



Leica Captivate v3.50 Software Release Notes

Product	Leica Captivate Field Controllers: CS20, CS35 Total Stations: TS16, TS60, MS60 GNSS Receivers: GS18 T
Release date	11 th June 2018
Maintenance date	1 st June 2018

Available in myWorld Week 24, 2018



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Available via : https://myworld.leica-geosystems.com/irj/portal

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1 Leica Captivate v3.50 Release Notes - Introduction

Please do take your time to read these Release Notes. They contain information about

- New features
- Bug fixes

General information There is a Leica Captivate v3.50 release for the following hardware

- Field Controllers: CS20, CS35
- Total Stations: TS16, TS60, MS60
- GNSS Sensors: GS18 T

Customer CareThe Leica Captivate software version 3.50 can be loaded onto all CS FieldProduct (CCP)Controllers and TS Total Stations with a CCP valid until at least 01.06.2018dates

Jobs, Coordinate Systems, Working Styles, RTK Profiles and other objects All Leica Captivate "objects" (such as Jobs, Coordinate Systems, Working Styles, RTK profiles etc.) created or used within previous Leica Captivate versions can be used without problems in Leica Captivate v3.50

Version compatibility between CS Field Controllers, TS Total Stations and GS Sensors The table below shows the compatibility between Leica Captivate versions

		CS20, CS35	CS20, CS35	CS20, CS35
		Leica Captivate	Leica	Leica Captivate
		v1.x	Captivate v2.x	v3.x
TS16, TS60, MS60	Leica Captivate v1.x	Fully compatible	Not compatible	Not compatible
TS16, TS60, MS60	Leica Captivate v2.x	Not compatible	Fully compatible	Not compatible
TS16, TS60, MS60 GS18 T	Leica Captivate v3.x	Not compatible	Not compatible	Fully compatible

The table below shows the compatibility between Leica Captivate and SmartWorx Viva versions

		CS20, CS35	CS20, CS35	CS20, CS35
			Leica	Leica
		Captivate v1.x	Captivate v2.x	Captivate v3.x
	All versions	Fully	Not compatible	Not compatible
All TS, MS and GS sensors capable of	prior to SmartWorx Viva v6.0 and higher than v5.60	compatible		
SmartWorx	SmartWorx	Not	Fully	Not compatible
Viva	SmartWorx	Not	Not compatible	Fullv
	Viva v7.x	compatible		compatible

2 Leica Captivate Software Improvements - new features

Support of IFC



The Industry Foundation Classes (IFC) are an open standard used in the building industry to digitally describe building models and is used by numerous software as an exchange format for building data.

To easily allow integration into this workflow, Leica Captivate v3.50 supports the IFC format.

An IFC file can be attached to a job in Leica Captivate.



When attaching, it is possible to view the classes available in the IFC and select which classes should be visible.

<u>ن</u>	IFC Class	es	-	1.	Hz 72°54'00.4" V 92°50'28.9"	@	11:18
	IfcBeam Objects 195						
~	IfcBuilding Objects 36	gElementProxy					
~	IfcColumn Objects 140						
~	IfcCoverin Objects 1	g					
~	IfcDoor Objects 9						
~	IfcFooting Objects 17						
Fn	ОК	All			Ca	ncel	Fn

Once the IFC file is attached, it can be seen in the **3D Viewer**. The objects contained in the file can be selected and it is possible to import them via an option from the context menu.



To import points and lines from an IFC object, the user has 2 options, as seen in the screen shot below:

Import EOI (elements of interest): When using this option, the object will be imported as points or lines or both. When selecting an object, Leica Captivate identifies the surfaces that define the object. In case of a positive recognition, the lines defining those surfaces will be highlighted in green. When selecting to **Import EOI**, these elements will be imported into the database. The entities to be created during import (points or lines or both) can be defined in the IFC import settings.

Import geometry: by using this option, the entire object will be imported as a mesh (triangles and vertices of these triangles). The entities to be created during import (points or lines or both) can be defined in the IFC import settings.



In the **3D Viewer** toolbar, the **Layer management** panel will show the objects contained in the file. They can be turned on or off for better viewing as needed.

Layer l	Management			Hz 347°54'57.7" V 91°55'52.1"	@	13:09
CAD layers	FC tree view					
	CONF 2					
	IfcBuilding					
+	B2 BASEME	NT NT				
+	B1 MEZZAN					
	+ B121	AKCII				
E OK			Inclute	D		
Fn OK	0	Classes	Isolate	Pa	age	Fn

Objects and groups of objects can be turned off individually. The **Isolate** button allows turning off all groups of objects in the list except the one highlighted. To turn all objects on again, the top check box can be activated.

The **F3(Classes)** button accesses to IFC Classes panel, where classes can be activated and deactivated for being displayed in the **3D Viewer**.

Data from the IFC file can be viewed in all occurrences of the **3D Viewer**. Import of data from IFC is possible from the **3D Viewer** in the following instances:

- In Data management
- In the Dataset panel for the linked jobs
- In these apps: Measure, Stake points, Stake points & DTM, Measure to line, Stake to line, COGO

There are some restrictions on what size of IFC file can be used but this is mainly limited by the complexity of the file. The following should give an indication, of what is possible:

- On a CS20/TS/MS the file size for attaching an IFC file is limited to 40 MB. On the CS35 no size limit is implemented but performance may suffer when using large files.
- There is a maximum number of vertices per surface. For the CS20/TS/MS this will be around 32700 vertices, for a CS35 around 130000.
- When viewing the data in the 3D Viewer, it will be loaded up to a certain limit. If the data to show exceeds this limit, the remaining data will not be displayed.
- For the CS20/TS/MS this limit is at 120MB, including all points, lines, DTM and CAD data shown within the job. For the CS35 the limit is at 1.2GB.

This new feature allows staking points and performing as built checks from IFC data directly. It can therefore significantly speed up the working process as no data conversion is necessary.

Allow opening apps from within apps via hotkeys



Sometimes when working in the field it can be necessary to switch to a different task for just one point to then return to what was being done before.

For instance, when measuring points, it may be needed to stake out one point, to then return to measuring.

With Leica Captivate v3.50 it is now possible to assign apps to hotkeys and call them from within other apps.

つ TS Hot Keys	Hz 65°00'00" V 270°00'18"	(1) 09:37
App - Stake points & DTM		
App - Stake rail		
App - Stake road		
္စာ App - Stake to line		
App - Stake tunnel		
App - Traverse		
Fn OK		Fn

This makes switching between tasks very fast and easy and can therefore save a lot of time in the field.

Improve the Stake to line - Quick line method



In the **Stake to line** app, several methods can be selected to be used on entering the app. One method is the **Quick line** method, which allows selecting two points and temporarily creating a line between these points to stake to, without actually storing this "quick line".

For Leica Captivate v3.50 this method has been improved to allow easier configuration of the line to stake to.

The **Rotate line** setting has been moved directly into the **Define Quick Line** panel, **Line** page.

つ Define Quick Li	ne	⊕	(1) 14:22
Line Stake 3D viewer			
Start point		2345	>
End point		330	>
Rotate line		35°00'00"	
Azimuth		180°00'00"	
Horizontal distance		16.6900 m	
Height difference		-1.4999 m	
Slope distance		16.7573 m	
Fn OK Inverse	Shifts		Page Fn

The **Stake** settings are now on the same panel, in a separate page tab, which now offers the option to define the **Start chainage** of the line.

 ☐ Define Quick Line) Hz 10°00'00' V 90°00'01'	(C) (D) (14:08
Line Stake 3D viewer				
Start chainage		30.0000 ft		
Chainage		0.0000 ft		
Offset		5.0000 ft		
Height offset		0.0000 ft		
Use chainage increments		✓		
Increment		5.0000 ft		
Increment after storing		Increase		\sim
Fn OK S	hifts	Ch-	Ch+	Page Fn

When points have been staked to a quick line, the **Esc** button allows to easily get back to the **Define Quick Line** panel to define a new line to stake to.

Overall, these changes make it easier and more efficient to stake to a "quick line".

In the **Stake to line** app, the **Quick line** method allows selecting two points and temporarily creating a line between these points to be staked without actually storing this "quick line".

With Leica Captivate v3.50 there is now also a method that allows staking to a temporary arc. There are several methods to define this arc.

└ Define Quick Arc	1 1 HZ 33°00'01" @ 1033				
Arc Stake 3D viewer					
Create arc using	3 points				
Start point	3 points				
Second point	2 points & radius				
End point	2 tangents & radius				
	2 tangents & arc length				
	2 tangents & chord length				

Once the arc is defined, the **Start chainage**, **Chainage** of first point to stake, **Offset** from the arc, **Height offset** and, if needed, chainage **Increment** can be defined.

Introduce a Stake to line - Quick arc, method



[←] Define Quick Arc	<u>1</u> ∩ Hz 10°00'00" @ 11:55
Arc Stake 3D viewer	
Start chainage	0.0000 ft
Chainage	5.0000 ft
Offset	10.0000 ft
Height offset	0.0000 ft
Use chainage increments	
Increment	5.0000 ft
Increment after storing	Increase V
Fn OK Shifts	Ch- Ch+ Page Fn

This new method allows to easily define an arc in the field and stake to it.

Calculate the centre point of a circle, triangle or rectangle



When using closed lines in the Stake points app, it is sometimes useful to know the centre point of this closed line, so it can be staked out.

With Leica Captivate v3.50 it is now possible to select a line in the 3D Viewer or the Measure app and calculate the centre point of this closed line via a new option from the context menu.



When showing the results for the centre point, the height value is calculated as an average from the original line. The height value for this point can be edited. It is also possible to assign a code to the centre point and to select which job to store it to.

つ New Point	1 1 1 Hz 270°00'00" @ 14:51 ↓ 1 1 Hz 270°00'00" @ 14:51
Result Code 3D viewer	
Point ID	TS0007
Easting	1793597.3654 ft
Northing	17226396.9647 ft
Height	1480.8656 ft
Store point to job	Leica Heerbrugg
Fn Store	Page Fn

This makes it very easy to calculate the centre point of a closed line and store it to the correct job.

On a building site, while staking points, it could be necessary to stake or check a height without having an actual design point with that height.

With Leica Captivate v3.50, the **Stake points** app now offers a new tool that allows staking an elevation without the need of a design point.



The tool allows entering an elevation and staking it in one or more positions. The stakeout position is then stored as a 3D point of the class **Measured**. To return to staking 3D points, the **Tools** menu shows a **Stake points** tool.

This new tool allows to easily stake out or check a height whenever needed, without the need of entering and storing a point first.

Until now it was possible to use a COGO app to calculate the intersection between two lines. The lines were calculated by selecting two points for each line or by a combination of points, bearings and distances. However, it was not possible to calculate the intersection based on an already existing line.

With Leica Captivate v3.50 it is possible to calculate an intersection of two lines defined by two selected lines (lines can contain multiple straight segments but cannot contain arcs or spirals) or four selected points or a line and two points.

The selection of the points and lines can be done in the 3D Viewer. The context

Staking an elevation without the need of point coordinates



Calculate the intersection of 2 lines



menu then allows selecting the Intersection option.



For the calculated intersection point, an **Intersection Result** page is shown that allows editing the point height and adding a code. It also shows the newly calculated point in the **3D viewer**.



This new context menu option offers quicker access to the intersection calculation and makes the tool more flexible.

Calculate a rectangle from measured points and offsets



Sometimes, when outside in the field, it can be necessary to calculate a rectangle from three measured points or two measured points and a distance without having to measure the remaining points.

Leica Captivate v3.50 offers a new feature, which allows selecting three points from the 3D viewer and then choosing to calculate the rectangle from those three points.

When selecting the three points, there are two methods to choose from.

් v3.50	⊕ 1 ◎ 1 ○ V 91°36'58" @ 14:02 1:02
	< Back
∎ [™] S0001	3 Pts rectangle 3 Pts rectangle parallel
S 0003	
■ \$0002	
4 −26 m→	
Fn OK	Fn

3 pts rectangle will use two points as a length of the rectangle. The distance to the third point is used as the width of the rectangle. Two new points are calculated, perpendicular to the length, starting at the end points of this first line.

The new point 1, opposite point 2 will be assigned the same height as point 2. The new point 2, opposite point 1 will be assigned the height of point 1. The heights of the new points can be edited before storing.

∽ v3.50	⊕ 1 ● 1 → V 91°36′58″ 0 00'00″ V 91°36′58″ 0) 14:02
Input 3D viewer		
A	■ S0001 New point 2	٩,
 ← 26 m→	TS0002_New point 1	٠
Fn Calculate	Page	Fn

3 pts rectangle parallel will not draw a rectangle but a parallelogram. The three points are used as corners of the parallelogram and a 4th point is calculated by moving the available sides parallel into points 1 and 3. There are no right angles in this form.

The height for the new point 1 will be calculated so that the point is on the same plane as the existing 3 points. The height of the new point can be edited before storing.



A rectangle can also be calculated by selecting two points from the 3D Viewer and then choosing the option to calculate a **2 Pts rectangle**, using these two points and an offset. The offset can be applied left or right (entering it as a negative or positive value).

∽ v3.50		⊕ 1 ◎ ↓ 1 ∨ 91°36′58″ @ 1403 1403
A	∎ S0001	< Back Inverse Segment line 2 Pts rectangle
/ 4 −26 m→	∎TS0002	
Fn OK		Fn

The new point 1, opposite point 2 will be assigned the same height as point 2. The new point 2, opposite point 1 will be assigned the height of point 1. The heights of the new points can be edited before storing.

Solution State State	⊕ 1 ◎ 1 ○ V 91°36′58" @	14:02
A	■ S0001 New point 2	Q,
≪ 26 m→	∎ <u>S0002</u> New point 1	¢
Fn Calculate	Page	Fn

Once the new points for the rectangle are calculated, a results page allows editing the height, assigning a code and viewing the calculated rectangle in the **3D viewer** tab.

Once the points are stored, the new line result is shown. The closed line created for the rectangle can also be given a code, the geometry can be edited, and Line ID and colour can be defined.

් Line0076	1 1 Hz 65°00'01" @ □ V 89°59'43" @ □
General Geometry Code Images	
Area ID	Line0076
Style	V
Colour	\checkmark
Number of points	4
Area	488.602 m ²
Perimeter	295.3082 ft
Start date	23.04.18
Store	More Page

This new calculation method can save time in the field and makes it easy to create rectangular areas directly in Captivate.

Segment a line from two points



When staking out underground cables, pipelines or other lines, sometimes only the inflection points are given in the design data.

To properly stake out the line, more points along the line may be needed. With Leica Captivate v3.50, it will be possible to select a line or two points from the 3D Viewer and select from the context menu the option to segment that section into equally spaced points.



└ Define Line Segmentation	1 ∩ 1/2 Hz 65°00'01" ∅ V 270°00'18" ∅	09:45
Calculate segment from	Number of points	\vee
Start chainage	0.0000 ft	
End chainage	79.9472 ft	
Line length	79.9472 ft	
Number of points	5	
Chainage increment	13.3245 ft	
Horizontal offset	0.0000 ft	
Apply on both sides		
Calculate		
ら a	1 ☆ Hz 65°00'01" @	09:45
	0016	
A Soc)17	Q;
TS0008 JS0010 JS0019 001		

These points can then be staked out to easily mark the course of the line.

002 003

004 005

JS0020

JS0018

50013

|≪−40 ft → Fn

ОК

Q

÷

Fn

Improve the entry of the PIN code when starting up Leica Captivate



In some countries instrument theft is a serious problem. One option to make stolen instruments unusable and therefore remove the value of the instrument, is protecting the software with a PIN code.

To make it easier to use this feature, we have improved the readability and usability of the PIN entry on Start-up of Leica Captivate.



It is advisable to use a PIN code on every instrument running Leica Captivate.

Added functionality in the Inspect Surfaces app



A v3.50 of the Inspect Surfaces app will be released with Leica Captivate v3.50. For this version the import of ASCII and PTS file has been improved so it is now significantly faster, making the workflow more efficient.

The new v3.50 of Inspect Surfaces can be used with all Leica Captivate versions 3.x from v3.20 onwards.

The App can be ordered directly with each new instrument or can be downloaded from <u>myWorld</u>.

Added functionality in the ESRI Shapefile exporter app

A v3.50 of the ESRI Shapefile exporter app will be released with Leica Captivate v3.50.

ESRI Shp This new version allows selecting the object to be exported (Point/Lines/Areas) and generating 3D or 2D objects, depending of configurated value.

The attributes generated in the shapefile table are "double" or "integer" values when it is possible, otherwise they are string values.

Spanish was added as a supported language for this app.

The new v3.50 of ESRI Shapefile exported can be used with all Leica Captivate versions 3.x from v3.00 onwards.

The App can be ordered directly with each new instrument or can be downloaded from <u>myWorld</u>.

3 Leica Captivate GNSS Improvements – new features

Support of the new GS07 GNSS smart antenna



The new Leica Captivate v3.50 firmware for the CS20 field controller supports the new GS07 GNSS smart antenna.



The GS07 is Leica Geosystems' new mid-range GNSS smart antenna. It is the light weight, yet robust piece of equipment which comes with functionality focused on exactly what you need, with the highest quality levels one would expect from a premium Leica Geosystems GNSS portfolio.

Please find more information on the Leica Geosystems website.

Support of the new CGR4 RTK radio



The new Leica Captivate v3.50 firmware supports the new CGR4 UHF receive only RTK radio for the CS20 field controller (models with expansion pack slot). This is an external radio that can be attached to the CS20.

This 400 MHz band radio allows to receive RTK corrections, regardless of the used GS receiver.



GS18 T – Tilt values



For certain projects it may not be allowed to use the GS18 T with the tilt compensation active. In these cases, the pole must be held vertically when measuring due to specific regulations.

It could still be important to prove, that the pole had been held vertically.

With Leica Captivate v3.50 it is now possible to only store the tilt values, without applying them to the measurement by choosing **Store tilt only** in the **Tilt Compensation** panel.



Store tilt only requires a GS18 T with Leica Captivate version from v3.50 onwards.

status panels for Base and Rover world.

QZSS related status information is now available in all satellite tracking and RTK

QZSS status information



NMEA GST message



The GS receivers can now be configured to stream the NMEA-0183 GST message (position error statistics).

Example of the GST message: \$GPGST,172814.0,0.006,0.023,0.020,273.6,0.023,0.020,0.031*6A

NMEA GST message requires a GS with Leica Captivate version from v3.50 onwards or SmartWorx Viva from v7.50 onwards.

4 Leica Captivate Software Improvements – Bug fixes

Search is started instead of objects being displayed	When a field is highlighted that leads to a list of objects, such as a Point ID field, and Enter is pressed, a search was started with a space as the search value.	
	The expected behavior is that the list of available Point IDs is displayed, without starting a search.	
	This issue is fixed with Leica Captivate v3.50.	
CS freezes when toggling between GS and TS mode while the long-range BT connection is interrupted	A CS20 can be used while simultaneously connected to a GS with a Bluetooth connection and to the TS with a long-range Bluetooth connection. It would happen if toggling between GS and TS mode on the CS20 while the BT connection to the TS is interrupted and the CS20 is trying to re-establish the connection. In this case the CS20 could freeze and would need to be restarted.	
	This issue is fixed with Leica Captivate v3.50.	
Wrong point ID is stored in the Stake points app after using the Meas app button	The Stake points app allows switching to the Measure app directly by using the F5 (Meas app) button. The Measure app will then suggest the next free Point ID to be stored with the next measured point. When returning to the Stake Points app, the next staked point would then incorrectly be stored with the Point ID suggested in the Measure app instead of the defined Point ID from the staked point.	
	This issue is fixed with Leica Captivate v3.50.	
Measurements are not possible with a CS20 connected to a Flexline Total Station	When a CS20 was connected to a Flexline Total Station (TS02plus, TS06plus or TS09plus), it was possible to measure distances but when trying to store a measurement, an error would be shown. This issue is fixed with Leica Captivate v3.50.	
New orientation is not set in the Autosetup app when	In the Auto setup app, if the Advanced settings were defined to Use Helmert method for calculations of resections, the new orientation was not set.	
method	This issue is fixed with the Auto Setup app v3.50 for Leica Captivate.	
Chainage value cannot be entered	In the Stake road app, no chainage value could be entered, if the alignment started with a negative chainage value.	
chainage of the alignment is a negative value	This issue is fixed with Leica Captivate v3.50.	

In rare cases, the GS average triplet was not used for a setup calculation	This issue would be seen when using averaged coordinates of a GS measured point in a Setup. If the GS point coordinates had been measured during the setup instead of being selected from an existing point list, only the last measured coordinates would be used, instead of the averaged coordinates.
	This issue is fixed with Leica Captivate v3.50.
GS raw data logging settings taken over from base into rover mode	This bug could be seen when using the same CS20 Controller to configure a GS sensor as a base and then a GS18 T sensor as a rover. When the GS base was configured to log raw data and the CS20 was then connected to the GS18 T and switched to rover mode, there was an error messages shown saying that raw data could not be logged while tilt compensation was in use, even though no raw data logging had been activated for the rover.
	This issue is fixed with Leica Captivate v3.50.
Code search finds wrong code in some rare cases	When configuring to Create linework while coding and setting the sorting methods to Original order , Quickcode or Last used , the search would sometimes find the wrong code. This was because the search would be done to match parts of the code, not the full code, so a search for "102" might find code "1020".
	This issue is fixed with Leica Captivate v3.50 and the correct code will be found with the search.
Point created in COGO – Line & arc calculation is added to wrong line	This issue could be seen when calculating a point in the COGO – Line & arc calculation function. A new point calculated with this function would automatically be added to the last line created in the Measure app.
	This issue is fixed with Leica Captivate v3.50.
Fixed attribute values not exported to XML when using last used attribute values setting	This issue could be seen when the coding settings are configured to use Suggested attribute values: Last used and when Create linework during coding is activated. In this case, when using a code list containing codes with fixed attribute values, these fixed values would not be contained in the exported file when exporting to XML.
	This issue is fixed with Leica Captivate v3.50.
Total Station turns after EDM mode or prism setting is changed	This issue could be seen if a Total station was configured to Wait & lock if no target was found after the configured prediction time and if the user then pointed the instrument to a new position after the Total Station lost lock on a prism.
	If, at this time, the user changed the EDM or the prism settings, the instrument would turn back to the last position after the prediction time.
Total Station turns	This issue is fixed with Leica Captivate v3.50. On an MS60 MultiStation ot a TS60 Total Station, when setting the Main power

off with battery level at 50% if external power source is configured	source to External power in the Battery & charging panel and configuring to Charge the internal battery when external power is connected , the instrument would power down when the battery is discharged to 50% while no external power source was attached.
	This issue is fixed with Leica Captivate v3.50 and the full battery capacity can be used.
SmartLink Reference frame not applied when Instantaneous	This issue could be seen when using SmartLink and configuring to automatically stop point measurements instantaneously after a position is measured.
measurement mode is used	In this case, the measured coordinates are always stored in the default reference frame ITRF2008(current) . If any other reference frame was selected, this would be ignored, and the default reference frame would be used.

This issue is fixed with Leica Captivate v3.50.

5 Obtaining and loading the new software using myWorld (CS20 Field Controller and TS/MS instruments)

It is strongly recommended to use myWorld to load the new software to the CS20 Field Controller and TS/MS instruments.



The myWorld online update cannot be used to load the new software to the CS35 tablet and GS18 T GNSS rover.

Once your Controllers and Instruments have been registered in myWorld, connect the hardware to your PC, navigate to your products page in myWorld and follow the on-screen instructions. The latest software versions will be loaded as required.

To connect CS20 Field Controller and TS/MS instruments to the PC you need to first install the USB drivers. These drivers are available for download at myWorld.

6 Obtaining and loading the new software using manual loading (CS20 Field Controller and TS/MS instruments)

If you prefer not to use the myWorld online update, it is also possible to "manually" load the new software – in this case, please carefully read the notes below.

Obtaining the new software	The new software, language files and apps can be obtained from the following sources:
	 the myWorld web site (it is also possible to manually download the files from the myWorld web site as well as automatically upgrading your controllers and sensors with myWorld) your local Leica Selling Unit or Dealer
Files which need to be obtained for upgrading a CS20	The following file needs to be obtained to upgrade a CS Field Controller - CS20LeicaCaptivate_v3_50.fw
Field Controller	This file contains all Leica Captivate and WinEC languages and apps
Files which need to be obtained for upgrading a TS/MS	The following file needs to be obtained to upgrade a TS/MS instrument - TSxxMS60LeicaCaptivate_v3_50.fw
instrument	This file contains all Leica Captivate and WinEC languages and apps
How to load the Leica Captivate files to a CS20 Field Controller or TS/MS instrument	 Insert the SD card into your PC or card reader and copy the necessary file to be uploaded to the instrument to the System directory of the card. This can be done with Windows Explorer or any other suitable PC software. (it is NOT possible to use a USB stick to upgrade your CS20 Field Controller or TS/MS instrument) Insert the SD card into the CS20 Field Controller or TS/MS instrument and turn on. Ensure the battery is fully charged. From the main menu, choose Settings and then choose menu item Tools and then choose Update software. The Update software screen
	is now visible.

	4. 5. 6.	In the File to load list box ensure the correct file name is visible. If the file name is not visible then check you have correctly copied the firmware file to the System directory of the SD card. Press $F1(OK)$ – a message will appear to remind you the controller will turn off and on during the process. Press $F6(Yes)$ to begin the loading process. The loading process will take a few minutes and the controller will turn off and on several times during the process.
Obtaining sample data	Since L simulat advanta	eica Captivate v2.0, the sample data is no longer included in each or build. The sample data can be installed using a separate installer. The age of this is that it is no longer needed to download several large files.
	During can be Viva CS and the	the installation, it is possible to select for which simulators the sample data installed – the sample can be installed for all 4 simulators (SmartWorx S simulator, SmartWorx Viva TS simulator, Leica Captivate CS20 simulator Leica Captivate TS/MS simulator).
	The sai is provi very ea	mple data installer can be downloaded from myWorld. An installation guide ded along with the sample data installer though the installation process is sy to follow.

7 Obtaining and loading the new software using manual loading (CS35 Tablet)

The CS35 Tablet can only be upgraded manually. Follow the instructions below.

Obtaining the new software	 The new software, language files and apps can be obtained from the following sources: the myWorld web site (it is also possible to manually download the files from the myWorld web site as well as automatically upgrading your controllers and sensors with myWorld) your local Leica Selling Unit or Dealer 	
Files which need to be obtained for upgrading a CS35 tablet	The following file must be downloaded to upgrade the CS35 tablet LeicaCaptivate_CS35_v3_50.zip	
	The file contains Leica Captivate languages and apps.	
How to load the Leia Captivate files to the CS35 tablet	 On your PC unpack the files from the .zip file to a USB stick Insert the USB stick into the CS35 Tablet Using the File Explorer app within Windows 8.1 on the CS35 tablet, browse to the USB stick. Double tap the Setup.exe file Follow the instructions 	
	Note that this procedure will need to be performed twice – once to uninstall the existing Leica Captivate software and then a second time to install the new software.	

Obtaining sampleSince Leica Captivate v2.0, the sample data is no longer included in the CS35datafirmware but will be provided separately via the sample data installer.

The sample data installer can be downloaded from myWorld. An installation guide is provided along with the sample data installer though the installation process is very easy to follow.

8 Summary of Leica Captivate Software Files

Listed below is a summary of the files available relating to the new Leica Captivate software. The version number for all files is v3.50.

File name	Description	File date	Build	Maintenance
			no.	date
CS20LeicaCaptivate_v3_50.fw	CS20 Field Controller	08.06.2018	142	01.06.2018
	Leica Captivate			
	software file			
TSxxMS60LeicaCaptivate_v3_50.fw	TS/MS instrument	08.06.2018	142	01.06.2018
	Leica Captivate			
	software file			
LeicaCaptivate_CS35_ v3_50.fw	CS35 tablet Leica	08.06.2018	142	01.06.2018
	Captivate software file			
	(without sample jobs)			
GSxxLeicaCaptivate.fw	GS18 T smart antenna	08.06.2018	142	01.12.2017
	Leica Captivate			
	software file			