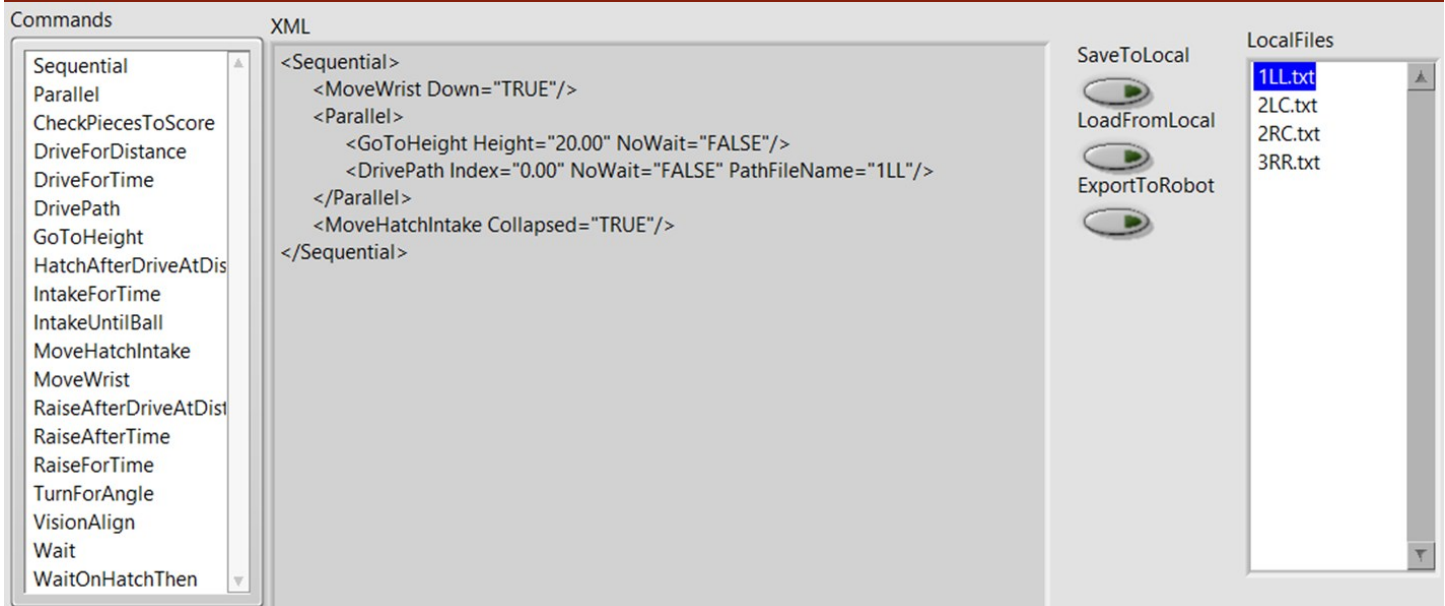




CONTROL SYSTEMS 2019

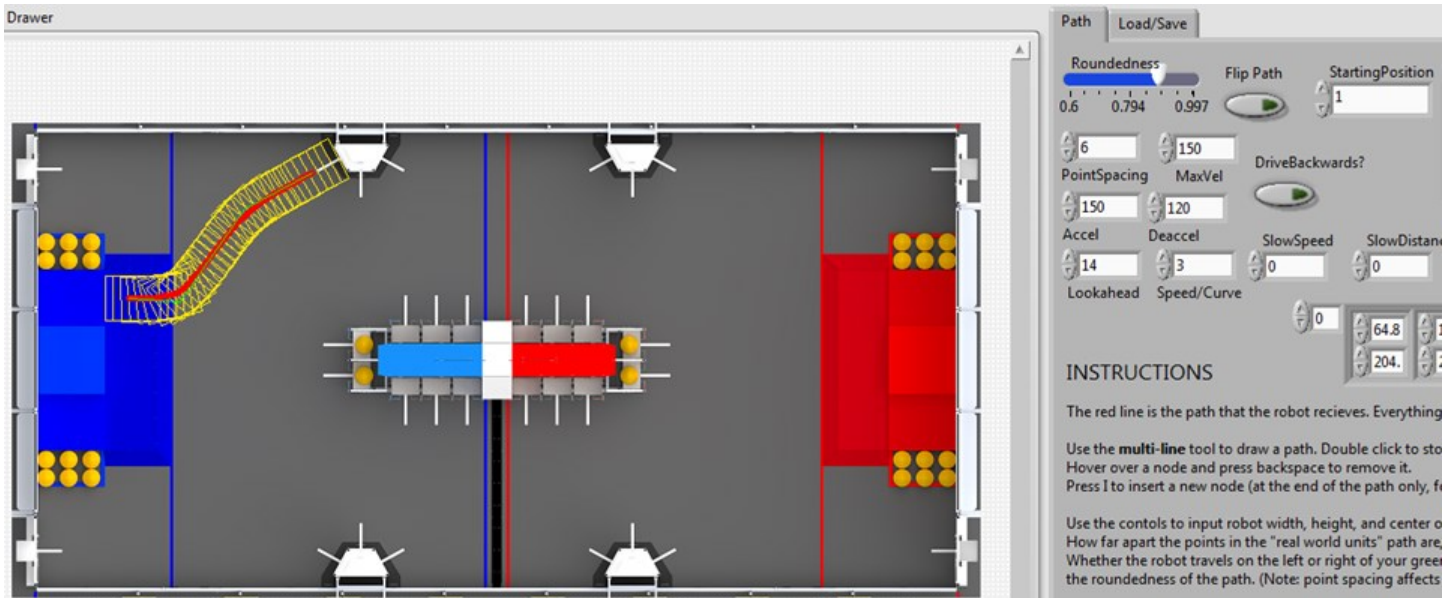


FLEXIBLE AUTONOMOUS EDITOR

- EASILY CREATE & EDIT AUTONOMOUS ROUTINES WITH CUSTOM-BUILT LABVIEW SYSTEM
- POINT & CLICK INTERFACE MAKES SCRIPTING AUTONOMOUS COMMANDS EASY
- CAN RUN COMMANDS IN SEQUENCE OR IN PARALLEL
- EVERY ROUTINE STORED IN ITS OWN XML FILE
- SAVE/LOAD/EXPORT FILES
- CHANGING AUTONOMOUS NO LONGER REQUIRES BUILDING DOWN CODE
- ROBOT CODE CHOOSES AND PARSES CORRECT FILE TO RUN AUTONOMOUS
- CUSTOM PROGRAM AUTOMATES CREATION OF AUTONOMOUS COMMANDS FROM "TEMPLATES"

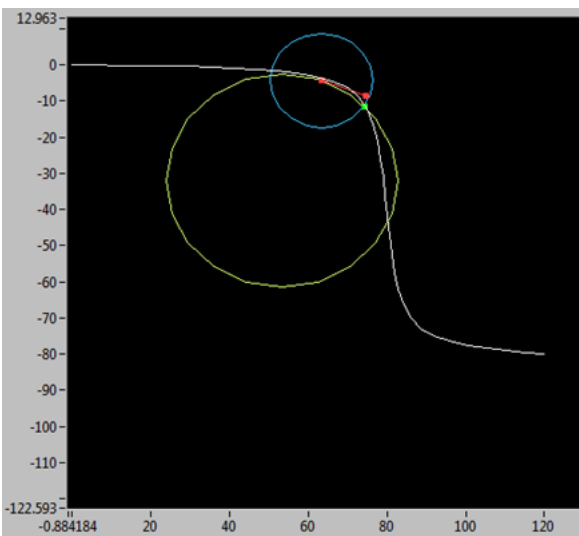
SENSING & AUTOMATION

- VISION ASSISTED ALIGNMENT HELPS DRIVERS ACQUIRE & SCORE GAME PIECES
- AUTOMATED HATCH SENSING & ACQUISITION VIA LIMIT SWITCH SIMPLIFIES DRIVING
- MOTION PROFILE CONTROLLED ARM WITH PRESET HEIGHTS FOR QUICK & EASY SCORING
- AUTOMATED ROBOT ACTIONS AT START OF SANDSTORM TO SECURE HATCH IN GRABBER
- CUSTOM DASHBOARD TO VIEW SENSOR READINGS AND SELECT AUTONOMOUS ROUTINES
- ENCODERS AND NAVX IMU USED FOR POSITIONING DURING PATH FOLLOWING



CUSTOM PATH DRAWER

- APPLICATION FOR EASY CREATION OF SMOOTH PATHS
- NEW FEATURES:
 - * ABILITY TO DRAW MULTIPLE PATHS IN ONE FILE
 - * ABILITY TO INSERT NEW POINTS INTO PATHS



CUSTOM PURE PURSUIT PATH FOLLOWING

- ALLOWS ROBOT TO SMOOTHLY FOLLOW PATHS
- NEW FEATURES:
 - * MORE ACCURATE LOOK AHEAD POINT CALCULATION
 - * NEW CODE AUTOMATICALLY INTEGRATES WITH PATH DRAWER TO SET STARTING POSITIONS