P.O. Box 4032 Doncaster Heights Victoria 3109 Australia

# **EASTWOOD HARRIS PTY LTD** Tel 61 (0)4 1118 7701

ACN 085 065 872 Project Management Systems Email: harrispe@eh.com.au

Fax 61 (0)3 9846 7700 Software and Solutions Web: http://www.eh.com.au

# TILOS & P3 DATA INTERFACE

BY

# **PAUL E HARRIS**

**OF** 

# **EASTWOOD HARRIS PTY LTD**

24 July 2007



# **TABLE OF CONTENTS**

1	OB	JECTIVE	5
2	BA	CKGROUND INFORMATION	5
3	CR	EATING A SCHEDULE IN TILOS FROM P3 DATA	5
	3.1	TILOS EXPORT & IMPORT PROFILE	5
	3.2	OUTLINE PROCESS	5
	3.3	P3 SCHEDULE PREPARATION	6
	3.4	TILOS SCHEDULE PREPARATION	7
	3.4.	1 Create the Schedule	7
	3.4.	2 Create the TILOS Calendars	8
	3.5	CREATE THE TILOS IMPORT PROFILE	9
	3.6	NOTES ON TILOS PROFILE	11
	3.7	P3 Data Import	12
	3.8	TIPS ON FORMATTING	13
	3.9	DISPLAYING & FORMATTING TILOS	14
	3.9.	l Displaying a March Chart	14
	3.9.	2 Formatting the Line Style	14
	3.10	IMPORTING LOGIC FROM P3	16
	3.11	ADDING AND EDITING LOGIC	19
	3.11	1.1 Adding the logic manually in Working view	19
	3.11	1.2 Adding the logic manually in Bar chart view	19
	3.11	1.3 Adding the logic manually in Activity Links form	19
	3.11	1.4 Editing a Link	20
	3.11	1.5 Deleting a link	20
	3.12	IMPORTING CONSTRAINTS FROM P3	21
4	IM	PORTING DATA FROM TILOS INTO P3	23
	4.1	IMPORTING ACTIVITIES USING SURETRAK	23
	4.2	IMPORT RELATIONSHIPS FROM TILOS TO SURETRAK	25
	4.3	IMPORTING ACTIVITIES USING P3	28
	4.3.	1 Background on the P3 Import/Export Utility	28
	4.3.	2 Export Templates from P3	29
	4.3.	3 Export Datasets from TILOS	30
	4.3.	4 Export from TILOS	31
	4.3.	5 Manipulate Datasets in Excel	32
	4.3.	6 Import Activity Data into P3	33
	4.3.	7 Import Relationships into P3	34
5	RA:	SELINES	36

6	PRO	GRESS A TILOS SCHEDULE	37
	6.1	BACKGROUND	37
	6.2	SETTING THE REPORT DATE	37
	6.3	ENTERING PROGRESS	38
	6.3.1	Progressing Start Milestones	38
	6.3.2	Progressing Activities	39
	6.3.3	Rescheduling the Project	40
7	EXP	ORTING TILOS PROGRESS IMPORTING INTO P3	41
8	IND	$\mathbf{E}\mathbf{X}$	47

#### 1 OBJECTIVE

The objective of this procedure is to outline in plain English a method of exchanging schedule data between TILOS and Primavera P3 Version 3.1.

#### 2 BACKGROUND INFORMATION

To understand this document the user must be familiar with P3, the P3 import and export function and the basics of using TILOS. A working knowledge of SureTrak would also be useful

It is important that the operator understands the process outlined in this document and does not just follow the processes in this document. Once the document is understood and the user has practised on a small schedule then procedures should be written and TILOS Profiles with matching P3/SureTrak Imports, Exports and Layouts should be created for repetitive transfers.

It is also important that a backup of every schedule that is either imported or exported is made before it is operated on.

#### 3 CREATING A SCHEDULE IN TILOS FROM P3 DATA

# 3.1 TILOS Export & Import Profile

The tool TILOS uses to import and export data is titled a Profile. The profile maps data to and from the TILOS database to and from the clipboard. This data may be copied from or pasted into other software such as Excel.

#### 3.2 Outline Process

The activity data is copied from the P3 schedule into the clipboard using the Copy command and imported into TILOS using a TILOS "Profile". A Profile works in a similar way as a Microsoft Project "Map" or P3 "Export", and maps the P3 data held in text fields in the clipboard to TILOS data fields. A TILOS Profile may be used for importing or exporting data.

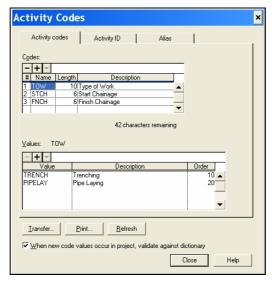
In summary the process is:

- ➤ The P3 schedule has either Activity Codes or Custom Data Items (CDI) defined and populated to record the Start Chainage, Finish Chainage and the Work Type (e.g. Trenching, Pipelaying) of each activity.
- A view is prepared and saved in P3 displaying only the data to be exported.
- ➤ A TILOS schedule is created with Start Date and the TILOS project calendar aligned to the P3 Calendar 1.
- ➤ When there are multiple P3 Calendars the Calendar ID's may be exported but calendar work periods are not exported. Therefore the TILOS Calendar Name and P3 Calendar ID must be the same and the calendar work days must be manually aligned.
- A TILOS "Profile" is created to map the P3 fields to the TILOS fields, and
- The data copied from the P3 schedule and imported into TILOS using the "Profile".

# 3.3 P3 Schedule Preparation

Create the P3 schedule as displayed below by:

Create three Activity Codes (or CDIs),



> Create calendar 5 and 7 representing 5 and 7 working days per week,



- > Create the activities, relationships and assign activity codes as below.
- Format the dates as dd/mm/yyyy, to match the TILOS date format and columns and save the Layout.

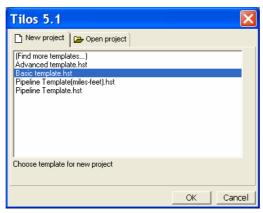
Activity	Activity	Early	Orig		TOW	STCH	FNCH								
ID	Description	Start	Dur	ID	Type of	Start	Finish	_			AY		JUN		
					Work	Chainage	Chainage	,/		14	21	28	.4	,11	լ18
1000	Start MS	09/05/2007	0	7		0	0		🖢 Star	t MS					
1010	Trench A	09/05/2007	5	5	TRENCH	0	35123	Ι.		<b>₹</b> T	rench A				
1020	Trench B	16/05/2007	5	5	TRENCH	35123	64345		ı	4	Ţ7 T	rench	В		
1030	Trench C	23/05/2007	5	5	TRENCH	64345	89345		ı	<b>.</b>		<b>∀</b> √	Trenc	h C	
1040	Lay A	16/05/2007	8	7	PIPELAY	0	35123		ı		<b></b>	ay A			
1050	Lay B	24/05/2007	8	7	PIPELAY	35123	69345				<u>}_</u>		LayB		
1060	Lay C	01/06/2007	8	7	PIPELAY	69345	89345		ı			4		🔽 Lay C	;
1070	Finish Milestone		0	7		89345	89345		ı					🔷 Finisl	n Mileston
2000		09/05/2007	1	1					ቖ						

# 3.4 TILOS Schedule Preparation

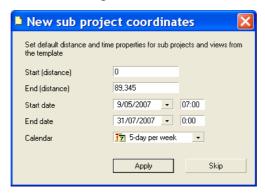
#### 3.4.1 Create the Schedule

Create a TILOS schedule with appropriate start & finish dates and start and finish chainages which have been aligned to the P3 schedule:

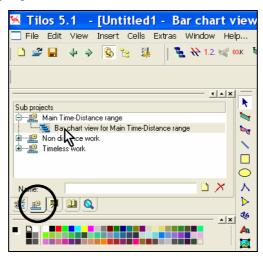
> Selecting File, New to open the New project form



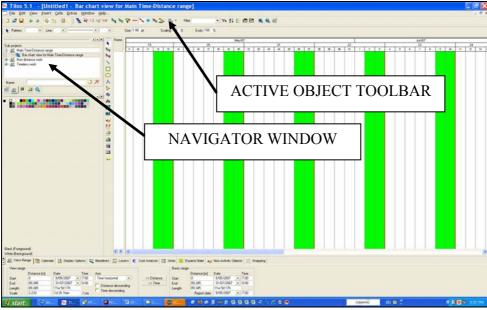
- > Select the Basic template,
- Enter the project data which is aligned with the P3 schedule:



From the Navigator Window select Bar chart view for Main Time-Distance range in the Sub projects tab:



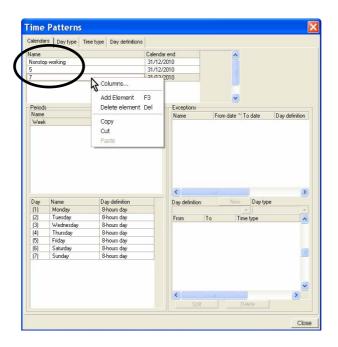
> Your screen should look like below:



#### 3.4.2 Create the TILOS Calendars

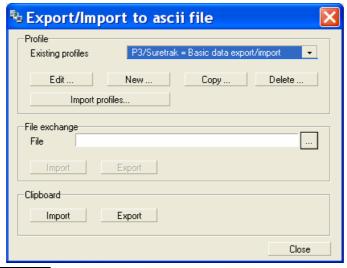
Calendars may not be imported but Calendar ID's may be imported from P3. The calendar work days in P3 and TILOS must be manually matched and the TILOS Calendar Name must match the P3 Calendar ID:

- > Select Extras, Calendars, Time Patterns... to open the Time Patterns form,
- > Rename the 5 day per week as 5,
- > Create a new 7 work day per week calendar with the Name of 7 by right clicking in the form and selecting Add Element,
- Ensure the calendar start date is before the project start date.

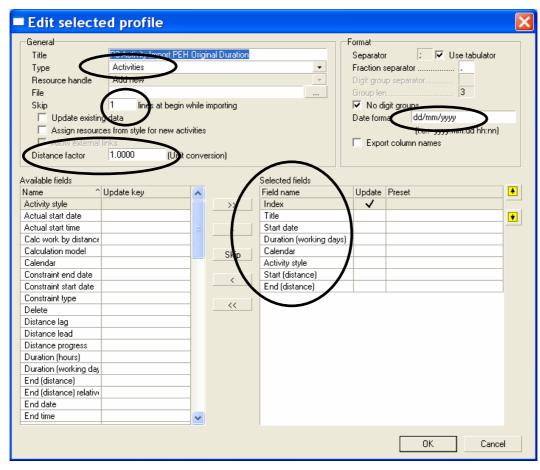


# 3.5 Create the TILOS Import Profile

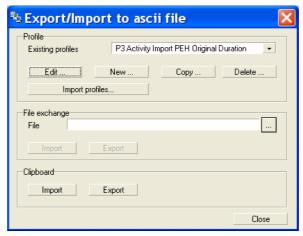
- > Click on the **Imports/Exports** icon on the **Active Object** toolbar,
- Select the Imports/Exports to Ascii File icon on the new toolbar that is now displayed.



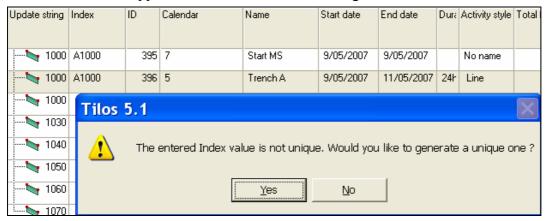
- > Select New.... from the Export/Import to ascii file form above to open the Create new profile form:
- Edit the form **EXACTLY** as per the picture below with the date format the same as the P3 layout and the order of the **Selected fields** in the same order as the P3 Layout:



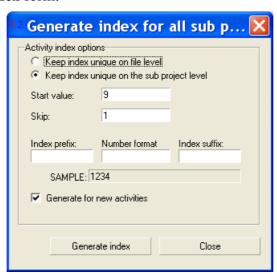
> Select OK to save the Profile.



**NOTE:** The TILOS Help file recommends that the **Update string** field is used for the P3 Activity ID but the templates in this paper use the **Index** field. Both Options were found to work but the advantage of the **Index** field is that this field must be unique. The picture below show what happens if two **Index** fields are assigned the same value:

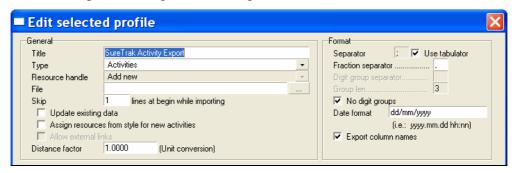


A unique **Index** value may be generated by clicking on the the **Generate Index** form:



# 3.6 Notes on TILOS Profile

This section will explain some points on the profile:



- ➤ **Title** It is recommended that the Title be made exactly the same as the P3 or SureTrak layout that is used in conjunction with the profile
- ➤ **Type** This is where the option of the type of data to be exchanged is selected, Activities, Links (Relationships) or Resources.
- ➤ File TBA
- ➤ Skip Data copied from SureTrak includes the Field name in the first line. This line should not be imported and Skipping one line will prevent this line from being imported. NOTE: If the first line of data is not being imported then check this setting
- ➤ Update existing data Updates existing data as opposed to adding new data.
- ➤ Assign resources from style for new activities TBA.
- ➤ Allow external links TBA.
- **Distance factor** Allows the conversion of say meters to kms.
- **Separator** This is used if the text data is not tab separated.
- **Fraction separator** The is the Decimal point separator.
- ➤ Date format This should match the data being imported.
- **Export column names** Exports the TILOS field names in the first line of data.

# 3.7 P3 Data Import

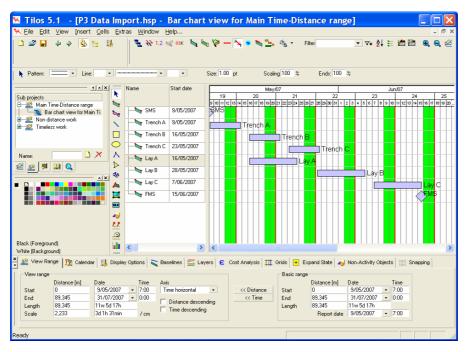
#### Return to P3:

- ➤ Select the P3 activities to be imported into TILOS. Ctl+A will select all the activities,
- ➤ Copy these activities, say with Ctl+C,
- > Return to TILOS.
- From the Export/Import to ascii file form select Import. The text data copied from P3 will be pasted into the Selected fields in the Edit selected profile form, e.g.:

P3 Field	P3 Field Code	TILOS Destination Field
Activity ID	ACT	Index
Activity Description	DES	Title
Early Start	ES	Start date
Duration	DUR	Duration (working days)
Calendar	CAL	Calendar
Type of Work	TOW	Activity Style
Start Chainage	STCH	Start (distance)
Finish Chainage	FNCH	End (distance)

**NOTE:** It is possible to Import the Start and Finish Dates and not import calendars or durations. This may result in the durations being different in P3 and TILOS when calendars have different workdays. With earlier versions of TILOS when the Start and Finish dates were imported the duration in TILOS was displayed one day shorter than in P3 as a result this document imports the Start Date and Duration. This issue was fixed with Hot Fix Tilos\_5.1.07\_EN.

- ➤ The Finish Milestone is not displayed. To display it, type in the date in the Finish date Field.
- > Your schedule should look like this:



# 3.8 Tips on Formatting

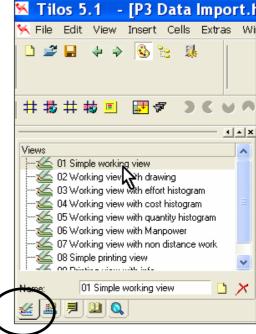
Function	Command
Zoom	buttons are used for zooming
Format the Columns in the bar chart view	Right click in the column area and select Columns.
Display Options	Click in the Bar Chart area, select the <b>Display Options</b> tab, see above, and click on display links.
Display the Critical Path	icon on Main Toolbar
Display Total Float	icon on Main Toolbar
Display Free Float	icon on Main Toolbar
Display Constraints	icon on Main Toolbar
Display Report Line (Data Date)	icon on Main Toolbar
Display Links (Relationship Lines)	icon on Main Toolbar
Display Progress	icon on Main Toolbar
Concatenate the Index and name in the name field	icon on Main Toolbar

# 3.9 Displaying & Formatting TILOS

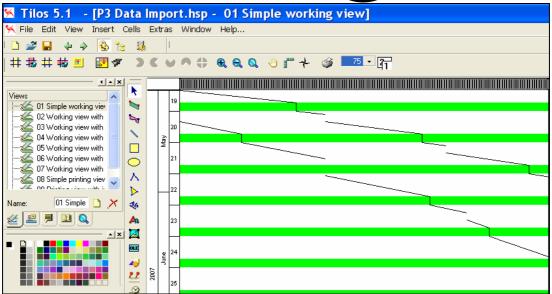
#### 3.9.1 Displaying a March Chart

To display the March Chart:

- > Select the Views tab in the Navigator Window,
- > Select the 01 Simple Working View,



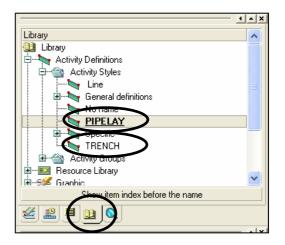
Your screen should look like this:



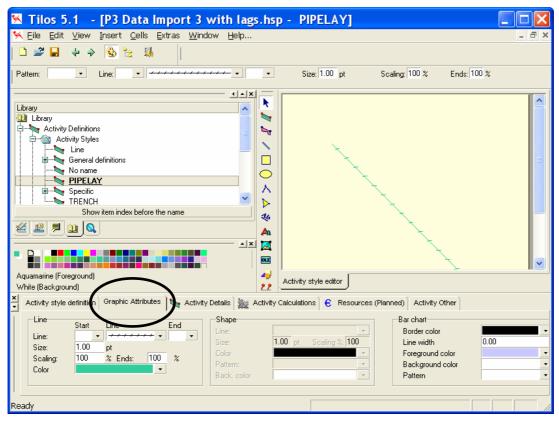
#### 3.9.2 Formatting the Line Style

To format the style:

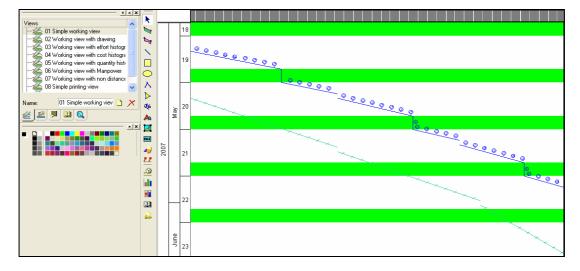
- Select the Library tab in the Navigator Window,
- Two new Styles have been created, PIPELAY and TRENCH which have imported from P3.



- ➤ Double click on the **PIPELAY** to open the **Property** window for the **PIPELAY** Line style:
- > Select the **Graphics Attribute** where the color and line format may be edited.



- Select the Views tab in the Navigator Window,
- > Select the 01 Simple Working View,
- ➤ Your activities will now be reformatted:



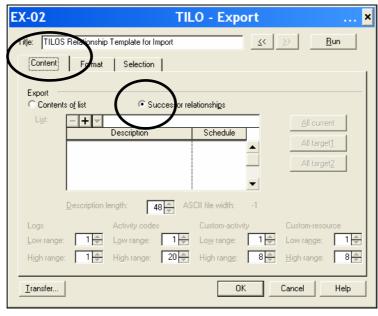
# 3.10 Importing Logic from P3

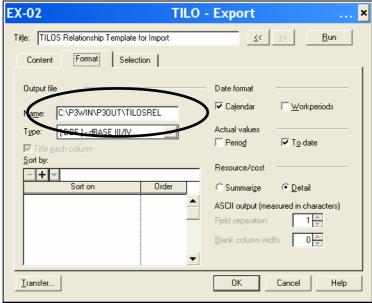
TILOS has several fields for recording the Activity ID:

- ➤ The **ID** is a unique number assigned by the system (and is similar to the Microsoft Project Unique ID). As Activities are added and deleted each new activity is assigned a Unique ID which is not used twice.
- ➤ Activity Index which may be used for recording the P3 Activity ID but TILOS WILL check that this field is unique and this is the recommended field to store the Primavera Activity ID.
- ➤ **Update string** may be used to record the P3 Activity ID but TILOS **WILL NOT** ensure this field is unique.

The following steps outline how to import the relationships:

- > Create an Export in P3 by selecting **Tools**, **Project Utilities**, **Export...**,
- Select and create an Export similar to the one below:

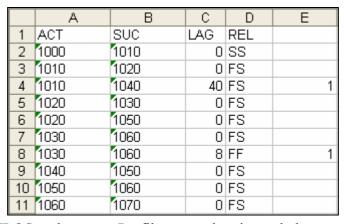




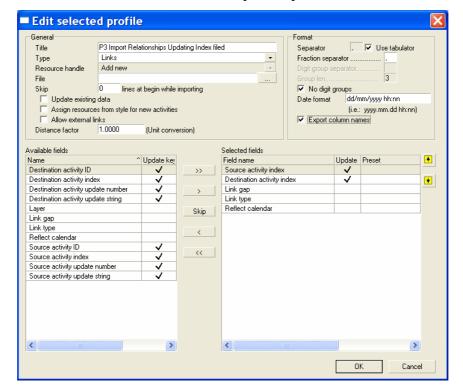
> Run the Export and open the file with Excel, it should look like the picture below:

	Α	В	С	D
1	ACT	SUC	LAG	REL
3	1000	1010	0	SS
3	1010	1020	0	FS
4	1010	1040	5	FS
5	1020	1030	0	FS
6	1020	1050	0	FS
7	1030	1060	0	FS
8	1030	1060	1	FF
9	1040	1050	0	FS
10	1050	1060	0	FS
11	1060	1070	0	FS

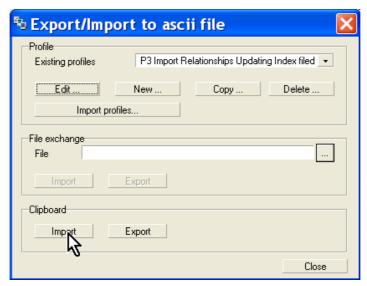
➤ The file needs to be edited as per the picture below which multiplies the lag by 8 to calculate it in hours and adds a 1 in column "E" which makes the relationship calculate using the calendar and not on elapsed durations in TILOS.



> Switch to TILOS and create a Profile as per the picture below:



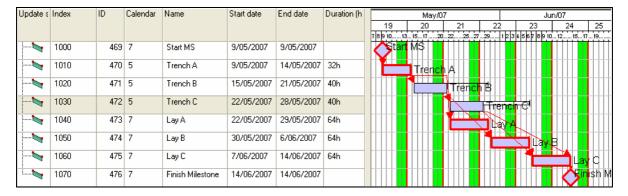
- > Copy the data only from Excel, do not copy the Headers in Row 1 unless the profile is set up to Skip 1 line at begin when importing.
- Select Import to import the relationships:



➤ To ensure the Lags are calculated correctly each lag must have the Lead/lag in working time box clicked, this is produced by importing a "1" into the "Reflect Calendar" field:



- > Press F7 to recalculate the schedule
- Display the Links and Critical Path and your schedule should look like this:



# 3.11 Adding and Editing Logic

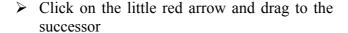
**NOTE:** TILOS activities have a "Virtual" Early Start constraint set to the activity's Early Start date unless they are specifically assigned a predecessor link or a constraint. Total and Free Float are also calculated to the end of the project.

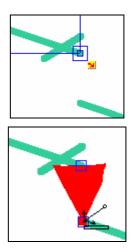
Therefore to be able to recalculate the schedule in TILOS the logic will have to be entered if it has not been imported; there are several methods:

- Adding the logic manually in TILOS using the **Bar chart view**, a **Working view** or the **Activity Links** form.
- > Importing form P3.

### 3.11.1 Adding the logic manually in Working view

> Select a line:





# 3.11.2 Adding the logic manually in Bar chart view

> Select the **Bar chart view** from the **Navigator** window and use the same process as the **Working view** method.

#### 3.11.3 Adding the logic manually in Activity Links form

- > Select a bar or line,
- > Open the **Activity Links** form,
- > Right click in the form
- > Select Add element.

## 3.11.4 Editing a Link

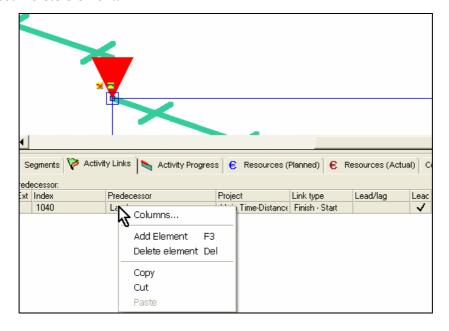
- > Click on the link
- > The bottom window will change,
- > Select the **Activity link** form,



- > Synchronise successor distance "so that the link between two activities applies to the distance coordinates as well as time".
- > Synchronise successor speed may be used when both activities are assigned a Work rate and Work.

## 3.11.5 Deleting a link

- > Select the line or bars associate with link,
- > Open the **Activity Links** tab in the bottom widow,
- > Right click on the link, and
- > Select Delete element.

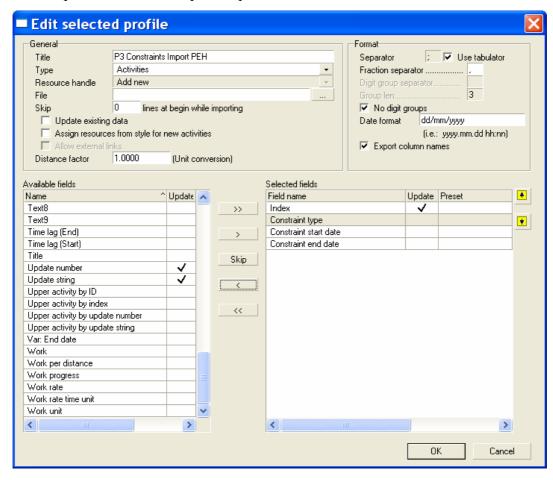


# 3.12 Importing Constraints from P3

The picture below show the TILOS constraints mapped to the P3/SureTrak constraints:

TILOS Constraint Type	P3 Constraint Type	P3 Constraint Code
Finish on	Expected finish	XF
Finish on or after	Early Finish	EF
Finish on or before	Late Finish	LF
Start on	Start on	ON
Start on or after	Early Start	ES
Start on or before	Late Start	LS
Work Between	Early Start + Late Finish	ES & LF
No TILOS Equivalent	Mandatory Start	MS
No TILOS Equivalent	Mandatory Finish	MF
No TILOS Equivalent	Zero total float	ZT
No TILOS Equivalent	Zero free float	ZF

A TILOS import was created as per the picture below:



When an export was run using this form it did not Export the Constraint Type, the picture below shows the result:

	Α	В	С	D
1	Index	Constraint type	Constraint start date	Constraint end date
2	1000		18/07/2007	18/07/2007
3	1010		18/07/2007	18/07/2007
4	1020		18/07/2007	18/07/2007
5	1030		18/07/2007	18/07/2007
6	1040		4/06/2007	18/07/2007
7	1050		18/07/2007	18/07/2007
8	1060		18/07/2007	18/07/2007
9	1070		18/07/2007	22/06/2007

Activity 1040 has an Early Start constraint assigned and 1070 a Late Finish assigned but these were not exported.

The highlighted fields in the picture below were copied and attempted to be imported but did import:

	Α	В	С	D
1	Index	Constraint type	Constraint start date	Constraint end date
2	1000		18/07/2007	18/07/2007
3	1010		18/07/2007	18/07/2007
4	1020		18/07/2007	18/07/2007
5	1030		18/07/2007	18/07/2007
6	1040	Start on or after	4/06/2007	18/07/2007
7	1050		18/07/2007	18/07/2007
8	1060		18/07/2007	18/07/2007
9	1070		18/07/2007	22/06/2007

**NOTE:** Currently TILOS will neither import nor export the Constraint type but this feature may be switched on in due course.

Therefore constraints will have to be manually transferred from P3 to TILOS until this issue is resolved.

#### 4 IMPORTING DATA FROM TILOS INTO P3

P3 does not allow pasting of data but has an import function. SureTrak does allow pasting of data. Therefore there are two options for importing data from TILOS to P3.

- > Copy and paste into SureTrak and open with P3, or
- ➤ Using the P3 Import function.

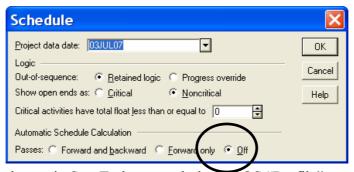
**NOTE:** The SureTrak is by far the simpler option for importing data as a file created by SureTrak be opened with P3 when save in a P3 (Concentric) format. P3 does generate some issues when managing large schedules created with SureTrak and it is often recommended that large P3 resourced P3 schedules which are being levelled should not be opened with SureTrak. Deleting the \*\*\*STW.P3 file often resolves any levelling errors with a P3 schedule.

You will have a choice of importing the TILOS Activity ID, or populating the TILOS **INDEX** field with an Activity ID that you wish to import into P3 or SureTrak.

# 4.1 Importing Activities using SureTrak

To import into SureTrak:

- ➤ Create a new project in SureTrak with the same **Project start date** as the TILOS schedule,
- ➤ Edit the calendars to match the TILOS calendars, this will ensure the Finish Date will calculate correctly from the Start Date plus the Duration,
- Add Activity Code Dictionaries to match the data to be imported from TILOS,
- > Select <u>Tools</u>, Schedule... and switch Automatic Schedule Calculation off, this prevents imported data from rescheduling when the logic has not been imported.

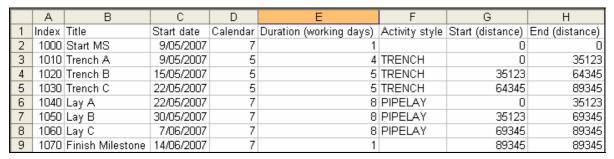


> Set up the columns in SureTrak to match the TILOS "Profile".

**NOTE:** Ensure the Calendar column is to the left of the Duration so the Finish Date is correctly calculated in SureTrak. Thus the activity will be assigned a calendar first and then the duration.

- > Switch to TILOS
- Ensure the Calendars are renamed to match the SureTrak Calendar IDs,
- > Run the Export to Clipboard from the From the Export/Import to ascii file form,

➤ To check the data open Excel and paste, the picture below shows the Index field has been imported, but the TILOS Activity ID could also be used:

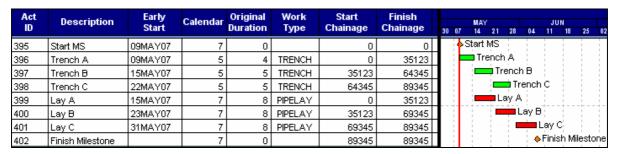


**NOTE:** You will notice that zero duration activities are blanks in TILOS and export with a duration of 1 day.

> Switch to SureTrak and select Edit, Paste Activity...:



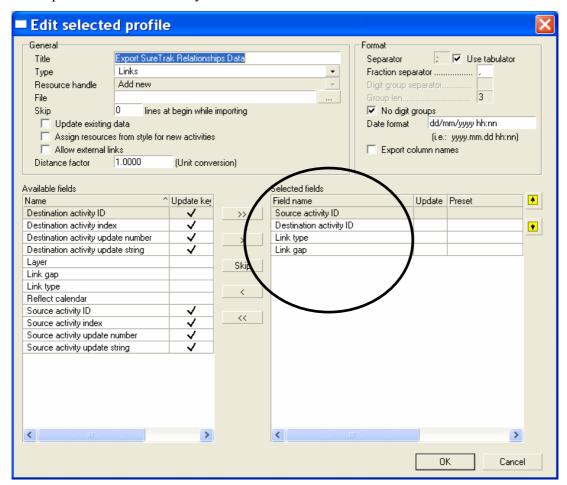
- ➤ Select the appropriate option and click OK
- ➤ Change the Activity Types of the Start and Finish Milestones as required, the picture below shows the TILOS Activity ID has been imported:



# 4.2 Import Relationships from TILOS to SureTrak

Relationships may be pasted into SureTrak when the appropriate columns are displayed.

➤ Create a TILOS "Profile" as per the picture below, you need to decide if you are to use the TILOS activity ID or populate the TILOS Index with an Activity ID and then import the TILOS activity index:



> Run the Clipboard Export.

**NOTE:** There were several issues found when the Relationships were pasted directly into SureTrak:

- ➤ The Lags were not exported from TILOS in hours. These have to be manually edited in SureTrak or the data pasted into Excel and recalculated to days by dividing by the appropriate value normally 8..
- ➤ The TILOS Relationship types format are not imported into SureTrak and have to be manually edited before importing, e.g. "SS" changed to "SS- Start to Start"
- The last relationship was not imported into SureTrak and needed to be manually added, or a dummy relationship added to the file before pasting.

Successors Trench A 396 Trench B 397 398 Organize 399 400 Organize by G Activity data item C Outline C Work breakdown 401 402 - + ▼ Predecessors Bkgrnd Text New page Group by Ascend Arial, regular, 8 None Display Sort by: ▼ Description Order Order by Uncategorized and unassigned activities Topic activities ☑ Empty WBS bands ▼ Reorganize automatically Sample Predecessors ΟK Cancel Help

> Create a SureTrak Layout as per the picture below:

> Paste the exported relationships into Excel, they will look like the picture below:

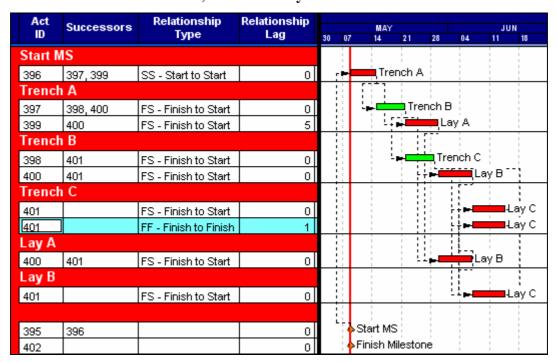
Source activity ID	Destination activity ID	Link type	Link gap
396	397	FS	0:00
395	396	SS	0:00
			120:00:0
396	399	FS	0
397	398	FS	0:00
399	400	FS	0:00
397	400	FS	0:00
398	401	FS	0:00
400	401	FS	0:00
401	402	FS	0:00
398	401	FF	24:00:00

- ➤ The Link Gap is formatted as hhh:mm:ss, reformat this a General using **Format**, **Cells** and convert to day's duration.
- The FF and SS need to be formatted as per the as per the picture below:

396	397	FS	-
395	396	SS - Start to Start	-
396	399	FS	5.00
397	398	FS	-
399	400	FS	-
397	400	FS	-
398	401	FS	-
400	401	FS	-
401	402	FS	-
398	401	FF - Finish to Finish	1.00

> Copy the cells without the headers,

> From SureTrak select Edit, Paste Activity...:



Reorganise by Activity ID:

Act	Description	Early	Calendar	Original	MAY			JUN		
ID		Start		Duration 3		7 14 21	28	04	11	18
395	Start MS	09MAY07	7	0	- 1	Start MS				
396	Trench A	09MAY07	5	4	÷	Trenc	hΑ		1	-
397	Trench B	15MAY07	5	5	i	T	renc	hΒ	i	
398	Trench C	22MAY07	5	5		-	iii 📥	rench	Ċ	
399	Lay A	22MAY07	7	8		= <del> </del>	Ļ	ay A		11
400	Lay B	30MAY07	7	8	1	1 1	- 🛉	<b>—</b> L	ay E	H
401	Lay C	07JUN07	7	8			-   -	- <b>F</b>	<del>-</del>	Lay C
402	Finish Milestone		7	0	- 1	Finish Mi	lesto	ne	!	1

- > Add the last relationship and
- > Recalculate by Pressing **F9**.

Act ID	Description	Early Start	Calendar	Original Duration	30 07	MAY 14	21	28	04	JI 11	JN 18	25	02	J1 09
395	Start MS	09MAY07	7	0		Start	MS	-			-			-
396	Trench A	09MAY07	5	4	L	📑 Tre	ench	ıΑ	-			1	-	1 1
397	Trench B	15MAY07	5	5	l i l	-	🗖 Tr	encl	hΒ	i		i		
398	Trench C	22MAY07	5	5		- 4		📫 Tr	renct	ηÇ				
399	Lay A	22MAY07	7	8		با	+	Ļ	ау А	· [	11			
400	Lay B	30MAY07	7	8			1.1	-		Lay E	9∦;		-	
401	Lay C	07JUN07	7	8				11	7	÷	Lay i	C¦		
402	Finish Milestone		7	0		-	1	1	-	1.0	Finis	sh Mi	ilesto	one

# 4.3 Importing Activities using P3

There are two options to import the data into P3:

- Import the data into SureTrak, save in P3 (Concentric) format and then open with P3.
- > Import using the P3 Import function.

This section will look at importing using the P3 Import utility.

#### 4.3.1 Background on the P3 Import/Export Utility

This P3 Import/Export utility will work with three file formats,

- Lotus 123
- > DBF
- > Text

The DBF format is usually the best format to use and this procedure will demonstrate using the DBF format which may be edited in Excel.

The P3 Import/Export utility handles two datasets:

- ➤ Activity Data, including resources and codes. Each resource has a line of data for each resource, which duplicates the Activity ID and other data such as dates and durations, and
- > Relationship Data.

The TILOS Import/Export utility handles four datasets:

- Activity Data
- > Relationship Data
- > Resource Planned Data
- Resource Actual Data

Therefore to import a complete unresourced TILOS file into P3:

- Two templates are exported from P3 in DBF format and opened in Excel,
- > Two datasets are exported from TILOS to the clipboard via a Profile,
- The datasets are pasted into the Excel Spreadsheets and edited as required and
- The datasets are imported into P3 using the P3 Import function.

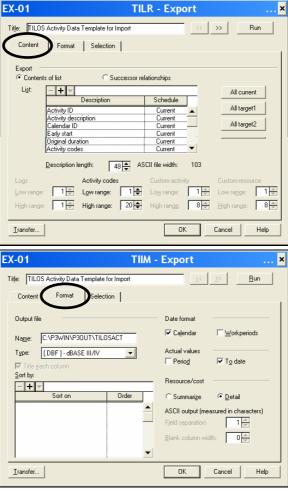
#### 4.3.2 Export Templates from P3

Two templates are exported from P3:

- > Create a new project in P3 with the same **Project start date** as the TILOS schedule,
- ➤ Edit the calendars to match the TILOS calendars, this will ensure the Finish Date will calculate correctly from the Start Date plus the Duration,
- Add Activity Code Dictionaries or CDIs to match the data to be imported from TILOS
- Add two activities with a relationship, lag, description and codes. These will help identify the P3 fields in the exported DBF file.



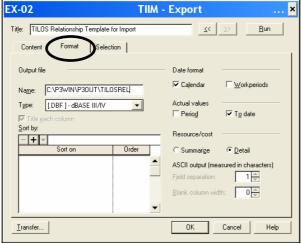
Create a P3 Export profile to export a template to populate with TILOS Activity Data by selecting **Tools**, **Project Utilities**, **Export...** and selecting Add...



- > Select OK to save the P3 Export,
- Select and the file TILOSACT.DBF will normally be saved in the C:\P3WIN\P3OUT and may be opened from with Excel.

- > Create a second Export Profile for the Relationships,
- ➤ Only the Successor Relationships Radio button on the **Content** tab needs to be set:





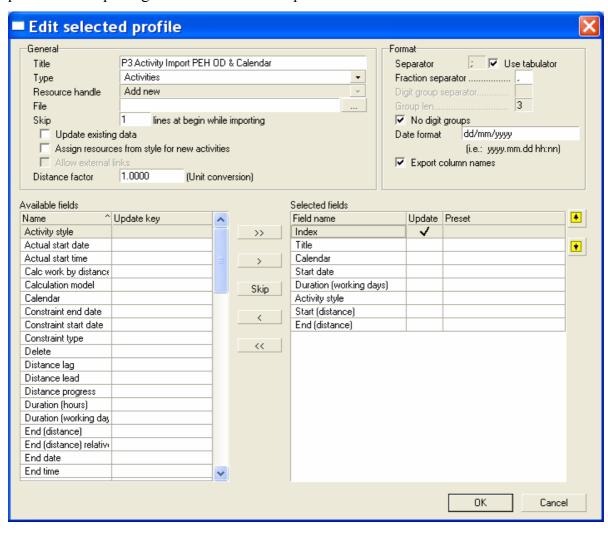
#### 4.3.3 Export Datasets from TILOS

To export Datasets from TILOS:

- > Open the DBF files with Excel
- Export the data from TILOS in the same way as SureTrak see para 3.5,
- ➤ Paste into the appropriate place in Excel after each export.

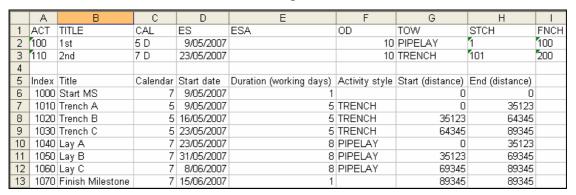
# 4.3.4 Export from TILOS

Create a Profile like the one below which puts the data columns in approximately the right position for importing into P3and run the Export:

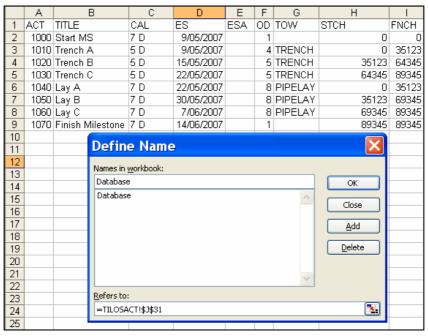


#### 4.3.5 Manipulate Datasets in Excel

- ➤ Open the Activity data DBF file from the C:\P3WIN\P3OUT directory with Excel,
- ➤ Adjust cell widths as required,
- > Paste the TILOS data below the existing data:



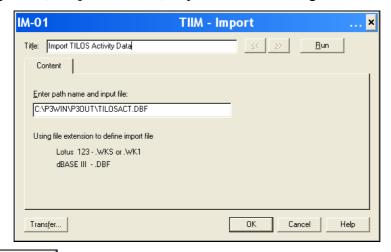
- > Drag the TILOS exported data so it is positioned under the correct P3 field headings,
- Ensure no fields are truncated b adjusting all the column widths. Saving the file as DBF format will truncate hidden text,
- ➤ Add a "Space" & "D" after each calendar number,
- ➤ Ensure the Calendar "CAL" to the left of the Early Start "ES" column so the activities have a calendar before they are assigned a Early Start date, other wise activities with a Saturday or Sunday ES will be moved to Monday and have incorrect Early Start Dates
- Select **Insert**, **Name**, **Define** to open the **Define** Name form and ensure the Named Range **Database** extends over the data to be imported:



- To check the Database range, select "Database" from the box above the Row A title and the range will be highlighted.
- > Save the file ready for import.
- **CLOSE THE FILE IN EXCEL** otherwise P3 will not import it.

### 4.3.6 Import Activity Data into P3

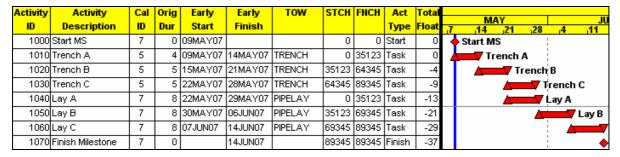
- ➤ Delete the dummy P3 activities created for the Export of the template,
- > Create a P3 Import profile to populate the schedule with TILOS Activity Data by selecting **Tools**, **Project Utilities**, Import... and selecting Add...



- > Select to save the Profile,
- > Select Run and the file TILOSACT.DBF will be imported.

Activity	Activity	Cal	Orig	Early	Early	TOW	STCH	FNCH	Act						
ID	Description	ID	Dur	Start	Finish				Туре	.7	M/	.21	.28	.4	J( _111
395	Start MS	7	1	09MAY07	09MAY07		0	0	Task	7	<b>7</b> Start	MS		 	
396	Trench A	5	4	09MAY07	09MAY07	TRENCH	0	35123	Task	1	7 Tren	ch A			
397	Trench B	5	5	15MAY07	15MAY07	TRENCH	35123	64345	Task		7 <b>//</b>	renc	h B		
398	Trench C	5	5	22MAY07	22MAY07	TRENCH	64345	89345	Task		<del></del>	<b></b> 7	Ггеп	ch C	
399	Lay A	7	8	21MAY07	21MAY07	PIPELAY	0	35123	Task		<del>7</del> —	🖊 L	ay A		
400	Lay B	7	8	28MAY07	28MAY07	PIPELAY	35123	69345	Task		7		<u>₩</u> 1	ay B	
401	Lay C	7	8	05JUN07	05JUN07	PIPELAY	69345	89345	Task		<del>7</del>			<u></u>	Lay C
402	Finish Milestone	7	1	12JUN07	12JUN07		89345	89345	Task		<del></del>				<b>/</b>

- ➤ The displayed duration may be forced to calculate correctly by changing a data field, this may be achieved changing the Activity Type, say to Independent and back to Task.
- ➤ If chainage values are truncated then close down the column width in the DBF file and reimport.
- The Start and Finish Milestones also need to be assigned their activity types.
- Finish Milestones will need to be delayed by one day,
- The Negative Float bar may be hidden as the values are incorrect:



# 4.3.7 Import Relationships into P3

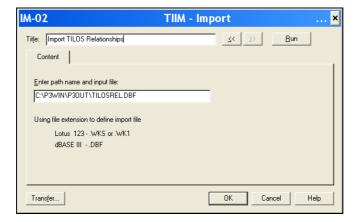
- > Open the Exported P3 relationship file,
- > Export the relationship data from TILOS,
- ➤ Paste the TILOS data below the existing P3 data in Excel,
- Edit the lag as required to change from hours to days,
- > The picture below show the TILOS activity IDs are being used but the TILOS Index could also be used:

	Α	В	С	О
1	ACT	SUC	LAG	REL
2	100	101	0	FS
3				
4	Source activity ID	Destination activity ID	Link type	Link gap
5	396	397	FS	0
6	395	396	SS	0
7	396	399	FS	5
8	397	398	FS	0
9	399	400	FS	0
10	397	400	FS	0
11	398	401	FS	0
12	400	401	FS	0
13	401	402	FS	0
14	398	401	FF	1

- > Drag the new data to the correct location,
- > Delete to existing data,
- Reset the Named range "Database" to include all the new data,

	А	В	С	О
1	ACT	SUC	LAG	REL
2	396	397	0	FS
3	395	396	0	SS
4	396	399	5	FS
5	397	398	0	FS
6	399	400	0	FS
7	397	400	0	FS
8	398	401	0	FS
9	400	401	0	FS
10	401	402	0	FS
11	398	401	1	FF

> Create a P3 Import profile to populate the schedule with the TILOS relationships by selecting **Tools**, **Project Utilities**, Import... and selecting Add...



- > Select OK to save the Profile,
- > Select and the file TILOSREL.DBF will be imported.
- ➤ The project may then be scheduled:

Activity	Activity	Cal	Orig	Early	Early	TOW	STCH	FNCH	Act	Total		200
ID	Description	ID	Dur	Start	Finish				Туре	Float	.7	MAY JUN 14 21 28 4 11 18
395	Start MS	7	0	09MAY07			0	0	Start	0	4	Start MS
396	Trench A	5	4	09MAY07	14MAY07	TRENCH	0	35123	Task	0	I 4	Trench A
397	Trench B	5	5	15MAY07	21MAY07	TRENCH	35123	64345	Task	6	1	Trench B
398	Trench C	5	5	22MAY07	28MAY07	TRENCH	64345	89345	Task	7	1	Ţ-Trench C-
399	Lay A	7	8	22MAY07	29MAY07	PIPELAY	0	35123	Task	0	1	Lay A
400	Lay B	7	8	30MAY07	06JUN07	PIPELAY	35123	69345	Task	0	П	Lay B
401	Lay C	7	8	07JUN07	14JUN07	PIPELAY	69345	89345	Task	0	1	Lay C
402	Finish Milestone	7	0		14JUN07		89345	89345	Finish	0	1	Finish

#### 5 BASELINES

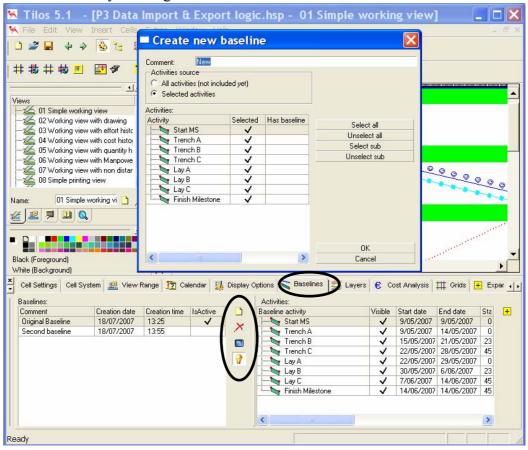
This section will deal with setting baselines and measuring progress:

- ➤ P3 baseline is usually set by copying a complete project and setting it as a Target 1 or Target 2. Some people use Custom Data Items but this will only draw bars on the bar chart and does not calculate any variance values.
- > SureTrak has Target Start and Target Finish dates that are copied from the current schedule as required.
- > TILOS allows setting of multiple Baselines which are saved as part of the project file.

**NOTE**: A TILOS Baseline data may not imported or exported using the ASCII import but the Primavera import/export has a baseline function. A Baseline may be created by importing the schedule that was used to create the baseline.

To create a Baseline in TILOS

- From either the Bar Chart view or a Time Chainage view click in the Bar Chart or a Time Chainage area,
- ➤ Click on the **Baseline** tab in the lower pane,
- > Click on the button to open the Create new baseline form,
- > Select the activities to be baselined.
- ➤ One baseline bar may be displayed in Time Chainage view by clicking on the **IsActive** or the button and hidden by clicking on the button.
- > Delete a baseline by clicking on the button.



#### 6 PROGRESS A TILOS SCHEDULE

## 6.1 Background

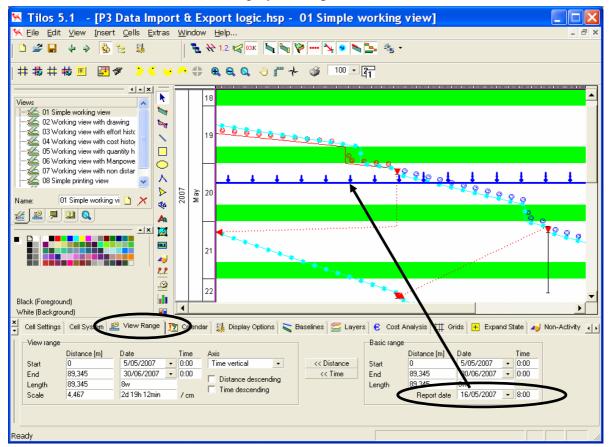
The following notes are aimed at assisting users familiar with P3 in-progress activity calculations to understand how TILOS calculates:

- ➤ TILOS uses a **Report Date** in a similar way to P3/SureTrak Data Date.
- ➤ IMPORTANT POINT: A TILOS activity without a constraint or a predecessor which is in the future of the **Start Date** or **Report Date** has a virtual Early Start constraint which will hold theactivity in the future unless the date is manually changed. This is similar to the way Asta Power Project works but different to Primavera products and Microsoft Project.
- ➤ When a project is scheduled the default effectively calculates linking Remaining Duration and Percentage Complete and uses Progress Override.

## 6.2 Setting the Report Date

To set the **Report Date** (Data Date):

- > Select the Time Chainage View,
- ➤ In the bottom window select the **View Range** tab, and
- Enter the **Report Date** in the field on the bottom right hand side.
- A horizontal may be displayed across the chart to indicate the **Report Date**.
- Click on the button to display the Report Date line.

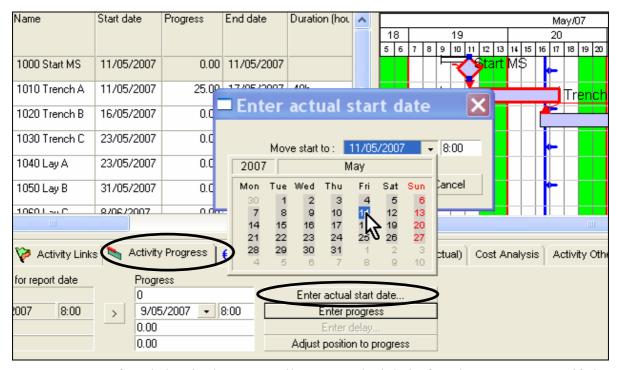


# 6.3 Entering Progress

#### **6.3.1 Progressing Start Milestones**

To enter progress against a TILOS schedule milestones:

- ➤ In the Bar chart view select the **Activity Progress** tab,
- > Select the activity,
- > Click on Enter actual start date to open the Enter actual start date form,
- > Enter the Actual Start for the activity.



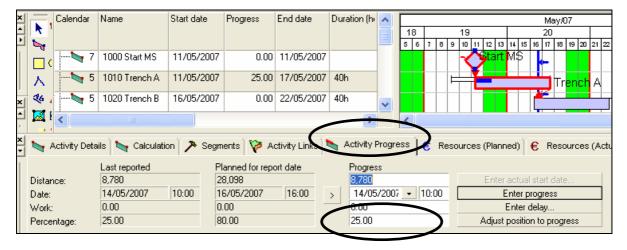
**NOTE:** It was found that is the Start Milestones scheduled after the **Report Line** if the **Progressed** check box in the **Segments** tab had not been checked.

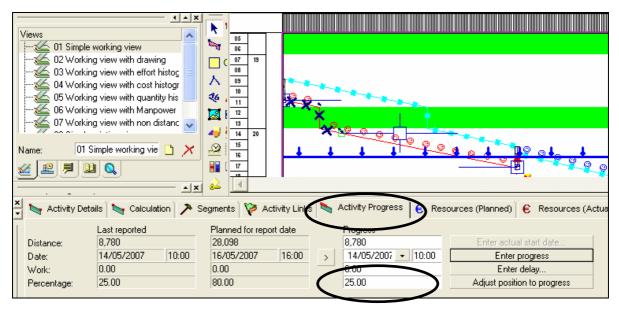


#### **6.3.2** Progressing Activities

To enter progress against a TILOS schedule activities in the **Bar chart view**:

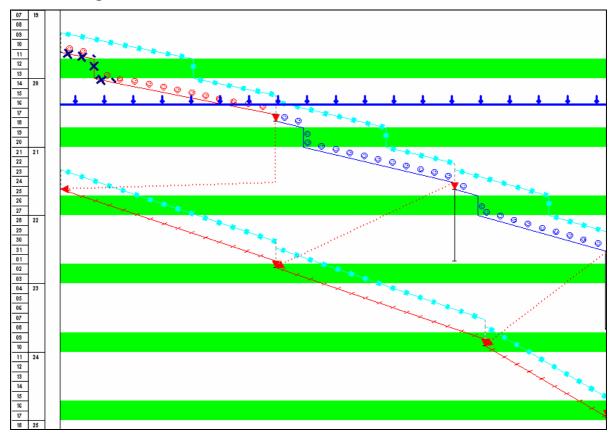
- ➤ In the Bar chart view or Time chainage view select the Activity Progress tab,
- > Select the activity,
- > Click on Enter actual start date to open the Enter actual start date form,
- > Enter the Actual Start for the activity,
- ➤ Enter the Percentage complete:



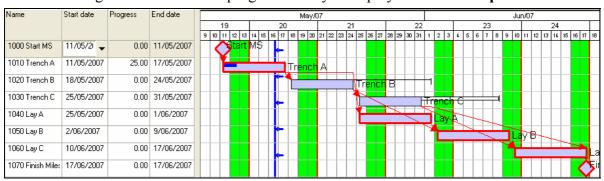


### **6.3.3** Rescheduling the Project

Press F7 to reschedule and the delay to the schedule against the Baseline may be seen in the **Time chainage view**:



The Remaining Duration of the in-progressactivity is displayed after the **Report Line:** 



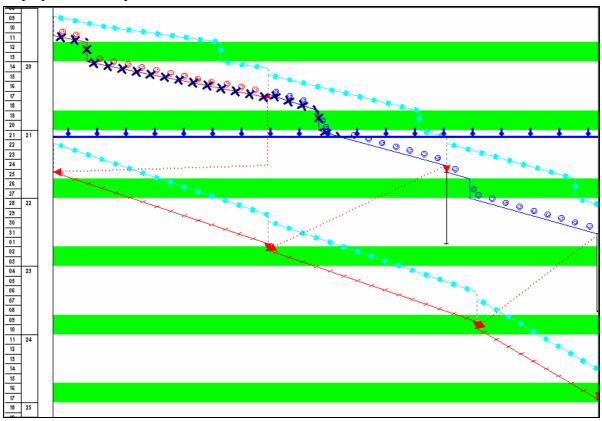
**NOTE:** You will observe that there is no Percent Complete against the Start Milestone.

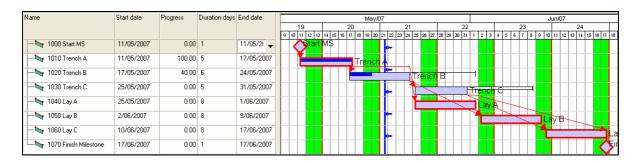
There are methods of recalculating the Remaining Duration which are not covered in this paper.

#### 7 EXPORTING TILOS PROGRESS IMPORTING INTO P3

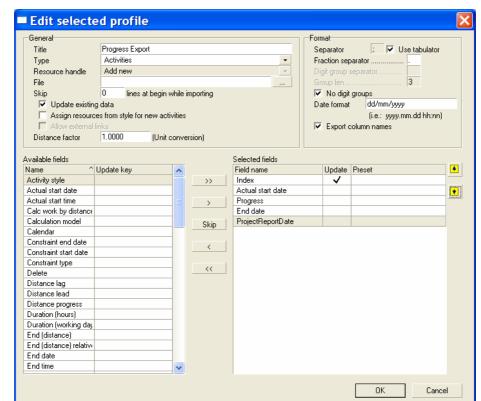
Assuming that an un-progressed schedule has been exported to P3, and possibly a P3 baseline set as Target 1.

The progresses TILOS file may look like the pictures below which display progress and displays some delay from the Baseline:





41



Create a Profile to as per the picture below export TILOS progress:

When pasted into Excel will look like this:

	Α	В	С	D	Ш
1	Index	Actual start date	Progress	End date	ProjectReportDate
2	1000	11/05/2007	0	11/05/2007	21/05/2007
3	1010	11/05/2007	100	17/05/2007	21/05/2007
4	1020	17/05/2007	40	24/05/2007	21/05/2007
5	1030	25/05/2007	0	31/05/2007	21/05/2007
6	1040	25/05/2007	0	1/06/2007	21/05/2007
7	1050	2/06/2007	0	9/06/2007	21/05/2007
8	1060	10/06/2007	0	17/06/2007	21/05/2007
9	1070	17/06/2007	0	17/06/2007	21/05/2007

This data may be imported into P3 in a number of ways, but manipulation will be required to make it suitable to import into P3.

#### **NOTES ON TILOS EXPORT:**

- 1. Milestones are exported with 1 day durations.
- 2. Completed Milestones do not have progress.
- 3. Remaining Duration is not exported.
- 4. All activities are exported with an Actual Start even if they have not started.
- 5. Actual Finish Dates are not exported.

#### NOTES OM PRIMAVERA IMPORT

The following guidelines must be understood so as not to corrupt the P3 data:

- ➤ The TILOS Data Date must be manually entered into P3 and may not be imported.
- Actual Start dates must only be imported into in-progress or completed activities,
- Actual Finish Dates must only be imported into complete activities.
- ➤ P3 will often calculate the Finish date and Remaining Duration without pressing F9 and recalculating the schedule.
- Autocost Rules must be understood. The Link Remaining Duration and Schedule Percent Complete option will affect how the Finish dates are calculated in P3 and depend on what data is imported. It is recommended that the Link Remaining Duration and Schedule Percent Complete is switched off if Early Finish dates and Percent Completes are imported.
- ➤ If the data is imported and the project rescheduled it is very likely to calculate a different answer to TILOS.
- ➤ There are two methods of importing Actuals into P3,
  - o The first uses the AS (Actual Start) and AF (Actual Finish) fields and
  - The second uses the ES (Early Start), ESA (Early Start Actual indicator), EF (Early Finish) and EFA (Early Finish Actual indicator).

**NOTE:** As TILOS exports all the dates in the Actual start date field, irrespective of whether the activity has started or not, the second option is the best column to use.

A Template should be created in the P3 Export to export the fields that will be populated by TILOS export data as per the picture below:



## A project like this:

Activity	Activity	%	Orig	Rem	Early	Early	Total	
ID	Description	Comp	Dur	Dur	Start	Finish	Float	MAY JU
1000	Start MS	0	0	0	09MAY07		0	Start MS
1010	Trench A	0	4	4	09MAY07	14MAY07	0	Trench A
1020	Trench B	0	5	5	15MAY07	21MAY07	6	Trench B
1030	Trench C	0	5	5	22MAY07	28MAY07	7	Trench C
1040	Lay A	0	8	8	22MAY07	29MAY07	0	Lay A
1050	Lay B	0	8	8	30MAY07	06JUN07	0	Lay B
1060	Lay C	0	8	8	07JUN07	14JUN07	0	
1070	Finish Milestone	0	0	0		14JUN07	0	•

Will open in Excel like this:

	Α	В	С	D	Е	F
1	ACT	ES	ESA	PCT	EF	EFA
2	1000	9/05/2007		0.0		
3	1010	9/05/2007		0.0	14/05/2007	
4	1020	15/05/2007		0.0	21/05/2007	
5	1030	22/05/2007		0.0	28/05/2007	
6	1040	22/05/2007		0.0	29/05/2007	
7	1050	30/05/2007		0.0	6/06/2007	
8	1060	7/06/2007		0.0	14/06/2007	
9	1070			0.0	14/06/2007	
10	1080	9/05/2007		0.0	9/05/2007	

The data from the TILOS Export must be manipulated:

➤ The TILOS data could be pasted next to the P3 data:

	Α	В	С	D	Е	F	G	Н	I	J	K	L
	ACT	ES	ESA	PCT	EF	EFA		Index	Actual start	Progress	End date	ProjectReport
1									date			Date
2	1000	11/05/2007		0				1000	11/05/2007	0	11/05/2007	21/05/2007
3	1010	11/05/2007		100	14/05/2007			1010	11/05/2007	100	17/05/2007	21/05/2007
4	1020	17/05/2007		40	21/05/2007			1020	17/05/2007	40	24/05/2007	21/05/2007
5	1030	25/05/2007		0	28/05/2007			1030	25/05/2007	0	31/05/2007	21/05/2007
6	1040	25/05/2007		0	29/05/2007			1040	25/05/2007	0	1/06/2007	21/05/2007
7	1050	2/06/2007		0	6/06/2007			1050	2/06/2007	0	9/06/2007	21/05/2007
8	1060	10/06/2007		0	14/06/2007			1060	10/06/2007	0	17/06/2007	21/05/2007
9	1070	17/06/2007		0	14/06/2007			1070	17/06/2007	0	17/06/2007	21/05/2007

- > TILOS Progress transferred into Primavera PCT fields,
- ➤ Completed Milestones identified and assigned a PCT of 100,
- Any activity which is 100% assigned a A in the ESA and EFA where there is a date,
- > The spreadsheet will look like the picture below:

	Α	В	С	D	Е	F
1	ACT	ES	ESA	PCT	EF	EFA
2	1000	11/05/2007	Α	100	11/05/2007	
3	1010	11/05/2007	Α	100	17/05/2007	Α
4	1020	17/05/2007	Α	40	24/05/2007	
5	1030	25/05/2007		0	31/05/2007	
6	1040	25/05/2007		0	1/06/2007	
7	1050	2/06/2007		0	9/06/2007	
8	1060	10/06/2007		0	17/06/2007	
9	1070	17/06/2007		0	17/06/2007	
10	1080	9/05/2007		0	9/05/2007	

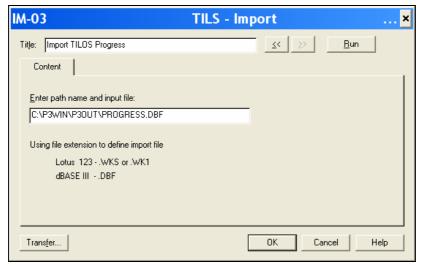
- > Save the file in Excel format in case it has to be edited and at a later date re imported,
- > Save in DBF format, remember this will delete all data outside the named area "Database".
- ➤ In P3 select Tools, Calendars, select the Global Calendar and click on to open the Standard Global Calendar Information form:
- > Set the Data Date to the TILOS Report Line date:



The schedule will look like the picture below:

Activity	Activity	%	Orig	Rem	Early	Early	Total	
ID	Description	Comp	Dur	Dur	Start	Finish	Float	MAY JU 7 14 21 28 4 11
1000	Start MS	0	0	0	09MAY07		0	
1010	Trench A	0	4	4	09MAY07	14MAY07	0	Trench A
1020	Trench B	0	5	5	15MAY07	21MAY07	6	-Trench B
1030	Trench C	0	5	5	22MAY07	28MAY07	7	Trench C
1040	Lay A	0	8	8	22MAY07	29MAY07	0	Lay A
1050	Lay B	0	8	8	30MAY07	06JUN07	0	Lay B
1060	Lay C	0	8	8	07JUN07	14JUN07	0	
1070	Finish Milestone	0	0	0		14JUN07	0	•

> Create a P3 import as per the picture below:



> The Import Run,

> Your schedule should look like the picture below:

Activity	Activity	%	Oria	Rem	Early	Early	Total	
ID	_	Comp	_	Dur	Start	Finish	Float	MAY JUN
	Start MS	0	0		11MAY07A		1000	
1010	Trench A	100	4	0	11MAY07A	17MAY07A		Trench A
1020	Trench B	40	5	4	17MAY07A	24MAY07	3	
1030	Trench C	0	5	5	25MAY07	31MAY07	4	
1040	Lay A	0	8	8	25MAY07	01JUN07	-3	Lay A
1050	Lay B	0	8	8	02JUN07	09JUN07	-3	Lay B,
1060	Lay C	0	8	8	10JUN07	17JUN07	-3	
1070	Finish Milestone	0	0	0		17JUN07	-3	

- ➤ As the Autocost Rule Link Remaining Duration and Schedule Percent Complete is unlinked the remaining duration has been calculated correctly because the Finish date was imported.
- > The Total Float is in the Negative as the Late Dates have not been imported and the schedule not recalculated.
- ➤ When scheduled this has calculated with the same dates and the Float calculated correctly.

Activity	Activity	%	Orig	Rem	Early	Early	Total	
ID	Description	Comp	Dur	Dur	Start	Finish	Float	MAY JUN
	-					1111011	Hout	,7 <u>,14 ,21 ,28 ,4 ,11 ,1</u> 1
1000	Start MS	100	0	0	11MAY07A			□� Start MS
1010	Trench A	100	4	0	11MAY07A	17MAY07A		Trench A
1020	Trench B	40	5	4	17MAY07A	24MAY07	6	
1030	Trench C	0	5	5	25MAY07	31MAY07	6	✓ V-Trench C
1040	Lay A	0	8	8	25MAY07	01JUN07	0	Lay A
1050	Lay B	0	8	8	02JUN07	09JUN07	0	Lay B
1060	Lay C	0	8	8	10JUN07	17JUN07	0	
1070	Finish Milestone	0	0	0		17JUN07	0	□ 🍑

# 8 INDEX

0 INDEA		
		Index field, 10
	<b>A</b>	
	A	<b>T</b>
A stime Ohiost to allow O		L
Active Object toolbar, 9		T.T. 4.1.14
Activity Code, 29		Library tab, 14
Activity Index, 16		Links, 13
Activity link form, 20		
Activity Links form, 19		N
Activity Links tab, 20		11
Activity Progress tab, 38.	. 39	Navigator Window, 7, 14, 15
Automatic Schedule Calc		New project form, 7
Transmant Semenare Care	, ununon, 25	New project form, /
	70	
	В	P
Denote in 20		
Bar chart view, 39		Profile, 5
Baseline, 36		Progress, 13
		Project start date, 23, 29
	C	
	C	R
Calendars, 8		K
CDI, 29		Recalculate, 27
Constraints, 13, 21		Report Date, 37
Content tab, 30		*
Create new baseline, 36		Report Line, 13
	0	Recalculate, 18
Create new profile form:	, 9	Rule Link Remaining Duration and Schedule Percent
Critical Path, 13		Complete, 46
	D	C
	D	S
DBF. 28. 29. 30. 32. 33.		
DBF, 28, 29, 30, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 33, 32, 32		Segments tab, 38
DBF, 28, 29, 30, 32, 33, Define Name form, 32		Segments tab, 38 Skip, 11
	35, 45	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45
		Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37
Define Name form, 32	35, 45 E	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14
Define Name form, 32  Edit selected profile form	E n, 12	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20
Define Name form, 32  Edit selected profile form Enter actual start date for	E 1, 12 2m, 38, 39	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14
Define Name form, 32  Edit selected profile form	E 1, 12 2m, 38, 39	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20
Define Name form, 32  Edit selected profile form Enter actual start date for	E 1, 12 2m, 38, 39	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20
Define Name form, 32  Edit selected profile form Enter actual start date for	E 1, 12 2m, 38, 39 e form, 9, 12, 23	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20
Define Name form, 32  Edit selected profile form Enter actual start date for	E 1, 12 2m, 38, 39	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file	E 1, 12 2m, 38, 39 e form, 9, 12, 23	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11	E 1, 12 2m, 38, 39 e form, 9, 12, 23	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file	E 1, 12 2m, 38, 39 e form, 9, 12, 23	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11	E n, 12 rm, 38, 39 e form, 9, 12, 23 F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file  Fraction separator, 11	E 1, 12 2m, 38, 39 e form, 9, 12, 23	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13	E n, 12 rm, 38, 39 e form, 9, 12, 23 F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13	E n, 12 rm, 38, 39 e form, 9, 12, 23 F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13	E n, 12 rm, 38, 39 e form, 9, 12, 23 F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13	E n, 12 rm, 38, 39 e form, 9, 12, 23  F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16 Update string field, 10
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13	E n, 12 rm, 38, 39 e form, 9, 12, 23 F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13 Generate Index form, 10 Graphics Attribute, 15	E n, 12 rm, 38, 39 e form, 9, 12, 23  F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16 Update string field, 10  V
Define Name form, 32  Edit selected profile form Enter actual start date for Export/Import to ascii file  Fraction separator, 11  Free Float, 13  Generate Index form, 10  Graphics Attribute, 15  ID, 16	E n, 12 rm, 38, 39 e form, 9, 12, 23  F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16 Update string field, 10  V View Range tab, 37
Edit selected profile form Enter actual start date for Export/Import to ascii file Fraction separator, 11 Free Float, 13 Generate Index form, 10 Graphics Attribute, 15	E n, 12 rm, 38, 39 e form, 9, 12, 23  F	Segments tab, 38 Skip, 11 Standard Global Calendar Information form:, 45 Start Date, 37 Styles, 14 Synchronise successor distance, 20 Synchronise successor speed, 20  T Time chainage view, 39 Time Patterns, 8 Total Float, 13, 46  U Update string, 16 Update string field, 10  V