

Xi Internationalization Guide

Translating Block Text and Alerts

Version 1.0

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Introduction

Translating Xi from English to another language is fairly easy to do. It requires translating of both the block text and all alert strings.

Translation Steps

Translation consists of 3 steps:

1. Translating the block text.
2. Translating the Alert String Header keywords.
3. Translating the alert strings.

Translating Block Text For Scratch

The block text is specified in JSON notation as part of the Scratch JavaScript extension. This is described in the JavaScript extension documentation provided by Scratch at <http://llk.github.io/scratch-extension-docs/>.

On the next page is the block descriptor section of xi4s.js, the Scratch client. Translate the English text to the text for your language.

Note: You must keep the index numbers for the drop down list items, such as, 1. False, 2. True.

Any text can follow the index number, but the number and the period (dot) must be maintained.

// Block and block menu descriptions

```
var descriptor = {
  blocks: [
    ['w', 'Board %m.bdNum IPAddress/Port: %s : %s', 'setBoard', '1', 'localhost', '1234'],
    [' ', 'Board: %m.bdNum Set Pin %n as %m.pinMode', 'pinMode', '1', '2', '1. Digital Input'],
    [' ', 'Board: %m.bdNum Digital Write Pin %n = %m.onOff ', 'digitalWrite', '1', '2', '1. Off'],
    [' ', 'Board: %m.bdNum Analog Write(PWM) Pin %n = %n', 'analogWrite', '1', '3', '128'],
    [' ', 'Board: %m.bdNum Move Standard Servo On Pin %n To %n Degrees - Inverted %m.inversion',
      'moveStandardServo', '1', '3', '90', '1. False'],
    [' ', 'Board: %m.bdNum Move Continuous Servo On Pin: %n Dir: %m.motorDirection Inverted %m.inversion Servo Speed (0.0
- 1.0) %n ',
      'moveContinuousServo', '1', '3', '1. CW', '1. False', '.5'],
    [' ', 'Board: %m.bdNum Servo Stop! Pin: %n', 'stopServo', '1', '3'],
    [' ', 'Board: %m.bdNum Play Tone on Pin: %n HZ: %n MS: %n', 'playTone', '1', '3', '1000', '500'],
    [' ', 'Board: %m.bdNum Turn Tone Off For Pin: %n', 'noTone', '1', '3'],
    [' ', 'Set Debug Level %m.dbgLevel', 'setDebugLevel', '0'],
    ['r', 'Board: %m.bdNum Digital Input on Pin %n', 'getDigitalInputData', '1', '2'],
    ['r', 'Board: %m.bdNum Analog Sensor Input on Pin %n', 'getAnalogSensorData', '1', '2'],
    ['r', 'Board: %m.bdNum Infrared Distance %m.distance Pin %n', 'getInfraredDistanceData', '1', '1. CM', '2'],
    ['r', 'Board: %m.bdNum SONAR Distance %m.distance Pin %n', 'getSonarData', '1', '1. CM', '2'],
    [' ', 'Board: %m.bdNum Set Pins For 4 Wire Bipolar Stepper %n %n %n %n Steps Per Rev: %n',
      'fourWireStepperPins', '1', '8', '9', '10', '11', '500'],
    [' ', 'Board: %m.bdNum Set Pins For Stepper Driver Board: Step %n Direction %n Steps Per Rev: %n',
      'stepperDriverPins', '1', '8', '9', '500'],
    [' ', 'Board: %m.bdNum Move Stepper On Pin %n RPM: %n Dir: %m.motorDirection Accel: %n Decel: %n # of Steps:
%n',
      'moveStepper', '1', '8', '180', '1. CW', '1600', '1600', '2000'],
    [' ', 'Board: %m.bdNum Stepper Stop! Pin: %n', 'stopStepper', '1', '8'],
  ],
  menus: {
    bdNum: ['1', '2', '3', '4', '5', '6', '7', '8', '9', '10'],
    dbgLevel: ['0', '1', '2'],
    onOff: ['1. Off', '2. On'],
    pinMode: ['1. Digital Input', '2. Digital Output', '3. Analog Sensor Input', '4. Analog (PWM) Output',
      '5. Standard Servo (PWM)', '6. Continuous Servo (PWM)', '7. Infrared Distance (GP2Y0A21YK) - (Analog In)',
      '8. SONAR Distance - (Digital In)', '9. Tone (Piezo)- (Digital Out)'],
    motorDirection: ['1. CW', '2. CCW'],
    inversion: ['1. False', '2. True'],
    distance: ['1. CM', '2. Inches']
  },
  url: 'http://mryslab.blogspot.com/'
};
```

Translating Alert String Heading Keywords

You will need to provide the translation for the following words you would like to see as part of an alert string:

Board:

Pin:

Most alert strings begin with the board and pin identifiers.

Translating Alert Strings

Below is the current list of Xi alert strings. The commented number is the index number used internally to identify the index of the alert. Please retain the comments and order of the strings.

```
// 0
"exceeds Maximum Number of Pins on Board.",
// 1
"does not support the requested mode.",
//2
"was not configured for digital write.",
//3
"was not configured for analog write.",
//4
"was not configured for TONE OUTPUT Control.",
//5
"was not configured for Servo Control.",
//6
"was not configured for Standard Servo Control.",
//7
"was not configured for Continuous Servo Control.",
//8
"was not configured for Stepper Control.",
//9
```

```
"this pin has already been assigned.",
//10
"Speed must be in the range of 0.0 to 1.0.",
//11
"does not support analog operation",
//12
"An IP entry already exists for this board.",
//13
"If you are using an Arduino, this feature requires a special version of
StandardFirmata." +
"See: https://github.com/rwaldron/johnny-five/wiki/Sonar for details.",
//14
"IP address must be set before a board is used",
//15
"If you are using an Arduino, this feature requires a special version of
StandardFirmata." +
"See: https://github.com/soundanalogous/AdvancedFirmata for details.",
//16
"The Four Pin Values Must Be Unique. Try Again!",
//17
"The Two Pin Values Must Be Unique. Try Again!",
//18
"Pin Mode was not set. ",
//19
"IP Address for this board was not set.",
//20
"Server not responding. Did you start XiServer for this board?" +
  "Please start the server, reload this page and try again"
```

Submitting Your Translation

When you complete the translation, please email it to MisterYsLab@gmail.com

Because Scratch currently does not allow users to directly load JavaScript extensions, I will create a project for your language, and then I will email it back to you to load and verify. Once the translation is verified, it will become part of the next release.

Snap! Translations

Snap! translations will be derived from the Scratch translation. Updating the Snap! blocks requires editing each individual custom block using the Snap! block editor. As a result, Snap! translations may appear in a later release than the Scratch translation.

Questions

If you have any questions about the translation process, please contact MisterYsLab@gmail.com.