blastaCARS DRIFT KARTS™

GO-KART DRIFT TRACKING SYSTEM

BACKGROUND

BLASTACARS DRIFT KARTS USED ONLY A TIMING SYSTEM, THEY NEEDED A DRIFT TRACKING SYSTEM

KARTS DRIFT AROUND A SPECIALISED TRACK, DESIGNED FOR DRIFTING

RESEARCH

THIS PROJECT IS UNIQUE: THE FINAL COMBINATION OF HARDWARE AND SOFTWARE FOR THIS PURPOSE HAS NEVER BEEN IMPLEMENTED BEFORE.

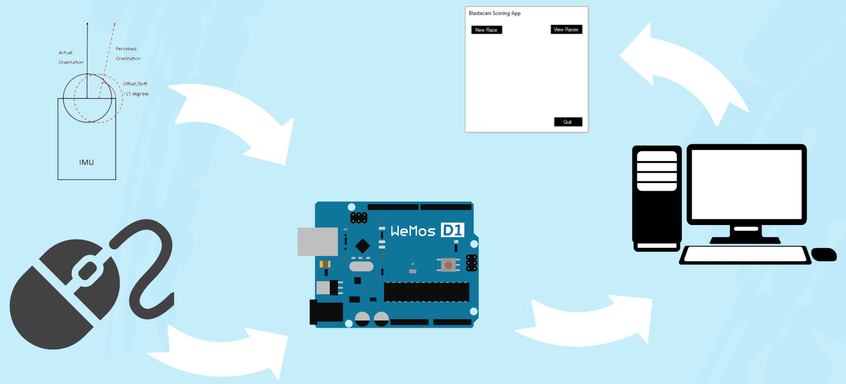
QUADCOPTERS AND SIMILAR SYSTEM DO MAKE USE OF SIMILAR HARDWARE, BUT OUR SYSTEM HAS NEVER BEEN ATTEMPTED

DRIFTING

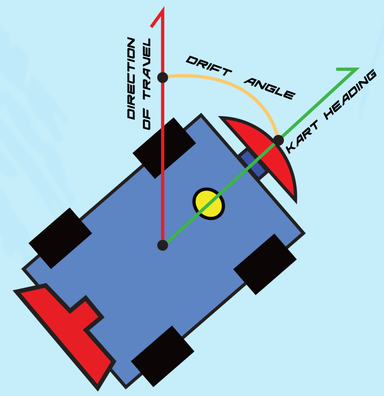
RACERS DRIFT BY MOVING THE BACK OF THE KART FURTHER THAN THE FRONT

SIDESLIP ANGLE INCREASES AS THE DRIFT BEGINS, AND DECREASES AS IT ENDS

FINAL SYSTEM FLOW



DRIFTING DEMONSTRATION



HARDWARE

MPU9250 IMU

WEMOS D1R2 WITH ESP8266

10,000 MAH EXTERNAL BATTERY

MICROSOFT INTELLIMOUSE SENSOR/BOARD

TRACK SERVER COMPUTER

WI-FI ROUTER

SOFTWARE

C#

C++

PROCESSING

1 LINE OF VISUAL BASIC

ARDUINO IDE

PROCESSING IDE

VISUAL STUDIO

NOTEPAD++

FUTURE WORK

FACEBOOK/SOCIAL MEDIA INTEGRATION

MECHANICAL IMPROVEMENTS

RILEY HUNTER, TORREY WORTH, TYLER FLEMING