

IBIS AMI Model Developers Toolbox

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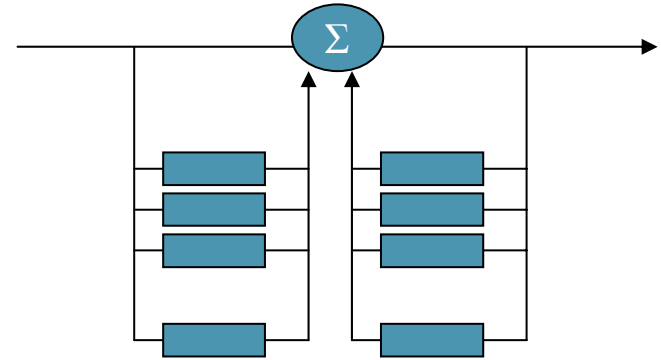
What's in it

- Sample Model Rx
 - Source code
 - Executable on Linux
 - Model params file
- Tester Program
 - Executable on Linux
 - Tester config file
- Starter model templates
- Documentation

- Use sample model and tester program to understand the details of the IBIS AMI API
- Create your own algorithmic models using starter model templates
- Use the tester program to test the model

Sample Rx Model

- Continuous Time Filter (CTF) RX model
 - Combination of feed forward and feed backward filter
 - Modifies the waveform given a set of coefficients
 - Tested for 6.25Gbps data rate
 - User configurable forward and backward taps
- Parameters needed by the model
 - Number of forward taps, Number of backward taps, Coefficients
 - Can be provided in a file
- To Compile:
 - a) `gcc -c ibis_ctf_rx.c`
 - b) `gcc -shared -o ibis_ctf_rx.dll ibis_ctf_rx.o`



CDNS AMI Tester Program

- Inputs

- Bit Stream: “(0111100001111)”
 - Alternatively, users can specify the number of bits and let tester generate random bits
- Data Rate
- Impulse Response
- DLL to interface to
- Model specific parameters

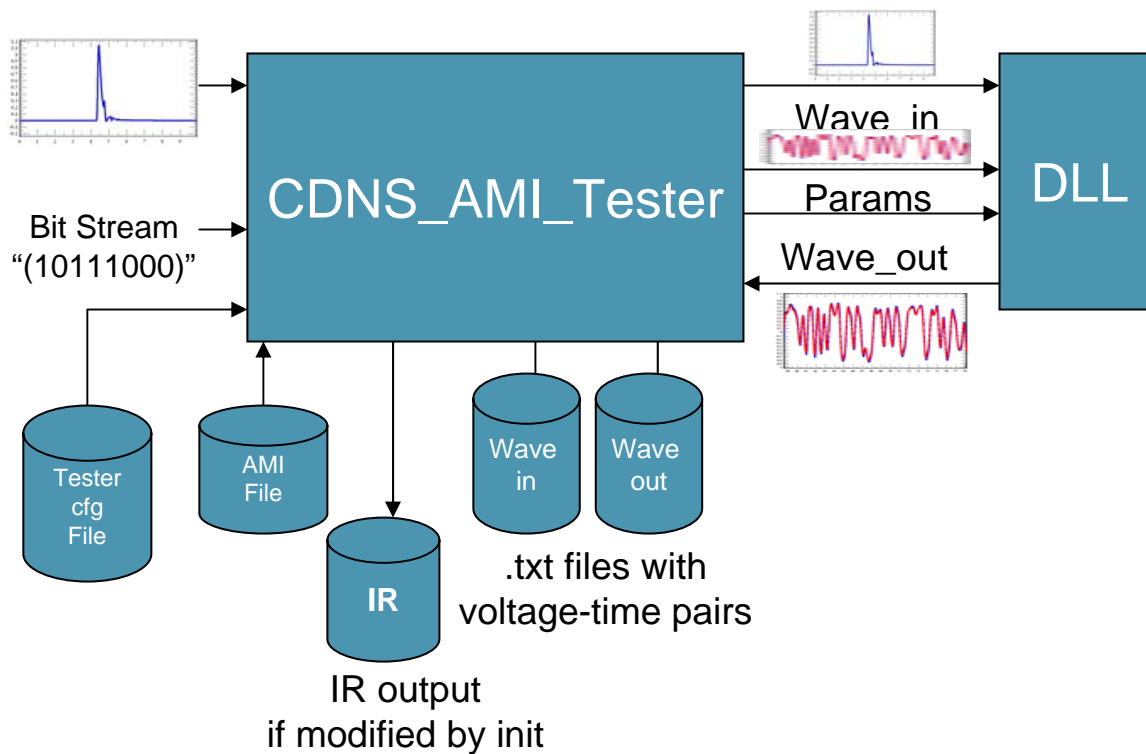


- Outputs

- Wave_out: *voltage-time pairs in txt file*
wave form data modified by the Model
- Wave_in: *voltage-time pairs in txt file*
Represents waveform passed to the model
- ImpulseResponse: IR data if it is modified by the model (init)

CDNS AMI Tester Program

- Usage:
`CDNS_TESTER [-h] ctf_rx_model`



AMI File contains:

- Measurement Delay
 - Ignore data for spec delay
- Model specific parameters

Tester config file contains

- Information generally set by end users through the EDA platform
- Data Rate
- Number of bits
- Input file names
- Output files names

How to get the kit

- Cadence AMI Developers toolbox will be available through IBIS web site soon
- In the mean time, you can send request for the toolbox to: shah@cadence.com

Resources

- Many presentations on Algorithmic Modeling starting from June 2006 can be found at:
http://www.vhdl.org/pub/ibis/macromodel_wip/archive-date.html
- Updates on the AMI work can also be found in ATM subcommittee updates provided at DAC 2007 and DesignCon 2007 IBIS Summits
 - Presentations can be accessed from this page:
<http://www.vhdl.org/pub/ibis/summits/>
- To reach the IBIS-ATM group on this topic, you can send email to: ibis-ami-toolkit@freelists.org



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