**Mestra**

Triggers & Programs

Michel Keijzers, © 2017

# History

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|  |  |
| --- | --- |
| **Date/period** | **Actions** |
| Nov 8, 2017 | Initial Version |

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# Introduction

This document describes the application software, which transforms the (text) file containing triggers and programs/instruction towards a file that is read by the Mestra Controller.

# Requirements

This paragraph shows all requirements common to all Mestra (embedded) software.

Table 15: Requirements GS

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID** | **Base ID** | **Version** | **Category** | **Item** | **Description** |
| GenS100 | - | 1.0 | Rules | Amount | At least 100 rules can be defined.  *Rationale: to have a useful system, enough programming flexibility is needed.* |
| GenS200 | - | 1.0 | Rules | Simultaneously | At least 20 rules can be active simultaneously.  *Rationale: to have a useful system, enough programming flexibility is needed.* |
| GenS210 | - | 1.0 | Triggers | Amount | At least 100 triggers can be defined.  *Rationale: to have a useful system, enough programming flexibility is needed.* |
| GenS220 | - | 1.0 | Commands | Amount | At least 100 commands can be defined.  *Rationale: to have a useful system, enough programming flexibility is needed.* |
| GenS230 | - | 1.0 | Commands | Per Trigger | At least 10 commands per trigger can be defined.  *Rationale: to have a useful system, enough programming flexibility is needed.* |
| GenS300 | - | 1.0 | Communication | No noise from other devices | Slaves should work also when other (non Mestra) devices using the same type of communication are present.  *Rationale: when using wireless communication, other RF or WIFI should not interfere with Mestra devices.* |
| GenS310 | - | 1.0 | Communication | No noise to other devices | Other devices should not be interfered more than needed by the use of Mestra devices.  *Rationale: except for the channels/ports/resources used by Mestra devices, all other non Mestra devices using the same communication should not be interfered with.* |
| GenS320 | G20 | 1.0 | Communication | Protocol | The communication protocol for all devices will be similar.  *Rationale: Adding devices need to communicate with the controller.* |
| GenS400 | G1 | 1.0 | Performance | Prevent Messages | Prevent sending messages from a slave to the Controller when not needed.  *Rationale: Sending (and the resulting received message(s)) cost a lot of time, also it pollutes the bandwidth.* |
| GenS500 |  | 1.0 | Testing | Unit testing | Testing of software can be performed automatically by using unit testing.  *Rationale: Manual testing is too time consuming and software will be complex.* |

## Design