

## Classic 3D transformations for adjusting UTM based coordinate systems.

Support Toll Free: (855) 414-9453

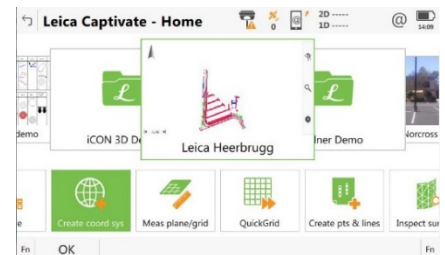
This quickguide outlines the process of using the Classic 3D transformation to adjust a UTM coordinate system to agree with MASCOT/ASCM or other coordinated survey marks. It may be necessary to use the transformation to account for differences between areas of published coordinates, which may be seen because of geological disturbance, or differences between monument coordinates and the broadcast positions reference stations/base used.

It should be reiterated that good survey practices should be followed at all times when using the reference networks (SmartNET) and/or classic 3D transformations on your project. Check into control marks before and after carrying out any survey work, and remember that any classic 3D transformation which fits well with public monuments in one area, may not show good agreement in another area within your area/province/county. It may be necessary to create several classic 3D transformations for different areas.

### Leica Captivate (all firmware versions)

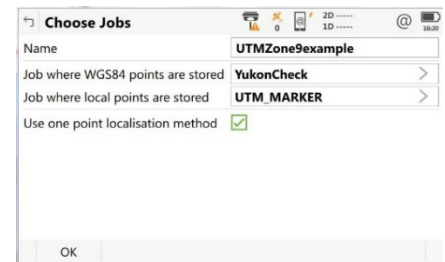
#### 1. Enter the 'Create Coord sys' application

- From the Main Menu, scroll to 'Create coord sys' app.
- Select 'create coord sys'



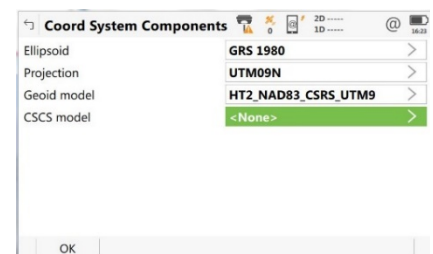
#### 2. Set the new coordinate system in "Determine Coord System"

- Select Type: 'Classic 3D'
- Name the coordinate system to create.
- Create two new projects (or select existing projects)  
The WGS84 job will have a GPS observed point.  
The local job will have the correct UTM coordinates of the mark.  
The coordinate system for the local job must be UTM with a geoid model.
- Check the box (Use one point localization).
- Press OK, then select 'orthometric' as the height mode.



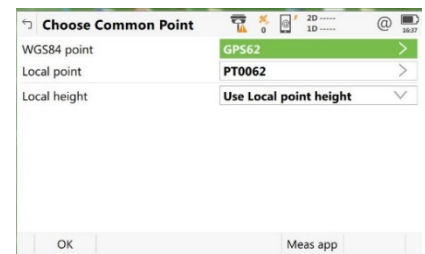
#### 3. Set the parameters of the existing UTM coordinate system.

- A GRS80 ellipsoid and geoid model must be used.



#### 4. Match the surveyed control mark with the actual coordinates

- For the WGS84 point, select the point surveyed with the GPS, or press F5 to survey a new point.
- For the local point, select the point which contains the monument coordinates.
- Select 'use Local point ht'



#### 5. Check the magnitude of the coordinate system adjustment, then press OK to store the new coordinate system. You can now attach this new UTM coordinate system to any new or existing job.