Global on-event script

This kind of a script is bound to a system event which occurs in the Field-Map Data Collector application on various circumtances. A script can perform additional tasks to handle such an event in order to make the customization of a project complete and fully functional.

Depending on the type of an event the script can receive additional information about the event by getting values of event-specific predefined global variables. For some types of events the script can even control the behaviour of Data Collector by setting vales of predefined global variables. For more information on working with global variables see the appropriate section of this manual.

Global events are divided into several groups:

Angle count sampling

Events related to measurement of basal area using angle count sampling method.

- **BeforeAngleCountMeasurement**

  Executed before angle count measurement is performed

  Input variables:

  - AngleCountSampling_LayerName

    Name of the layer for angle count sampling

  - AngleCountSampling_AttributeName

    Name of the attribute for angle count sampling

  Output variables:

  - AngleCountSampling_BasicParametersXML

    XML with basic sampling parameters, created automatically when performing sampling

  - AngleCountSampling_Method

    1 ~ basic method - mean D and H (Czechia)

    2 ~ extended method with tree DBH /DBH-H chart (Germany)

Global on-event script (cont.)

- **BeforeAngleCountSampling**

  Executed before angle count sampling is performed

  Input variables:

  - AngleCountSampling_LayerName

    Name of the layer for angle count sampling
  - AngleCountSampling_AttributeName

    Name of the attribute for angle count sampling

  Output variables:

  AngleCountSampling_ClassifyingLayerName

  Layer containing lookup lists with classifiers, e.g. Species

- **OnMissingClassifier**

  Executed when a classifier is missing during angle count sampling

  Input variables:

  - AngleCountSampling_LayerName

    Name of the layer for angle count sampling
  - AngleCountSampling_AttributeName

    Name of the attribute for angle count sampling

  Output variables: none

Global on-event script (cont.)

Field-Map

General events related to project / DLL extensions management

- **AfterOpenFieldMap**

  Executed after Data Collector is started

  Input variables: none

  Output variables: none

- **AfterOpenProject**

  Executed after a project is open

  Input variables: none

  Output variables: none

- **BeforeRunDLL/AfterRunDLL**

  Executed before/after a DLL extension is run

  Input variables:

  - DLL_FileName

    Full path to the DLL extension currently run

  Output variables: none

- **BeforeCloseFieldMap**

  Executed before Data Collector is closed

  Input variables: none

  Output variables: none

Global on-event script (cont.)

Mapping

Events related to map drawing

- **BeforeMapDraw/AfterMapDraw**

  Executed before/after a map is drawn (enables to perform custom painting into the map window)

  Input variables: none

  Output variables: none

- **OnDoubleClickToMap**

  Executed when an entity from an active layer is double-clicked in the map window.

  Input variables:

  - Mapping_LayerName

    Name of the active layer

  - Mapping_CurrentID

    ID of the entity which was double-clicked

  - Mapping_CurrentX_m

    X-coordinate of the entity which was double-clicked (in metres)

  - Mapping_CurrentY_m

    Y-coordinate of the entity which was double-clicked (in metres)

  Output variables: none

Global on-event script (cont.)

- **BeforeMovePoint/AfterMovePoint**

  Executed before/after a point is moved using a move tool.

  Input variables:

  - MovePoint_OldX

    Original X–coordinate of the point
  - MovePoint_OldY

    Original Y–coordinate of the point
  - MovePoint_NewX

    New X–coordinate of the point
  - MovePoint_NewY

    New Y–coordinate of the point

  Output variables: none

Measurement

Events related to the input of measured data

- **AfterInputData**

  Executed when manual data input is selected in the settings and a user enters the raw data by hand using input dialog window

  Input variables:

  - Input_HorizontalDistance_m

    Value of horizontal distance in meters

Global on-event script (cont.)

- Input_SlopeDistance_m

  Value of slope distance in meters
- Input_Inclination_deg

  Value of inclination in degrees
- Input_HorizontalAngle_deg

  Value of azimuth in degrees

Output variables: none

- **AfterReceiveVector**

  Executed when the raw data of horizontal vector is received from measurement device or via pen mapping

  Input variables:

  - Vector_HorizontalDistance_m

    Value of horizontal distance in meters
  - Vector_SlopeDistance_m

    Value of slope distance in meters
  - Vector _Inclination_deg

    Value of inclination in degrees
  - Vector _HorizontalAngle_deg

    Value of azimuth in degrees
  - Vector_PenMapping

    0 ~ data from measurement device

    1 ~ pen mapping data

  Output variables: none

Global on-event script (cont.)

Remote diameter

Events related to remote diameter / height measurement

- **BeforeMeasurement**

  Executed before a measurement of the remote diameter

  Input variables:

  - RemoteDiameter_LayerName

    Name of the layer containing an attribute to be measured
  - RemoteDiameter_AttributeName

    Name of the attribute to be measured

  Output variables:

  - RemoteDiameter_DBH_mm

    Value of the diameter provided by the script in milimeters
  - RemoteDiameter_TreeHeight_m

    Value of the corresponding height provided by the script in meters

- **BeforeHeight Measurement**

  Executed before a measurement of the height part of remote diameter

  Input variables:

  - RemoteDiameter_LayerName

    Name of the layer containing an attribute to be measured
  - RemoteDiameter_AttributeName

    Name of the attribute for which the height is measured

    (empty when measuring a stem profile)

  Output variables: none

Global on-event script (cont.)

- **AfterHeight Measurement**

  Executed after a measurement of the height part of remote diameter

  Input variables:

  - RemoteDiameter_LayerName

    Name of the layer containing an attribute to be measured
  - RemoteDiameter_AttributeName

    Name of the attribute for which the height is measured

    (empty when measuring a stem profile)
  - RemoteDiameter_Height_m

    Value of height in meters

  Output variables:

  - RemoteDiameter_HeightOk

    Used to signal whether the measured height is valid or not

Sampling

Events related to process of sampling

- **ChooseSamplingMethod**

  Executed to determine which sampling method should be used

  Input variables:

  - Sampling_LayerName

    Name of the layer containing an attribute to perform sampling for
  - Sampling_AttributeName

    Name of the attribute for which the sampling is about to be performed

Global on-event script (cont.)

Output variables:

- Sampling_Method

  10 ~ angle count sampling

  20 ~ transect sampling

Stand density measurement

Events related to process of stand density measurement

- **BeforeStandDensityMeasurement**

  Executed before measurement of stand density to provide the plot radius and the mean DBH used for the measurement

  Input variables:

  - StandDensity_LayerName

    Name of the layer containing an attribute to be measured

  - StandDensity_Attribute

    Name of the attribute to be measured

  Output variables:

  - StandDensity_PlotRadius_m

    Value of the plot radius provided by the script in meters

  - StandDensity_MeanDBH_cm

    Value of the mean DBH provided by the script in centimeters

Global on-event script (cont.)

- **AfterTreeMeasurement**

  Executed after measurement of a single tree during the process of stand density measurement.

  Input variables:

  - StandDensity_LayerName

    Name of the layer containing the attribute being measured

  - StandDensity_AttributeName

    Name of the attribute being measured

  - StandDensity_Distance_m

    Distance of the measured tree from the center of the plot

  - StandDensity_TreePosition

    Position of the tree:

    0 ~ inside of the plot

    1 ~ outside of the plot

    2 ~ tree already exists within a search tolerance

  Output variables: none

Global on-event script (cont.)

Stem profile

Events related to measurement of stem profile

- **BeforeProfileMeasurement**

  Executed before local stem profile measurement (possibility of passing additional H,D data)

  Input variables:

  - StemProfile_LayerName

    Name of the layer containing an attribute which triggered the stem profile measurement

  - StemProfile_AttributeName

    Name of the attribute which triggered the stem profile measurement

  Output variables:

  - StemProfile_DBH_mm

    Additional DBH provided by the script in milimeters

  - StemProfile_TreeHeight_m

    Additional tree height provided by the script in meters

  - StemProfile_DiameterUnit

    Unit of diameters in additional set:

    0 ~ milimeters

    1 ~ centimeters

  - StemProfile_Point1...n

    Set of numbered additional points of stem profile – string containing H and D values separated by ‘|’ (H|D)

Global on-event script (cont.)

- **AfterCalliperHeightIncrement**

  Executed after height increment during on-line calliper measurement of stem profile.

  Input variables:

  - StemProfileCalliperHeight

    New value of stem profile height.

  Output variables: none