

## Points and Intervals

We occasionally receive support calls about what is the difference between a **Point** and an **Interval**. This newsletter explains the differences...

### The Point Is...

Basically, a point describes a unique position in space. It is represented by a **Point ID** and always has co-ordinates attached which describe this position.

In SKI-Pro, points can be seen in various views, but normally, points are viewed, edited and deleted within the **View/Edit**, or the **Points** tab view.

Right click on any point to access the **Point Properties** dialog box. This gives information about the point – co-ordinates, co-ordinate class, stochastic information, etc.

### The Interval

An interval is best described as a period in time during which a reference or rover receiver is being used to collect data. The data being collected can be RTK data or data (static and/or kinematic) for post processing.

All intervals are either **Static** or **Moving intervals**. This can be explained when considering how data is actually collected during a survey.

### Static and Moving Intervals

A static interval is created whenever a position is occupied during a survey. This means the pole is being held stationary, the user has pressed **F1(OCCUPY)** and the point is actually being measured.

After pressing **F1(STOP)**, but before pressing **F1(STORE)**, the user has to give this measured point a point ID. The time between pressing

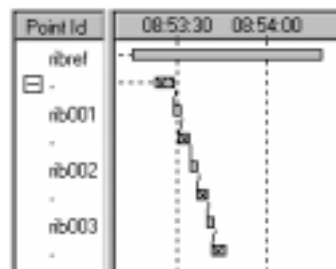
occupy and stop is a static interval and “contains” one measured point.

The pole is now moved to the next point to be measured. During this period, a moving interval is created. A moving interval can never “contain” statically occupied points.

It can be seen that a typical survey is made up of a combination of static and moving intervals. This combination of intervals is known as a **track**.

When this data is imported into SKI-Pro, what does this track look like?

A representation of the survey through time can be seen in the **Data Proc** tab view in SKI-Pro. Consider the following simple survey:



For this survey, there is only one static interval for the reference station. The colour of the interval is grey, which means raw data has been logged during this time. The reference data is one single static occupation with no moving intervals – it is therefore not a track.

For the rover, it can be seen how the individual moving and static intervals are linked to create a track. This track consists of 3 static intervals and 4 moving intervals.

Notice how each static interval has an associated point ID, whereas the moving intervals have no point ID.

All intervals have start and end epochs and also all inter-

vals have one antenna height associated with them.

Right click on any interval in the **Data Proc** tab view and choose **Properties** to access the **Interval Properties** dialog box. Note how all individual intervals (moving and static) within the whole track itself can be viewed within this dialog box.

If you do not have the Data Processing option on your dongle, the Interval Properties dialog box can still be accessed by right clicking on a point in the **View/Edit** tab view and choosing **Edit Interval**.

### Intervals and Points

It is now clear that moving intervals never represent static points and static intervals always represent only one statically occupied point.

But what would happen if the same point was statically occupied twice and given the same point ID?

In this case, there would be two intervals (one static interval for each occupation would be seen in the **Data Proc** tab view), but only one point would be seen in the **Points** tab view. This would be an **Averaged** point, which was automatically computed from the two measured solutions.

### Remember

- A **point** describes a unique position in space and is represented by a point ID. A **point** will always have one (or possibly more) associated **intervals**.
- A **static interval** is a period of time during which one position is statically occupied.
- A **moving interval** is a period of time, during which no positions are statically occupied.