Sprint 6 Retrospective Document

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Project acronym: ROBOCON-RT

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# Sprint 6 summary

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| --- | --- | --- | --- |
| Item ID (from the previous retrospective doc) | Workpackage ID (from the Kick-off doc) | Status | Group’s comments |
| 4 | 4 | In Progress | The problems with the motors (encoder problems) lasted longer than we expected, so we could not start doing this. |
| 5 | 6 | Dropped | We dropped this item since it is unnecessary now that we switched to the quad-core ConnectCore 6 board. |
| 6 | 8 | Dropped | We dropped this because we decided to focus on simulation first. |
| 7 | 4 | Completed | We have designed the general control interface. |
| 8 | 6 | In progress | Currently on hold as we are now prototyping on our quad-core ConnectCore 6. |
| 9 | 6 | Completed | We made a new circuit for inverting the signals coming from the encoder. We are getting signals from the encoder successfully. |
| 10 | 4 | Completed | We inspected the various implementations in RHexLib for motor control. |

# Sprint 7 plan

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| --- | --- | --- | --- |
| Item ID | Workpackage ID (from the Kick-off doc) | Description | Status |
| 11 | 4 | Establishing the consistent communication with the new motor that we will replace with the older one | New |
| 12 | 6 | EtherCAT: Communicate with motor drives using ConnectCore 6 | New |
| 13 | 6 | Simulation: Control the simulation robot components with a C code | New |
| 14 | 4 | Motor Control: Implement the EtherCAT motor drive control interface | New |
| 8 | 6 | Scenario Test: Test portability of RHexLib by installing it on UP2 computer | Leftover from Sprint 6 |
| 16 | 4 | Design the network interface between the RHexLib and Gazebo | New |
| 4 | 4 | EtherCAT Master library: Write C code to directly control brushed motors | Leftover from Sprint 6 |

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# Overall progress

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| --- | --- | --- | --- | --- | --- | --- |
|  | Sprint 1 | Sprint 2 | Sprint 3 | Sprint 4 | Sprint 5 | Sprint6 |
| MF1 | 0% | 5% | 15% | 25% | 25% | 45% |
| MF2 | 0% | 60% | 90% | 92% | 92% | 93% |
| MF3 | 66.67% | 73% | 84% | 100% | 100% | 100% |
| MF4 | 0% | 10% | 10% | 10% | 10% | 30% |
| MF5 | 16.6% | 45% | 76% | 80% | 82% | 82% |
| MF6 | 0% | 10% | 10% | 10% | 10% | 45% |
| MF7 | 0% | 0% | 0% | 0% | 0% | 30% |
| MF8 | 0% | 0% | 0% | 0% | 0% | 0% |
| MF9 | 13% | 14% | 15% | 20% | 25% | 25% |
| MF10 | 0% | 0% | 0% | 0% | 0% | 0% |
| MF11 | 100% | 100% | 100% | 100% | 100% | 100% |
| MF12 | 37% | 40% | 40% | 40% | 40% | 40% |