy client. In 12d Model 11 or later, they can be opened directly from within 12d Model.

2.6 Viewing History and Rollbacks

Like with all files in 12d Synergy, you can always view the history of a 12d Model Project. You can see who made a change when and why.

Simply click the **History** button from the Preview Window. You can also tick on the 'Show Preview' option to display the project preview at each check in time.

If you want to perform a local rollback, you can – simply select the version you wish to rollback to and hit '**rollback**'. This will perform a **local rollback only**. This means only the files that version will be delivered to your machine.

If you wish to roll back the server version, you must check out the project, roll it back to the version you wish and check it back in.

2.7 Viewing Access History

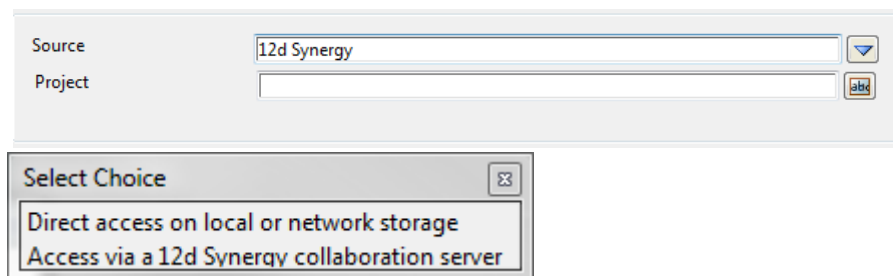
12d Synergy also tracks when people access a 12d Model project, either for edits or to share data. You must have administrative permissions to see this list, but if you do, simply **Edit** the 12d Model Project in the **12d Synergy Client** and select the '**Access Log**' tab.



3 Working with 12d Model 11 and Beyond

3.1.1 Opening a 12d Model Project

You can either open a 12d Model project directly from the 12d Synergy client, or from 12d Model for the standard project loading screen. Simply set the source to 'Access via a 12d Synergy collaboration server'.



Then click the Project browse button to be prompted with the 12d Synergy Job Favourites and Job search windows.

If you have not checked this project out already, you will be prompted to do so. You may opt to go ahead without checking it out and operate in a read only mode – **but be aware that you may not be able to save changes or check in your data.**

This read only mode is useful for checking work.

3.1.2 Working with files stored in 12d Synergy

3.1.2.1 Dragging and Dropping

As 12d Model 11 now provides drag and drop functionality, you can now drag and drop files, such as DWG and 12da, from the 12d Synergy client on to the main 12d Model window for them to be read.

3.1.2.2 The File Box

The standard file box in 12d Model has been upgraded to provide access to files within 12d Synergy.

3.1.2.2.1 Reading Files

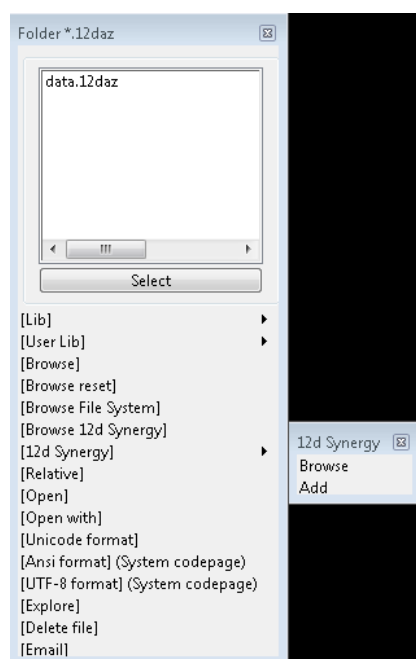
To read files from 12d Synergy, simply click the standard File Box browse button and click 'Browse 12d Synergy'

This will display the standard 12d Synergy job selection and file browser screens, providing you with the ability to select the file you need.

3.1.2.2.2 Adding Files

You can add any file directly into 12d Synergy. For example, a volumes report file could be added to your job Report folder by clicking the file box folder, after the file has been created, and selecting '12d Synergy -> Add'

You will then be asked to select the location for the final file.



3.1.2.2.3 Writing Files

You can nominate an existing file in 12d Synergy to overwrite. Simply click the file box browser and select **'Browse 12d Synergy'**. Select your file. This file will be automatically checked out when you attempt to write to it, if it is not already.

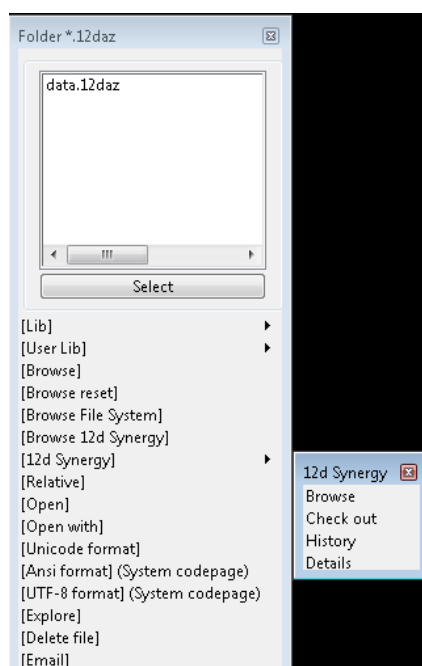
Note: This file will not be checked in when writing is finished.

You are responsible for checking the file back in – this is simply because it is very likely you may require several iterations of any file before it is ready to be submitted to 12d Synergy.

To check it in, simply visit the '12d Synergy' menu of the file box browse button and select 'check in'.

3.1.2.2.4 Accessing 12d Synergy File Information

Any file selected in a file box can give you access to standard 12d Synergy information, including detailed information and history. Simply use the '12d Synergy' walkright to gain access to this information.





3.1.2.3 The Directory Box

You can use the directory box in 12d Model to nominate a path within 12d Synergy. You can click the browse button and select 'Browse 12d Synergy' to select a 12d Synergy path.

3.1.2.4 Pending Files

As you may be working on checked out files for a period of time, or a process such as a chain may operate over 12d Synergy files, the file box that was responsible for editing the file may no longer be available.

You can use the Pending Files menu option to see all edited files and check them in, directly from 12d Model.

3.1.2.5 Storing Customization in 12d Synergy

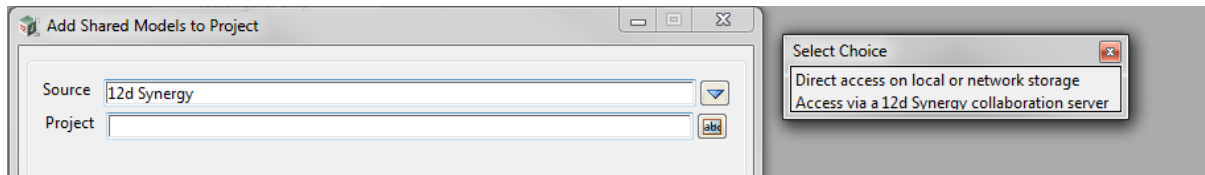
It is possible to store your customization, such as your User, Customer_User_Lib, in 12d Synergy.

Simply edit your env.4d and point the folder path in question to the full link path of the 12d Synergy folder.

3.1.3 Accessing Shared Data

Accessing shared data is very similar to the way you access shared data in a normal 12d Model Project.

As normal, open the sharing panel for models or tins, or use the new sharing manager.



Simply set the 'source' to a 12d Synergy server.

Click the browse button to nominate the 12d Model project inside 12d Synergy you wish to share from. From there, you can pick the models or tins you want to share.

3.1.4 Attributes

Your 12d Synergy attributes are automatically propagated down from 12d Synergy whenever you open a 12d Model Project.

These are automatically stored as Project Attributes and are available under the group '12d Synergy', so are accessible via normal 12d Model processes and macro calls.

3.1.4.1 Attributes and Title Blocks

12d Synergy attributes are also available in title blocks in 12d Model 11 and beyond.

Simply reference: `$12d_Synergy_AttributeName` in your title block as user text, much like you would for project details, and your title blocks will be plotted with the 12d Synergy attributes substituted.

3.1.5 Checking in your project

When you are ready, you can check in your data back to the server. This can be achieved via the **12d Synergy - > Check in Project** option in 12d Model.

However, this will not release the check out. You can update your data on the server, but it will remain checked out for you.

If you wish to update the data on the server and release the check out, you must check in as normal from the **12d Synergy Client**.



3.2 Taking 12d Model projects into the field

In many cases, it will be necessary to take a 12d Model Project out of the office, whether into a satellite office or directly into the field for use with 12d Field. In these cases, connectivity to the 12d Synergy server may no longer be possible. You can use the 'Offline' feature to help you.

This feature is only available for versions after 12d Model 10.

3.2.1 Taking your 12d Model Project Offline

3.2.2 Starting the Process

To begin taking your 12d Model project Offline, simply right click it and select 'Offline' from the project menu. You must nominate where you would like it to be stored.

Note that your entire 12d Model project will be checked out at this point in time.

3.2.3 Sharing data

If you are sharing data into your 12d Model project, this data will be available when you take your project offline.

3.2.4 Pack and Go

12d Synergy will also allow you, if required, to extract your linestyles and symbols to take into the field with you. Please note that if this option is used, only the linestyles that were part of the project will be used. Any others may not be available until it is brought back online.

3.2.5 Opening an Offline 12d Model Project

As this data is now offline and sitting in a local folder on your computer, you can simply open it as a normal 12d Model project from within 12d Model.

3.2.6 Bringing your Project back Online

When you are ready to return to 12d Synergy, simply connect to the server, right click your 12d Model Project and click 'online'.

This will move your offline project into an online state, ready to be checked in.

4 Working with 12d Model 10

4.1.1 Opening a 12d Model Project

If you are using 12d Model 10, you must open a 12d Model Project that is stored inside 12d Synergy from the main 12d Synergy Client.

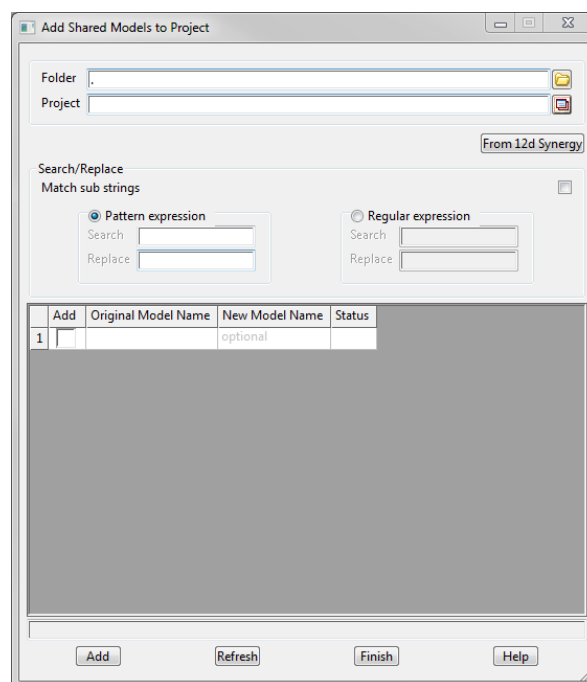
4.1.2 Working with files stored in 12d Synergy

In 12d Model 10, you can load files that are stored in 12d Synergy directly into 12d Model. Simply click the file box browse button and select '12d Synergy'-'>'Browse'

4.1.3 Accessing Shared Data

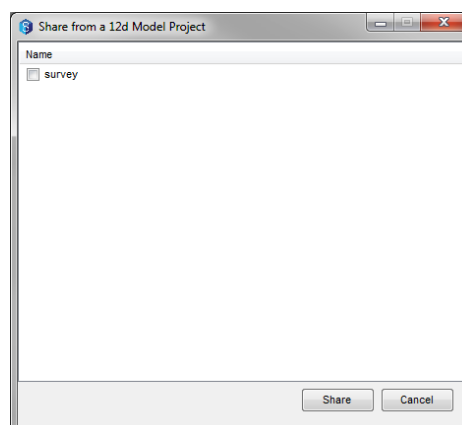
Data can only be shared into 12d Synergy managed 12d Model Projects when you are working in 12d Model 10.

If you have installed 12d Synergy, a button labelled '**From 12d Synergy**' will appear on the sharing panels.



Clicking this panel will prompt you for a 12d Synergy job and 12d Model project to share from.

You will then be prompted for the models or tins you wish to share. Tick on or off as required and click '**Share**'.



You will then need to complete the sharing operation in 12d Model as normal.



4.1.4 Attributes

Your 12d Synergy attributes are automatically propagated down from 12d Synergy whenever you open a 12d Model Project.

These are automatically stored as Project Attributes and are available under the group '12d Synergy', so are accessible via normal 12d Model processes and macro calls.

4.1.5 Checking in your project

When you are ready, simply save and close 12d Model. You can check your 12d Model project back in from the 12d Synergy client.