

## Custom Software Statement of Work

### PLUGIN SCOPE

Matthews Marking Systems will provide a software solution in the form of an MPERIA® Plugin. The plugin will use information provided in a table that resides on the MPERIA® controller to update a variable with a configurable shift code.

The table must have a key column for month names and columns for each possible day in a month (1-31). The plugin will get the current date from the controller and reference the table to determine which shifts are working that day (A,B or C,D). Then, the plugin will use the current time and compare it to shift change time configured in the plugin, accounting for shifts that start before and end after midnight. The plugin will support a shift length of 12 hours.

The plugin will use the calendar as configured in the table as well as the current time to determine which shift to use. The plugin will populate a variable with the current shift code letter.

### REQUIREMENTS

These requirements govern the operation of the system. The plugin will be tested against these requirements.

1. The database table must be populated correctly by the user.
  - a. The database table must have a column for each of the 12 months of the year. This column must be the key column of the table.
  - b. The database table must have 31 additional columns, one for each possible day of the month.
  - c. The content of each cell must take the form of "X,Y", where X is the first shift's letter code and the Y is the second shift's letter code. The cell content should not include the quotation marks, just the X,Y content.
    - i. The cell content X and Y must contain a single character.
      1. For example, A,B and C,D are valid cell entries. ABC,DEF is not a valid entry.
  - d. The database table may be created/updated using external software provided that it is formatted correctly and imported into the controller correctly.
2. The plugin shall use the MPERIA® controller's date and the provided database table to determine which shifts are to be used for that calendar day.
3. The plugin shall only support shifts which are 12 hours in length.
  - a. The user shall configure the plugin for when the shift code is to change, not necessarily when the worker shift begins.
    - i. The calendar provided by Owens Corning lists a start time of 6:45 and an end time of 7:00. It is assumed that the shift code actually changes at 7:00 rather than 6:45. If this is incorrect, clarification will be necessary and a revision of the approval document will be needed.
4. The plugin shall support shifts that begin before and end after midnight.
  - a. For example, with a shift start time of 7:00pm, the shift would end at 7:00am the next calendar day. The plugin will display the correct shift from the hours of midnight until 7:00am.

5. The plugin shall have a configurable option for the time that the shifts change.
  - a. If the controller's time is before the configured time, the variable will contain the second of the previous day's shift code letters.
  - b. If the controller's time is between the configured time (inclusive) and the configured time plus 12 hours (exclusive), the variable will contain the first of the current day's shift code letters.
  - c. If the controller's time is equal to or later than the configured time plus 12 hours, the variable will contain the second of the previous day's shift code letters.
6. The variable name to be populated shall be configurable.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
--	Document Created	01/16/23	KD