# TAPESTRY TRAJECTORY [BIN]

**Motion File [Binary Trajectory1/2.scn]**

This format implements that used internally by the Tapestry system.

**Convention/Restrictions**

- The data is Binary (Intel).
- The data must start at least 1 second into the simulated week.
- The data must be differentiable.
- The data must have no time gaps.
- The data must be at 10Hz throughout.

- Use the following "C" structure to write successive **10 Hz** record into your file.

```
#pragma pack(push,1)

typedef struct {

        long int Week;                  // GPS week number (4 bytes)
        double  SecondsIntoWeek;        // seconds into GPS week
        double  ECEF Position[3];       // meters (x, y, z )
        double  ECEF Velocity[3];       // m/s
        double  ECEF Acceleration[3];   // m/s/s
        double  ECEF Jerk[3];           // m/s/s/s
        double  Attitude[3];            // radians [Roll, Pitch, Heading]
        double  Angular Rate[3];        // r/s
        double  Angular Acceleration[3]; // r/s/s
        double  Angular Jerk[3];        // r/s/s/s

} NAVTRUTHRECORD;                       // Tapestry format

#pragma pack(pop)
```

- The pragma directive assures BYTE alignment of the data within the file. This is not the default for most compilers (e.g. Microsoft, Borland).

- The first record in the file is used as the initial state for the Scenario. After you have imported the Trajectory. You may use the Data/Time Icon to move the Start Time from that entered. You cannot change the initial location.