**Comparitive study of of a low power 8 bit ALU using an 8x4 Barrel Shifter**

**Literature Review weekly Report:**

# **Realization of 8 x 4 Barrel shifter with 4-bit binary to Gray converter using FinFET for Low Power Digital Applications**

**Basic Theory**:In this paper the authors have discussed about the design of an 8\*4 barrel shifter designed using FinFet which is further used in the design for gray code converter.

**Methodology**:In this paper the authors have presented an 8\*4 barrel shifter using FinFet and verified the truth table. Different parameters such as power, Delay ,PDP and EDP are calculated using cadence Virtuoso and compared with conventional CMOS based design and a conclusion is given.

Ⅱ. VLSI DESIGN OF BARREL SHIFTER USING COMPLEMENTARY AND PSEUDO NMOS LOGIC

Basic Theory:In this paper the authors have presented an analysis of an 8 bit barrel shifter using CMOS and Pseudo NMOS logic.

**Methodology:**The MUX for the barrel shifter is designed using Cadence Virtuoso and power consumption parameter is calculated for both the designs and a final conclusion is given.

**Weakness**: In this paper the authors could have had an in depth analysis of different parameters which could have given more information into advantages of using a Pseudo NMOS logic

Ⅲ.**Gate Diffusion Input technique based full swing and scalable 1-bit hybrid Full Adder for high performance applications**

**Basic Theory**:In this paper the authors have presented different techniques on how to design a single bit adder.

**Methodology**:Designed full adder using different techniques and have found out different parameters like are area, delay , power, number of transistors used.

Ⅳ.**VLSI Design of Low Power 8×4 Barrel Shifter using 90 nm TG technology**

**Basic theory**: In this paper the authors have designed a barrel shifter using two techniques i.e CMOS and Transmission gate.

**Methodology:** The authors have verified the truth table and different parameters such as delay, power delay and power delay product were observed.

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