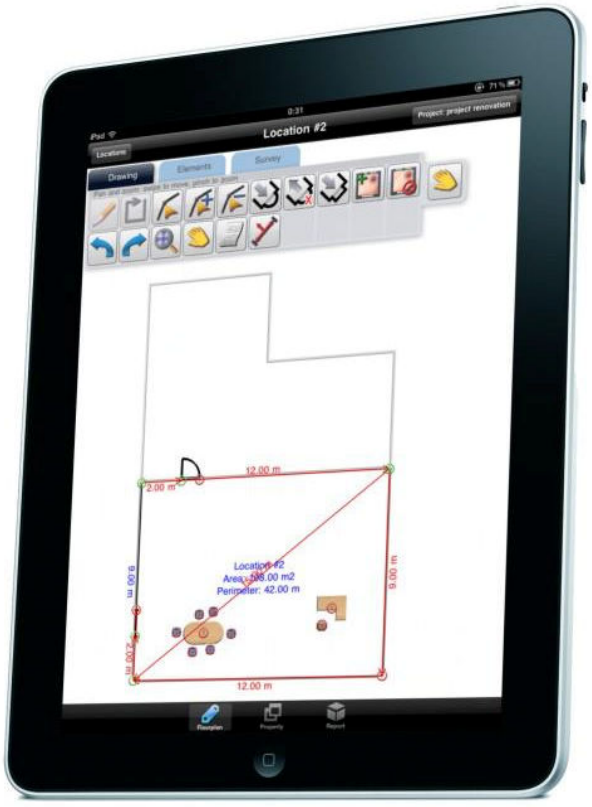
OrthoGraph Architect

User's Manual



Introduction

OrthoGraph is a building survey system developed for the iPad platform. Traditionally OrthoGraph was developed for Windows Mobile devices, but the opportunities of iPad allow a much flexible workflow with very easy to use tools for sketching and measuring floor plans.

OrthoGraph is the only CAD application for the iPad that lets users sketch and create a survey for the production of detailed floor plans with instant graphic feedback on the fly. The unique approach of OrthoGraph is first to build up a hierarchical structure of building elements (land-plots, stories, rooms and room parts), and then each building element can be drawn, just like using a pen and paper. Afterwards, linked to the survey you can push the walls and corners around based on the measured data. This way creating a floor plan takes only a few minutes, and the result is a complete building survey, including an accurate plan, calculated areas, perimeter and detailed reports on the rooms.

Through the Dropbox integration you can upload your ground plan easily to your computer, where you can use it for post processing.

This document is intended to show the main features and functions of the software thus helping you taking the first steps. To start using OrthoGraph Architect as fast as possible we have created a chapter named “OrthoGraph Architect Step by Step” that drives you through the main concept and features of the software. Another important chapter is the detailed function list of the OrthoGraph Architect module that you find in the “OrthoGraph Function List” chapter.

For more help check our forum (http://forum.orthograph.net/), our website (http://www.orthograph.net/), videos on youtube (http://www.youtube.com/user/akorbuly) or contact us via mail (info@orthograph.net).

Contents

OrthoGraph Architect Step by Step

Introduction

Having a floor-plan is necessary in many cases starting from renovation / reconstruction through interior decoration to flooring or real estate utilization. The precision of this kind of document can vary depending on the field you are working in, but in most of the cases you don't have any kind, and if there is any blue print or paper records, they can be old and unreliable.

Here at OrthoGraph we have faced with the same problems many times, and have seen that there are no existing solutions for on-site surveying running on mobile devices. What we found were such solutions that are not focusing on building survey rather on trying to be a CAD software on handhelds. They were slow, difficult, or really hard to use.

This is why we have decided to create a tool for you: a tool for on-site sketch and measurement of real estate data, including the building floor-plan, structure, properties and objects. Please remember: OrthoGraph is not a CAD software, it is for survey, and it was designed mobility.

This document is trying to describe through a simple survey project how to use this software. Later we will expand this document with a bit more complex tasks as well. So let's see first how to survey a simple flat or apartment.

Basics

There is a big difference between the concept of OrthoGraph and average CAD software. As OrthoGraph is designed for supporting the building survey process, the approach is based on the physical process of the activity:

1. you go into a room,
2. look around, then you have an impression about how it looks like
3. create the sketches of the floor plan
4. make it more detailed with housing, bending segments
5. measure the walls and if necessary then the diagonals
6. add wall openings and set their properties
7. measure them
8. place objects and set their properties
9. make photos about anything important

When you are done with a room, then you walk into the next one and repeat the steps above. When you are done with the second room too, then you need to attach the two rooms to each other (Match openings). To minimize the survey error we always recommend selecting a common room like a central corridor, and then attach all further rooms to that particular one room. You could attach rooms to each other like they were in a chain, but then the measurement errors will be added to each other.

Attaching rooms to each other can be done through wall openings (doors or windows). When you attach two rooms to each other, then they will stick, and act like they were one room. We name this functionality "floating islands". The groups of attached or single rooms are acting like islands that can be attached to each other generating a larger island.

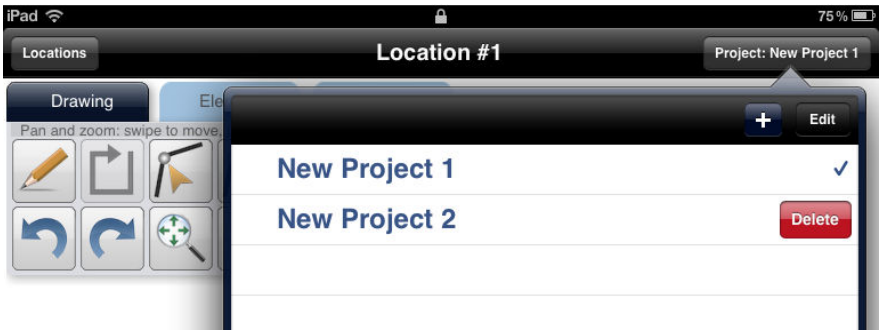
There will be walls that are surveyed from two rooms – from both sides –, but they represent the same wall. To prevent them represented doubled there is a function, which can help you identify these two sides of the same wall. The function

automatically sets the real wall thickness based on the measured data. This feature is also important for having later proper CAD conversion. Through this function a difficult house plan can very simply cleared with all measurements and details.

Anytime you decide to transfer the measured floor-plan to your desktop or to the office for your colleagues, you can simply upload it to your Dropbox account.

If you required calculations from the real measured data (e.g. wall area for painting, floor area for cleaning), just use the embedded report functionality that can make calculation for particular rooms or even for a group of rooms.

Project

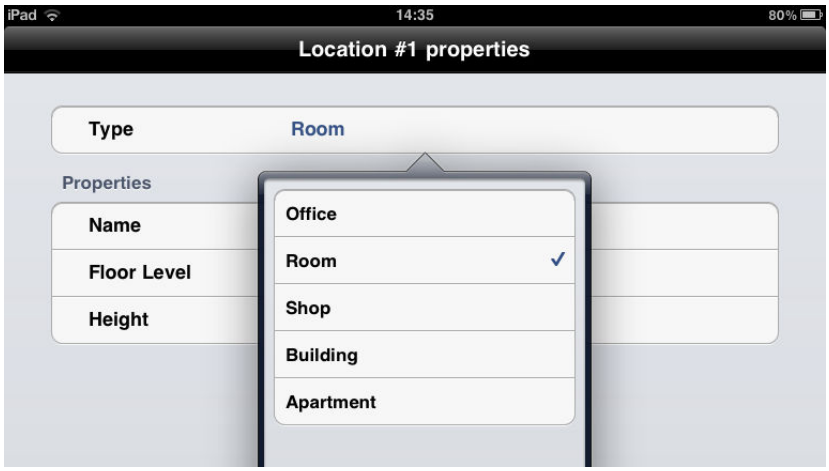


The first step is to create a project. The first time you open OrthoGraph Architect, you will see one project called *New project 1*. You can access the project list on the top right corner on the top status bar.

After pressing the project button you have the project list, where you can modify the name of the project. For this you have to press the **Edit** button on the top right of the project window, or you can add a new project with pressing the **+** sign left to the **Edit** button. You can also delete any project, but you can leave this project window only if you have at least one project open. The delete function is available while editing the project list, left to the project name there is a dash (**-**) sign. After pressing this, a **Delete** button appears on the right side of the project name. If you are not in edit mode, you can make this button appear by swiping your finger to the right or left on the name of the project you want to delete.

Location

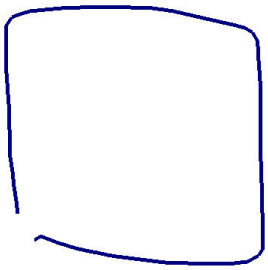
If you have named your project, you can specify a location for the project. Press the Property button on the bottom toolbar, and you get the property window of the current location.



Touch the Name field, and you can change the name of it, and you can also set the two other data. If you touch the Type, you will get a list, where you can set the type of your location. Let's choose Room this time.

Sketch

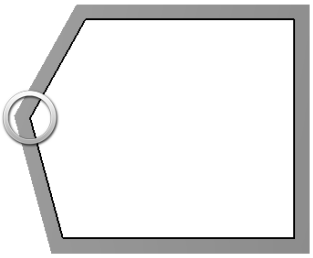
Press the Floorplan button on the bottom bar, and you will go back to the main window.



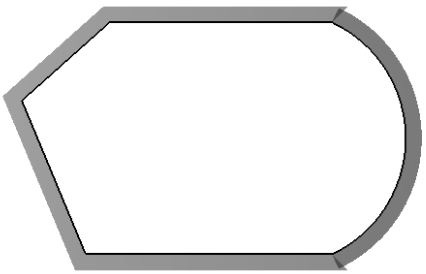
Here you can see a tabbed toolbar with drawing (represented by a pencil) preselected, an empty space where you will draw your floor-plan, and a wall tool. In the wall tool you can set the wall width, and the drawing method. In the signs the arrows represent your drawing direction, and the rectangles represent the wall you see. So if you are drawing your room clockwise, and you are inside the room, you select the first one. Now you can draw the walls of the room with one continuous shape (polygon), so draw with your finger without releasing your finger tip from the touch screen.

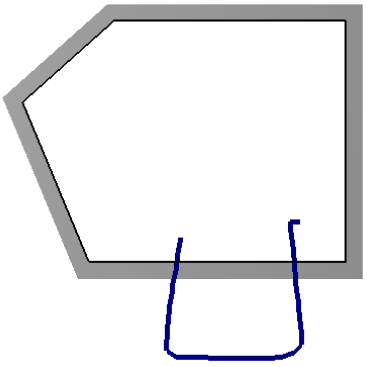
If you release your finger from the screen, and the starting and ending points are relatively far from each other, you will have a set of walls, which you can amend, which will complete the wall polygon of your room. If the wall endpoints are close enough, the software will connect them automatically. If you only need to close the polygon, you can use the tool for this purpose.

If your first sketch was not good enough, you can modify the corners with the 3 relevant tools respectively: drag, add new, or delete an existing one.



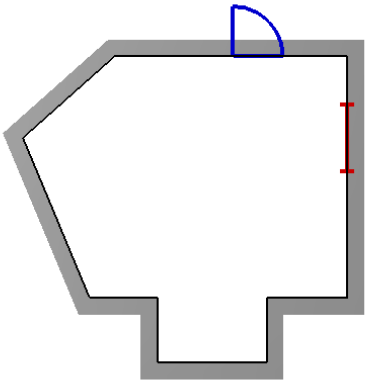
If your room has not only straight walls, you can also bend them with the bend tool, and if you have a break in the wall, then the add housing tool is also available.





Wall openings

Now we have the shape of the room, but we also need to create doors and windows. The relevant tools are on the next tab of the toolbar: tap the Elements label, and you will see them.



Select the type of wall opening you want to place, and simply tap a wall. Now at the bottom you can set the properties of the window (height, width, elevation). The one wing door is a bit different, after you tap the wall, you swipe your finger to the direction the door's opening.

Measurements

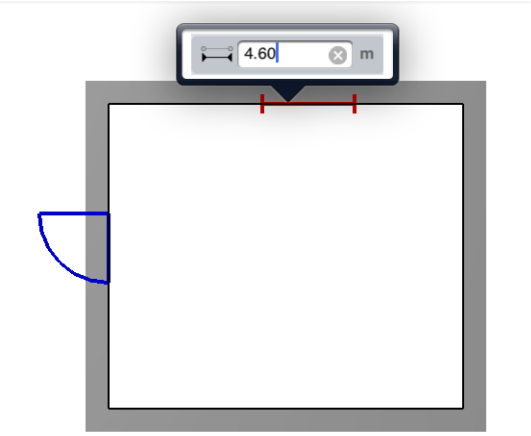
One of the most important features of OrthoGraph is that it converts the sketch to a real floor-plan, in a quick and easy way. The method is measuring the distances between corners and other reference points of your drawing.

To start a measurement choose a point tapping it on the screen, and then holding your finger on the screen move it to another point that you want to measure from the first one.

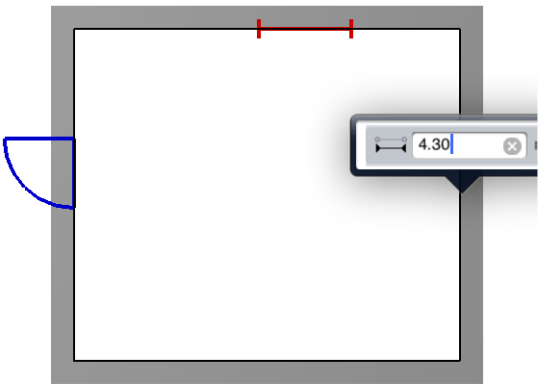
OrthoGraph always reflects the entered distances instantly by moving the secondly chosen point from the first chosen into the direction of measurement. By measuring a point from another one OrthoGraph first tries to move it without having the drawn angles unmodified. If it is not possible anymore (because of the details of your measurements) OrthoGraph will also update the angles related to the measurements.

Either way after entering the distance, you immediately see the modification of the drawing, so you cannot type wrong distances, because it would transform your drawing strangely. The only exception is the first measurement, where you might see no change, as in that case the whole drawing will be resized accordingly the entered distance.

OrthoGraph also helps to identify the fully measured points (represented with green circles) and those points that need more measurements to have them fully measured (red circles with question marks). To have a corner exactly measured it needs to have two measurements from two other points. As soon as you measure with this detail, all your corners will become green showing that you have fully measured the room successfully.

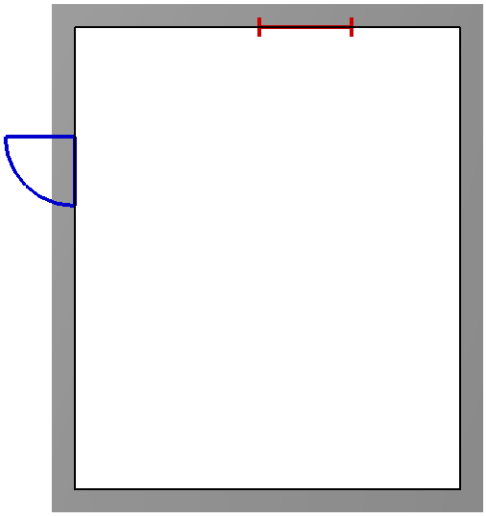


first we measure the wall left of the door, it is 5 meters

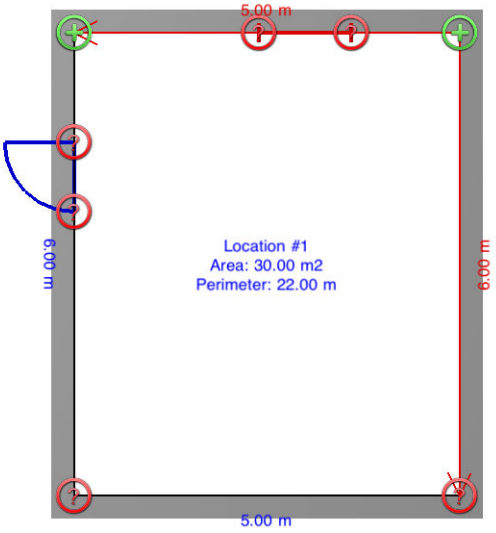


now the whole room is sized bigger a bit

now we measure the wall opposite to the door, it is 6 meters



now the room is stretched to the direction we measured

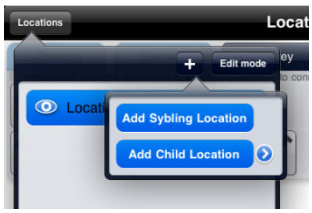


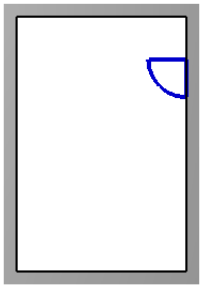
you can see the measured distances here (red arrows)

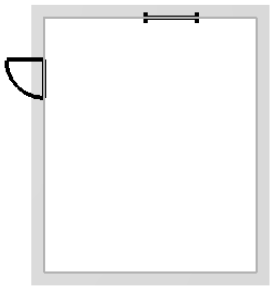
Match openings

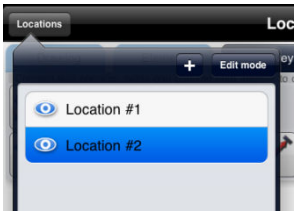
For the creation of house's floor plans you need to join the already measured rooms to each other from the individually drawn and measured room polygons. You can connect two rooms through their doors or windows. Matching is done through identifying both sides of a wall opening in both rooms containing it.

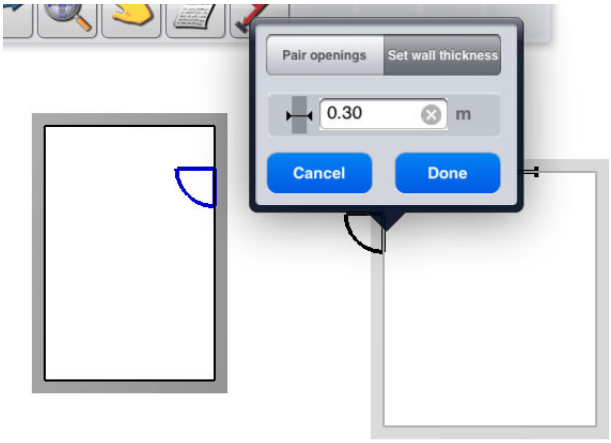
Creation of new rooms is exactly the same like the first. You can sketch a new room, after you have created it. For this tap the location button at the top of the screen, tap the + sign, and choose Add Sibling Location. Now the formerly drawn (and measured) rooms are greyed, and you can sketch the new room.

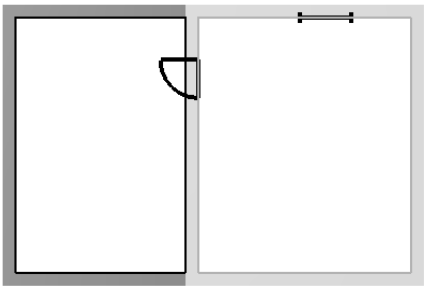




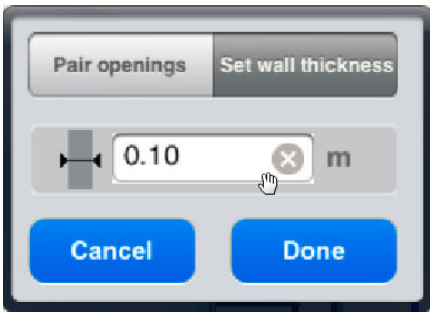








To match two sides of an opening, find both sides of the door in both rooms, and select them. Tap one side of the door in one of the rooms by holding your finger on the screen and moveing it to the other side of the door in the other room and releasing your finger from the screen. A window will appear where only the wall thickness is to be measured. Here you have the option to pair only the door sides in case the two rooms were already connected through another wall opening. In this case you don't need to set anything.



With this method you can build up your floor-plan room-by-room.

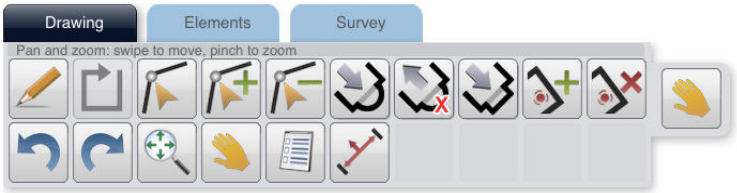
Match Walls

If you have more than two rooms on the floor plan, and there are such walls that don't contain openings but are the two sides of the same wall, then using the Match Walls function you can simply identify them as one wall. To do it simply tap the screen inside the current room and move your finger above the two walls to the outside room. As a result the wall thickness of the wall in the actual room will be set to the value of the distance between the two wall sides, and the other part of the wall (part of the other room) will be set to be a wall reference line only.

OrthoGraph Function list

OrthoGraph has two toolbars for helping the building survey procedure. The main toolbar located at the top of the screen contains those tools that are responsible for drawing creation, measurements, and all user interactions. The main functions are grouped into three sections based on their place in the survey process:

1. Drawing
2. Elements
3. Survey



There are some functions that might be needed during different phases of the building survey, therefore they are grouped into different toolbars. You can jump back and forth between the tool-tabs simply by touching their label, there is no strict lining of them, but the typical workflow is separated into these three major functionalities. A common area of this major toolbar - the 2nd row - contains those tools, that are not depending on the statuses of building survey, and might be needed anytime during the work.

The property view toolbar is located at the bottom of the screen. Its role is to let the user switch between different views of the particularly selected physical structure element (like a room or story). It has four view states:

1. Drawing mode
2. Property sheet
3. Report view
4. Background

At some functions there might be a third toolbar that appears listing functions and data dedicated to the actually selected function. This third toolbar appears at the bottom of the screen. Such functions are drawing where the wall thickness and reference line position can be set; or the wall opening or object placement functions where the related properties are shown.

A detailed description of the Drawing Mode can be found starting from the following chapter.

The Property Sheet view gives access to all parameters related to the particular structure element. It can be of a type of textual data, image or number. Please see the details how properties are handled in OrthoGraph Architect in the “Common Part of the Main Toolbar” chapter.

Report view is an alphanumeric view of graphical calculations related to the particular structure element. The current Room’s area, wall surface and many more are listed in a read only format as well as a summary of all elements below the current one are also available (e.g. in case of stories or buildings).

There is also a status bar on the head of the window, this is for the navigation within the location structure, and among the projects.

Drawing tools:

This toolbar is entitled to help the first phase of building survey, the sketching and graphical editing of the floor-plan.

Pencil:
This tool is responsible for creating the floor plan sketch. It allows the freehand drawing of a room polygon (just draw like you were drawing on a paper with a pencil), and also after the sketch, the software will recognize the floor plan's corners and walls. OrthoGraph always works on one room at a time, therefore one polygon can be created at a time related to each physical structure element.

The freehand drawing tool allows the creation of one closed room polygons at a time, but drawing walls step-by-step is also possible. In this case it is necessary to continue the floor plan drawing from the last corner where the drawing was ended (draw each wall like you were drawing with a pencil on a paper).

The more accurate the user is when creating the room sketch the better the system can analyze and convert it to walls and corners. OrthoGraph snaps each corner to the 15 degrees scale of the 360 degrees circle, which means each polygon segment will be snapped to angles having 15/30/45/60/75 etc. degrees to its neighbor.

When the first sketch is made, there are many tools to modify and advance the firstly to create a room polygon, even the measurements will modify the wall lengths, and through diagonals the angles will also be clearly updated.

Close Polygon:
When a drawing is sketched, and the beginning and the end of the room polygon needs to be closed, then the Close Polygon tool can help to do it with one click. If the beginning and ending points are near to each other, then OrthoGraph lengthens these walls to intersect each-other in the last corner. If there is a larger distance between these walls, then OrthoGraph inserts a connecting wall between the endings of them.

Move Corner:
A room polygon drawing can be modified at anytime. After choosing this tool you should tap a corner, and hold your finger on the screen. As long as you move your finger on the screen the particular corner will follow it. When you release your finger from the screen, the corner will remain at its new location.

Add Corner:
Sometimes the sketch recognition does not identify all points you wanted to draw, so sometimes you need to use more detail in the polygon as it was sketched. Using this tool it is very simple to add new corners to the room polygon. Tap the wall you wish to break into parts and move your finger on the screen until the new corner is in the proper location you wanted to have. Next release your finger from the screen and the new corner will remain in its desired position.

Delete Corner:
Sometimes the sketch recognition creates additional corners that are not needed as part of the room polygon. The Delete Corner tool can help in this case: tap the corner to be deleted, and in that moment the particular corner disappears. It is important always to have exactly the amount of corners the room polygon should consist as e.g. intermediate corners in a wall might cause failures later during the measurement process.

Bend Wall Segment:
In many cases it is needed to have bended segments in a floor plan. These segments can not be sketched, but later in the drawing process, linear segments can be bended. OrthoGraph can handle only bended segments that are part of a circle. To bend a segment tap it on the screen, and holding your finger on the screen bend the segment to the direction you wish.

Straighten a Segment:
Bended segments can be straightened. Tap the screen at the bended segment you wish to straighten and it will become straight.

Add Housing:
In many cases it is easier to create the rough polygon of a room, and then have it detailed later. The add housing function can help a lot, you simply have to draw where you need housing in a wall. After you have sketched the housing onto the screen above the desired wall, OrthoGraph will integrate it to the existing wall segment. Draw the housing as you would draw with a pencil on a paper.

Add Hotspot:
Hotspots are used to store exact positions of “important points” during you survey. If there is an object or a point you wish to place exactly, or make a note of, within your floor plan, then hotspots are the tools for that. A hotspot acts like a corner in the wall. It can be surveyed to any other two points, and it also can be used as a reference point of a distance measure.

If there is a wall, in which the length cannot be measured as e.g. a bookshelf stands there, then using a hotspot (that directly sees both ends of the wall) the two endpoints of the wall can easily be measured. Then the hotspot should also be measured from other corners, and the partially hidden wall can be clearly measured.

To place a hotspot just tap the screen in the required position. Hotspots can be moved using the “Move Corner” tool as it were a corner in a wall.

Delete Hotspot:
If there is a hotspot that is not needed anymore, then it can easily be deleted from the floor plan using this tool. Tap the particular hotspot, and it will be instantly removed.

Elements toolbar: 

When the room polygon is drawn, then elements like wall openings or walls can be placed onto it. The purpose of this toolbar is to make the placement of additional drawing elements possible.

Place Window:
This tool allows the placement of windows into walls. To place a window first set its properties at the bottom of the screen, then tap the containing wall in the desired position. After placing a window it can only be moved within the wall to its accurate position using the survey tool. To do adjust the placement of a window, choose one of the window's corners, then survey its distance from another corner of your drawing. The most accurate measurement can be achieved if you can measure from one of the corners of its the containing wall.

To measure the width of a window simply select its two endings using the survey tool, and enter the measured distance. The changes will be reflected instantly on the floor plan.

Delete Window:
To delete a window from the floor plan simply tap it, and it will be removed.

Place One Wing Door:
This tool allows the placement of one wing doors into walls. To place a one wing door first set its properties at the bottom of the screen, then tap the containing wall in the desired position and move your finger into the direction you wish to have its opening. After placing a door, its opening direction can not be changed (use undo, if it is not correct), and it can only be moved within the wall to its accurate position using the survey tool. To do it choose one of the door's corners and then survey its distance from another corner of your drawing. The most accurate measurement can be achieved if you can measure from one of the corners of its the containing wall.

To measure the width of a door simply select its two endings using the survey tool, and enter the measured distance. The changes will be reflected instantly on the floor plan.

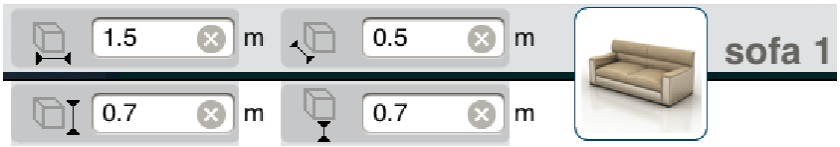
You can also modify the major properties of the wall openings in the pop-up toolbar at the bottom of the screen.

Place Two Winged Door:
This tool allows the placement of two winged doors into walls. To place a two wings door first set its properties at the bottom of the screen, then tap the containing wall in the desired position and move your finger into the direction you wish to have its opening. After placing a door, its opening direction can not be changed (use undo, if it is not correct), and it can only be moved within the wall to its accurate position using the survey tool. To do it choose one of the door's corners and then survey its distance from another corner of your drawing. The most accurate measurement can be achieved if you can measure from one of the corners of its the containing wall.

To measure the width of a door simply select its two endings using the survey tool, and enter the measured distance. The changes will be reflected instantly on the floor plan.

Delete Door:
To delete a door from the floor plan - let it be a one or two winged door - simply tap it, and it will be instantly removed.

Place Object:
To place an object the first and most important thing is to prepare its properties at the appearing settings bar at the bottom of the screen. There you can set its dimensions as well as you can choose its object type.



When you have set the required object type and its properties, then tap its location on the floor plan. As the object appears you can tap and hold to move it, or rotate it using two fingers (keeping their distance unchanged) as you would move or rotate a peace of paper above the floor plan. When you tap the screen at a different location, where there is no current object placed, then a new object of the current type will be placed down.

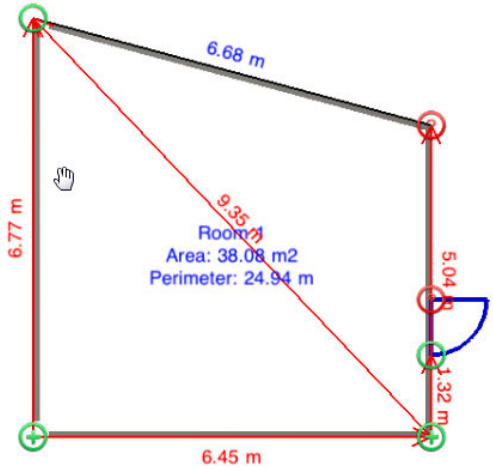
Delete Object:
To delete an object simply tap it on the screen.

Survey tools:

The last process of room floor plan creation is to survey the sketched and prepared drawing. You can jump back and forth between the toolbars, there is no strict lining of them, but the typical workflow is separated into these three major functionalities.

Show Measures:

This tool alters the displaying of measured distances and corner measurement statuses as well as some calculated data like the room area and perimeter. The displayed icons above the corners mean the following:



1. red circle around a corner with a question mark or + sign: the corner is not fully measured yet

2. corner with a + sign instead of having a question mark: a room has exactly two of these type of points. These are the “base points” that should be measured from outside the room. These are the only points that can be measured from outside. Not only wall endings but also a wall opening can represent these base points when a room is connected to another through a wall openings.

3. green circle around a corner: the corner is exactly measured, there are no more measurements available for this point. To measure a point accurately you need to do exactly two measurements if it is a wall end point, and one measurement if it is a window. By the base points only the existence of required internal measurements is displayed, so they become green after the first measurement is done between them.

The arrows show the measurement direction. All arrows are pushing the corner away from the “tail to the head” direction. If a point is only measured from another point, then OrthoGraph tries to move it keeping its angles unchanged. If it is measured from two points (two arrow heads are connecting to it) then its angle will be precisely updated.

To do a measurement to provide the required “push” action first always choose the point from the distance that has to move the second chosen point.

Room stamps:

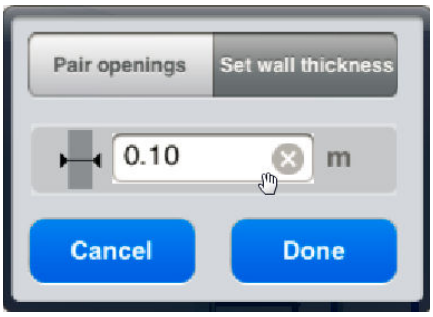
In many cases it is handy to know what the surrounding rooms are called for orientation purposes. In other situations when we have to present to a customer a floor-plan on the iPad and we need to give an overall view of the property, it is much more clear and gives a better overview if we can see the names and main parameters for all rooms.

Move Room:

If you wish to move and rotate a whole room with its contents then choose this tool for it. Then if you tap the screen and move your finger into a direction, then the whole room will follow. To rotate the particular room please tap the screen with two fingers, and make a rotation movement keeping the distance between your fingers unchanged. If you move and rotate the room like it were on a separate paper above your floor plan, then OrthoGraph will recognize your demands properly.

Match openings:

For the creation of a house's floor plans you need to join the already measured rooms to each other from the individually drawn and measured room polygons. You can join two rooms through their doors or windows. Matching is done through identifying both sides of a wall opening in both rooms containing it.



To match two sides of an opening, find both sides of the door in both two rooms, and select them. Tap one side of the door in one of the rooms and hold your finger on the screen and move it to the other side of the door in the other room and release the screen. A window appears where only the wall thickness is to be measured. Here you have the option to pair only the door sides in case the two rooms were already connected through another wall opening. In this case you don't need to set anything.

There will be walls that are surveyed from two rooms – from both sides –, but they represent the same wall. To prevent them represented doubled there is a function, which can help you identify these two sides of the same wall. The function automatically sets the real wall thickness based on the measured data in the current room and the wall to be a reference line only in the other room. If the lengths of the two sides of the same wall don't match, then OrthoGraph Architect will automatically split the longer wall into parts. Through this function a difficult house plan can very simply cleared with all measurements and details.

To match the two sides of the same wall simply tap the screen inside the current room and move your finger above the two walls to the outside room.

Upload to Dropbox:

When you are done with your floor plan, or just want to transfer it in its current state to your PC for further processing, then you can do it with the use of the services of Dropbox. By the first time you try to do it the Dropbox login/sign up window will be displayed. Here you can link OrthoGraph Architect to your Dropbox account, which information will be stored on you iPad for later use.

After linking OrthoGraph Architect to you Dropbox account a window requesting a file name is displayed. First choose the required file format, simply enter the name you wish to give to the current project without any extension, and then tap OK or the hide keyboard button on the bottom right corner of your iPad.

The Supported file formats are the following:

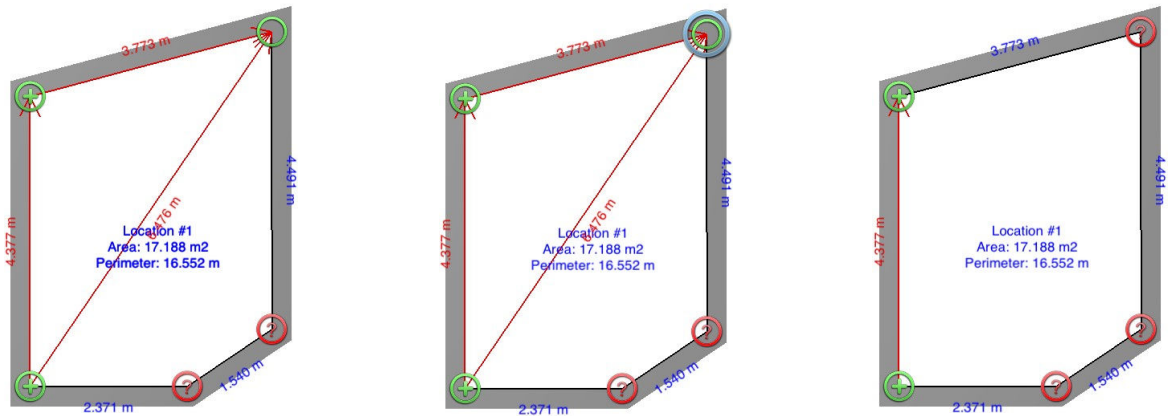
1. SRVD – OrthoGraph's own file format, usable together with the CAD conversion tools. This format can be converted to Google SketchUp, can be read using ArchiCAD Import Module and in the future there will be more CAD converters that can create DWG or other file formats too.
2. JPG – JPEG file format exporting the current view of OrthoGraph Architect. It has a fixed resolution of 768x910 independently of using OrthoGraph in Landscape or Portrait mode.
3. PNG – PNG file format with the same functionality as the previously mentioned JPG.

After uploading the particular file a confirmation window is displayed about its success, and also detailing the possible usage of the uploaded file.

If you wish to unlink OrthoGraph from your Dropbox account, then you can do it anytime by going into the Settings menu of your iPad, select OrthoGraph and then switch off the "Linked to Dropbox" switch.

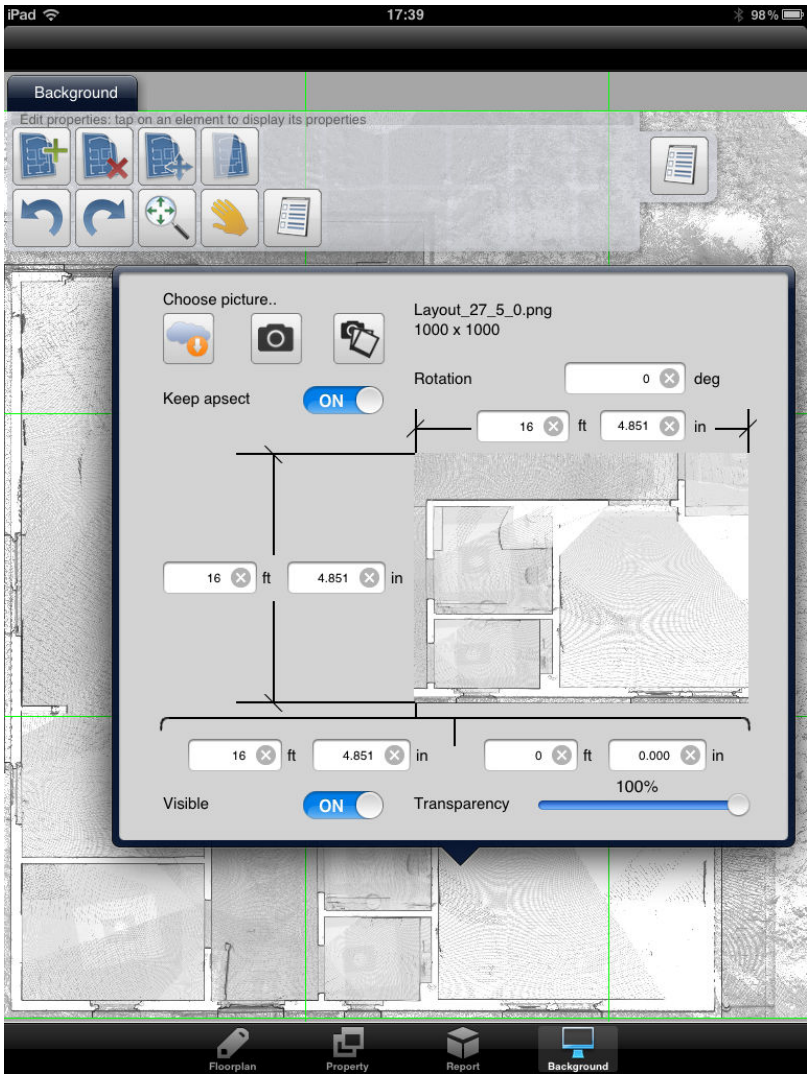
Delete measures:

This tool lets you make a point unmeasured. If this function is selected, and you tap a measured point ad swipe your finger away, all measures going to that point will be deleted.



Background images:

You can set images as background to the drawing for helping the creation and measurement of floor plans. If you have blueprints or digital plans (e.g. high resolution flattened point cloud images) available, you can use them as background images for your sketch, so you can fit your walls drawn to the background floor-plan images. To set background images please choose the “Background” button on the property view toolbar at the bottom of the screen. If you select it, then the main toolbar will be replaced with a new one that contains only functions that are related to the editing of background images. In this mode you cannot edit the graphical floor plan elements as they are only displayed to help setting the proper position of background images. The source of background images can be Dropbox, Camera Roll or the iPad Camera. You can place down as many background images as you wish, but only up to 9 million pixels can be displayed at the same time because of the limitations of the iPad hardware. This means if you have more 1 million pixel photos (1000x1000 pixels) then you can switch to be visible only up to 9 of them. All other images will be displayed as grey squares representing their position on the floor plan.



Each image has its property page that is shown on the screenshot above. These properties are: the source image properties at the top right corner of the property sheet, image display size by the sides of the image preview and the left bottom corner position of the image. Images can also be rotated either by hand (move images function) or by entering the required rotation amount at the top right corner of the property sheet.

At the bottom of the property sheet the visibility of the image can be turned on or off, and the transparency can be set. Transparency has a sense in those situations, if you make more snapshots of parts of a floor plan or you split a high resolution floor-plan scan into parts, and you wish to position these images to each-other properly. If they are transparent, then you can move and rotate them above each other like you were doing the same using transparent layers of floor plan parts. The green rectangles always show the sides of the images on the floor-plan.

Using the three buttons on the top left corner of the property sheet you can choose a new source for the particular image from Dropbox, Camera roll or from the camera of the iPad.

Background images are ordered to physical structure elements (like blueprint of a story of the building). They can be edited by the physical structure element they were placed into, but are shown by the element and all children of it. If you order a background image to a story, then you will be able to draw in all rooms taking place on the particular story. If you switch to another story, then the background image will not be displayed.

Add background:

This tool adds a new background image to the actual physical structure element. First choose the file or source you wish to use for this purpose (Dropbox, Camera Roll, and Camera). When the property sheet appears, then you can set all the required properties of the image going to be placed down.

Delete background:

This tool lets you remove unused background images from the sketch window. Just tap the background image and it will be simply deleted.

Move background:

This tool makes it possible to position the background image to its required location. You can move the picture with swiping it with your finger to any direction. It is also possible to rotate the image by rotating it using your two fingers.

Show/Hide background image:

After selecting this function the tapped background image will be toggled to visible or invisible.

Display Background Image Properties:

In background mode you can bring up the property sheet of the selected background image with the properties button. Tap the image and the property window will be displayed.

Here you can resize, rotate, set transparency and toggle visibility.

It is also possible to replace the picture from three possible choices: through Dropbox, from Camera Roll, or by taking a picture using the iPad's camera.

Common part of the main toolbar - the 2nd row:

The main toolbar of OrthoGraph Architect contains in its second row those functions that might be required anytime during the creation of the floor plan.

Undo:
Undo dismisses the last operation made in OrthoGraph. Each time you tap the Undo icon, OrthoGraph will undo the last operations step by step.

Redo:
After one or more undo operations have redone the lastly undone operation made in OrthoGraph. In case you have done more undo steps backwards you can redo them again one by one with the Redo feature.

Fit in Window:
Zooms the actual room to fit into the drawing area of the screen.

To zoom in and out the current view tap the screen with two fingers and move them nearer or farther to each other.

Pan tool:
You can move your work area and zoom it in and out using the pan tool. Similar functionality can be achieved if you tap the screen with two fingers and move them away in most of the functions of OrthoGraph.

To zoom in and out the current view tap the screen with two fingers and move them nearer or farther to each other.

Properties tool:
Selecting any drawing element after activating this tool, you can watch and set its special properties.

Most drawing elements can store properties like alphanumeric parameters or in many cases even photos of the particular wall or drawing element. Click the Properties icon first then tap the particular drawing element on the screen to access its properties. A properties window appears that shows the list of properties and their current values. Tapping any of the values switches it to edit mode where entering the new value is simple and available.

There are two specialties in case of setting property values:

- by image properties tapping the image button in the actual line brings up the currently attached image. If there is no image yet, a gray camera icon appears. Tapping the current image or the camera icon the iPad's camera turns on, and allows making and then attaching a snapshot from the current view into the particular property.
- by inherited parameters like wall height (defined by the room) the property is read only by default. To detach the inheritance the blue flag before the property has to be tapped, which makes it gray and the property editable.

Measure distance tool:
One of the most important features of OrthoGraph, it helps measuring the distances between corners and other reference points of your drawing.

To start a measurement choose a point tapping it on the screen, and then holding your finger on the screen move it to another point that you want to measure from the first one.

OrthoGraph always reflects the entered distances instantly by moving the secondly chosen point from the first chosen into the direction of measurement.

By measuring a point from another one OrthoGraph first tries to move it without having the drawn angles unmodified. If it is not possible anymore (because of the details of your measurements) OrthoGraph will also update the angles related to the measurements.

For more details please read the Show Measures section too.

Settings of OrthoGraph Architect

Set the language of OrthoGraph Architect

By default OrthoGraph Architect is sensitive to the general language settings of the iPad, and if that language is supported, the application switches to the given language. Currently 4 languages are supported, but we are continuously expand these language, as we recognized that we have users from many different countries of the world:

- English
- German
- Hungarian
- Italian

Use English language

If you wish to use the base English language of OrthoGraph instead of the language choosen by the system, then you can turn it on in the iPad preferences, by simply switching the “Use English language” flag on.

Linked to Dropbox

By the first time you try to use the Dropbox feature, a login/sign up window will be displayed. After successful login this action will link OrthoGraph and your Dropbox account. If you wish to unlink OrthoGraph from that account, then you can do it anytime by going into the Settings menu of your iPad, select OrthoGraph and then switch off the “Linked to Dropbox” switch.

Delete database on startup

Sometimes it is necessary to clean old unused projects, the net setting is for this purpose, by switching this the next time you start the app, all projects will be wiped.

Switching between imperial and metric units

OrthoGraph Supports both metric (SI system) and imperial systems for drawing creation. You can switch anytime between these systems by going to the Settings pane of the iPad, and switching the “Use imperial units” flag on or off.

Measure during sketch

OrthoGraph supports two ways of survey, the “sketch-and-measure” and the “measure-during-sketch”. If you do not want to enable this second one, you can disable it here by swiping the switch off.