

## *Tangram Technical Note*

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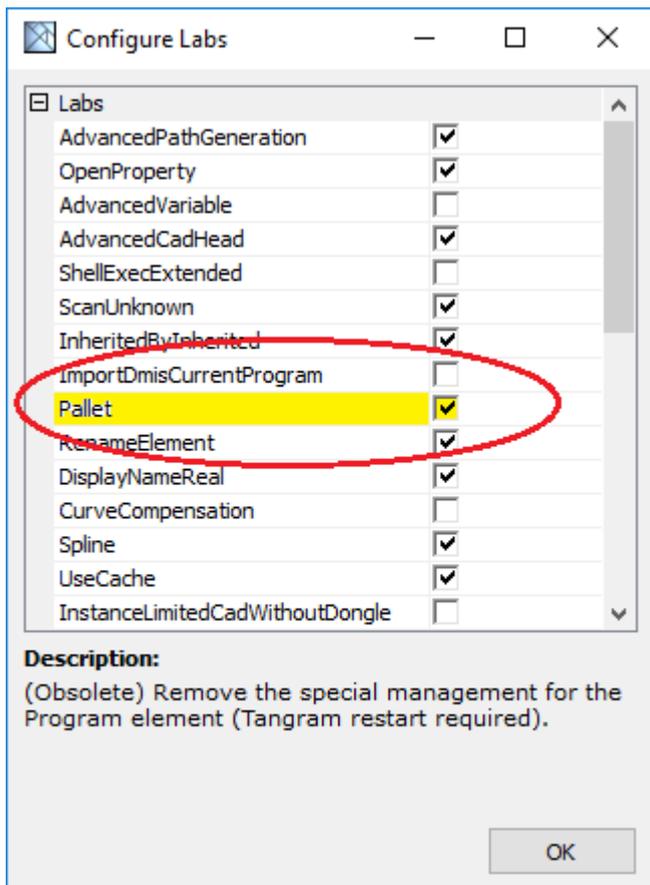
# ***Pallet Management***

### ***Tangram V5***

Rev.	Date	Change Reason
1	16-April-2018	First release
2	24-July-2019	Added Circular Pallet

## Overview

It can happen that small parts can be placed on a single pallet and measured all together. The "Pallet" function in Tangram helps in these cases because it allows you to repeat a predefined number of times the program, following a predefined distribution of parts on the pallet. This option is at the moment "under lab" only because the number of different distribution maps will be extended but, for the first kind of Pallet it is reliable.

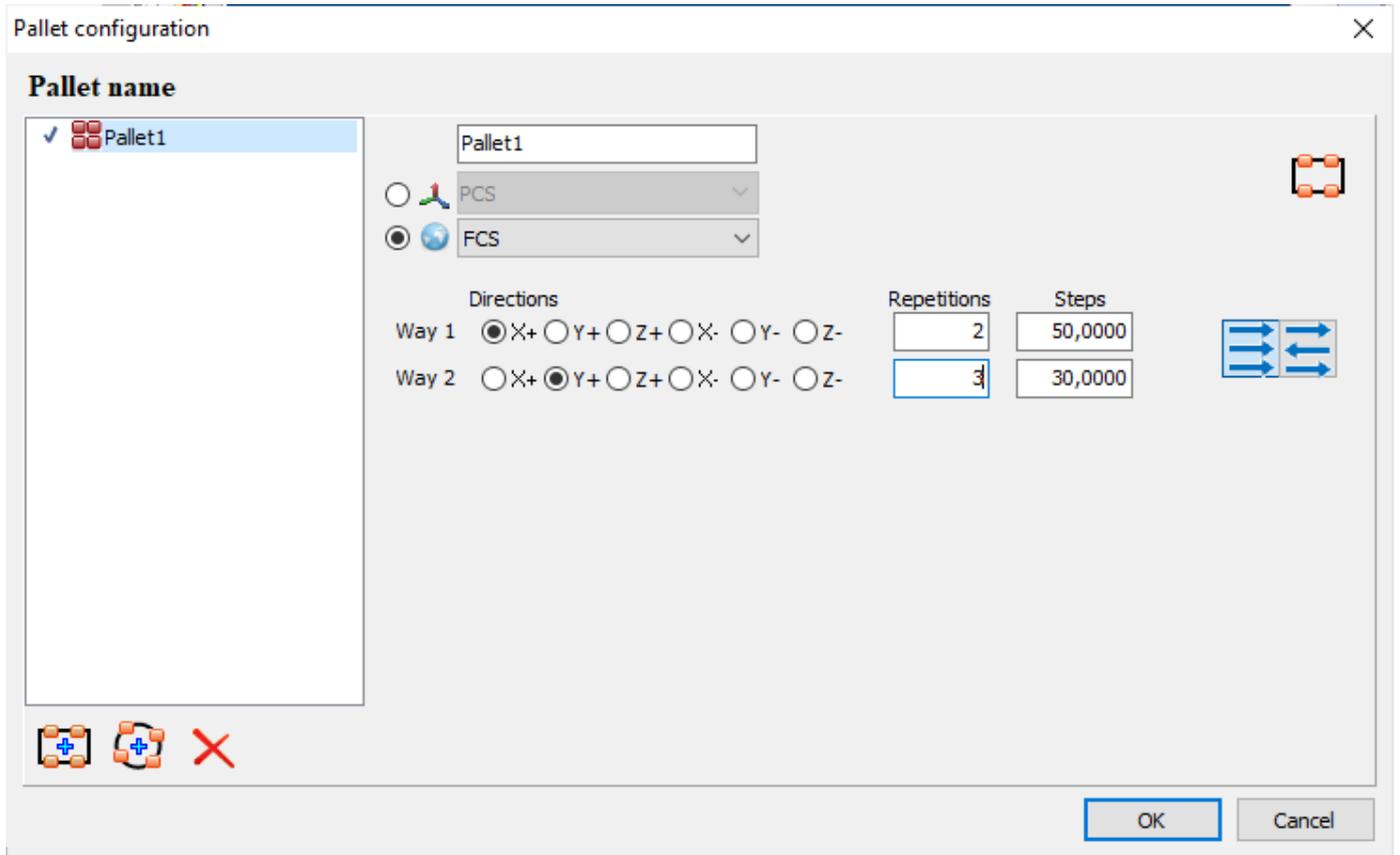


## Define Pallets

When the Pallet function is enabled in Tangram, one more button will appear on the main toolbar, to manage pallets:

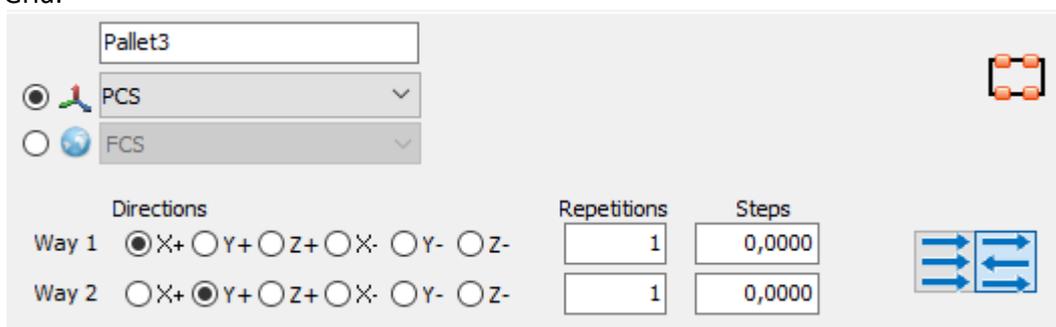


when you click it the first time, the following panel brings up:



Click on the one of the two options  or  to add one pallet definition.  
One Pallet is defined by:

- Name
- Kind of Pallet, "Grid" or "Circular". Both are 2D definitions
- Coordinate System Reference. On which the directions and steps are defined.  
Normally this as a System Reference set on a corner of the Pallet.  
You can chose between a local reference or a global reference
- Geometrical definition depends from the type of Pallet:
  - Grid:



For the two lines of distribution on the grid:

- Direction
- Number of repetitions

- Step between one position and the other

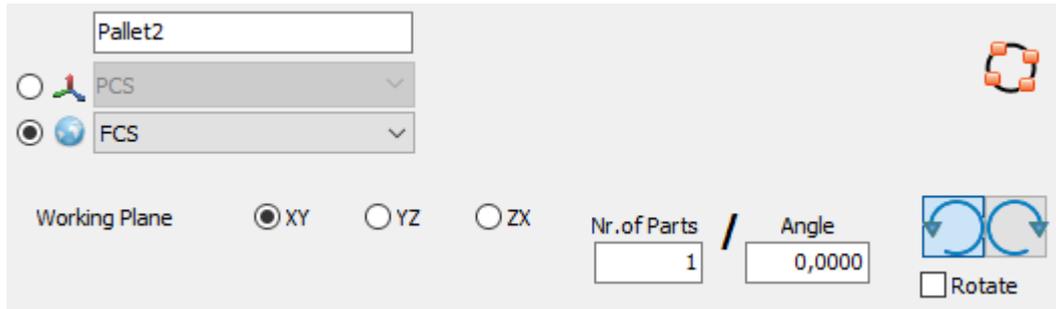


How to walk in the grid, i.e. line by line with same direction



or line by line by a “snake” path

- Circular:



Select the working plane and assign one of the two values, “Nr of parts” or “angular step”. The other is calculated.

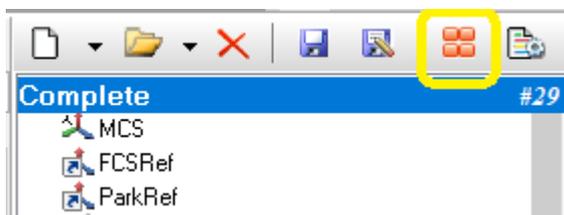
Then select the orientation CW or CCW and set the Rotate option if the parts orientation in each location is not fixed but rotates radially.

You can define more Pallets and chose the right one, case by case.

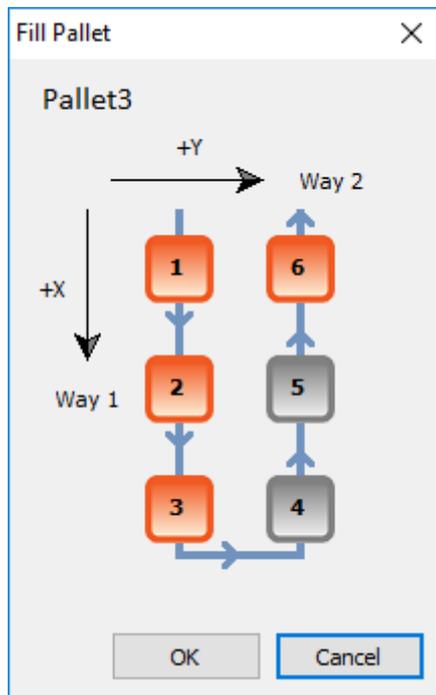
Use  button to remove a pallet from the list  
 Move the check along the list to choose the “current” Pallet

## Using a Pallet

When there are definitions of pallets, in the Program title bar appears the Pallet icon:



When you click on it, the current pallet definition is shown:

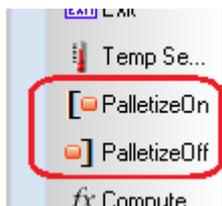


Here you can see the path where the boxes represent the positions of the pieces. Orange box means part present, Grey box means part non present in that position. Click on the boxes to set where there are parts in the pallet. This configuration is stored in the program and will be recalled when you reload it.

## Run time

Very often there are elements in a program to be repeated on a pallet, that must be executed one time only once at the beginning of the cycle or at the end of the cycle.

For this reason, there are two elements in the "Program elements" group dedicated to pallet management. They limit the part of the program that must be repeated.



PalletizeOn → says the part of the program to be repeated start from here

PaletizeOff → says from here on, the elements will be run only after all the pieces on the pallet has been measured.



Each measurement of a part in a pallet is independent and has an independent report. As if it had been executed individually.