GPS Newsletter – System500 GIS

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GIS Data Collection

Following on from newsletter No. 12, "Introducing GIS", this newsletter discusses the actual process of collecting GIS data using the "**GIS Data Collection**" program.

How does the collection of data with this program differ to collecting data with the "**Survey**" program on an SR510/20/30?

Starting the Program

After starting the "**GIS Data Collection**" program, the familiar "**DATA COLL\ Begin**" panel appears.

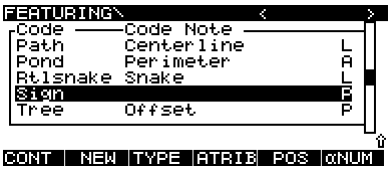
As with the **Survey** program, the **Begin** panel allows the configuration set, job, antenna and co-ordinate system to be chosen. Also, and most importantly for GIS data collection, the **codelist** is selected.

The **codelist** is the heart of the "**GIS Data Collection**" program, because this defines the actual **GIS topology**, i.e. what features are going to be surveyed. Consequently, the first step in the collection of GIS data is the selection of the feature code itself.

Featuring = GIS Selection

Continuing from the "**Begin**" panel, the "**FEATURING**" panel is immediately accessed. This displays and allows the selection of **feature codes** that are contained within that codelist.

In GIS data collection, features can be surveyed as a **point** (such as a bench), a **line** (such as a path) or as an **area** (such as a pond).



The **P**, **L**, and **A** on the right of the panel indicate if that code is a **point**, a **line** or an **area** code respectively. The choice of the feature not only determines the GIS topology but also the method as to how the point is actually surveyed (this is described later).

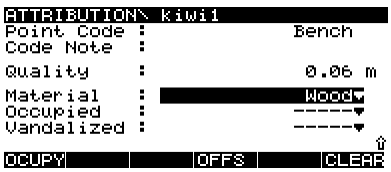
Note that usually, this codelist is already created in the office and transferred to the sensor. However, it is also possible to create and build a new codelist or add features to an existing codelist in the field whilst collecting GIS data. This makes the actual collection and feature coding of data both powerful and extremely flexible.

Highlighting the correct code and pressing **F1(CONT)** selects the feature code and accesses the **ATTRIBUTION** panel. This panel allows attributes to be entered for that feature and the actual measurement of the feature itself.

Attribution = Data Collection

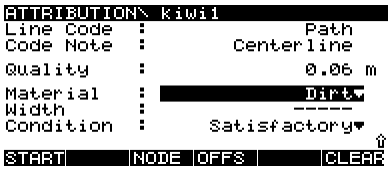
Attributes can be entered in the same manner, regardless of whether a **point**, a **line** or an **area** feature is being measured.

The actual measuring of a **point** feature is done with a static point occupation, by simply pressing **F1(OCUPY)**.



F3(OFFS) allows the measurement of inaccessible point features (for example using a laser range finder) using either **Bearing and Distance**, **Double Bearing** or the **Double Distance** method.

The measuring of a **line** feature or an **area** feature is possible in one of 3 ways.



1. Pressing **F1(START)** sets the sensor logging positions at a definable rate. The user would then simply walk along or around the feature (the path or pond in this case) with the sensor logging points (called **nodes**) automatically. Logging is stopped with the **F1(STOP)** key, which appears after **F1(START)** is pressed. This is called the "**stream by time**" method.

2. If the **SHIFT F3(DIST)** key is used before streaming is started, a distance can be specified as the minimum distance between two subsequent nodes. This method is called "**stream by distance**"

3. The **F3(NODE)** key allows the measuring of each line or area node as single static points. By default 5 positions are measured and averaged before storing the point. This is called the "**node mode**" method.

In all of these modes the use of a line or area offset is possible.

Remember…

- The "**GIS Data Collection**" program can run on **any** System 500 sensor.
- Data collection is based around the feature codelist and point, line and area features can be collected.

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