As-Planned Versus As-Built Method

TEC – AP v AB

As Planned Versus As Built in Ms Excel

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TEC APvAB - Download

The "TEC-ApvAB" can be downloaded from the web page https://www.tecsoftware.it/ under the "TEC.GANTT.CHART.Planned.AsBuilt" hyperlink.

Figure 1 – TEC Software Main Page

The TEC-GanttChart has the options to:

☐ **Trial: Download** – from this link can download the zip file that does contain the following key file,
  ○ "TEC_gantt_chart_planned_as_built.xlsb" – The MsExcel VBA routine to Plot the Gantt Chart As Planned vs As Built of a set of Activities extracted and not from any planning tool or system;
  the use of which will be explain in the following chapters.
☐ **Instruction EN** – This instruction manual in PDF format; and
☐ **Video Tutorial** – Video showing the use of the tool, from youtube.

TEC APvAB - Overview

The "TEC-APvAB" is a routine in excel that run a VBA macro, that from a set of key activities attributes will plot the relevant Gantt Chart for the As Plan versus As Built, or any comparison between two schedule start and finish dates.

The routine does work on few simple steps.

Those steps are presented below in a summary way, for a more detail step by step explanation please make reference to next chapter.

Create the Data Set – Planned and Actual Dates

Run the TEC-APvAB MsExcel tool, please do ensure:
- The VBA/Macro are enabled in MsExcel; and
- Enable modification to the file, if been prompt at launch.

Close the Message box been prompt at launch of the tool, Figure 2.
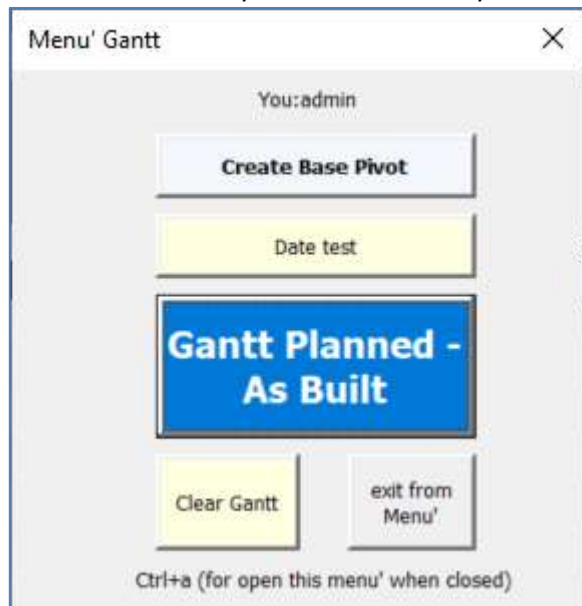It can be call back by "CTRL" + "a" at any time

Figure 2 – Main Menu.

The set of Activities with the planned dates can be recorded into the "Table_Planned", whilst the relevant actuals in "Table_As_Built".
Of Course can compare any two set of activities forecast dates, not necessary planned versus actual.
The structure of the key attributed that need to be entered into the Dates tab holder are:
- **Activity ID** – Unique identifier of the Activity;
- **Activity Name** – Description of the Activity scope;
- **Start Date** – Start date, from the CPM network or entered by the team, depending from the source of the data;
- **Finish Date** – Finish date, from the CPM network or entered by the team, depending from the source of the data;
- **Early Start / Finish** – Non Mandatory, can be left blank, from the CPM network or entered by the team, depending from the source of the data. Can Point to other attributes as well;
- **Latest Start / Finish** - Non Mandatory, can be left blank, from the CPM network or entered by the

team, depending from the source of the data. Can Point to other attributes as well.

The Early and Latest Dates attribute can be left empty if not have or extracted from the planning tool.

Map the Data to the Data Set

When the key activities attributes defined in the previous chapter have been imported into the relevant tabs for the planned and actuals ("Table_Planned","Table_As_Built" respectively), the TEC-APvAB tool allow the flexibility to associate the required key activity attributes as previously defined, in case you do already have and are using a standard activity report from your planning tool.
In "Order & Setup" tab in the range A2:B10 of the tab can define those association, Figure 3 and Figure 4.

TEC.GANTT Comparison Planned Actual	
Columns (sheet TABLE_base_planned)	reference column
Activity ID	1
Activity Name	2
Start	3
Finish	4
Early Start	5
Early Finish	6
Late Start	7
Late Finish	8

Figure 3 – Activity Attribute association

In Column B for each of the key attributes identified in the relevant column A will be input the column from where read in the Data Set saved in "Table" tab.
For example in this case we are mapping:
- Column 1 with the Activity ID;
- Column 2 with the Activity Name;
- Column 3 with the Start date;
- Column 4 with the Finish date;
- Column 5 with the Early Start date. Can be left empty;
- Column 6 with the Late Finish date. Can be left empty;
- Column 7 with the Late Start date. Can be left empty; and
- Column 8 with the Late Finish date. Can be left empty.
Of course, can map to any columns as required from the format of your Data Set export.

	A	B
1	**TEC.GANTT Comparison Planned Actual**	
14	**Type only 5 included forecast**	**Insert color for draw**
15	Planned	4
16	As Built	3
17	to be define	1
18	to be define	3
19	to be define	1
20		
21	**Color reference**	
22		1 actual (suggestion)
23		2 actual (suggestion)
24		3 actual (suggestion)
25		4 actual (suggestion)
26		5 actual (suggestion)
27		6 actual (suggestion)
28		7 actual (suggestion)
29		8 actual (suggestion)
30		9 Not classified
31		10 Forecasted (suggestion)
32		11 Forecasted (suggestion)
33		12 Forecasted (suggestion)
34		13 Forecasted (suggestion)

Figure 4 – Project Definition

In Range from A15 to B19, Figure 4, will define the projects description (in this case "Planned" and "As Built") and the color with which the relevant bar in the Gantt Chart will be plotted, as per the set of palet defined in A21 to B34, Figure 4

Last but not less important, need define the spacing (row height) for the Gantt Chart plotting, and will be defined in zone A39 to B44, Figure 5

	A	B
1	**TEC.GANTT Comparison Planned Actual**	
38	**Hight rows (One item 6 rows)**	**Hight**
39	Height row 1	2
40	Heightrow 2	14.3
41	Height row 3	0.5
42	Height row 4	2
43	Height row 5	14.3
44	Height row 6	5

Figure 5 – Gantt Chart Row Height Definition

Check the Data Set for Compliance

Once the Data Set has been populated and the mapping completed, we are ready to run the TEC-APvAB tool.

It is suggested to make a final check on data consistency, and do ensure all Start, Finish "Date" type.

If presence of any additional character need to be sorted out (such as " A" or "*" for actual date or constrained activities if the Data Set is generated from Primavera P6). It can quickly be sorted out with a "Replace" function of MsExcel.

Late and Early Dates fields can be left empty if the attribute is not available.

With the TEC tool there is a routine to check the dates compliance that can be evoked from the Main Menu and the click the button "Date Test", see Figure 2.Figure 2 –

Plot the Gantt Chart

Data Set defined, mapping completed, check of data consistency done, we are ready to plot the As Planned versus As Built Gantt Chart.
We do envoke the main menu with "CTRL"+"A" and click "GANTT", see Figure 2.
The Gantt Cart comparison will be plot in the "Gantt" tab.
If not already empty form other plot, please empty using the relevant button from the main menu, see Figure 2.

At this point two steps need to be undertaken in order to have the comparison plot.

With the Main Menu, Figure 2, click:
- ✓ "Create Base Pivot"; and
- ✓ "Gantt Planned-As Built".

The result will be as shown in Figure 6

Figure 6 – Comparison Gantt Chart

Milestones are shown with the "M" inside the box and in red color if finish and blue if start ones.

Use the Plotted Gantt Chart

When the Gantt Chart is plotted, it is recommended to copy and paste the result in another MsExcel file, in order to add all the extra necessary information you may require.
As can see between each row representing an activity there is an empty row a reduced height. This can be modified, manually, in order to add extra text or graphic as required.

Key Do & Don'ts

The TEC-APvAB tool is running using MsExcel and VBA, so it is recommended to

DO
- ✓ Enable the Content;
- ✓ Enable the Macros / VBA; and
- ✓ Experiment within reason and complying with the DON'TS.

DON'TS
- ✓ Save the file with different extension than the ".xlxb";
- ✓ Change name to the tabs;
- ✓ Change the "Gantt" tabs layout into the tool file; and
- ✓ Use non Date format for Start and Finish date.

Unlock of the TEC-APvAB Tool

If you find the tool of use and
- ➢ want to unlock the time trial version, please contact the service department at sales@mediaoncloud.it
- ➢ for any technical query contact the tec.planner@outlook.com