

## Innovation-11

### 1. Brief Name of the Innovation:

A Tool for Estimating the Power Consumption in LTE Baseband

### 2. Contact Information:

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### 3. What is the technology?

The tool has been developed as a windows application using Microsoft Visual Studio C#.Net.

### 4. What does the technology do?

This software tool will assess the power consumption in LTE baseband processing algorithms.

The input configurable parameters for this application are:

- i) Complexity of the algorithm in terms of million operations per second.
- ii) LTE B.W of Operation
- iii) Processor Specification
  - a) Average operations per Instruction
  - b) Power to Performance ratio of that particular processor (mW/MIPS)

Outputs:

The tool will take these input parameters and estimates the operational power consumption in (mWatts) individually as well as for all MIMO modes. To save the result graph right click on the graph and then save. It will be saved in image format.

### 5. Explain the specific problem this technology has created to address or solve

The objective to develop this tool was to estimate the power consumption in future standards baseband algorithms such as that of LTE based on the operational complexity involved in

them (i.e. in terms of Million Operations per Second), without the need for implementing the algorithms and also avoids actual manual hardware measurement.

**6. Why is it better? How much better?**

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**7. Have you filed for Intellectual Property (IP)? Have Patent Cooperation Treaty (PCT) applications filed?**

A copyright is in the process.

**8. What is the development stage of this innovation?**

Finished

**9. Have any prospective users or buyers shown interest in this technology?**

-- not yet approached--

**10. Who do you consider competitors or competing technology?**

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**11. List the milestones remaining to be accomplished to bring your technology to full development and ready for the intended end-user?**

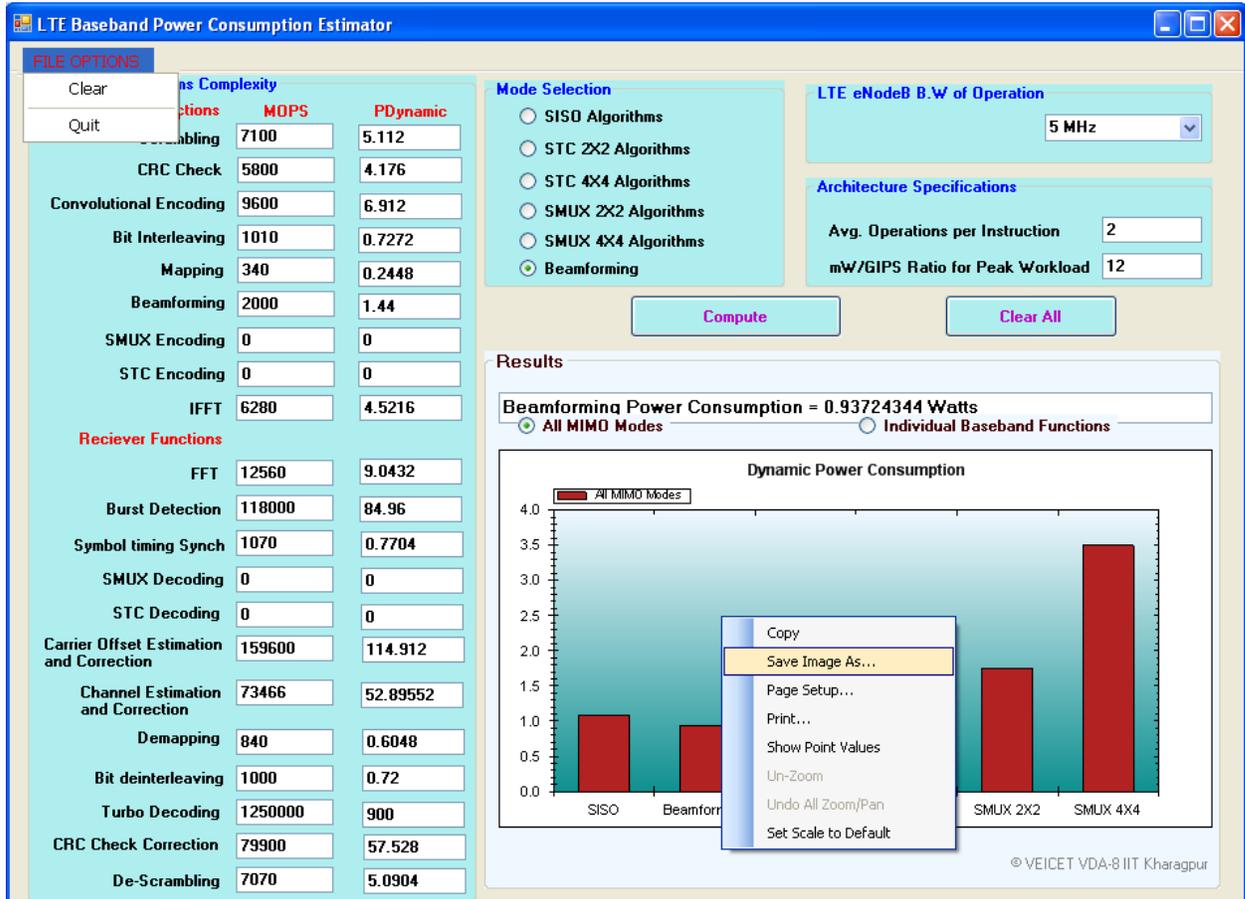
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**12. Broad Technical Specifications:**

Needed software to install:

- i) Windows XP operating System
- ii) Microsoft Visual Studio 2005 or later

13. Diagram or Pictures if any



Screen shot of the tool developed in Microsoft visual studio C#.Net