MDP Android App Message Scheme

**Movement**

|  |  |  |  |
| --- | --- | --- | --- |
| Send | MOVE:F | Move Forward | C3 |
| Send | MOVE:TL | Turn Left |
| Send | MOVE:TR | Turn Right |

**Statuses**

|  |  |  |  |
| --- | --- | --- | --- |
| ~~Receive~~ | ~~STATUS:FP~~ | Fastest Path / Exploring – status to be updated on app itself | C4 |
| ~~Receive~~ | ~~STATUS:EX~~ |
| Receive | STATUS:F | Ack of manual movement message sent to Arduino – to coordinate |
| Receive | STATUS:TL |
| Receive | STATUS:TR |
| Receive | STATUS:DONE | Done <with FP/EX> |
|  |  |  |
|  |  |  |

**Algorithm**

|  |  |  |  |
| --- | --- | --- | --- |
| Send | WP:<x>,<y> | Set Waypoint | C5 |
| Send | START:<x>,<y> | Set Start Point |
| Send | BEGINFP | Begin Fastest Path | Trigger  Algo |
| Send | BEGINEX | Begin Exploration |
| ~~Send~~ | ~~ARENA~~ | ~~Get Current Grid Status~~ | ~~C6, C7~~ |
| ~~Send~~ | ~~GETPOS~~ | ~~Get Robot Position~~ |

\*manual mode will be implemented through suppressing the update of the map – data will still be automatically pushed

\* x and y are 0-based

**Display**

|  |  |  |  |
| --- | --- | --- | --- |
| Receive | ROBOTPOSITION:<x>,<y>,<hdg> | Robot Position  Heading = NSEW | C6, C7 |
| Receive | GRID:<map\_descriptor> | Current Grid Status [for AMD]  *Format: all cells, 1=obstacle* |
| Receive | GRID:<explored>,<obstacles> | Current Grid Status [as per map descriptor format – P1&P2] |
| Receive | BLOCK:<x>,<y>,<id> | Display Number ID Blocks  For future implementation | C10 |

**String**

|  |  |  |  |
| --- | --- | --- | --- |
| Send | <as is> | Send String Command | C8 |