Data East, LLC

Functionality of CarryMap 5.5 application

for Android devices

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Overview of buttons located on map window

Create object – creates objects on the map (points, polylines, polygons).

Record track – records and saves GPS tracks.

¹*Measure* – measures distances and areas on the map.

Coordinates by GPS – defines current location of point object by GPS coordinates.

^{Compass} – returns map northwards.

Notes on map – creates graphic notes on the map.

Search on map, go to coordinates – performs text and numeric search, goes to coordinates in DD and DMS formats.

List of maps – shows and opens maps and projects stored on the device.

 \equiv *Main menu* – provides options to make settings of the app without leaving the current project, to add layers and maps to project, to manage layers visibility and to perform operations with layers (zoom in/out, delete, view legend, view layer properties, etc.).

- + *Change map scale* – zooms in/out the map.

Creating new feature

To create new *feature* on the map, tap the *Create feature* button.



In the appeared menu select the feature type: point, polyline, or polygon.



Specify the feature geometry. To do so, consequentially tap the required places on your map.



To delete the needless point on the map, tap it. To add the new point, pull the edge in the needed place and the point will be added there. To change location of the created point, tap and hold it, then drag it to the new place on the map.

Now specify the layer where you want to create the new feature. To do so, in the feature card tap the arrow near the *Select layer for creating feature* option.



In the appeared window you can either select the layer from the currently opened project, or select the previously created layer in the application, or create the new layer.

To select the layer from the existing data, press *Select from data* and select the required layer from the list of GPKG layers stored in the application.

Select from data

To create the new layer, press Create new.

(+) Create new

The layer will be automatically created with the default name, but you can rename it, to do so, enter the new name using the keyboard.

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2		/			/	2		
1								
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~	Point	s_18j	un20	20				
	Selec	ct fro	m da	ta				
(\neq)	Crea	te ne	w					_
q	we	e	r t	t y	/ 1	L	i o	p
а	s	d	f	g	h	j	k	1
Ŷ	z	x	с	۷	b	n	m	\otimes
123	٢			space			re	turn
	Ð					-		Ŷ

Now press *Return* to confirm the layer renaming.

If there are previously added layers in the project, then to create the feature you need to select the required layer from the list. The selected layer will be marked with the check sign.



To select another layer, press its name in the list and it will be marked with the blue check sign.



To go to changing parameters of the layer settings, press 10 . See *Changing settings for layer parameters* section for more details about changing layer settings.

To go to saving the created feature and filling in the fields, press the back arrow.



To fill in the *Feature name* and *Description* fields, tap the required line and enter the text.



To complete creation of the feature, press *Create*. The feature will be saved. If you need to cancel this operation during the feature creation process, press *Cancel*.

Creating features by current location

To create the feature by your current location, press *Coordinates by location* in the identification card of the created feature.

Coordinates of the point feature will be changed to coordinates of the current location. The new point with coordinates of your current location will be added to the created polygon or polyline feature.

Creating features by coordinates

To create the feature by coordinates, during the creation process you need to press ^{coordinates} button in the feature identification card (see *Creating new feature* section for details). The line for entering coordinates will appear.



Enter the required coordinates and press Return on the keyboard.



The point with the specified coordinates will be added on the map.





elect layer for creating feature Points_18jun2020	۹ ۲	*		
Coordinates Create by coordinates Take photo/ video Add attachmer elect layer for creating feature Image: Coordinates Image: Coordinates Image: Coordinates Points_18jun2020 Feature name Description Image: Coordinates Image: Coordinates Image: Coordinates Creation date Not defined Image: Coordinates Image: Coordinates Image: Coordinates Modification date Image: Coordinates Image: Coordinates Image: Coordinates Image: Coordinates	•			G
Feature name Description Creation date Not defined Modification date		Create by	Take photo/	Q Add attachments
Description Creation date Not defined Modification date				>
Not defined Modification date	Desc	ription		
	Not define	ed		
Cancel	Not define	ed		

To save the point, press Create.

Creating point feature by photo

To create the new point feature by photo, press *Create feature* button in the map window and in the appeared menu select *Create point by photo* button.



To be able to use this option, in your smartphone settings you need to allow CarryMap app to have access to the device camera and memory. Besides, for all photos made with your device, the option of using geolocation should be enabled.

After pressing the *Create point by photo* button the camera window will open.



Press *Take photo* button.



To use this photo, press Use photo.



To take another photo, press *Retake*. In the appeared camera window take the new photo and press *Use photo* again.

To use the existing photo, press Gallery.



Select the required photo from your Gallery. Now coordinates of selected photo will be used to create the point on your map and this photo will be added as attachment to the point.



Changing the layer and its settings is done same as when creating features, see *Changing settings for layer parameters* section for details.

To complete creation of point by photo, press Create button.

To cancel creation of point by photo, press Cancel button.

Editing features

To start editing feature, select it on map or find it searching by attribute or coordinates (*see "Searching on map" section for details*) and tap *Edit* icon in the feature identification card.

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to.				
6		> 0		Q
	X		1	- Para Marri
	Untitled	2020_2		
	K			
Edi	Take photo/ video	A+ Use as a destination point	Delete	Share
_	Take photo/	destination point	Delete	Shure
_	Take photo/ video	destination point	Delete	Share
54. Creatio	Take photo/ video	destination point 3.09958164	Delete	Share.
© 54. Creatio 18.06.	Take photo/ video 86985279, 83	destination point 3.09958164	Detete	Share €

You can change coordinates format, if needed. To do so, select the feature and in the appeared identification window tap the line with coordinates to change the format.

Q				
a		1		
8	_	•		Q
			B	mana hebrona
	a	-	//	//./
	titled ts_18jun20	20_2		
Edi	Take photo/ video	J+ Use as a destination point	Delet	Share
	985279, 83.0	09958164		\$
Creation o	late			
18.06.20	20, 20:46	5:47		
Modificati	on date			
18.06.20	20, 20:46	5:47		
			_	

Note that selected coordinates format will be saved for the current project.

The available coordinate formats are as following:

- Degrees-minutes-seconds;
- Decimal degrees;
- UTM meters (if you selected Projected coordinate system in Settings, *see "Settings" section for details*).

Being in the feature editing mode, you can change the feature geometry. To delete the point, tap it on the map. To add the new point, tap the empty place on the map. To move the point, select it on the map and drag it to required place on the map.

To save your changes, tap *Save*. To cancel made changes, tap *Cancel*.

To change the feature name, enable the editing mode and select *Feature name* in the feature card.

Feature name Description	
Coordinates Renew geometry video Add attachments	Delete
54*52"11.47"N, 83*5'58.49"E	\$
Creation date	
18.06.2020, 20:46:47	
Modification date	
Cancel Save	

Enter the feature name and tap Done.

If feature name has not been specified, the feature card will have the default name *Untitled*, but the default name will be changed right after you specify the name of this feature.



Using QR code to fill in attribute fields

You can fill in text fields in the feature attributes using QR code. To do so, select the required field in the feature card and tap QR code.

Adding attachments to feature

You can add photos to any feature on the map. To do so, select Take photo/video.

Q	8		
Q	1		-
8	•		Q
			- may had your
Untitle Points_16	d Ijun2020_2		
Edit Take ph	oto/ Use as a	Delete	Share
54*52'11.47	"N, 83°5'58.49"E		\$
Creation date 18.06.2020,	20:46:47		
Modification da 18.06.2020, 3			

To be able to use this option, in your smartphone settings you need to allow CarryMap app to have access to the device camera and memory.

Take a photo or video and tap Use photo, to add it as attachment to the feature.



Added photos can be viewed in the feature's card. To open the photo, tap the appropriate thumbnail.



To delete the added photo, tap *Delete*.



To share/send the added photo, tap Share.



Added videos can be viewed in the *Files* section of the feature's card. To view or delete the video, select it in the card and select the required option.



Add achments

To attach to feature the file stored on your device, tap *Add attachments* in the feature's card.

In the appeared dialog, if you need to add the media file from the gallery, tap *Add from gallery*, and if you need to add the document, tap *Add from files*.

Add from	
Gallery	
Files	
Cancel	

Measuring distance and area

To measure distance or area, tap the *Measurements* button.



The button will change its color and the tool window will appear. If you want to measure distance, tap *Measure distance* icon.



If you want to measure area, tap *Measure area* icon, accordingly.



To start measurement, sequentially tap the map adding points.



To delete the needless point, tap it again. The calculated distance or area will be shown in the upper part of the measurement window.



Measuring distances and areas is also possible using *My location* option. To start measurement from the point of your current location, tap and then . Now the point of your current location will be used as the starting or one of the intermediate points of measurement.

To change measurement units, go to *Settings* of the map menu (note that changing units is possible if you are not in the measurement mode). In the *Measure units* section select the required units:

- *Metric*: meters kilometers;
- *British*: feet miles acres.

MEASURE UNITS	
Meters - Kilometers	×
Feet - Miles - Acres British	

To close the measurement window, tap the cross icon in the upper right corner of the window or tap *Measurements* button again.



To copy the measurement result, long tap the output value and tap *Copy* in the appeared dialog.



Recording track. Creating polygon by track.

To start recording track or to start creating polygon by track, press *(Second track button)*. To record track, press *Record track* button.



To create polygon by track, press *Create polygon by track* button.



When recording track or creating polygon by track starts, the tool button becomes red.



To complete recording track or creating polygon by track, press the tool button \bigotimes again.

In the appeared window select the layer where to you want to save your track or polygon. Enter the track name in the *Feature name* field, if needed.

0 x 0		0	
6			Q
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	- 0	P.
	Zoom to object	Take photo/ video	Add attachments
ielec V	t layer for cre Lines_19ju	eating feature n2020	>
-	Feature I		
	ation date defined		
	ification date defined		
	Cance	_	reate

Note that every 5 seconds your track will be saved automatically. That is, even if your device switches off by some reason, the track will be automatically saved to the selected layer and so will not be lost.

Note that recording track does not hinder any other operations provided with the app (for example, feature creation or editing, adding new layers to project, etc.).

Recording track can be stopped:

- When you leave the project and go to the maps and projects list tapping button.
- When you delete the layer, where to the track is being recorded.
- When you press *Record track* or *Create polygon by track* button again.

## Creating project, editing project name

To create project, open CMF2 map and data in GeoPackage, KML, KMX, SHP or GPX format (see *Importing data* for more detail), the project will be created automatically.

The project name can be changed in the map menu, to do so, tap the editing icon.

Pro 201	oject_29Apr 19
~	Points_29Apr2019_2 Belongs to default.gpkg
~	Points_29Apr2019
~	World Map.cmf2
	Add basemap
$\Box$	Bookmarks
ŝ	Settings
0	About map
(j	About application
?	Help

Enter the new name and tap *Enter* 

# **Opening project**

To open the project stored on your device, tap . In the *Maps* tab you will see all previously saved and autosaved projects.



To open project, select it from the list. To delete project, select three dots menu and select *Delete from device*.



To change name for project, tap *Rename* in the menu, enter the new name, and tap *OK*. If you rename autosaved project, it will be moved to the *My projects* section.

To open another map, tap 🖉 and select the required map from the list. To create new project for this map, add gpkg layers to map *(see "Creating new object" and "Working with layers in project" sections for more details)*.

## Working with layers in project

All layers added to project can be viewed in the map menu. You can change the layers order in the project. To do so, long tap the layer and drag it to the required position in the list of layers.



If the layer is the first one in the list, it will be displayed on top of all layers on your map, accordingly. To zoom to layer in the project, tap the three dots menu and select *Zoom to layer*.



To delete layer from the current project, tap three dots menu and select Delete.



To delete layer from the device, go to library tapping vin the layer menu and select *Delete from device* tapping the three dots menu of the layer you want to delete.

← Add		Q
DATA	MAPS	GALLERY
My data (defa	ult.gpkg)	•
	points ned 28/04	•
	ts_01ai آل Delet	e te from device
LYR Poir	its_02apr2019	1:
LYR Poir	nts_02apr2019delme	2 •
LYR Poir	its_15apr2019	:
LYR Poir	its_15mar019	+

The layer will be deleted from the device. To view all features containing in the layer, press the layer in the main menu of the map.

Project2018_06_20		
	+	
~	My points1	:
~	Belongs to default.gpkg My tracks1 Belongs to default.gpkg	
~	Open Street Map OSM Online service	0 0 0
ŝ	Settings	
(j)	About application	
?	Help	

All objects containing in the layer will be shown in the list.



To view feature on the map, select it in the list and it will be highlighted on your map.



## Adding layers to project

To add layer to current project, tap Add button in the map menu.



Select the required layer from library and it will be added to your current project. If you need to select multiple layers, tap *Select all*  $\stackrel{\textcircled{}}{\textcircled{}}$  or long tap the required layers and then tap *Open*.

$\leftarrow$	OPEN		
DATA	MAPS	GALL	ERY.
My data	default.gpkg)		*
LYR	My_points1		•
LYR	My_tracks1		•••

Selected layers will be added to the project.

Project2018_06_20		
		+
~	<b>My tracks1</b> Belongs to default.gpkg	:
~	<b>My points1</b> Belongs to default.gpkg	•
	Select base map	
ŝ	Settings	
ĺ	About application	
?	Help	

To turn off layer visibility, tap  $\checkmark$  near the required layer name and the icon will change its color to grey  $\checkmark$ . Note that the layer will not be deleted from the project, it just will not be shown on the map. To turn the hidden layer on, tap the icon near its name again.

## Adding map to project

If you want to add map to project, tap  $Add \stackrel{\checkmark}{\smile}$  and go to *Maps* tab showing all CMF and CMF2 maps stored on your device.



Select the map you want to add from the list. If the selected map is used in other projects, the appropriate message will appear.

Open file as
WORLD MAP.CMF2
PROJECT2_2018_06_20
CANCEL

To open map as a project, select the project from the list. If you need to open the map only, select it from the list.



When you open map in CMF format, it is automatically converted to CMF2 format.

Converting	
Layers: 7 / 54 Objects: 1	
13%	
	CANCEL

If you want to add the map in CMF2 format, it will be added to the current project right after you select it.

Pr	oject2_2018_06_20	
	+	
~	Саратовская область Саратовская область.cmf2	:
~	My points1 Belongs to default.gpkg	:
~	World Data World Map.cmf2	• •
	Select base map	
ŝ	Settings	
(i)	About application	
?	Help	

CMF map can also be used as the base map (see "Selecting base map" section for details).

Same as with adding to project, if you want to use old CMF map as the base map, it will first be converted to CMF2 and after that will appear in the list of maps available for adding. Select the converted CMF2 map from this list and it will be added as base map.

Changing settings for layer parameters (selecting symbology, setting labeling, adding fields)

To view symbology used for layer, tap three dots, and select Legend in the menu.

$\left[ \bigcirc \right]$	Zoom to layer
	Layer properties
	Legend
So	Share
(d)	Delete all object
	Delete

In the appeared window you can view all symbology used to display this layer. To turn the layer off, pull the layer visibility shift.

$\leftarrow$	My points1	
•	My points1	
0	pp_yelw	
•	pp_orng	
•	pp_red	
•	pp_viol	
•	pp_pink	
•	pp_blue	

To add fields to the layer attributes, select Layer properties in the menu.

$[\bigcirc]$	Zoom to layer
	Layer properties
	Legend
So	Share
(d)	Delete all object
	Delete
# Now tap the *Fields* section.

← Points4_2018_06_20	
Fields	
Symbology Single symbol	
Fill color	
Customize symbology	>
Labeling	
Labels	

In the appeared window tap Add field button.

← Points4_2018_06_20		
Layer fields Add field		
Field name	Field type	
Name	Text	
creation_date	Date	
modification_date	Date	

In the appeared field	Field name	Field type	1	tap the <i>Field name</i> line and enter the
name of the new field				mp and I communicate and and contract

Input field name			
	CANCEL	ок	

Now tap the *Field type* line and select the required field type from the list.

Select field type	
ТЕХТ	
INTEGER NUMBER	
DOUBLE NUMBER	
DATE	
BOOLEAN(YES/NO)	
	CANCEL

To delete created field, tap  $Delete^{[]]}$ . To save made changes, tap  $Save^{\checkmark}$  in the upper part of the window. To change the object fill color, select *Fill color* in the *Layer properties* menu.



In the appeared list select the required color and all features will be changed accordingly.



To change properties of the layer symbology, select Customize symbology.



With the *Customize symbology* option you can change the symbol shape, size, show/hide its border and select border color, set transparency. To change symbol shape, tap *Shape* and select the required shape from the appeared list.

0	$\bigtriangleup$
$\bigcirc$	\$ s S

To select image as symbol, tap  $\bowtie$  and select the required image from the Gallery. To show labels for features, select *Layer properties*, tapping three dots menu.



Pull the switch in the *Labeling* section to display labels.

Labeling	
Labels	

In Label field line select the field which attributes will be used to label all features.

Label field NAME
------------------

To add the new field, see "Setting layer symbology. Adding new fields." section above.

In the *Font size* line specify the font size pulling the shift to the required value.

Font size	
2	- 16

Select the labels color in the Font color line.

Font color	$\bullet$
------------	-----------

## Setting symbology for default layers in the app

When creating point features in the default app layer called **My_points1**, you can specify different symbology for features in this layer.

To do so, create the new feature and tap the pushpin icon in the feature card.



In the appeared list select the required symbol.



Tap *Save*  $\checkmark$ . Changing symbology for the feature is also possible when editing mode is on.

## **Importing data**

To add data to current project, tap *Add* in the map menu. All data that can be added to project are shown in the *Library* section consisting of *Data, Maps*, and *Gallery* tabs.

DATA	MAPS	GALLERY

The *Data* tab contains data in GeoPackage, KML/KMZ, SHP and GPX formats. To add the existing KML/KMZ, SHP, GPX file to the project, select it and select CarryMap from the list of apps to open this file.

To add KML/KMZ, SHP file to the project, press in the *Data* tab in the appeared list select the folder where the required file is stored and then select the file.

÷	Yulia	Q
	Placemarks_Polylines_feat ure_1.kmz	•
KMZ	614 б	Ū
	Street_lavren12.kmz	*
KMZ	690 ố	
SHP	<b>шейпы</b> 0,96 КБ	* *
GPKG	Layers.gpkg Points_test 86,02 КБ	0 0 0
KMZ	Untitled Path.kmz	0 0 0

The file will be added to *Data* tab.



To add gpkg layer, tap again the added file, it will be converted to gpkg layer and added to the project, and the appropriate message will appear.



Converted gpkg layer will be added to the project.

Project2018_06_20		
	+	
~	Placemarks_Polylines Belongs to Untitled Path(3).gpkg	•
~	Points4_2018_06_20 Belongs to default.gpkg	•
~	<b>My points1</b> Belongs to default.gpkg	••••
~	<b>My tracks1</b> Belongs to default.gpkg	•••
~	Open Street Map OSM Online service	•
ŝ	Settings	
(j	About application	
?	Help	

The same steps mentioned above should be done to add KML/KMZ, SHP, GPX files.

# **Exporting data**

You can share files in GeoPackage, SHP, KML/KMZ, GPX formats or share KML/KMZ, SHP, GPX files stored on your device. To do so, open the layer menu in the *Data* section pressing three dots, and select *Share*.

My data (Polygon layer 1-	-2.gpkg)	000
Placemarks_Polyg	ons	00
LYR Opened today	Share	
My data (Default.gpkg)	Delete	
Points1_2018_06_2	21	000

When sharing gpkg layer you can select the format: SHP, KMZ, GPKG, GPX.

<ul> <li>Morid mane</li> </ul>		
Select share format Which format would you like to share this layer in?		
KMZ		
SHP		
GPX		
GeoPackage		
Cancel		

After selecting the format, select the method you want to use to share your file.

Besides, you can share the single feature, to do so, tap it on the map and in the appeared card press *Share*.



Select the data format in the appeared window.

Choose action	
GPX	
KMZ	
SHP	
GeoPackage	
Cancel	

After that, select how you would like to share the feature.

## Searching features. Going to feature by coordinates.

To search for GPKG feature or CMF2 by attributes, open the search field pressing the search

button Q.	
Q Search	\$ 0

Enter the search text to the appeared field (for example, the point name, description, etc.) and press *Return* on the keyboard. The search results will be shown in the list.

← Cafe	0
THEMATIC MAPS	
Cafe "U fontana" Cafes & kiosks	>
Cafe "Leopard" Cafes & klosks	>
Cafe "Gril Bar" Cafes & kiosks	>
Cafe "Sherkhan" Cafes & kiosks	>
Cafe "Kacheli" Cafes & kiosks	>
Cafe "Chayushki" Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe "Blini ot Babi-Yagi" Cafes & klosks	>
Cafe "Beryozka"	>

To go to the found feature on the map, press its name in the search results list.

← Cafe	٥
THEMATIC MAPS	
Cafe "U fontana" Cafes & kiosks	>
Cafe "Leopard" Cafes & kiosks	>
Cafe "Gril Bar" Cafes & kiosks	>
Cafe "Sherkhan" Cafes & kiosks	>
Cafe "Kacheli" Cafes & kiosks	>
Cafe "Chayushki" Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe Cafes & kiosks	>
Cafe "Blini ot Babi-Yagi" Cafes & kiosks	>
Cafe "Beryozka"	>

The feature will be marked on the map.



To perform an "exact search", before entering the search numeric or text value, put "!" and then enter the required number or text to search for.





If no features were found during search, you would see the Features not found message.

To go to feature by coordinates, open the search field pressing the search button  $\bigcirc$ . The text search field will appear. To switch to the go to coordinates mode, press *Switch* button.



When entering DMS coordinates, to put ° (degree), ' (minute), or " (second) sign, press space after the number and the sign will automatically appear in the go to coordinates line. After

entering the longitude and latitude values you need to enter their name: north, south and west, east.

Then press *Return* on the keyboard. The found point will be marked with  $\checkmark$  icon on your map. The coordinates that you searched for will be shown in the card.



To go to DD coordinates, first enter X, then Y coordinate, and press Return.

9



The found point will be marked with for will be shown in the card.

icon on your map. The coordinates that you searched

#### Selecting map scale

To set map scale open the map window and click on the scale bar.



In the window that opens, enter the scale and click OK, the map will be drawn at the specified scale.

Enter scale value		
1:2 568 562		
	CANCEL	ОК

#### Selecting basemap

÷

To select base map for your map, tap *Select base map* in the map menu.



You can select basemap from ArcGIS Online maps or WMS online services or use any CMF/CMF2 map (specific format for mobile maps created using extension for ArcGIS Desktop called CarryMap Builder).

You can also select base map from OpenStreetMap or use any thematic map converted to CMF/CMF2 format from the app Gallery. To do so, tap *Select base map* in the map menu and then tap *Add*.



Go to Gallery tab.



Select the needed map from the Gallery and tap *Download*.

$\leftarrow$	Asia		Q
00 00 CMF 2	Indonesia.cmf2	900 MB	4
00 00 CMF 2	Iran.cmf2	172 MB	4
<b>@@</b> <b>@@</b> CMF 2	Iraq.cmf2	52.94 MB	Ŷ
00 00 CMF 2	Israel.cmf2	66.21 MB	4
00 00 CMF 2		2.94 MB	\$
00 00 CMF 2	Jangy-ayyl.cmf2	2.82 MB	4
00 00 CMF 2	Japan.cmf2	1.66 GB	Ŷ

The downloaded map will be added to Maps tab.

$\leftarrow$	Add		Q
DATA	MAPS	GA	LLERY
	Bahrain.cmf2 Middle East	6.92 MB	• • •
	Kazakhstan.cmf2 Central Asia	128 MB	•••
	krim.cmf2	41.99 MB	• • •
	Gambia.cmf2 West Africa	8.72 MB	• • •
00 00 CMF 2	Map1.cmf2 Map	29.03 MB	8 :
4	altai-republic_poi.cr	mf2 20.35 MB	:
الله الکر	Iraq.cmf2 Middle East Opened today	52.94 MB	+):

Select this map to add it as base map to your project. To zoom to base map, select three dots menu and tap *Zoom to map*.



## **Adding online services**

To select the basemap from the maps available in ArcGIS online service or WMS, tap *Add basemap* and then tap *Services*.

← Add		Q
SERVICES	MAPS	GALLERY
K		

If you already have connected services, they will be shown in the list in the Services tab. If you

need to add another service, tap  $Add \checkmark$ , fill in all the required fields and tap *Ready*.

Select the required service type, enter its name and link to this service.

← Add service	$\checkmark$
Choose map service type	
ArcGIS Service	$\checkmark$
Web map service	
Service name	
Service	

The added service will be shown in the Services tab.

$\leftarrow$	Add		م
SERVIC	ES	MAPS	GALLERY
	Service http://se	ervicesisonline	e.com/

Select the required map from the service and it will be added as base map to your project.

# **Specifying destination**

The *Use as a destination point* option allows selecting the feature or place on the map as a destination you want to reach. To specify the place as your destination, tap the required place on the map, open three dots menu and select *Use as a destination point*.



To select object as destination, select it on the map.



Now go to three dots menu and select Use as a destination point.



When the *Use as a destination* option is enabled, the arrow showing direction to specified target and distance to this target appear on the screen.



The target feature will be marked with the flag symbol  $\mathbb{R}$ .

To disable use of the *Use as a destination* option, tap the cross icon in the upper part of the screen and then tap *Yes* in the appeared dialog.



The Use as a destination option will be disabled.

When the *Use as a destination* option is enabled, the distance to specified target feature appears in the upper part of the screen.



location point. To do so, tap the cross button



In the appeared window select the layer where to the point feature will be added.

Create

To confirm your selection, press

# **Creating bookmarks**

Bookmarks are provided for storing the needed map extents and data. To create the bookmark, set the required map area boundary, go to the project menu and tap *Create bookmark*.

Pro 201	oject_29Apr 19	(
$\checkmark$	World Map World Map.cmf2	
~	Points_29Apr2019 • Belongs to default.gpkg	l
~	Points_29Apr2019_2	
~	Open Street Map Change basemap	
$\Box$	Bookmarks	
ŝ	Settings	
0	About map	
í	About application	
?	Help	

Enter the bookmark name or leave the default name. To save the bookmark, tap *OK*. To view the created bookmark, go to *Bookmarks* section in the project menu.

Pro 201	nject_29Apr ∥ □ @
$\checkmark$	World Map World Map.cmf2
~	Points_29Apr2019  Belongs to default.gpkg
~	Points_29Apr2019_2
~	Open Street Map Change basemap
$\Box$	Bookmarks
ŝ	Settings
<u>@</u>	About map
í	About application
?	Help

To delete the bookmark, tap three dots and select *Delete*. To rename already created bookmark, tap *Rename*, enter the new name and tap *OK*.

Enter new na	ame		
Bookmark_5			
	CANCEL	ОК	

To go to the bookmark on map, select it from the list and it will be shown on the screen.

÷	Bookmarks	Q
	Bookmark_5 Created 25/04	:
	Bookmar Created 25/04	:
	Bookmark_4 Created 25/04	:
	Bookmark_3 Created 25/04	:
	<b>Закладка_1</b> Created 08/04	:

If previously created bookmark does not fall into the current map extent, it will be grayed out in the list and you will not be able to view it.

÷	Bookmarks	Ē	Q
	Bookmark_5 Created 25/04		•
	Bookmar Created 25/04		:
	Bookmark_4 Created 25/04		:
	Bookmark_3 Created 25/04		:
	Закладка_1 Created 08/04		* * *

To view all active bookmarks of the current map, tap

# **Creating marks**

To create the graphic mark on your map as a text, custom shape or arrow, press *Create mark* button and select the note type.

To create the mark as the custom shape, press  $\checkmark$  button. Draw the required shape on the map.



To change the note color, select the required color from the provided list.



To create the text mark on the map, press  $^{\mathbf{A}}$ . In the appeared field enter the note text and press *Done* on the keyboard.



To change location of the text mark, long tap the note and drag it to the new place on the map.



To change the text mark color, select the required color from the provided list.



To save the text mark, press Save

To cancel creating the text mark, press *Cancel*  $\bigotimes$ .

To create the mark as the arrow, press <. Now draw the arrow on the map, specifying the start and end point of the arrow.



To change location of the arrow, specify the start and the end point of the arrow again, and the previously created arrow will be deleted.

To change color of the arrow mark, select the required color from the provided list.





To turn off the layer with marks, go to the main menu pressing (=), and press the check sign Map notes

To view all created marks, select Map notes layer.



# The list with all marks will appear.



To go to any mark on the map, select it from the list and it will be opened on the map.

#### Saving map extent

To save the map extent for printing or to save it to PDF document, set the required map area boundary and tap *Save to PDF*.

Car	ryMap	
~	StarkVille StarkVille.cmf2	+
	Add basemap	
$\Box$	Bookmarks	
ŝ	Settings	
0	About map	
(j	About application	
?	Help	

In the dialog that opens, select the required action to save or print the created map extent.

## **Application settings**

The *Settings* tab provides the following options to specify the app settings:

- Change measurement units;
- Hide or show buttons to change map scale +;
- Turn on/off device screen lock during app work;
- Specify maximum cache size for the app. To set the size, tap *Set max size of cache* and select the required size value.
- Clear cache and select cache size for the app data. To clear cache, tap *Clear cache*.
- Select symbol for pushpins, my location and destination. To do so, open the appropriate section (Pushpin, My Location, Destination point) and select the required symbol from the appeared list.



- In the *Coordinate system* section, you can select UTM zone, if WGS-84 coordinate system is used in the current project.
- Enable/disable display of buffer showing accuracy of the current location definition.

## **Working with Gallery**

The Gallery tab contains maps in CMF2 format. All maps are divided in two groups -

Thematic maps and World maps. To go to *Gallery*, tap *Add* vin the map menu or tap and select *Gallery* tab in the appeared window.



The *Thematic maps* group contains maps created using extension for ArcGIS Desktop called CarryMap Builder and provided by our clients and partners.

The *World maps* group contains OpenStreetMap maps converted to CMF2 format and sorted by countries and regions. After downloading, the maps are ready to be used in CarryMap app.

To download a map from *Gallery*, select it from the list and tap *Download*  $\bigcirc$ . The download process will start. To cancel the process, tap *Cancel*  $\times$ .



After downloading the map to your device, the download icon will change to  $\bigcirc$ . If the map has available updates, you will see the icon  $\bigcirc$  near this map name. Tap this icon to download the updated version of the map.

To delete map from device, tap the three dots menu and select *Delete*. You can download it again from *Gallery*, if needed.

To share map, tap the three dots menu and select *Share*. Note that you can share maps downloaded to your device only.



All downloaded maps can be viewed in Maps tab.



## **Finding current location**

To define your current location on the map, tap My location



When the *My location* option is enabled, the button changes  $\checkmark$ . To disable the option, tap any place on the map. If you tap the location button again, the map will go to the tracking mode and the button will look as  $\checkmark$ . Being in the tracking mode, the map will rotate according to your current location. To disable tracking mode, tap any place on the map.

## Using external GPS receivers

Starting from version 5.3, CarryMap app supports external GPS receivers from Bad Elf. Using these GPS receivers allows to specify coordinates of your current location more accurately.

Note that making all settings for Bad Elf GPS option is done outside CarryMap app. To connect Bad Elf receiver, enable Bluetooth on your device and all available receivers will be shown in the appeared list.

< Bluetooth	SCAN :
ON	
1 Bluetooth device has be	een found.
AVAILABLE DEVICES	
Bad Elf GPS #0	009184

Select the required GPS device and set connection with your mobile device. To do so, tap *OK* on your device and on Bad Elf receiver.



Bad Elf GPS receiver will be connected and you will see the appropriate message.



If by some reason Bad Elf receiver works inappropriately, CarryMap app will automatically use the embedded GPS receiver of your mobile device (if geolocation option is enabled), and the following message will appear.

Connection with Bad Elf GPS receiver has been lost. Temporarily the embedded GPS receiver of your device is being used If geolocation option of your device is disabled and connection with Bad Elf receiver is lost, you will see the following message.

Connection with Bad Elf GPS receiver has been lost. Reconnect Bad Elf device or enable GPS location option to use the embedded GPS receiver of your device

To find your current location and to record tracks, enable geolocation option on your device or check connection with Bad Elf receiver.

## Working with protected maps

The maps protected with password are marked with the lock  $\bigcirc$  icon. To open the password protected map, tap its name, enter password in the appeared window and tap *Unlock*.

Password r This map is lo to unlock the r	cked. Enter pa	assword
	CANCEL	UNLOCK

The map will be opened in the project. Now access to this map is allowed, to lock it again, go

to *Maps* tab, press  $\bigcirc$  in the appeared window, and then *OK*.



Access to your map is locked and you will need to enter password again to continue working.

If the validity time of the map has expired, the map icon looks as  10  and the appropriate message appears.

The map has expired