# WindSpeed

- volatile int m nb rotations
- volatile unsigned long m contact time
- volatile unsigned long m average time
- volatile double m wind speed
- + WindSpeed()
- + ~WindSpeed()
- + void init()
- + void update()
- + void rotation()
- + double getWindSpeed()

#### **GPS**

- TinyGPSPlus m gps
- + GPS()
- + ~GPS()
- + void init()
- + void update()
- + double getLat()
- + double getLon()
- + double getCourse()
- + double getSpeed()
- + int getSatellites()
- + String getDate()
- + String getTime()
- + CoordLatLon getCoordLatLon()
- + CoordXY getCoordXY()

## WindDirection

- float m raw wind direction
- float m wind direction
- + WindDirection()
- + ~WindDirection()

-m\_wd

- + void init()
- + void update()
- + float getWindDirection()
- + float getRawWindDirection()
- + void setFilteredWindDirection (float wind direction)

### CMPS12

- SoftwareSerial ss cmps
- char m pitch
- char m roll
- float m vaw
- float m yaw raw
- + CMPS12()
- + ~CMPS12()
- + void init()
- + void update()
- + void calibration()
- + float getYaw()
- + float getYawRaw()
- + int getPitch()
- + int getRoll()

m\_cmps

+ void setFilteredYaw (float yaw)

-m\_ws

-m gps

Observer

- float m true wind angle
- + Observer()
- + ~Observer()
- + void init()
- + void updateSensors()
- + void fusion()
- + void updateTrueWindAngle()
- + float getTrueWindAngle()
- + CMPS12 \* cmps()
- + GPS \* aps()
- + WindSpeed \* ws()
- + WindDirection \* wd()

#m obs

## AlgorithmInterface

- # float m cmd rudder
- # float m cmd sail
- + AlgorithmInterface() + ~AlgorithmInterface()
- + void init(Observer
- \*obs)
- + virtual void updateCmd()=0
- + virtual void setLine
- (CoordLatLon a, CoordLatLon b)
- + float getCmdRudder()
- + float getCmdSail()