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com.kauailabs.navx.ftc

## Interface IDataArrivalSubscriber

* All Known Implementing Classes: [navXPerformanceMonitor](http://docs.google.com/com/kauailabs/navx/ftc/navXPerformanceMonitor.html), [navXPIDController](http://docs.google.com/com/kauailabs/navx/ftc/navXPIDController.html)  
    
  public interface IDataArrivalSubscriber  
  The IDataArrivalSubscriber interface provides a method for consumers of navX-Model device data to be rapidly notified whenever new data has arrived. Two separate "callback" functions are provided: - timesetampedDataReceived(): reception of sensor-timestamped data - untimestampedDataReceived(): reception of data without a sensor- provided timestamp. Both timestamps are at millisecond resolution. A "system timestamp" is provided in both casees, which represents as accurately as possible the time at which this process acquired the data. If available, sensor timestamps are preferred, as they are generated by a real-time system and thus have a greater accuracy than the system timestamp which is vulnerable to latencies introduced by the non-realtime Android operating system. To support data retrieval of various different types of data from a single data publisher, a "kind" object is also provided which can be used to indicate the type of data being referred to in the notification. This callback is invoked by the AHRS class whenever new data is r eceived from the sensor. Note that this callback is occurring within the context of the AHRS class IO thread, and it may interrupt the thread running this opMode. Therefore, it is very important to use thread synchronization techniques when communicating between this callback and the rest of the code in this opMode. The sensor\_timestamp is accurate to 1 millisecond, and reflects the time that the data was actually acquired. This callback will only be invoked when a sensor data sample newer than the last is received, so it is guaranteed that the same data sample will not be delivered to this callback more than once. If the sensor is reset for some reason, the sensor timestamp will be reset to 0. Therefore, if the sensor timestamp is ever less than the previous sample, this indicates the sensor has been reset. In order to be called back, this interface must be registered via the AHRS registerCallback() method.

### Method SummaryAll Methods Instance Methods Abstract Methods

|  |  |
| --- | --- |
| * + Modifier and Type | * + Method and Description |
| * + void | * + [timestampedDataReceived](http://docs.google.com/com/kauailabs/navx/ftc/IDataArrivalSubscriber.html#timestampedDataReceived-long-long-java.lang.Object-)(long system\_timestamp, long sensor\_timestamp, java.lang.Object kind) |
| * + void | * + [untimestampedDataReceived](http://docs.google.com/com/kauailabs/navx/ftc/IDataArrivalSubscriber.html#untimestampedDataReceived-long-java.lang.Object-)(long system\_timestamp, java.lang.Object kind) |
| * + void | * + [yawReset](http://docs.google.com/com/kauailabs/navx/ftc/IDataArrivalSubscriber.html#yawReset--)() |

### Method Detail

#### untimestampedDataReceived void untimestampedDataReceived(long system\_timestamp, java.lang.Object kind)

#### timestampedDataReceived void timestampedDataReceived(long system\_timestamp, long sensor\_timestamp, java.lang.Object kind)

#### yawReset void yawReset()

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