Use Case S2: Detailed Description

Use Case Name: Monitor Humidity Data
Scenario: Record Daily Humdity Extremes
Brief Description: With the System running, the System records the daily humidity extreme data–the minimum and maximum humidity–from the 1-wire humidity sensor.
Actors: System
Related Use Cases:
Use Case S9: *The System Shall Save Humidity Extremes*
Stakeholders: Local and National Weather Bureaus and individuals monitoring local weather data.
Preconditions: The System is running, the humdity data is received from the hygrometer hardware. The extreme humidity data values are initialized: -1.0 for max, 101.0 for min.
Postconditions: The extreme humidity (minumum and maximum) data found and noted.

Flow of Events

System	One Wire Hygrometer Sensor
	1. Return requested humidity data measured
2. Records the date/time of the current humidity measurement.	
3. Compare the current humidity against both the minimum and maximum.	
4. Record the current temperature as an extreme if it is less than or equal to the minimum or greater than or equal to the maximum.	
5. Record the date and time for *event 4*	

Exception Conditions
1a. If the One Wire Hygrometer sensor stops working, then the System changes neither the minimum nor maximum values.
1b. If the One Wire Hygrometer sensor returns an error, then the System changes neither the minumum nore maximum values.
1c. If the One Wire Network breaks, then the System changes neither the minumum nor maximum values.
3a-5a. If the date has changed from the previous measurement, the humidity max and min are reset and compared for the new date.