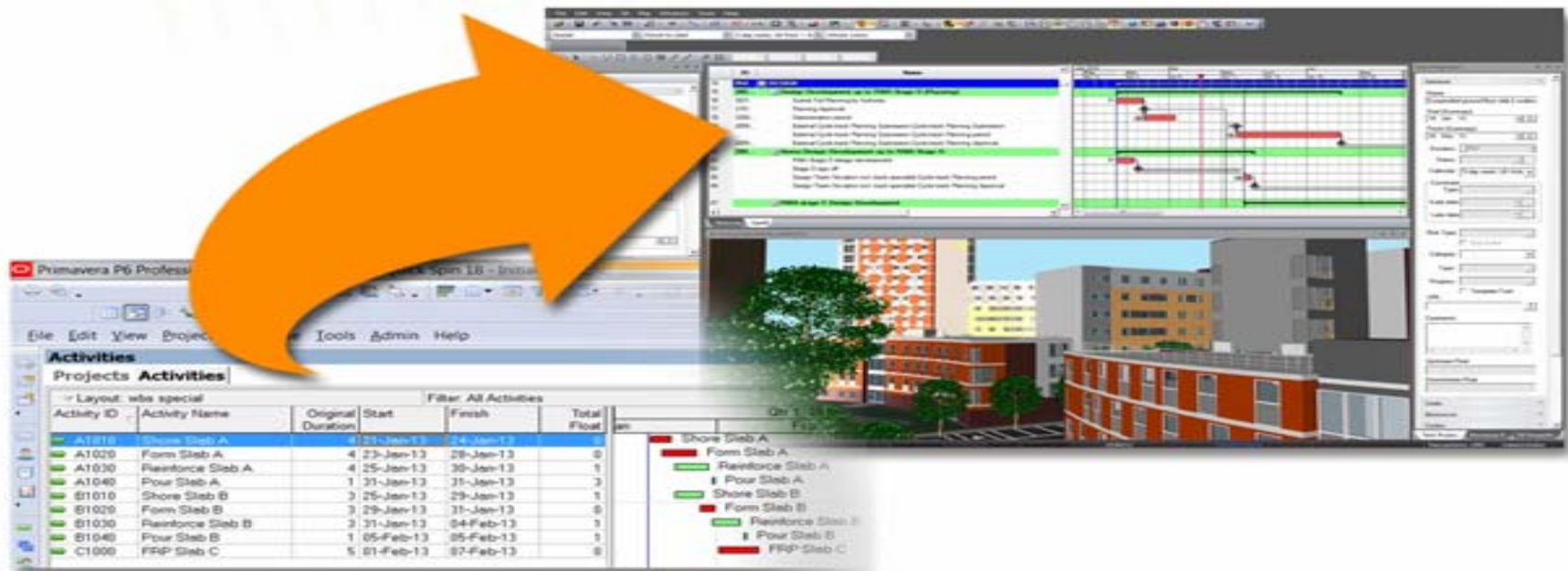


20th 21st 22nd 23rd 24th  
WEEK 1

# Synchro

Explore options. Manage solutions.

## SCHEDULE SYNCHRONISATION & UPDATING IN SYNCHRO





## What is Synchro?

A platform that brings schedules and 3D objects together for a 4D solution

A scheduling software that allows you to make changes to your schedule

- within Synchro
- within another scheduling software of your choice and import those changes into Synchro

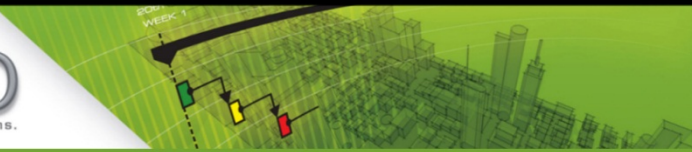
A scheduling software that allows you to import 3D models and link the 3D objects to your schedule for a 4D visualisation



Project schedules can be imported into Synchro from several different schedule software:

- ☐ ASTA Power Project
- ☐ Microsoft Project xml
- ☐ PMA Net Point
- ☐ Primavera P3
- ☐ Primavera P6

*There are basic rules for importing; exporting; and synchronizing for each type of scheduling software*

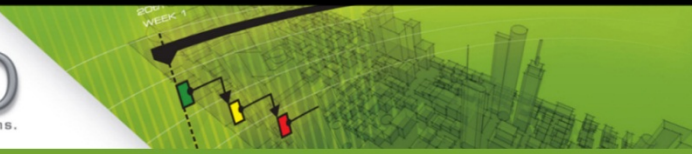


## Prior to importing a P6 Schedule into Synchro you need

- the proper P6 API installed
- access to the P6 database where the schedule resides

## How do I get the API?

Synchro will provide you the API based on the version of P6 being used and how it is set up – server versus stand-alone



## How do I import a P6 Schedule into Synchro?

*Open Synchro and save the blank untitled Synchro project to a new file*

## Main Menu

File Edit View 3D Play Windows Tools Help

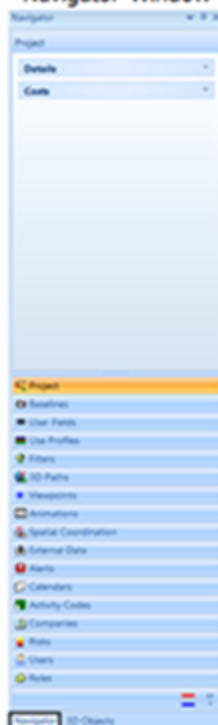
## Toolbar



## Fast Options (drop down menus)

Install (Use Profile) Finish to start (Link Type) Project Calendar (Calendar) Whole scene (Frustum Culling)

## Navigator Window



## Gantt Window

## Task List

ID	Name	Duration	Start	Finish
1	Foundation Project	10d	10/10/12	10/10/12
14	Foundation	10d	10/10/12	10/10/12
15	Foundation	10d	10/10/12	10/10/12
16	Foundation	10d	10/10/12	10/10/12
17	Foundation	10d	10/10/12	10/10/12
18	Foundation	10d	10/10/12	10/10/12
19	Foundation	10d	10/10/12	10/10/12
20	Foundation	10d	10/10/12	10/10/12
21	Foundation	10d	10/10/12	10/10/12
22	Foundation	10d	10/10/12	10/10/12
23	Foundation	10d	10/10/12	10/10/12
24	Foundation	10d	10/10/12	10/10/12
25	Foundation	10d	10/10/12	10/10/12
26	Foundation	10d	10/10/12	10/10/12
27	Foundation	10d	10/10/12	10/10/12
28	Foundation	10d	10/10/12	10/10/12
29	Foundation	10d	10/10/12	10/10/12
30	Foundation	10d	10/10/12	10/10/12
31	Foundation	10d	10/10/12	10/10/12
32	Foundation	10d	10/10/12	10/10/12
33	Foundation	10d	10/10/12	10/10/12
34	Foundation	10d	10/10/12	10/10/12
35	Foundation	10d	10/10/12	10/10/12
36	Foundation	10d	10/10/12	10/10/12
37	Foundation	10d	10/10/12	10/10/12
38	Foundation	10d	10/10/12	10/10/12
39	Foundation	10d	10/10/12	10/10/12
40	Foundation	10d	10/10/12	10/10/12
41	Foundation	10d	10/10/12	10/10/12
42	Foundation	10d	10/10/12	10/10/12
43	Foundation	10d	10/10/12	10/10/12
44	Foundation	10d	10/10/12	10/10/12
45	Foundation	10d	10/10/12	10/10/12
46	Foundation	10d	10/10/12	10/10/12
47	Foundation	10d	10/10/12	10/10/12
48	Foundation	10d	10/10/12	10/10/12
49	Foundation	10d	10/10/12	10/10/12
50	Foundation	10d	10/10/12	10/10/12

## Gantt Chart



## Task Properties

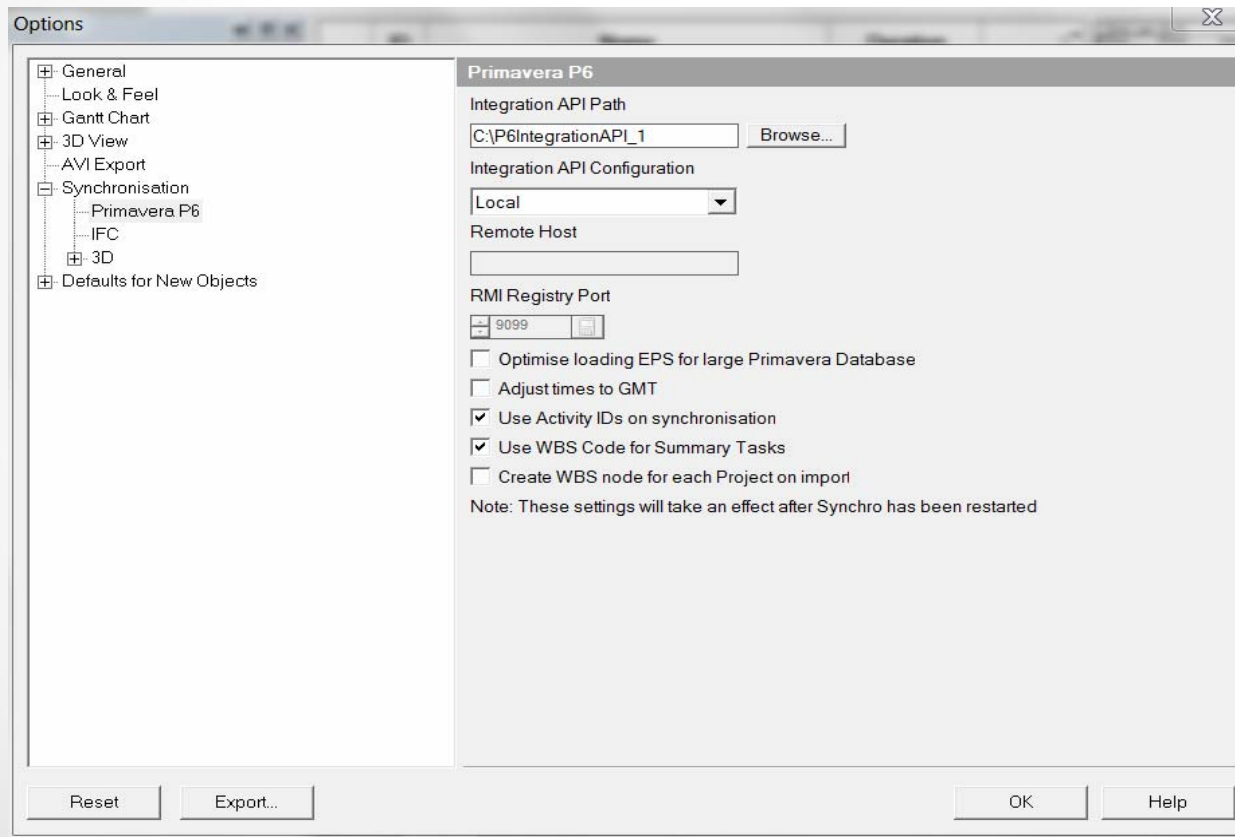






## Check the Primavera synchronization options

Select Tools > Options > Synchronisation > Primavera P6



Confirm the Integration API Path and Configuration.

Confirm that the default settings are selected – “Use Activity IDs on synchronization” and “Use WBS Code for Summary Tasks”.



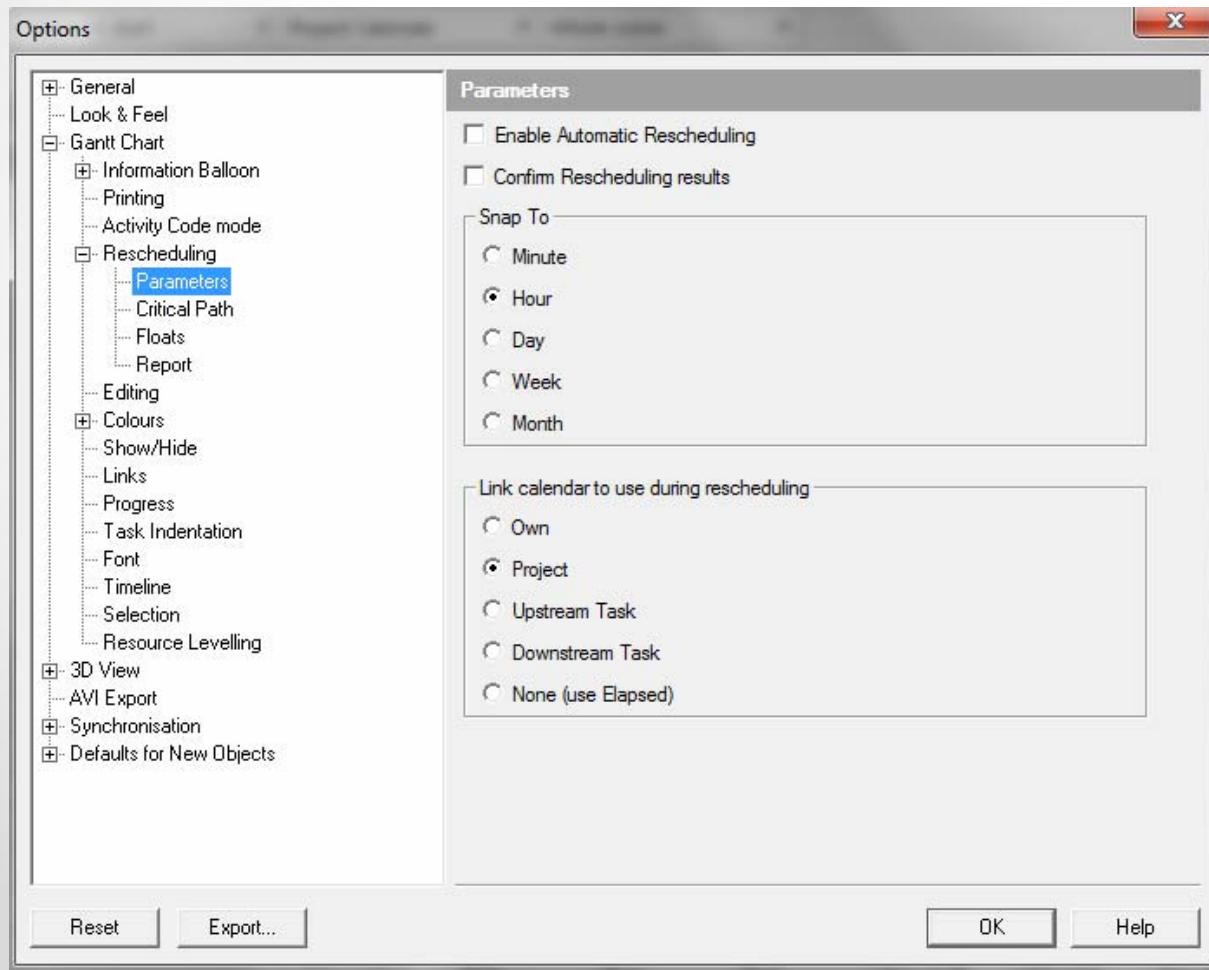
## P6 Synchronization Rules:

- If the original schedule and P6 database are used, Synchro will look for GUID's when synchronizing.
- If the original schedule has been copied then updated or a different P6 DB has been used, if the then Activity ID's will be compared provided they have not been changed.
- It is possible to change the ID's in both P6 and Synchro.
- The schedules can be synchronized using a different computer and can have a different file name
- Choose the command that best suits what information will be added and what information will remain in the Synchro file.





## Stay in options and go up to Gantt Chart > Rescheduling > Parameters



Turn off the “Enable Automatic Rescheduling” otherwise anytime you make a change in Synchro it will reschedule.

The “Snap To” allows you to choose the smallest increment of time that will be used for calculations. For this training snap to hour will be used.

Make sure “Project” is selected for “Link calendar to use during rescheduling”



Now it is time to import the P6 file

File > Import > Primavera P6

Primavera P6 import

Databases

Load DB

Connect options

Name Password Connect

List of Projects

Selected project

Project ID Data Date

< Back Next > Cancel Help

The Primavera P6 Import screen will open.

Select "Load DB" and select the database where the P6 schedule resides from the dropdown menu.

Put in your P6 username and password and click the connect button.

The P6 projects schedules you have access to will appear under “List of Projects”

Highlight the P6 schedule name to select the schedule to be imported.

Primavera P6 import

Databases  
XE Load DB

Connect options  
Name Password  
admin \*\*\*\*\* Disconnect

List of Projects:

- 2013 User Conference
  - Quick Spin 1B - Initial Schedule
- Aegis Consultants
  - UMBC Performing Arts Phase 2 Update 8 October 26, 2012 Monthly
- Out of Sequence Testing
  - Out of Sequence - Actual Dates
  - Out of Sequence - Progress Override
  - Out of Sequence - Retained Logic
- HP Test
- SDS2 Test
- Customer Projects

Selected project  
Quick Spin 1B - Initial Schedule

Project ID QS1B - current Data Date 2013-01-21 00:00:00.0

< Back Next > Cancel Help

A screen will be presented asking how you would like to import your P6 schedule

Primavera P6 import

How would you like to import this file? —

☐ Use the Selected Task to merge the data into the current Project

☒ Append the data to the end of the current Project

☒ Reframe Gantt to show imported data

Which attributes and how would you like to synchronise? —

Object	Command
Tasks	Import
Links	Import
Task constraints	Import
Costs	Skip
Calendars	Import
Resources	Skip
Resource assignments	Skip
Risks	Skip
Risk assignments	Skip
Activity codes	Import
Codes assignments	Import
User fields	Skip
User field values	Skip
Users	Skip

Default Skip all

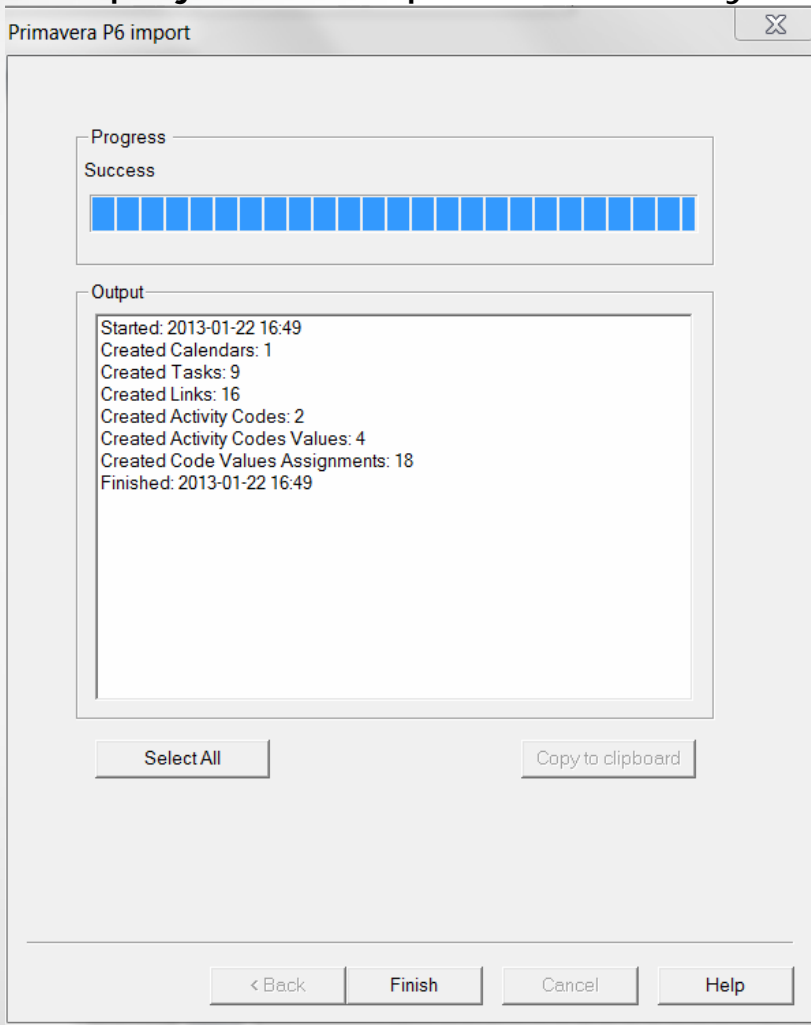
< Back Import Cancel Help

On this first import you will always want to import

- Tasks
- Links
- Task constraints
- Calendars
- Activity Codes
- Code assignments

*If you are using costs, resources, and/or user fields, choose the **Import** command; otherwise select **Skip** on the schedule objects not being used in the P6 schedule*

The P6 project will import and show you the following screen



Click finish to finalize the import

The P6 tasks and relationships are now in the Synchro file

The screenshot displays the Synchro software interface for a project named "Quick Spin 1B - Synchro". The interface includes a menu bar (File, Edit, View, 3D, Play, Windows, Tools, Help), a toolbar, and a status bar.

**Navigator Panel:**

- Project Details:**
  - Project Start: 21/01/13
  - Project Finish: 07/02/13
  - Project Duration: 17d
  - Number of Tasks: 9
- Project Structure:**
  - Baselines
  - User Fields
  - Use Profiles
  - Filters
  - 3D Paths
  - Viewpoints
  - Animations
  - Spatial Coordination
  - External Data
  - Alerts

**Task List Table:**

ID	Name	Duration	Start	Finish
2	A1020 Form Slab A	4d	23/01/13	28/01/13
3	A1030 Reinforce Slab A	4d	25/01/13	30/01/13
4	A1040 Pour Slab A	1d	31/01/13	31/01/13
5	B1010 Shore Slab B	3d	25/01/13	29/01/13
6	B1020 Form Slab B	3d	29/01/13	31/01/13
7	B1030 Reinforce Slab B	3d	31/01/13	04/02/13
8	B1040 Pour Slab B	1d	05/02/13	05/02/13
9	C1000 FRP Slab C	5d	01/02/13	07/02/13

**Gantt Chart:** The Gantt chart displays the project schedule from January 14th to February 7th, 2013. It shows the duration of each task as a red bar, with dependencies indicated by arrows. The tasks are: Form Slab A, Reinforce Slab A, Pour Slab A, Shore Slab B, Form Slab B, Reinforce Slab B, Pour Slab B, and FRP Slab C.

**3D View:** The 3D view shows a perspective of the construction site with a grid floor. A "FRONT" view is indicated. The status bar at the bottom shows "Enough memory", "[Filter Off] Selected[0][0][0]", and the date "24/01/13".

Save the file

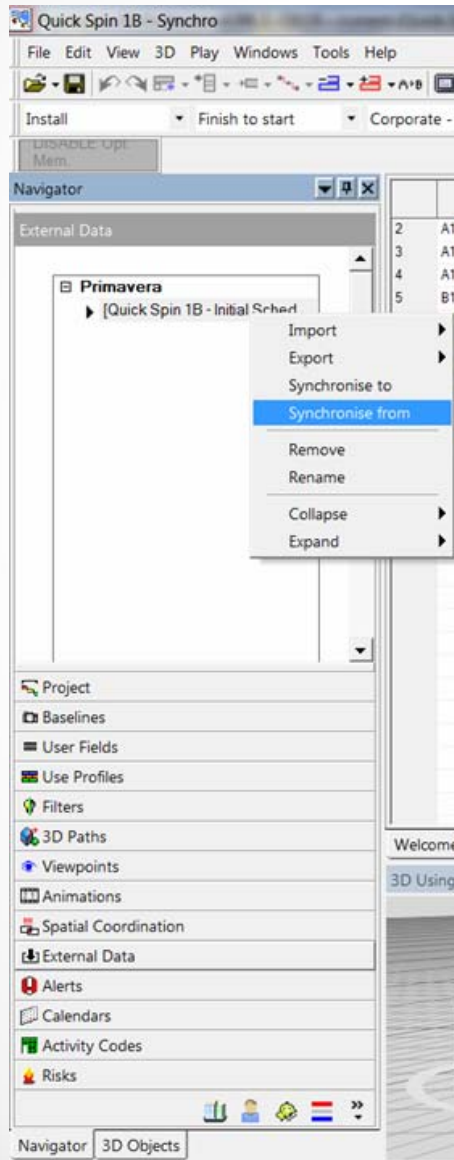


## How do I synchronize information from my updated P6 file?

For this to happen, it is best practice to copy the P6 file and make the copy the archive file. This allows the original –current file to always be the working file.

After these changes the schedules in P6 database should be as shown:

	<b>Project ID</b>	<b>Project Name</b>
<b>Original Schedule</b>	<i>QS1B-current</i>	<i>Quick Spin 1B – Update #1</i>
<b>Copied Schedule</b>	<i>QS1B-Initial</i>	<i>Quick Spin 1B – Initial Schedule</i>



- Select the “External Data” on the “Navigator” tab
- Highlight the P6 project schedule under Primavera
- Right click and select “Synchronize From”.

Primavera P6 synchronise from

Databases

Load DB

Connect options

Name Password

Connect

List of Projects:

Selected project:

Project ID Data Date

< Back Next > Cancel Help

The “Primavera P6 synchronize from” screen will open.

Select “Load DB” and select the database where the P6 schedule resides from the dropdown menu.

Put in your P6 username and password and click the connect button.

Primavera P6 synchronise from

Databases

XE Load DB

Connect options

Name Password

admin \*\*\*\*\* Disconnect

List of Projects:

- Test Project 1
- Test Project 2
- Test Project 2
- ☒ **2013 User Conference**
  - Quick Spin 1B - Initial Schedule
  - Quick Spin 1B - Update #1**
- ☒ **Aegis Consultants**
  - UMBC Performing Arts Phase 2 Update 8 October 26, 2012 Monthly
- ☒ **Out of Sequence Testing**
  - Out of Sequence - Actual Dates
  - Out of Sequence - Progress Override

Selected project

Quick Spin 1B - Update #1

Project ID QS1B - current Data Date 2013-01-28 00:00:00.0

< Back Next > Cancel Help

Highlight the P6 schedule name to select the schedule to be synchronised.

Primavera P6 synchronise from

How would you like to import this file?

☐ Use the Selected Task to merge the data into the current Project  
☐ Append the data to the end of the current Project

Which attributes and how would you like to synchronise?

Object	Command
Tasks	Synchronise
Links	Synchronise
Task constraints	Synchronise
Costs	Skip
Calendars	Consolidate
Resources	Skip
Resource assignments	Skip
Risks	Skip
Risk assignments	Skip
Activity codes	Consolidate
Codes assignments	Synchronise
User fields	Skip
User field values	Skip
Users	Skip

A screen will be presented asking how you would like to synchronize from your P6 schedule.

Choose the command that best suits what information will be added and what information will remain in the Synchro file.

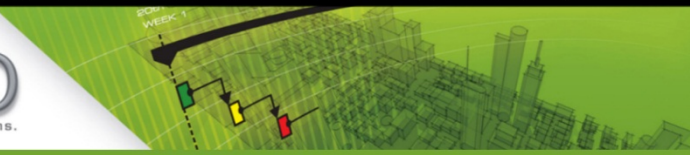
Click the Synchronise button

## P6 Synchronization Options:

- **Skip**
  - This type of object will not be processed
  - The schedule in Synchro it will be ignore the new updated schedule when synchronising.
- **Synchronise** - objects will be synchronised according to the following rules:
  - All added attributes in the new schedule will be added to the existing schedule in Synchro
  - All modified attributes will be modified accordingly
  - All deleted attributes in the new schedule will be deleted from the existing schedule in Synchro

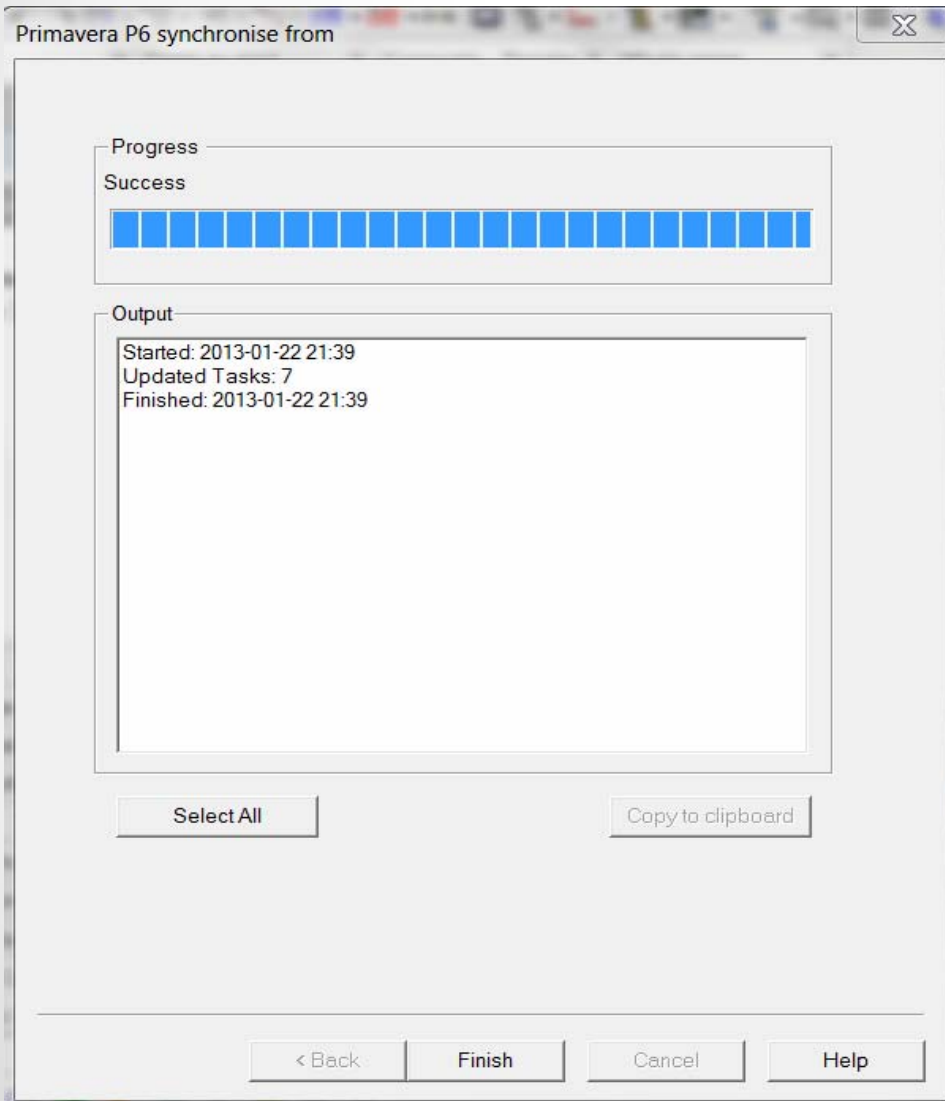
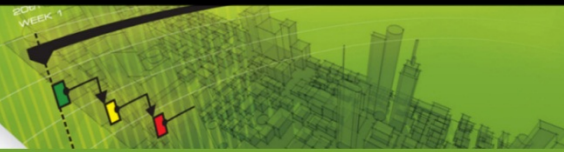
*Note: The option to Synchronize is not available for P6 global objects (such as Calendars, Resources, Risks and Activity Codes) since these can not be deleted. The schedule in Synchro will be replaced with the new updated schedule when synchronizing.*





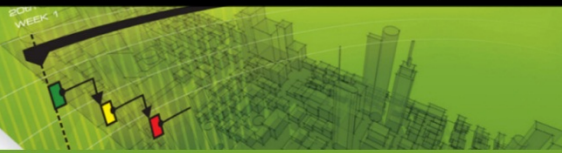
## P6 Synchronization Options: (Cont.)

- **Consolidate** - similar to synchronization, except that objects in the target system will not be deleted therefore the following rules apply-
  - All added attributes in the new schedule will be added to the existing schedule in Synchro
  - All modified attributes will be modified accordingly
  - All the new attributes created in Synchro will be left untouched
  - The schedule in Synchro will be merged with the new updated schedule when synchronizing.
- **Integrate** - this is the default choice for Resources and Resource Assignments and is used when several schedules have been imported into Synchro. This will only affect the 'source' schedule.
  - All added attributes in the new schedule will be added to the existing schedule in Synchro
  - All modified attributes will be modified accordingly
  - All deleted Resources from the new updated 'source' schedule will be deleted from the existing schedule in Synchro
  - Attributes created in Synchro will remain..

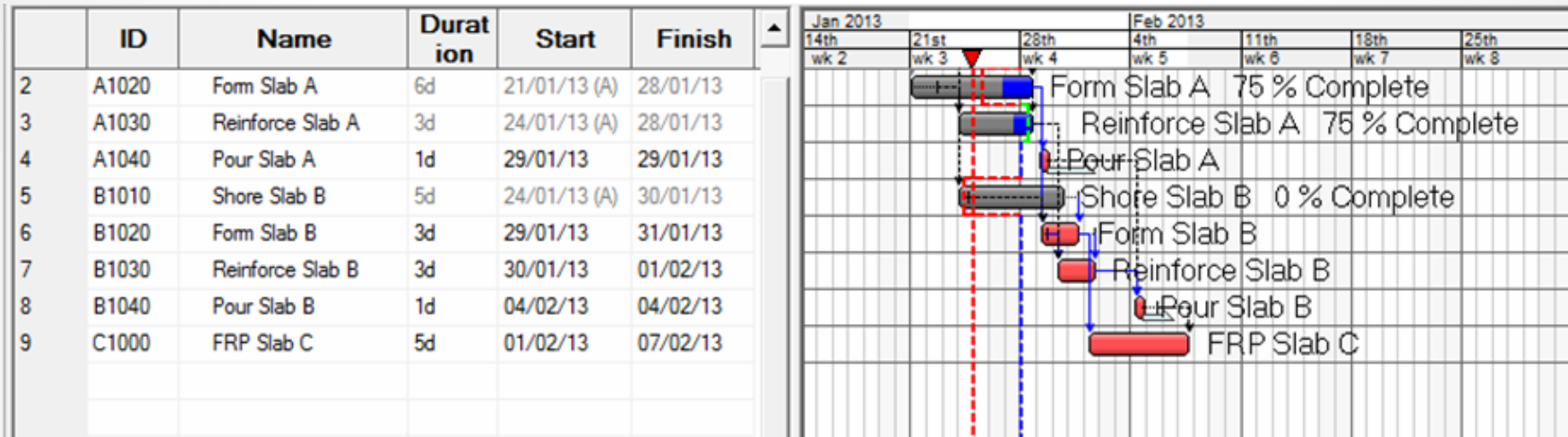


Once the synchronization is complete the progress/output screen will pop up listing what was synchronized.

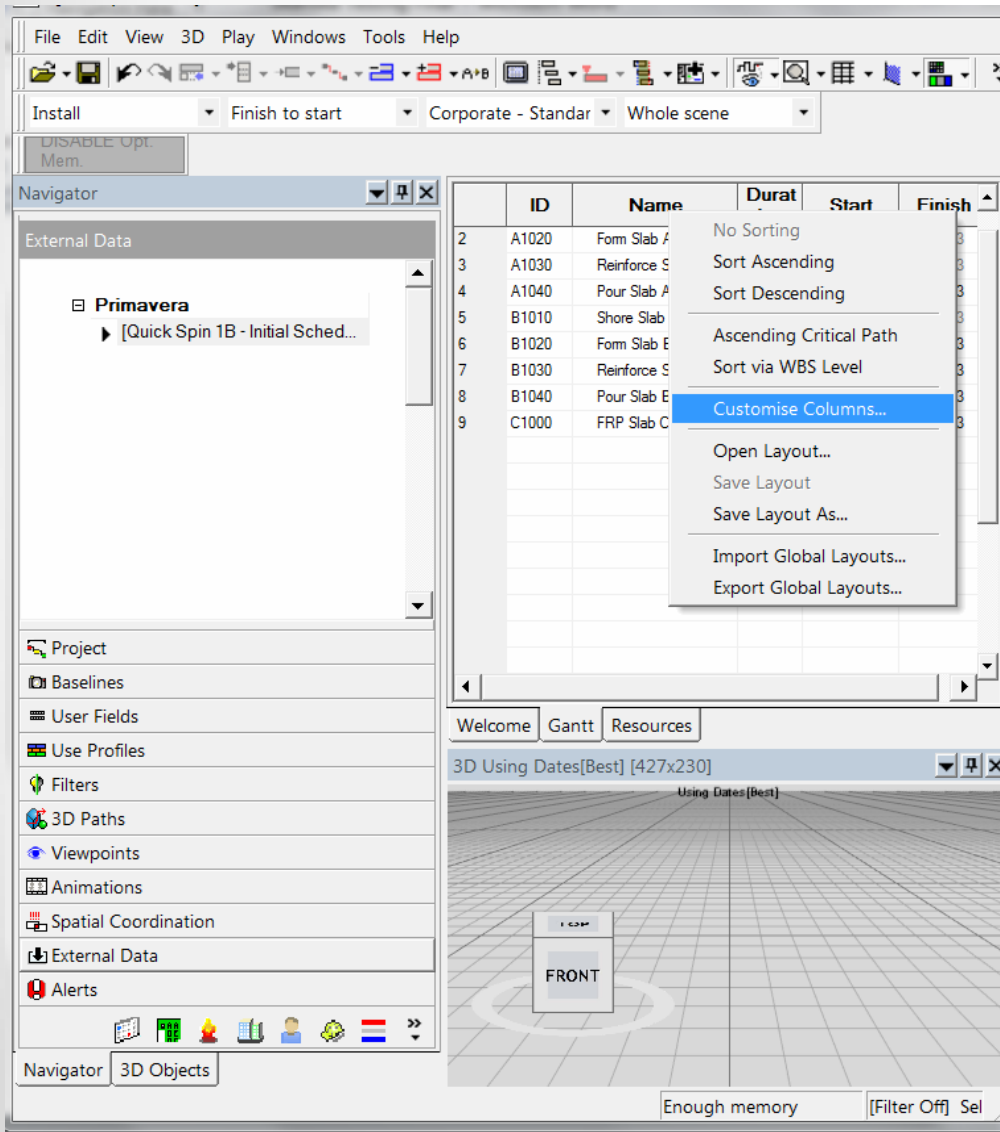
Click finish to finalize the synchronization.



The tasks in the Synchro file have been updated to match the P6 schedule

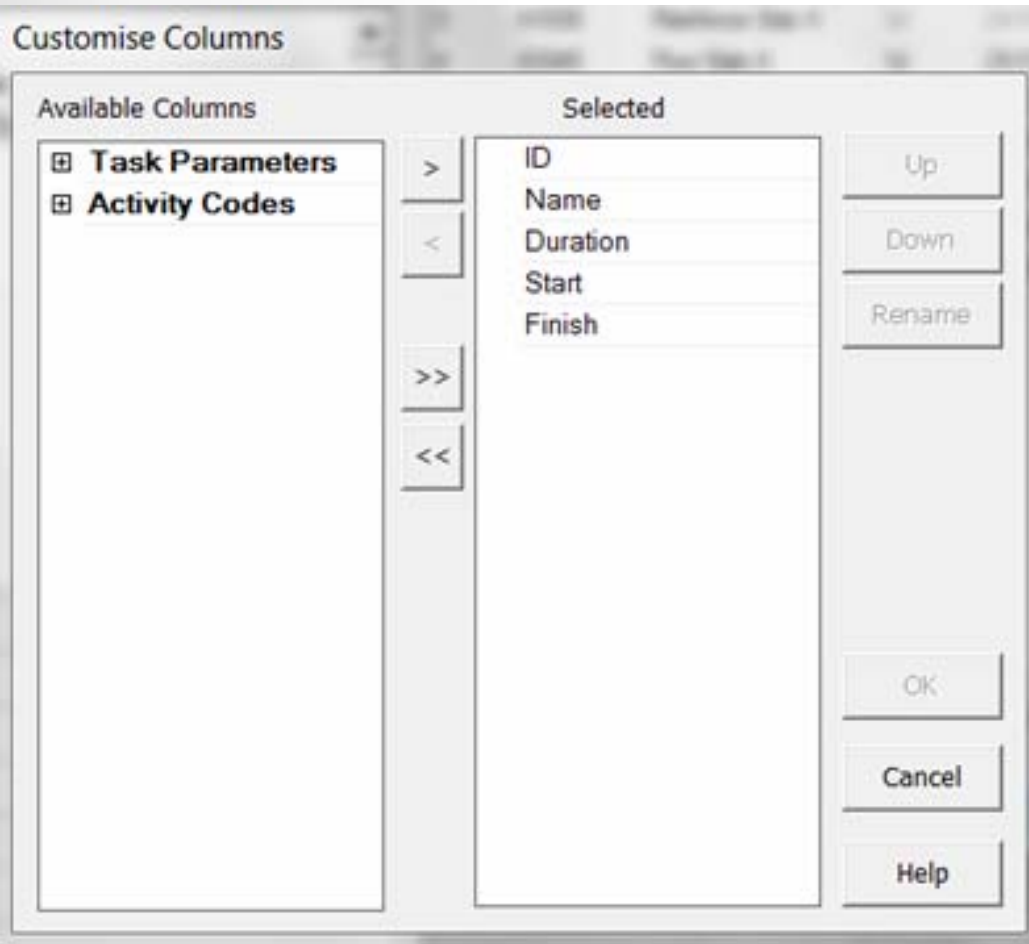


**Note:** that the duration reflected is the projected actual duration to date.



To view the original duration – the “Planned Duration” in Synchro

- Place cursor on column headings
- Right click
- Select “Customise Columns”



The “Customise Columns” dialog box will open.

- Expand the Task Parameters
- Select Planned Duration
- Use the > bring it over to the selected columns
- Use the “Up” and “Down” buttons to place it in the location preferred

*\* Other columns can also be added*

## How do I modify and Update the Synchro File?

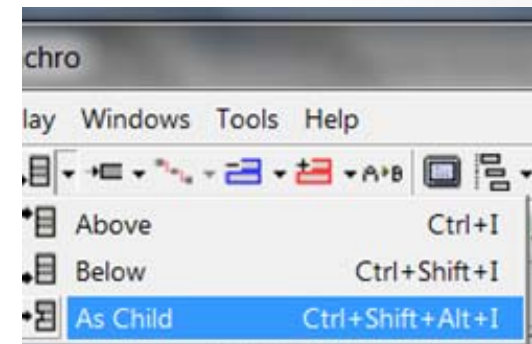
### •Adding activities:

	ID	Name	Planned ...	Duration	S
2	A1020	Form Slab A	4d	6d	21/01
3	A1030	Reinforce Slab A	4d	3d	24/01
4	A1040	Pour Slab A	1d	1d	29/01
5	B1010	Shore Slab B	3d	5d	24/01
6	B1020	Form Slab B	3d	3d	29/01
7	B1030	Reinforce Slab B	3d	3d	30/01
8	B1040	Pour Slab B	1d	1d	04/02
9	C1000	FRP Slab C	5d	5d	01/02

Highlight and select "FRP Slab C".

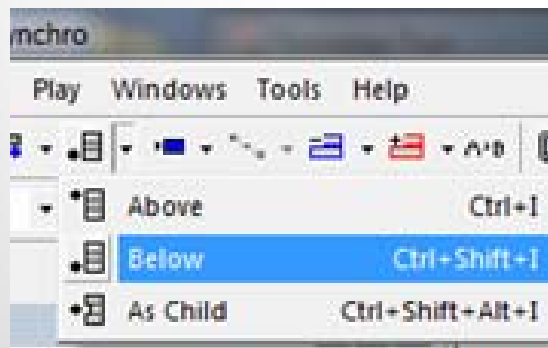
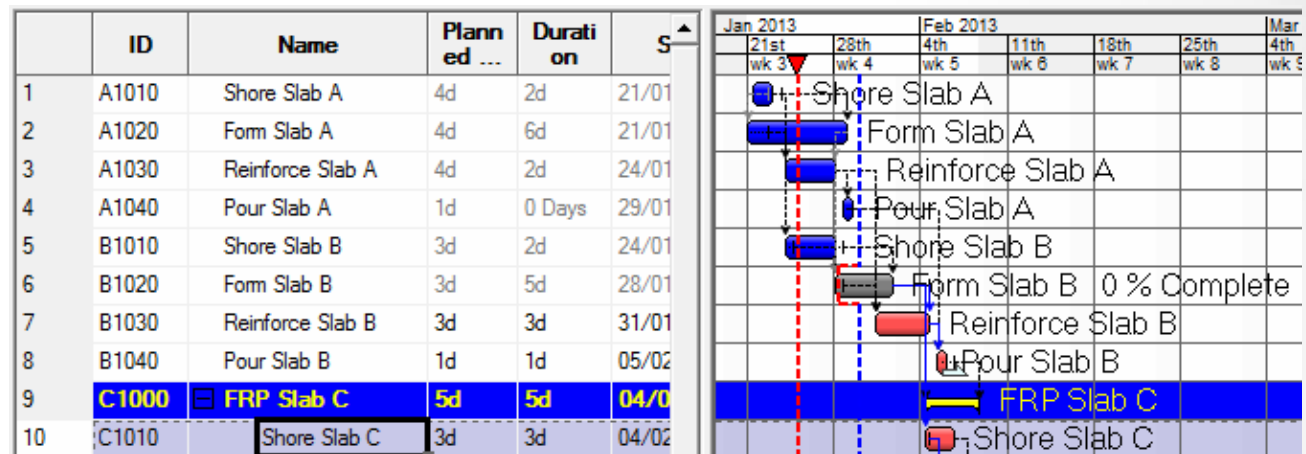
Using dropdown arrow beside the shortcut key "Insert" select "As Child" or right click, select Insert New Task > As Child

Rename the new activity to "Shore Slab C"



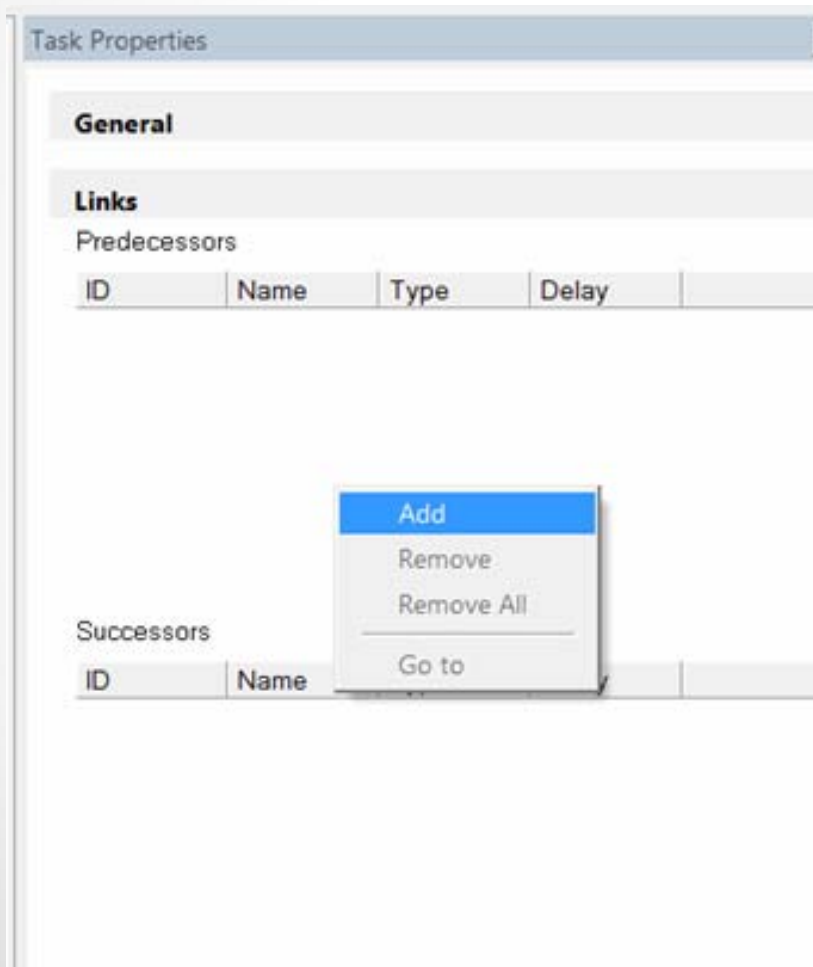


Highlight and select the new task "Shore Slab C"



Using dropdown arrow beside the "Insert" shortcut key "Insert Below" and select "Below" or right click and select Insert New Task > Below.

- Adding logic/linking tasks:



Opening Task  
Properties > Links

Right click in the  
predecessor or  
successor window

Select add

## Add/Remove Links

## Predecessors

Task ID	Task Name	Link Type	Calendar	+/-	Delay
B1020	Form Slab B	Finish -> Start	Corporate - Standard F		0 Days

Delete

Help

Close

## Task tree

Search ID

Add

ID	Name
A1010	Shore Slab A
A1020	Form Slab A
A1030	Reinforce Slab A
A1040	Pour Slab A
B1010	Shore Slab B
B1020	Form Slab B
B1030	Reinforce Slab B
B1040	Pour Slab B

☒ Show WBS

The Add/Remove Link window will open allow you to choose a task from the list.

The type of relationship and a lag can also be changed in this window.

*Once all the task relationships have been entered, calculate the schedule by clicking F9.*

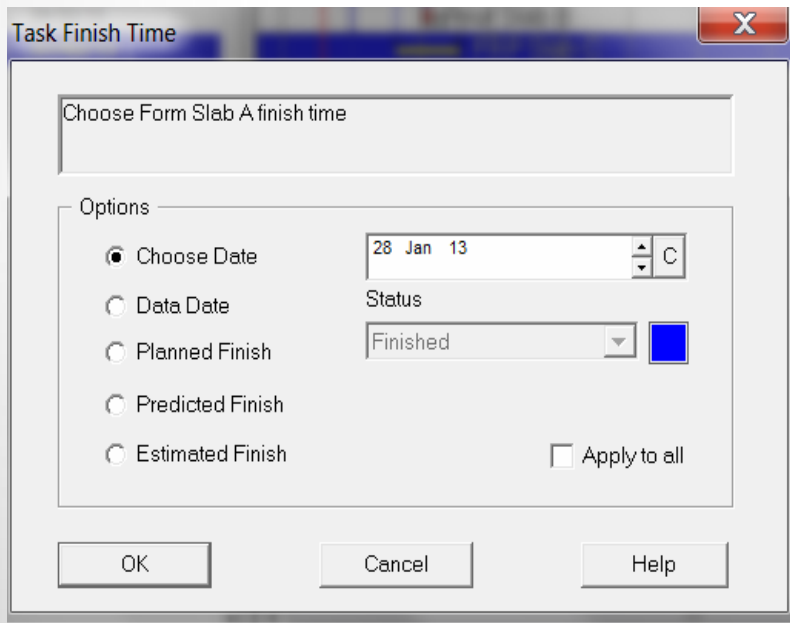
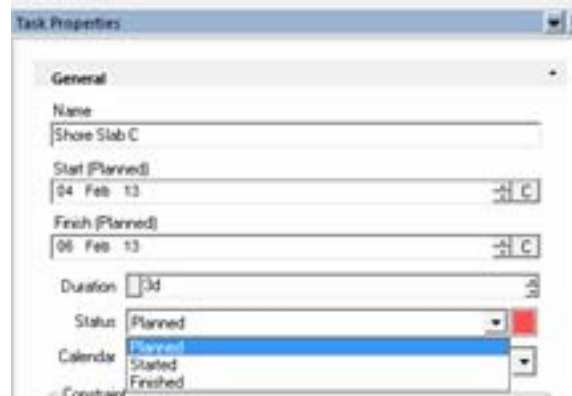
- Update task:
  - ✓ highlight the task to be updated
  - ✓ Select the Task Properties > General

	ID	Name	Plan ne...	Durat ion	Start	Finish	
7	B1030	Reinforce Slab B	3d	3d	30/01/13	01/02/13	
8	B1040	Pour Slab B	1d	1d	04/02/13	04/02/13	
9	<b>C1000</b>	<b>FRP Slab C</b>	<b>5d</b>	<b>5d</b>	<b>01/02/13</b>	<b>07/02/13</b>	
10	C1010	Shore Slab C	3d	3d	01/02/13	05/02/13	
11	C1020	Form Slab C	3d	3d	04/02/13	06/02/13	
12	C1030	Reinforce Slab C	3d	3d	04/02/13	06/02/13	
13	C1040	Pour Slab C	1d	1d	07/02/13	07/02/13	

Jan 2013	Feb 2013
21st wk 3	28th wk 4
	4th wk 5
	11th wk 6
	18th wk 7
	25th wk 8

Change the status to  
Started or Finished.



The Task Start time and/or Task Finish time will open, prompting for the date.

Use the calendar drop down to choose the correct date.

Click OK when complete.



## Task Properties

### General

### Links

### Resources

### Codes

### Risk

### Monitoring

Actual Start

28 Jan 13



Estimated Finish

30 Jan 13



Progress

Manual



☐ % Complete

0

☒ Remaining Duration

3d



Adjusting the remaining durations:

- Go to Task Properties > Monitoring
- Change the progress o manual
- Adjust the remaining duration



- Calculating the schedule with a new data date:

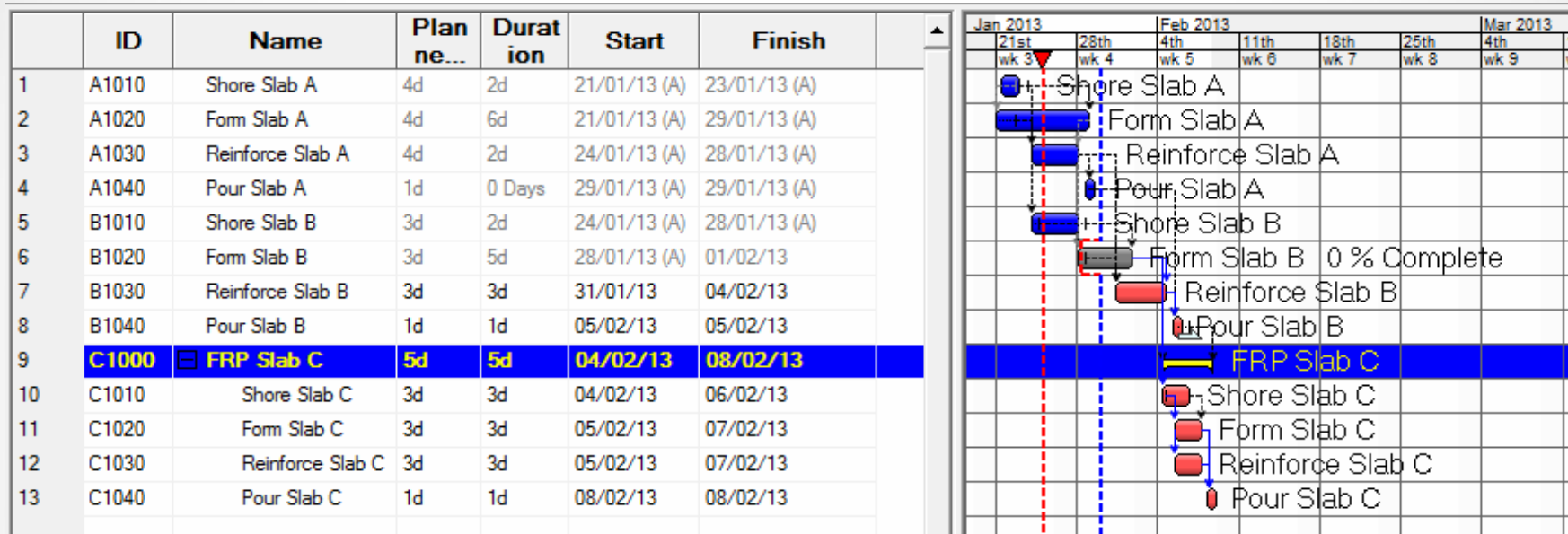
The screenshot shows the 'Navigator' window with the 'Project' tab selected. It displays the following settings:

- Number of Tasks:** 13
- Project Date Zero:** 21 Jan 13
- Data Date:** 30 Jan 13

Under the 'Data Date' section, the 'Manual' radio button is selected, and the 'Automatic' radio button is unselected. Each date field has a small calendar icon and a 'C' button next to it.

- Go to Navigator > Project tab
- Adjust the Data Date the project will be calculated from
- Click F9 once the data date is entered





The Synchro schedule will reflect the new dates as shown.

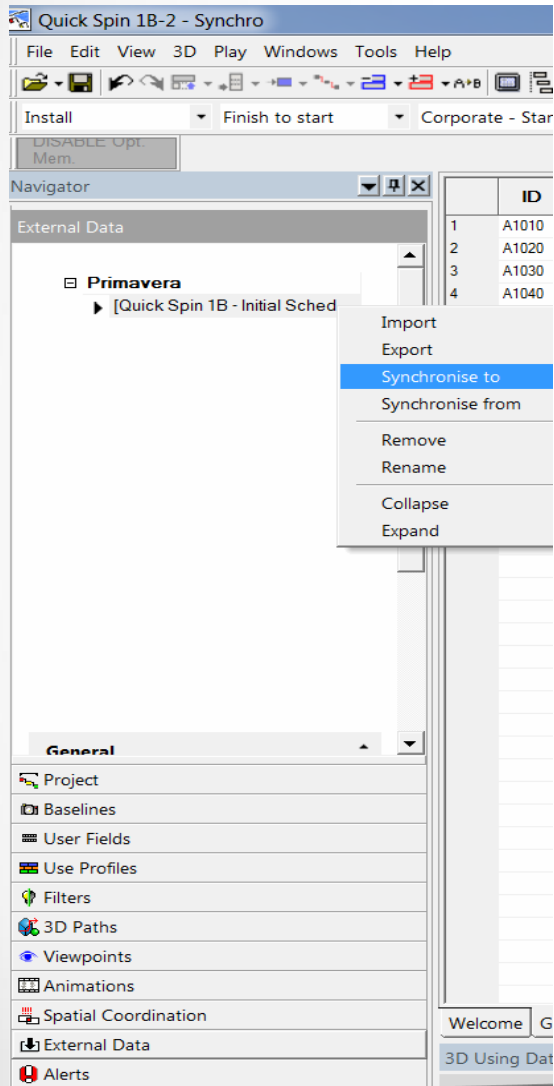
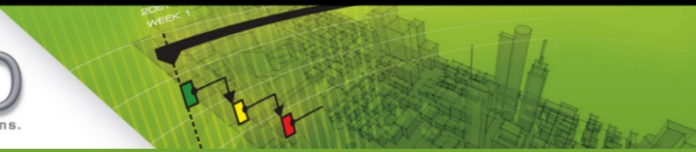


*Save the file with a new name*

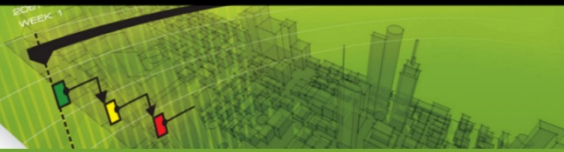
## How do I synchronize information to my P6 file?

The information modified and updated in the Synchro file can now be synchronized back to P6. Make sure the previous P6 file has been copied and archived as described previously.

	<b>User Conf</b>	<b>2013 User Conference</b>	0
	QS1B - current	Quick Spin 1B - Update #2	0
	QS1B - Initial	Quick Spin 1B - Initial Schedule	0
	QS1B - Update #1	Quick Spin 1B - Update #1	0



- Select the “External Data” on the “Navigator” tab
- Highlight the P6 project schedule under Primavera
- Right click and select “Synchronize To”.



Primavera P6 synchronise to

Databases:

Connect options:

Name:  Password:

List of Projects:

Selected project:

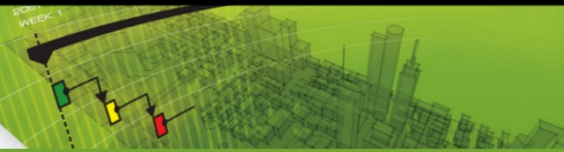
Project ID:  Data Date:

< Back   Next >   Cancel   Help

The “Primavera P6 synchronize to” screen will open.

Select “Load DB” and select the database where the P6 schedule resides from the dropdown menu.

Put in your P6 username and password and click the connect button.



Primavera P6 synchronise to

Databases  
XE Load DB

Connect options  
Name Password  
admin \*\*\*\*\* Disconnect

List of Projects:

- Test Project 2
- Test Project 2
- 2013 User Conference
  - Quick Spin 1B - Initial Schedule
  - Quick Spin 1B - Update #1
  - Quick Spin 1B - Update #2
- Aegis Consultants
  - UMBC Performing Arts Phase 2 Update 8 October 26, 2012 Monthly
- Out of Sequence Testing
  - Out of Sequence - Actual Dates
  - Out of Sequence - Progress Override

Selected project  
Quick Spin 1B - Update #2

Project ID QS1B - current Data Date 2013-01-28 00:00:00.0

< Back Next > Cancel Help

Highlight the P6 schedule name to select the schedule to be synchronized.

*(This is the file you just renamed in P6)*

Click next



Primavera P6 synchronise to

How would you like to import this file?

☐ Use the Selected Task to merge the data into the current Project  
☐ Append the data to the end of the current Project

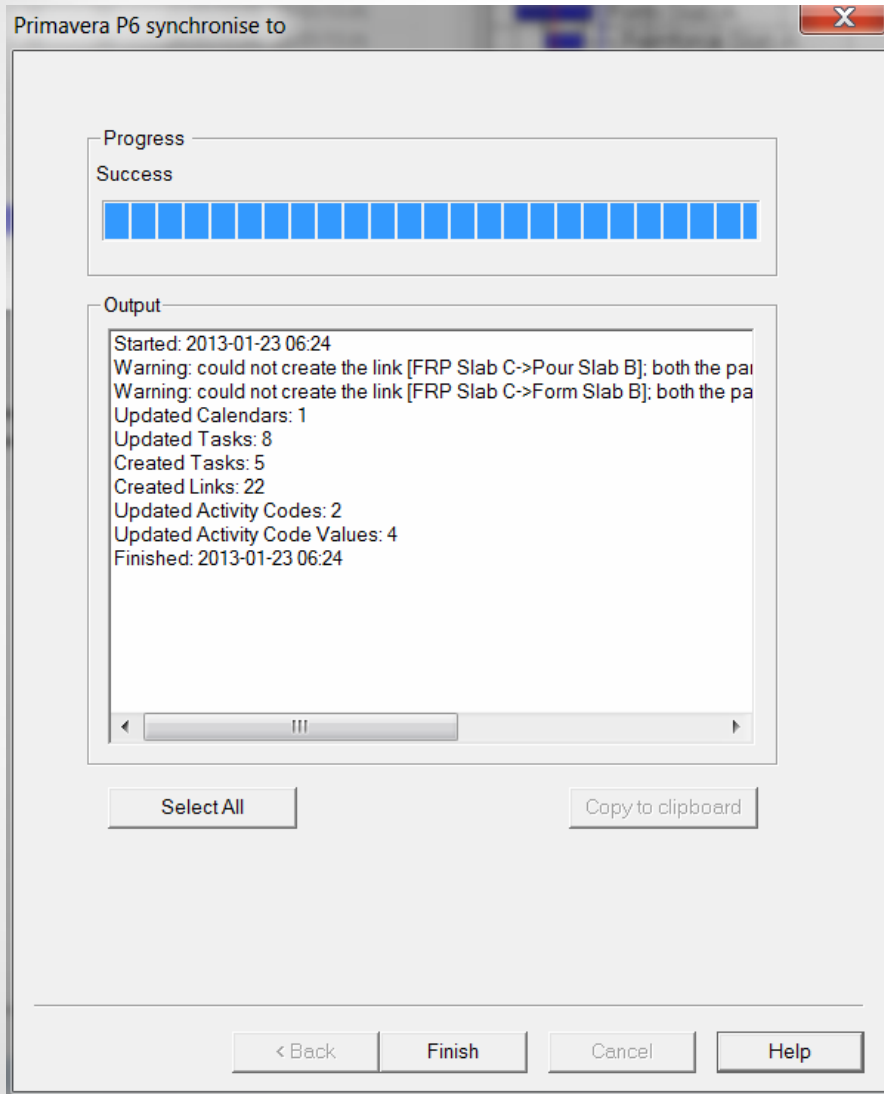
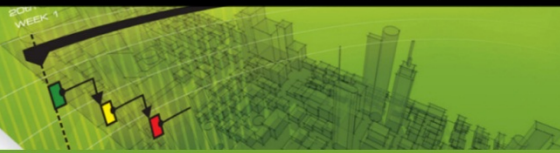
Which attributes and how would you like to synchronise?

Object	Command
Tasks	Synchronise
Links	Synchronise
Task constraints	Synchronise
Costs	Skip
Calendars	Consolidate
Resources	Skip
Resource assignments	Skip
Risks	Skip
Risk assignments	Skip
Activity codes	Consolidate
Codes assignments	Synchronise
User fields	Skip
User field values	Skip
Users	Skip

A screen will be presented asking how you would like to synchronize to your P6 schedule.

Choose the command that best suits what information will be added and what information will remain in the Synchro file.

Click the Synchronise button

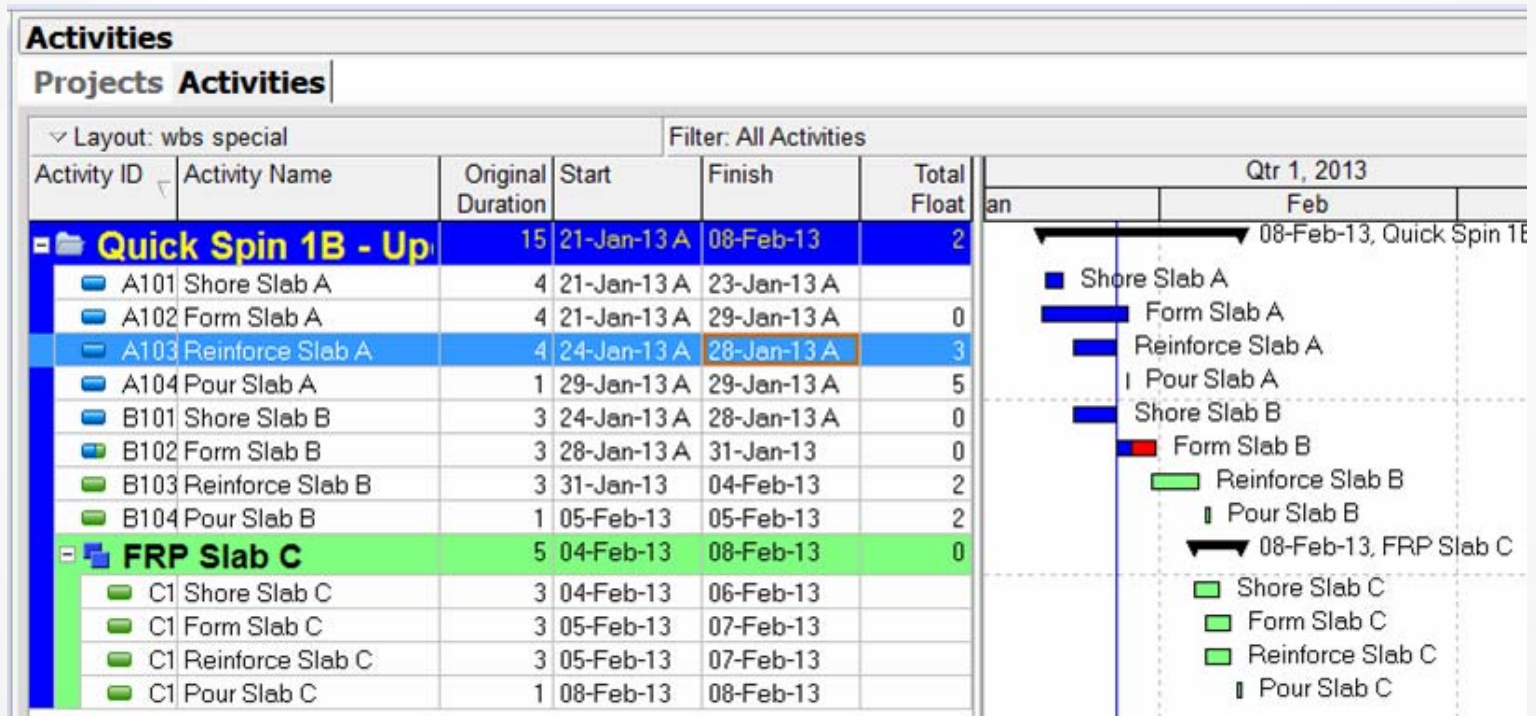


Once the synchronization is complete the progress/output screen will pop up listing what was synchronized.

**Note:** *there is one warning because no relationships are allowed on WBS summary tasks in P6*

Click finish to finalize the synchronization.

The tasks in the P6 schedule update have been updated to match the information from the Synchro file as shown.



**Note:** since no relationships are allowed on WBS summary tasks in P6, the relationships for "FRP Slab C", that are reflected in Synchro, have been deleted.