2016 Software Design and Simulation Score Sheet

Purpose: To document the software design process and practices used for creating and testing the robot program. (25 Points)	**Possible Points**	**Score**
SOFTWARE DESIGN PROCESS (85 points)		
• Evidence that a software design process was followed ○ Identifying the required operations (e.g., locomotion/drive, chassis rotate, arm lift/bend/rotate/extend, claw rotate/open, ...) ○ Designing each required operation (e.g., flow charting the steps involved, consideration of user interface, etc.) ○ Coding and Verification (how correct operation of the robot program is validated) ○ Release and Maintenance (version control, managing changes/updates)	**30**	
Comments:		
• Evidence of custom software design versus using the default robot program	**15**	
Comments:		
• Evidence that advanced simulation techniques were utilized to verify the correct program operation (e.g., Simulink, virtual world, external mode, etc.)	**20**	
Comments:		
• Evidence that test and debug techniques were considered (e.g., debug terminal, print to screen, real-time debugger, external mode/in-the-loop, etc.)	**10**	
Comments:		
• Evidence that the program functionality is connected to the teams' scoring objectives/strategies.	**10**	
Comments:		

Team Number: _____ School: _____

SOFTWARE DESIGN PRACTICES (40 points)		
• Consideration of good software design practices (e.g., commenting, naming conventions, code simplicity, code modularity/portability)	**15**	
Comments:		
• Consideration of error conditions and response actions. (e.g., illegal operations, invalid states, motor/servo stop limits, out of bounds values, etc.)	**15**	
Comments:		
CLARITY OF DESIGN AND DESCRIPTION (10 points)		
• Clarity of design and description (well written, easy to follow, no excess material/information)	**10**	
Comments:		
Total	**125**	
	÷5	**÷ 5**
Final score:	**25**	

Judge name/number (print): _____

Team Number: _____ School: _____