

# HelloBluetooth nRF8001 application

## Requirements

To compile the hello\_bluetooth project, you will need nRFgo Studio and the nRF8001 SDK that can be downloaded from [www.nordicsemi.no](http://www.nordicsemi.no) and a full version Keil C51, with its  $\mu$ Vision IDE. Please note that to download the nRF8001 SDK, you must register an account and enter the product key written on the nRF8001 Development Kit box into My Products page.

The hello\_bluetooth folder needs to be placed inside the «projects» folder of the nRF8001 SDK, as shown in the screenshot in figure 1.

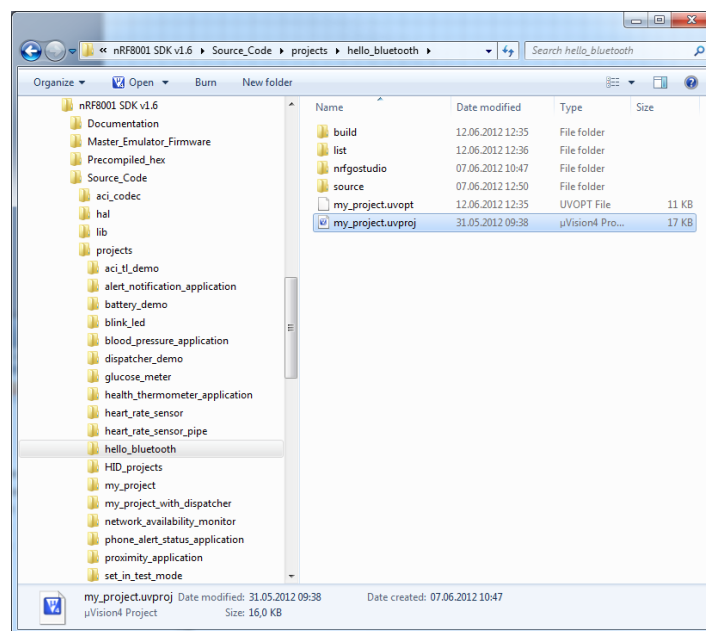


Figure 1: Placement of the hello\_bluetooth\_folder.

## Structure

When the application starts, the application controller will load the needed setup into the nRF8001. Having done this, the application will enter the standby state. From this state, the application controller will set the name of the device, using the lib\_aci\_set\_local\_data function. This will give a callback, with a command response event. In the handler for this, lib\_aci\_cmd\_response\_hook, we try to initiate a connection, by using the lib\_aci\_connect method. When getting connected, this will give a callback, lib\_aci\_connected\_hook, in which we request a timing parameters change, to the ones set up in the nRFgo Studio. This again, will give a callback, the lib\_aci\_timing\_hook, in which we can go to the run state.

On a disconnect, things will start over again, by returning to the standby state and go from there.

The above section is also tried explained in the quite coarse state diagram in figure 2.

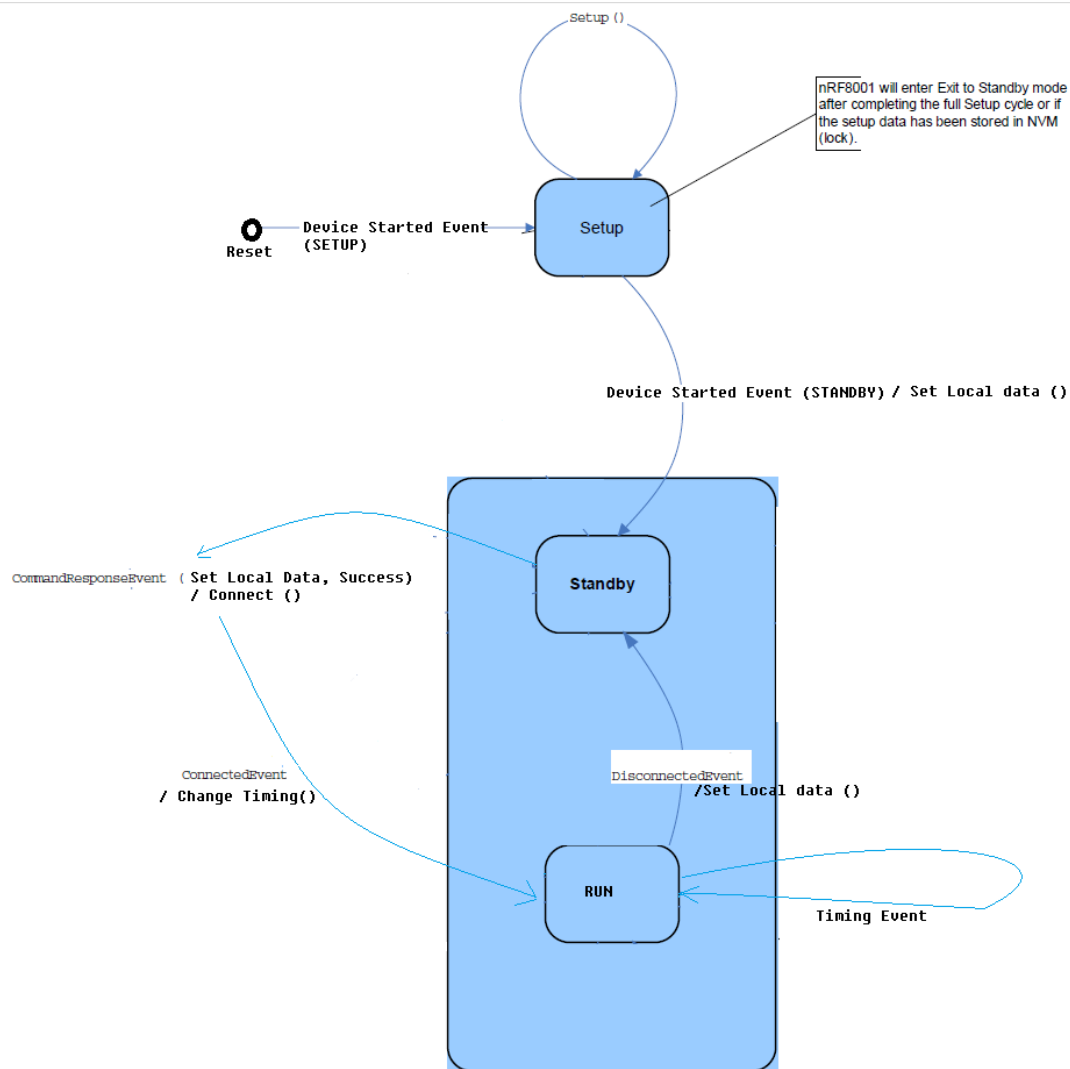


Figure 2: Simplified state machine for the application. Modified from figure 43 in the nRF8001 Product Specification.

## Resources

There is support available on the nRF8001 through the MyPage system at [www.nordicsemi.no](http://www.nordicsemi.no). There are also forums available on [developer.bluetooth.org](http://developer.bluetooth.org), that might be able to help.

Additionally, quite extensive documentation comes with the nRF8001 SDK, in its “Documentation” subfolder, both from a firmware and hardware point of view. The Product specification on the nRF8001, freely available on [www.nordicsemi.no](http://www.nordicsemi.no) might also be useful.