



## Appendix C



# List of Programmed Files & Softwares



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### List of Software used to develop the programmes:

Name of software	Company
Matlab and Simulink	Mathworks
Opnet Modeler	OPNET
ISE Design Suit 14.6	Xilinx
MoteWorks 2.0.F	Crossbow
TinyOs	Operating System
Atlys	Diligent
IEEE 802.15.4 OPNET SIMULATION MODEL	OPEN-ZB.net (Open Source)

### Matlab and Simulink Files:

Name of the Files	Description
anncon.m	To generate ANN model
anncon.mdl	To evaluate ann model
Anfiscon.m	Gernate anfis model
mote.mdl	Simulink model file to create network using motes of wireless sensor network
Init.m	To initialize the paratmeters of WSN in trutime.
IEEE 802.15.4WSN.fig	Graphical user interface for summary work
IEEE 802.15.4WSN.m	To create links to control GUI parameters
GTS SIMULATOR.fig	To design simulator using GUI
GTS SIMULATOR.m	To create links for control parameters

### Xilinx Files for ANN Configuration:

Name of the File	Description
Anncon2101.vhd	Vhdl file to write the vhdl code
Layers.vhd	Vhdl package for implementing layers of ANN
Layer_pins.ucf	Assignment of hardware pins of FPGA board to the input and output variables.
Lookuptable.vhd	Lookup table for the Tansig activation function of ann

### Moteworks files for WSN hardware :

Name of the File	Description
Makefile	File containing the dependencies (other files) of application uses during the compilation step.
Makefile.component	Describes the top level application component, MoteWorks convention to describe the particular dependencies for a particular application.
Application.nc	The application's configuration
ApplicationM.nc	Application programming code is entered