Study of R-2R DAC and Gray Code Input DAC for Glitch Reduction

*Adhikari Gopal, Richen Jian,   Haruo Kobayashi

Kobayashi Laboratory

Division of Electronics and Informatics

Gunma University

Glitches

Effects of glitch

o Serious deterioration of images, videos, sounds

Remedy

◦ High-order reconstruction filter usage

◦ Track/Hold circuitry usage at output.

} Extra Space in IC, Expensive

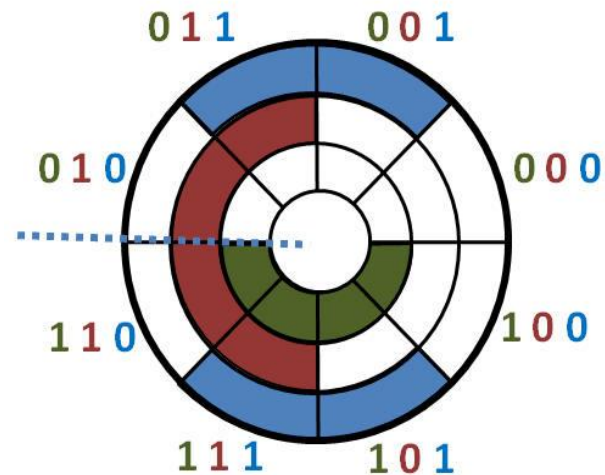◦ Using Gray code input DAC topologies ✔

Final Statement

Coding method can lead to robust mixed-signal circuit design.

Gray code was invented by Frank Gray at Bell Lab in 1947.

"Two-Way Television" - Booklet by AT&T - Bell Labs, April 1930

FRANK GRAY and A. L. Johnsrud in television booth. Behind the glass panels at sides and top are the photo-electric cells.