Diagram Documentation

Primary Use Cases - (Use Case diagram)

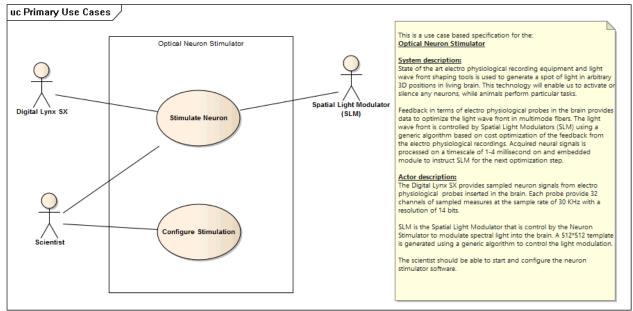


Figure: 1

Logical View - (Class diagram)

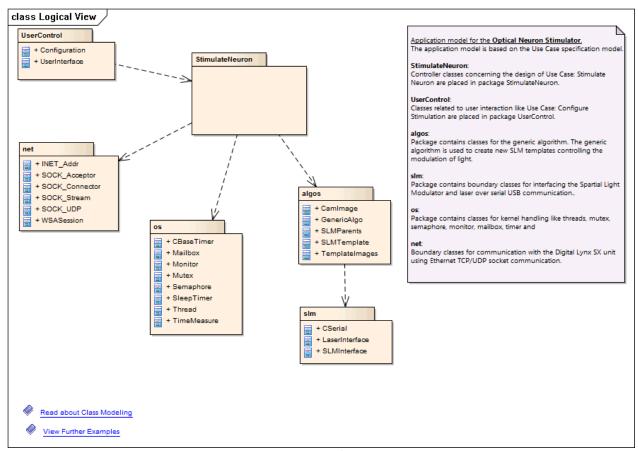


Figure: 2

StimulateNeuron Classes - (Class diagram)

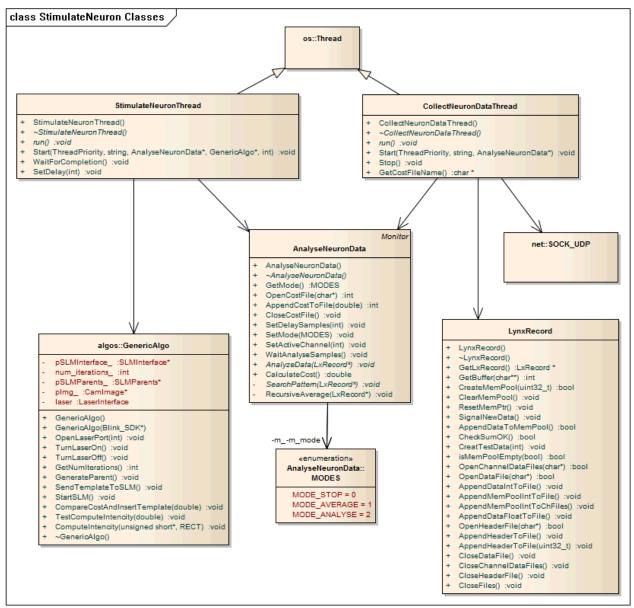


Figure: 3

Generate Templates and Control SLM - (Interaction diagram)

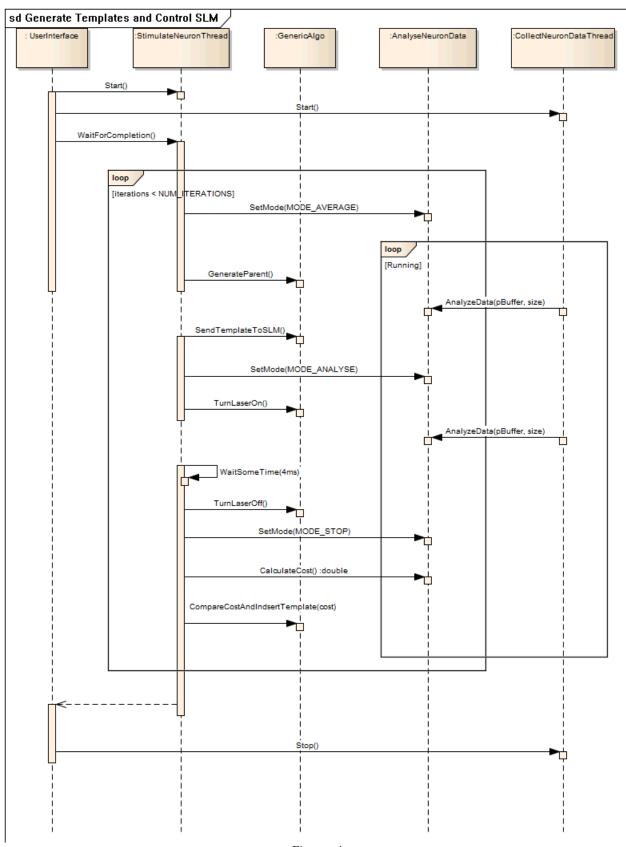


Figure: 4

Collect and Analyze Neuron Data - (Interaction diagram)

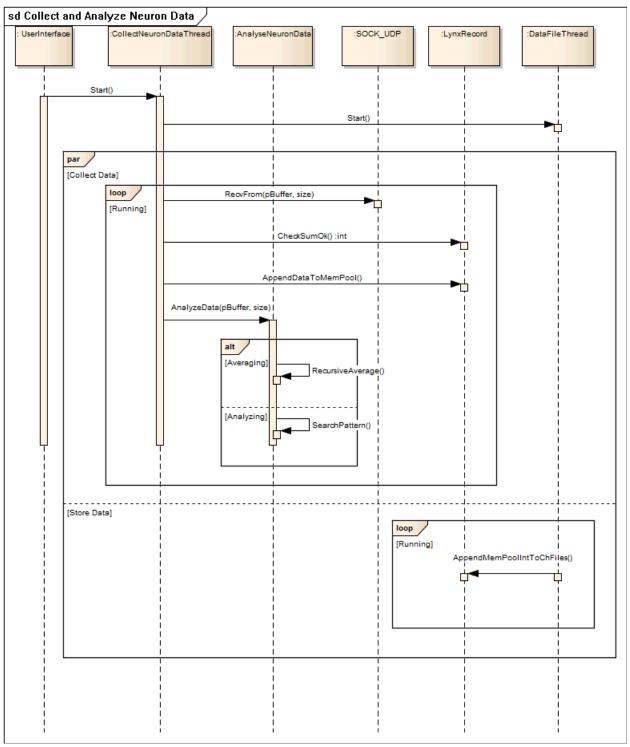


Figure: 5

Neuron Data File Thread - (Class diagram)

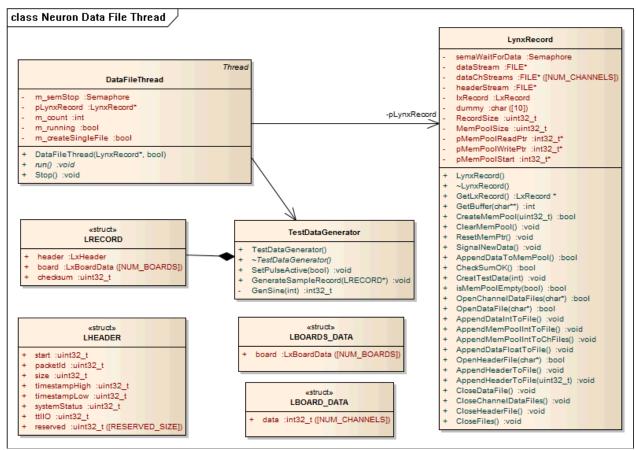
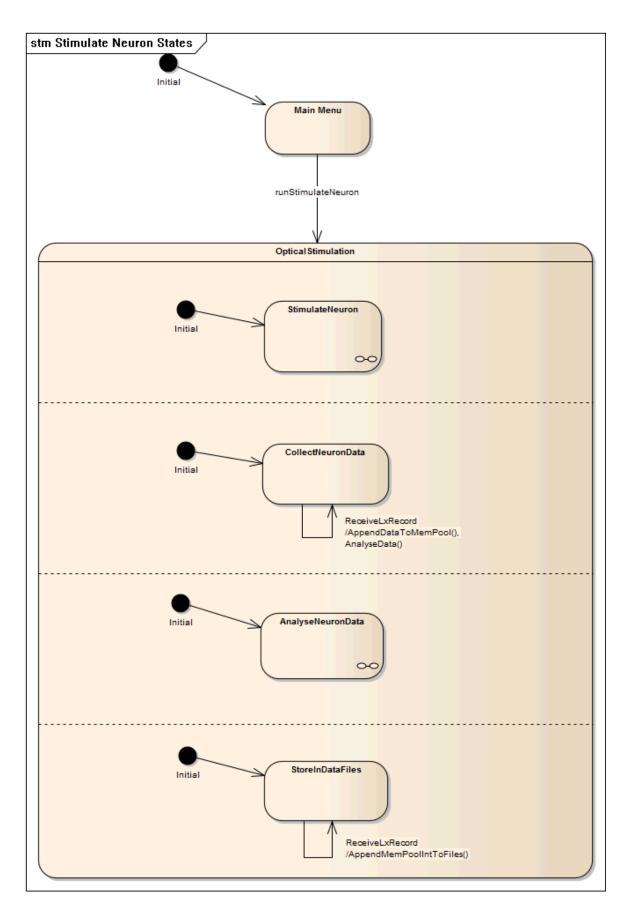


Figure: 6

<u>Stimulate Neuron States</u> - (StateMachine diagram)



$\underline{Analyse Neuron Data} \text{ - } (\textit{StateMachine diagram})$

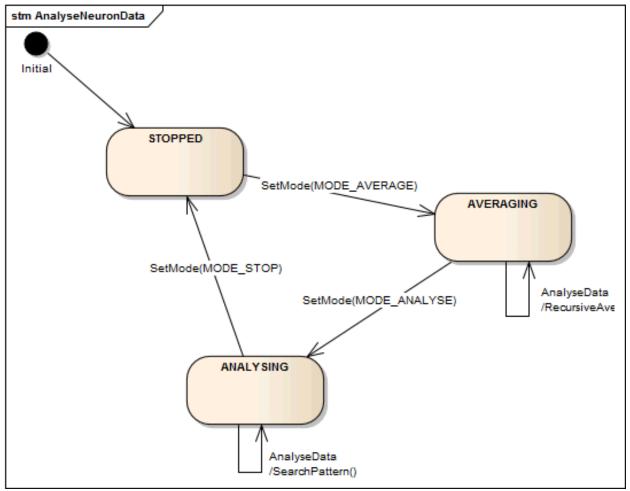


Figure: 8

StimulateNeuron - (StateMachine diagram)

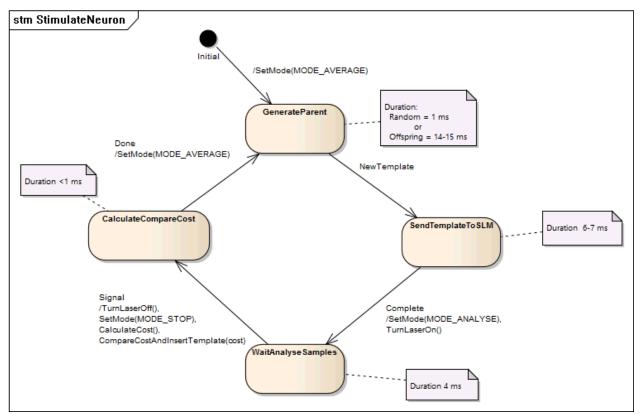


Figure: 9

UserControl - (Class diagram)

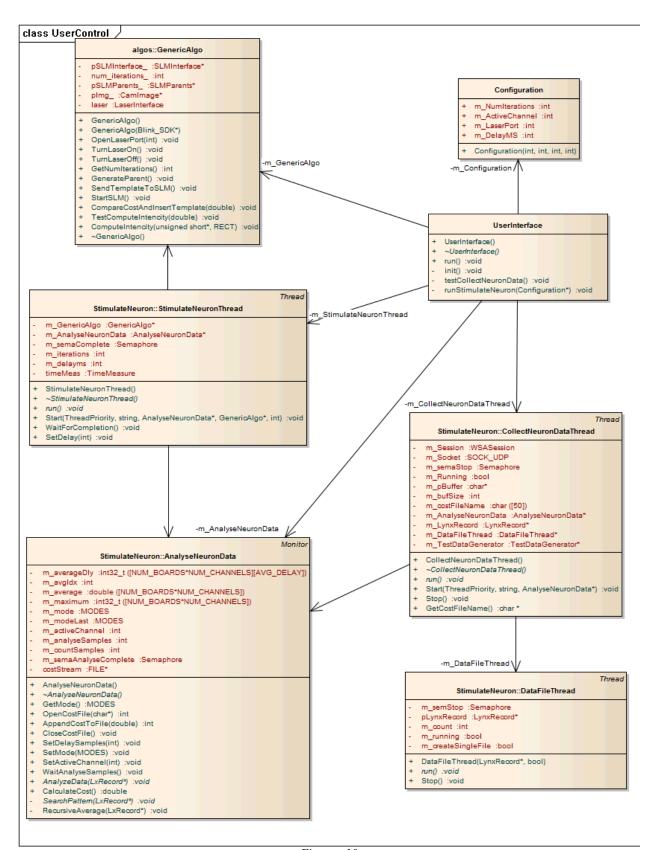


Figure: 10

Generic Algorithm Classes - (Class diagram)

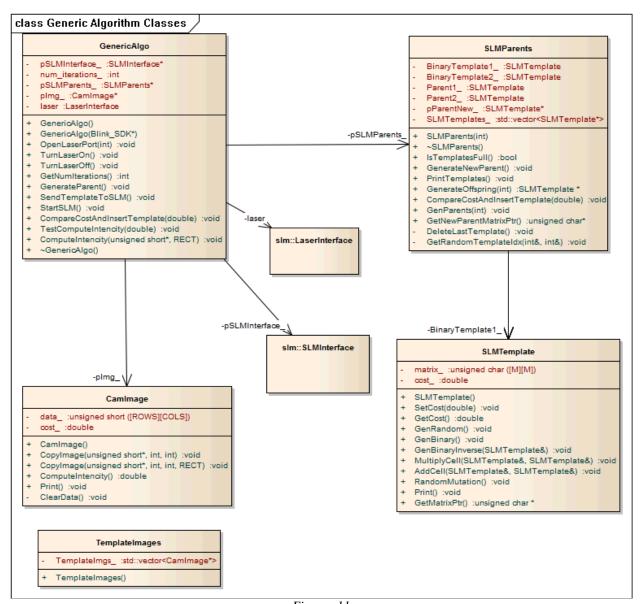


Figure: 11

class SLM and Laser Interface Classes

SLMInterface

- oldPhase :uchar_vec
- pSDK_ :Blink_SDK*
- board_number :int {readOnly}
- n_boards_found_ :unsigned int
- constructed_okay_ :bool
- + SLMInterface(Blink_SDK*)
- + SLMInterface()
- + ~SLMInterface()
- + ResetInterface():bool
- + SendTestPhase(unsigned char*, int) :bool
- + SendPhase(unsigned char*) :bool
- phaseRandom(size_t, size_t, uchar_vec&) :void
- Consume_keystrokes():void
- Precalculate_and_loop(uchar_vec&, uchar_vec&, int, Blink_SDK&) :bool

LaserInterface

- m_CSerial :CSerial*
- m_baudRate :int
- + LaserInterface(int)
- + ~LaserInterface()
- + OpenPort(int) :bool
- + TurnOn() :bool
- + TurnOff() :bool

CSerial

- # m_hIDComDev :HANDLE
- # m_OverlappedRead :OVERLAPPED
- # m_OverlappedWrite :OVERLAPPED
- # m_bOpened :bool
- + CSerial()
- + ~CSerial()
- + Open(int, int) :BOOL
- + Close() :BOOL
- + ReadData(void*, int) :int
- + SendData(char*, int) :int
- + ReadDataWaiting() :int
- + IsOpened() :BOOL
- # WriteCommByte(unsigned char) :BOOL

Figure: 12

Kernel Classes - (Class diagram)

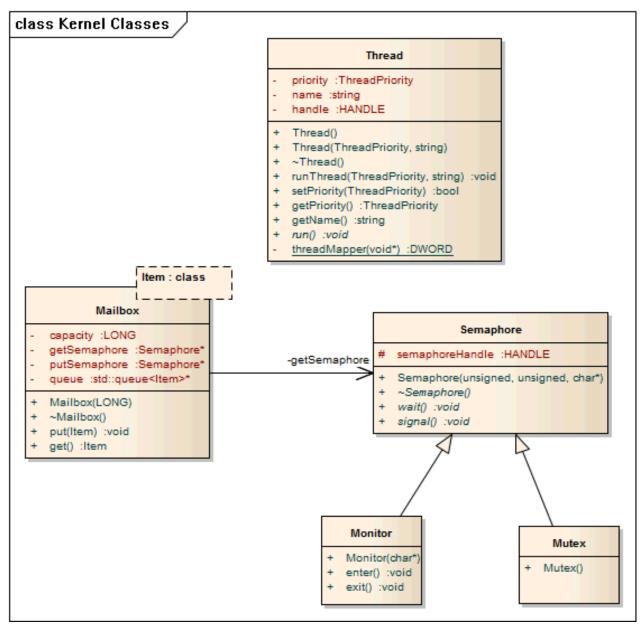


Figure: 13

Timer Classes - (Class diagram)

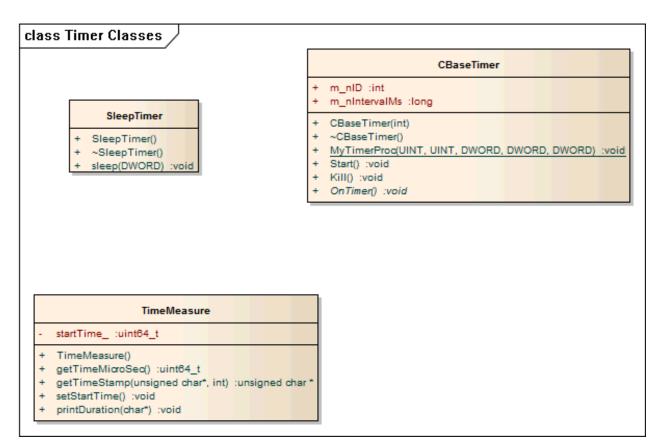


Figure: 14

Network Classes - (Class diagram)

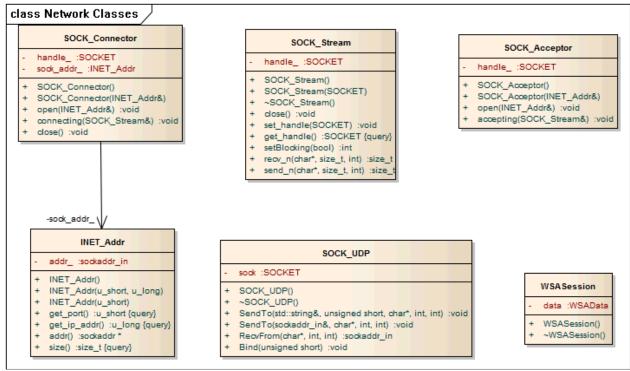


Figure: 15