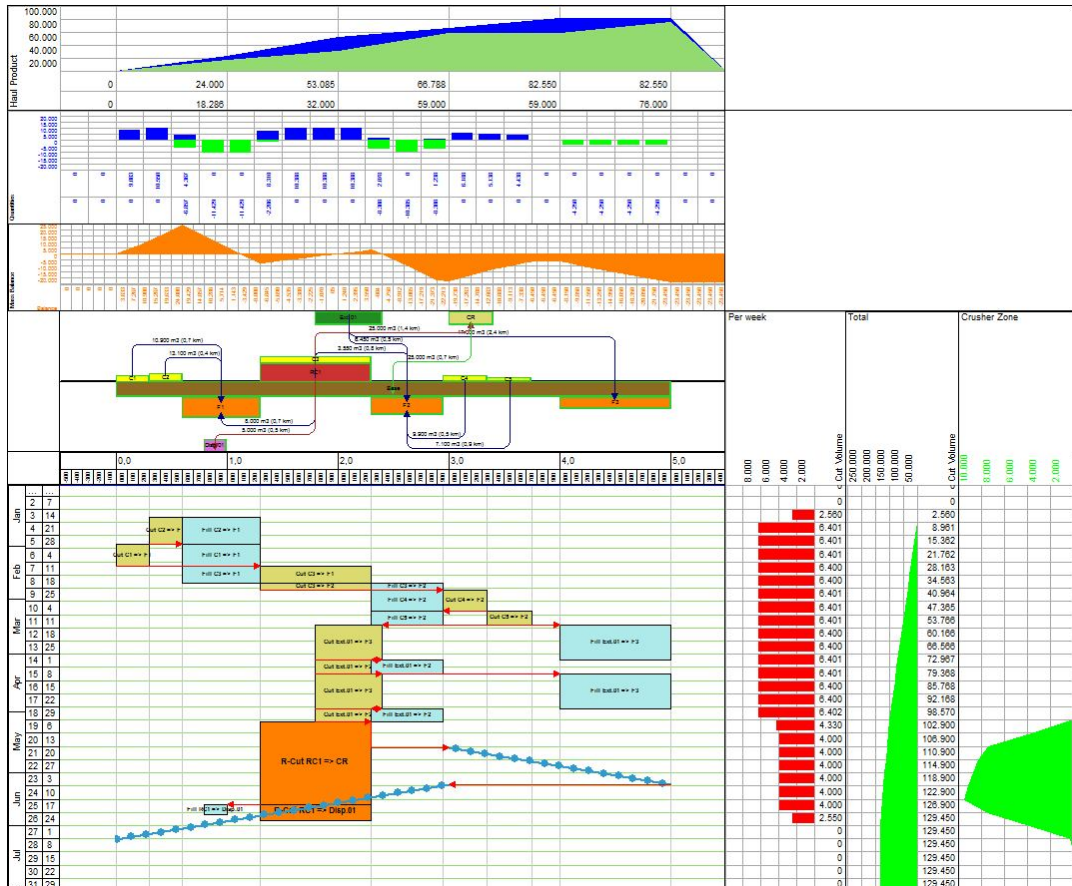# What is new in TILOS 8

Increased Speed - More Capacity - Greater Flexibility

Maximum value for your company!

TILOS 8 was developed with a new kernel providing the technology for rapid future developments in the coming years.

We have also made many evolutionary little feature enhancements that are not specifically mentioned, but makes working in TILOS 8 a lot easier and comfortable.

Usability

Zooming

The zoom of a view can be directly modified by pressing the control button and using the mouse wheel.

Scrolling

The horizontal scroll position can be changed by pressing the shift button and using the mouse wheel.

Auto scrolling

When creating links or sizing tasks and moving the mouse towards the border of the working windows, the view starts scrolling to make further objects visible.

Multiple instances

TILOS can be started multiple times with different projects. Using drag and drop with the mouse allows data to be copied directly from one project to another. (see: Drag & Drop below)

Architecture

Speed enhancements:

TILOS 8 uses multiple processors/threads to execute the code in parallel. For example: While reschedule runs, you may be edit objects.

Loading projects is up to 20 times quicker, reschedule up to 50 times - as well as importing and exporting data.

Loading grouped and sorted Gantt charts shows up to 100 times quicker.

Tables and Lists:

Name	Index
Bride 02	B02
Bridge 01 (default)	B01

The tables (grids) and the list boxes have been re-engineered to work much faster than before in terms of loading, scrolling and sorting. Each column can be used for sorting by clicking on the column header.

Any column can be locked and only the columns to the right of this are scrolled. This can be done by right-clicking on the column heading and locking the columns to the left.

The whole list can be copied to the Windows clipboard – by right-clicking on any column header.

Multi-edit: Multiple rows (max 500) can be selected and any edits on the Properties Tabs will multi-edit the same data item on all selected items.

Tree structures (task templates) can be moved by drag and drop to change the parent items. In simple lists items can be copied by dragging them.

Drag & Drop
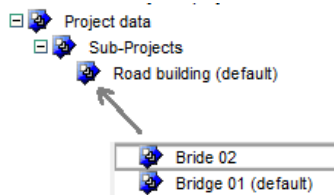
If 2 or more TILOS projects are opened at the same time, data can be copied between the 2 TILOS instances. This works based on the tables (grids), not in the time distance view.

All library items as well as activities can be moved/copied in that way. Missing library items in the destination file are automatically created, if they do not exist in the destination file. For simple items ("other" library objects and graphic)., the "already-exists"-check is done by the name Other items, like task templates, resources or calendars are identified by their ID.

If tasks are copied between sub projects, all new items are created with a new TASK ID.

If a whole sub project is dragged between TILOS instances the behavior is different: If a sub project with the same ID is existing in the destination file, then its tasks will be replaced completely by the sub project that is copied. In this case, tasks from the source project keep their old Task ID from the source file.

This function allows to merge different sub projects into one destination file.

Explorer view
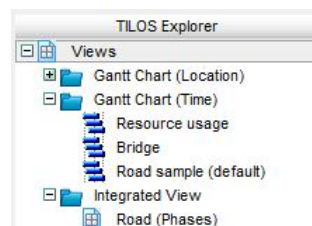
The explorer has now 3 main folders to simplify the navigation:

Views*:*

In the VIEWS-folder all views are grouped by view type. The result is a better overview as all data views are grouped in one place. (The task and link list of version 7 have been moved from sub project context to an own view type in view folder).

Views can be sorted and grouped by type or user defined values.

A few new list views have been defined such as the Micro Progress View, that displays all the micro progress records of a project.

Project data:

All project specific data is stored in this folder. In earlier versions of TILOS those have been partly located in library folder. Now there is a good separation between project specific data and general library data.

Library:

This contains base data not necessarily linked to one specific project - such as task templates, resource and cost library.

Time distance view

Cell wizard

The new cell wizard supports all types of cell content to embed existing cell contents or to create new cell contents in order to view them in a cell. Cell and View setup is more easy and intuitive now.

Multi sub projects

Up to TILOS 7 one time-distance cell could display only 1 sub project. In TILOS 8 now multiple sub projects can be added to be displayed the same time-distance cell. Planning and viewing of data is now more flexible:

- Different scenarios can be overlaid in order to compare them.
- Parts of the project can be planned in separate TILOS files from different persons, merged and then overlaid to highlight the interaction between the different planning states.

Gantt Chart Output

Grouping and sorting

The grouping and sorting options for the Gantt chart view have been enhanced and is much faster in TILOS 8. Different views can be created and saved for later use.

Print to multiple pages

Large projects can be printed to multiple pages by enveloping them to a definable border view around each page of the output.

Hide bars panel

This options allows us to only print the Gantt chart text panel without the gantt bars, For example as a project summary report list with progress and earned value data.

## Enhanced Controlling features

Baseline
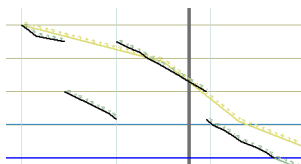
In TILOS 7 baselines were created at the sub project level and each baseline had its own report date. This has been unified in TILOS 8 and the baselines are now global for the whole project.

Newly introduced tasks can be added to existing baselines as an update. Different baselines can be merged to one baseline after conversion from Version 7.

This allows more powerful reports and progress analysis in time distance diagrams where different sub projects are merged in one view.

Histograms
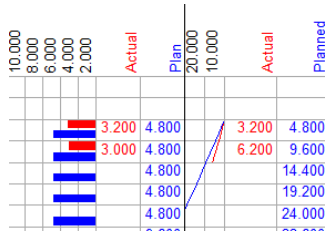
Histograms can display baseline data in TILOS 8 in order to compare them with the original planned values.

The main advantage is to analyze the planned and achieved productivity during execution phase.

Cumulative curves have a new option to draw the lines and show the data only up to the report date.

Dashboard

The dashboard showing performance and earned value data from different crews can now be embedded into a cell of the time distance view.
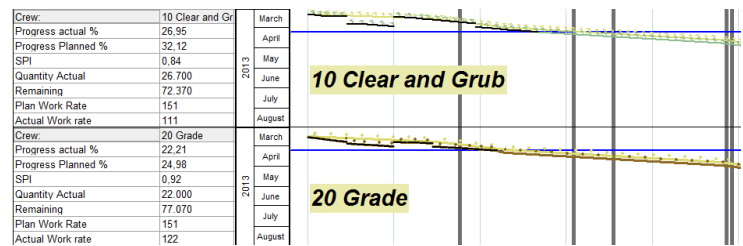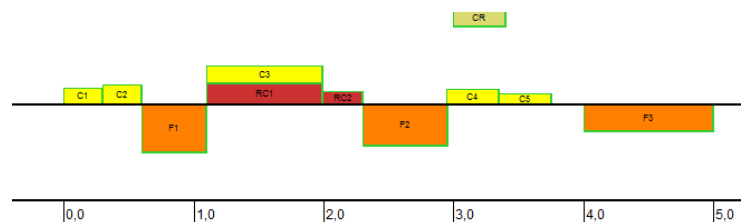

Mass Haulage

Overview

This is a completely new functionality added to TILOS 8 and is designed for heavy civil works. It supports a multistep planning of mass transportations. After importing the quantities and the areas, the haulage itself and the sequencing can be planned more easily and smart.

Mass Diagram

The mass haulage diagram displays all quantities (mass areas) along the distance axis referring to a soil type table.

The diagram displays the main cut and fill areas, borrow pits, dump sites and stockpiles.
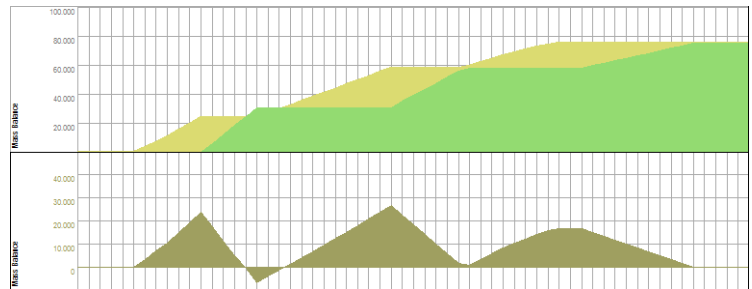
Histograms

Based on the mass areas, diagrams can be defined using TILOS standard functionality:

Cumulative quantity curves showing total cut and fill values and balanced curves preparing the haulage are available. The shortest transports are between the zero line of the balance curve indicating equal cut and fill situation.


Haulage planning

Planning the haulage is interactively done by drawing connectors between the mass areas. On the fly the transport distance and the cut / fill state of each area is analyzed and displayed.
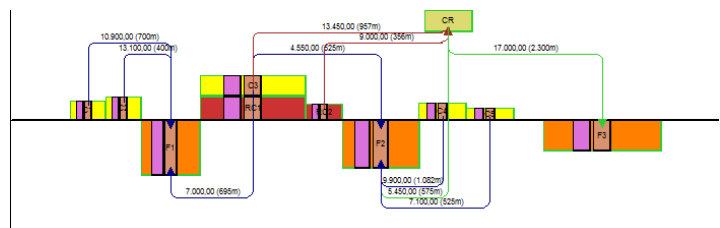

Scheduling

By a wizard you may create from the haulage lines the cut and fill tasks in the time distance diagram. After adding the links, the reschedule process can be activated to calculate the required time for the mass haulage and also the time based usage of the equipment in the diagrams.
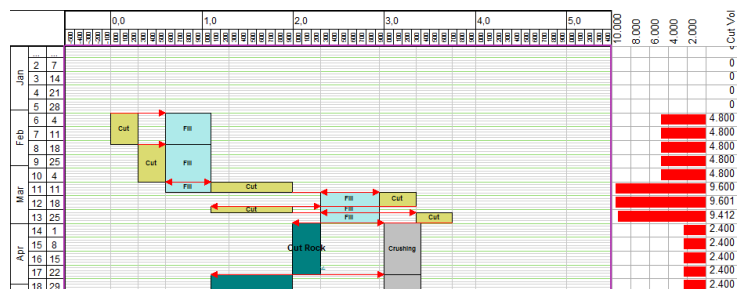
Controlling	The Mass haulage controlling uses the standard reporting function of TILOS. Different progress methods can be used: Direct progress entry or micro progress can be imported. Evaluation is also using the standard functionality of TILOS.
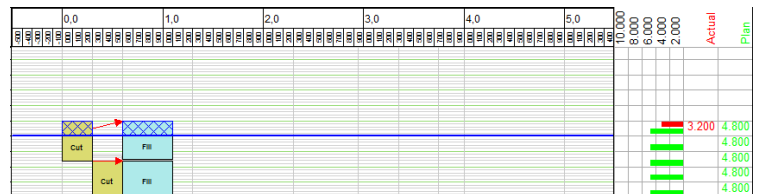
Data Exchange

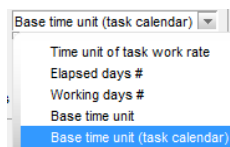|	
General enhancements	The XML profile editor has been integrated into TILOS and it is located in the Tools menu option.
	When creating a data file, the XML profile information can be embedded in that data file. This simplifies the import by using the embedded profile.
	Additional to transfer data by creating a data file, the data exchange in TILOS 8 can directly connect TILOS to the Exchange macros via a TCP-IP based connection.
MS Project	Support for MS Project 2013 has been added.
Primavera	Support for WBS structure that can be exchanged with TILOS directly.
iTWO	A new module has been developed to exchange data with the RIB iTWO software.
	It can import the activitiy model with assigned resource and cost from RIB iTWO. In the reverse way, the TILOS activity model can be exported to iTWO.
	This allows creating the schedule in TILOS and export to iTWO to make the connection with the estimate. The resource loaded schedule can be passed back to TILOS updating the existing activities.

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Other enhancements

WBS Structure

Path		Name	
□ 10		10	Phase 10
□ 10.10		10	Earth Work
10.10.010	010	Top Soil
10.10.020	020	Soil
10.10.030	030	Rock
10.10.040	040	Mud
10.10.050	050	Clearing
□ 10.20		20	Tops

In addition to category structures, a WBS structure can be created and applied to the tasks. This can be used for grouping the data in the Gantt chart based on the WBS code.

Duration display

Base time unit (task calendar)
- Time unit of task work rate
- Elapsed days #
- Working days #
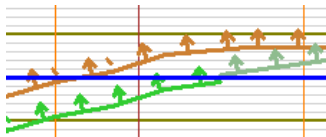- Base time unit
- Base time unit (task calendar)

For each calendar a base time unit can be defined to show working days in relation to the working time defined in that specific calendar. (e.g. 8h days, 10h days depending on the defined working time).

Distance profiles:

More text and user definable data fields have been added.

Line styles

Viewing task progress in TILOS 7, the progress line styles have been overlaid with the line style of the task. In TILOS 8 this can be placed behind the task.

Using the enhanced display mode (Customize colors for progress) for each task, a task individual definition for color and line style can be made for: planned, performed and baseline state of a task.

Lines
Line color:
Line style
☑ Customize Colors for progress
Progressed Color:
Baseline:
Micro Progress
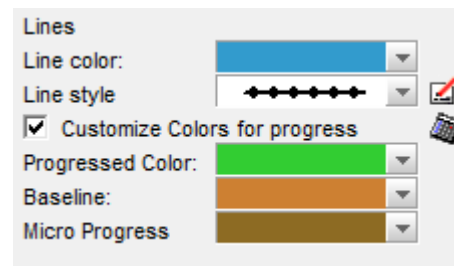
The function "Update task template" updates the task template's color definition as well as all tasks that are already created based on this template.

Task template: Fill Base
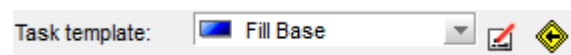
New module: TILOS ProgressMap

View to the earth

TILOS ProgressMap can show your project and schedule on the globe using GIS programs like Google Earth® or ESRI©

The geometry (path, place marks or polygons) can be connected with the schedule data from TILOS. For each path point a distance value is generated that becomes the connector to the TILOS distance coordinates.
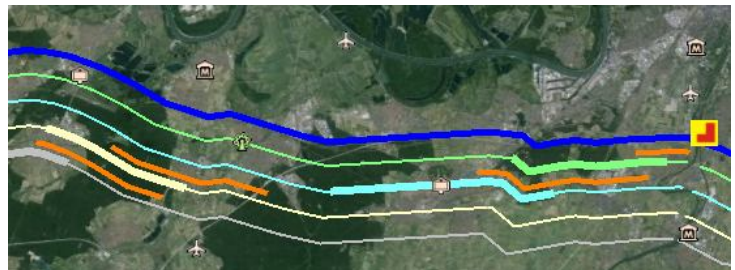
Example: The thick lines displaying work areas of selected crews in week 24-28 April 2013. The orange lines aside are displaying the baselines (Where the crews should have worked according to the initial plan)

The yellow symbol displays that the river drill is progressed by 75 %.

Message: It is not needed to create complex BIM data models to make a simulation of the project execution and to see what is built at each location on the map.

Adding geometry

Geometric data can be imported from KML/KMZ files, which is a standardized format. In addition Spreadsheet tables can also be used to import the geometry with the GPS data.

Adding the schedule

Schedule data is imported from the currently opened project in TILOS. During the import, the data is sliced by time to calculate the work planned for each period.
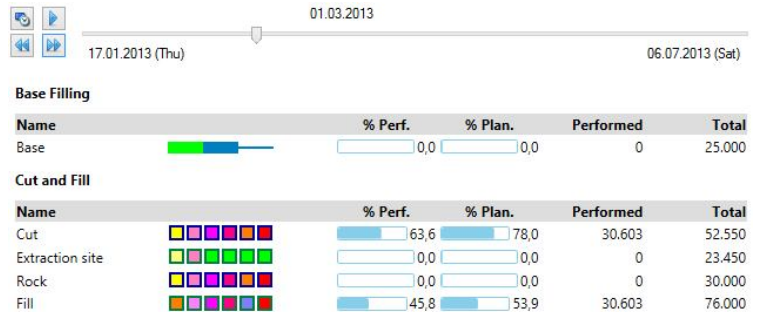
Adding configuration

Simple filter and grouping functions are used to transform the schedule to "moving lines" or to "changing symbols" based on the progress state of the associated activities.
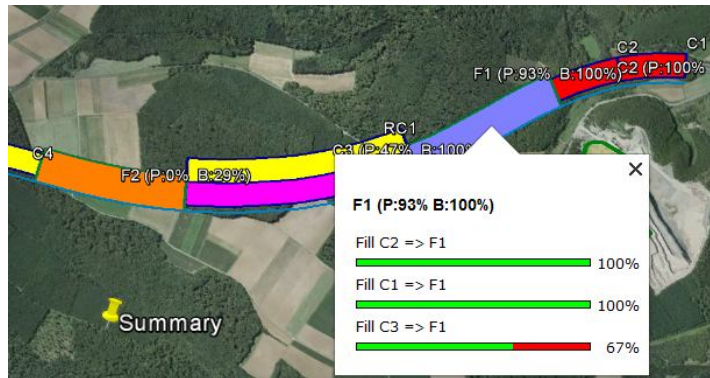
Progress table

The progress table displays the progress situation for each type of work.

Each color corresponds with the % complete of the total cut or fill. The map provides the same overview on each area.

Clicking on an area, all tasks connected with that area become visible.