



# OrthoGraph

## suggested syllabus

# Tools for using the OrthoGraph building surveying system

- iPad (Android/multiplatform to come in 2015)
- laser measuring device.

## A few words about the application

The software is developed to speed up the process of building surveying, and to prepare precise manuals. It was designed mainly to measure residential and public buildings but it can handle smaller industrial buildings as well.

## Requirements

- At least one iPad for demonstration purposes but preferably enough devices for every participants of the class.
- The software should be thought for at least 3 hours
- Every participating student should submit one building-surveying project for the lecturer
- Teaching OrthoGraph in a compulsory course.

## What we provide

- Free teacher and student version of the application for each participant of the class.
- Free training for the lecturer
- Access of training materials, tutorials and videos

## First steps - Introducing the U.I., establishing the Location structure, if needed.

**Plotting the first room** - Drawing the approximate shape of the room, paying attention to the Position of the reference line (it should always be on the side which is intended to be measured). Inserting and removing corner points, using the bended wall, and niche options.

**Making measurements** - Applying the first measurement (A Bluetooth laser measuring device may be used), first measurement rescales the drawing, for the following ones the program will dynamically adjust the drawing to the measured distances (This demonstrates well if the room has more than four corners). Colours of the nodes, closing the room pointing out the extra measurement. Hotspot function.

**Basic principles** – always work on one location, measurements are directed, move to the next location after actual location fully measured

**Wall openings** - Placing doors and windows, showing that single leaf doors' door leaf is sensitive to the drawing direction. Locating the exact position of the openings. Measuring the dimensions with nodes, and with the property tool (here the tool can be used on the wall to show it works there as well and it has more options).

**Objects** (stairs, columns, furniture, signs) - Comments and freehand annotations and the difference between them (with annotation you can indicate).

**Adding new location** - Only draw the missing walls, the new location will adjust itself to the previous one. Adding measurements is just like before.

## View options (bottom bar)

**Floorplan** - The standard view option this is where the drawing is executed.

**Property view** - It shows the properties of the currently selected location, these features are changeable or new properties can be added.

**Report view** - Displays the measurements of the currently selected location.

**Background view** - A reference picture (e.g. scanned blueprint) can be set up here as a background, to help with the sketching (can only read picture files).

## Survey tab

**Moving locations** - Connected locations will move together. With two fingers the location can be rotated.

**Pairing wall openings** - The two locations will jump together sharing the opening.

**Pairing walls** - It connects two walls that are already next to each other but otherwise independent of each other.

**Separate walls** - Disconnects the connected walls, works with both pairing method.

**Remove measurement** - Removes all measurements towards the given node, turning the green nodes back to red ones.

**Export** an e-mail/Upload to a Dropbox account in one of the available file formats. Explaining the use of each file format if not known.

**View tab** - Gives options to represent data and visual appearances on screen.

## Permanent toolbar

### Undo/redo

**Zoom** - One tap centers and zooms the currently selected location. Double tap will zoom out and fits the entire project on screen.

**Pan** - Navigate with one finger, rotate with two.

**3D view** - triple viewing options.

**Button navigation** - the viewpoint can be adjusted by using the two buttons on the bottom of the screen. Left button - movement direction, Right button - turning direction. Altitude can be changed by the slider.

**Window view** - Can be used by holding the tablet in front of us and moving it around.

**Model view** - (This might need to be enabled in the Ipad's settings at the OrthoGraph app options within iOS settings.) In Window mode if the tablet is placed on the table the app will switch to Model view in a few seconds. By rotating the tablet the horizontal angle can be adjusted, with the scale on the side of the screen the vertical angle can be set.



We appreciate any comments or suggestions on the following e-mail address:  
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