Salomé JOUSSE (arrivée à l’heure avec le sourire les 2 cours)

Loïck LEPETIT (super accent anglais, est présent le plus souvent possible)

Antoine MAUGAN (était au CA, son ordi marche super bien +1 en Bus de données)

Rapport Projet Labview

Une image contenant texte, capture d’écran, Police, nombre

Description générée automatiquementUne image contenant texte, diagramme, Dessin technique, Plan

Description générée automatiquement

SPI is connected to the clock to synchronize data transmission and reception between master and slave.

The first loop is used to enter the dummy register:

* As the register is in the most significant bit, we use a reverse 1D array after having used a ne U8 input.
* We use a while loop to ensure that all bits are processed.
* We use a flat sequence structure to proceed step by step
  + first, we send the data to the SDA
  + then wait, in this case 100ms
  + then we set the clock to the high state, the rising edge
  + then wait a second time for 100ms
  + and then we put back the clock low
  + it synchronizes the data and clock
* This loop makes it possible to write when the clock is low, so that the data is read when the clock is high, i.e. on a rising edge.
* Une image contenant texte, capture d’écran, diagramme, ligne

  Description générée automatiquementAt this stage, the RW bit is sent, followed by the dummy register address.

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Description générée automatiquement



Une image contenant texte, ligne, Rectangle, Police

Description générée automatiquement

So far, we've written to the SDA with the myRIO, i.e. in digital output, but we'd like to retrieve the frame transmitted by the dummy register. So, for the adapter board to be able to write, it must be in digital output mode, to which end we use the "set ouput enable" method. Setting it to false allows the myRio to let the slave take over.

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Description générée automatiquement

Here, we're writing to the SDA:

* First, we set the clock to a high state so that it starts reading on a high state, on a rising edge.
* Then we wait 100ms
* Next, we set the clock to a low state and retrieve the output data from the SDA
* Wait again for synchronization
* Repeat this loop 8 times, as we want 8-bit data

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Description générée automatiquement

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Description générée automatiquement

At the start of the VI, we set the CS (chip select) to false to select the correct frame, because this is an SPI read 3-wire mode protocol, so we saw in the datasheet that by setting it to false, the initial condition was met.

At the end, remember to set the CS to true because this is the end condition (see above on Accelerometer SPI read protocol in 3-wire mode).

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Description générée automatiquement

Une image contenant capture d’écran, texte, Rectangle, affichage

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