

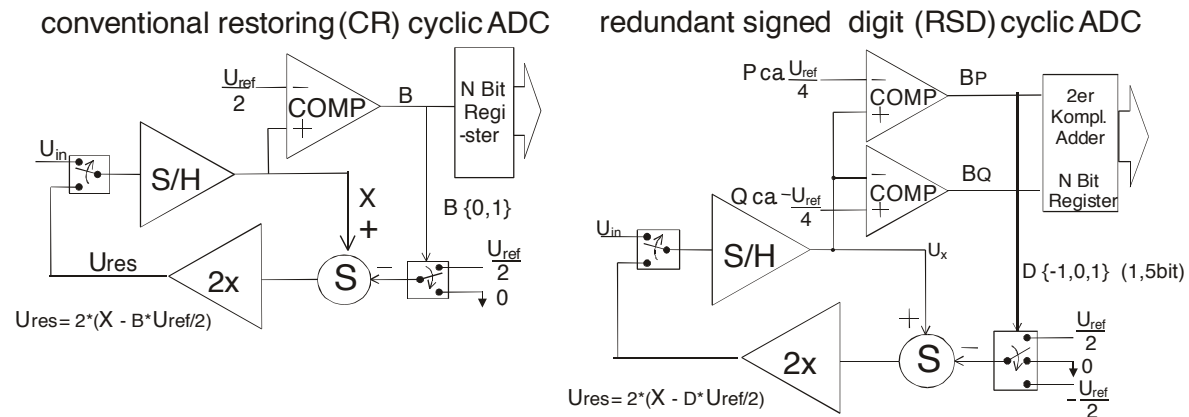
## Improved accuracy of ADC:

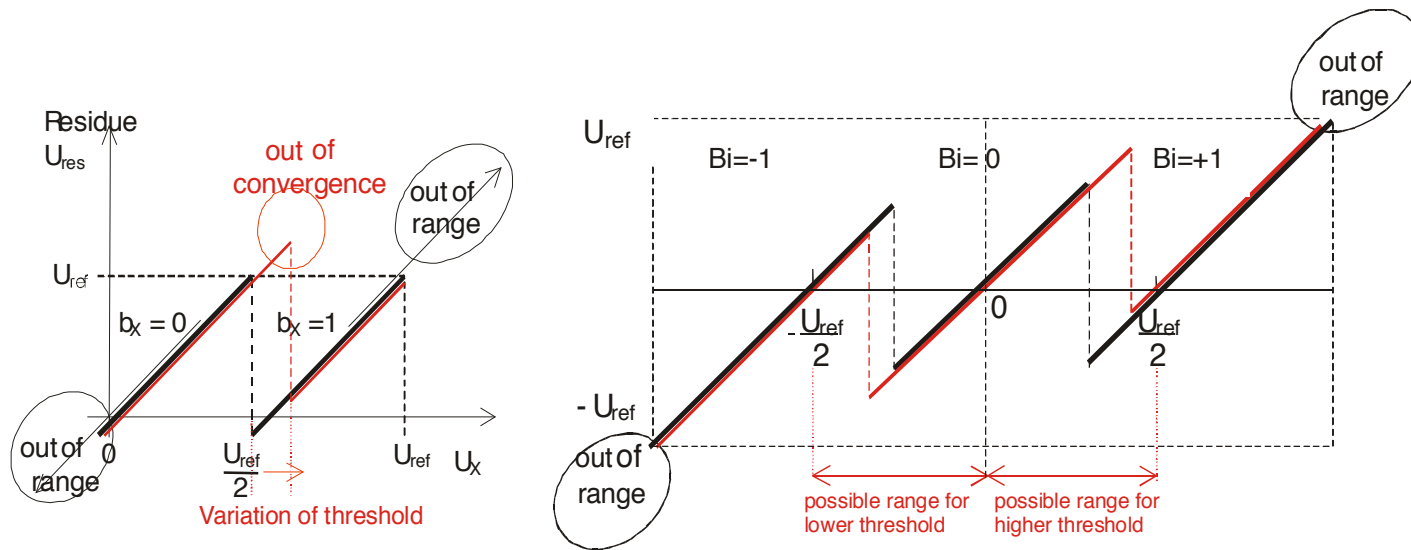
- use of redundant-signed-digit principle (RSD):

Offset of Comparator: too large residue can cause overflows

applying a second, redundant threshold solves this problem (RSD, redundant signed digit)

large offset of comparators possible, low-performance comparators sufficient





Transfer functions of one stage for conventional restoring and RSD-converter

RSD produces 2 bit strings, which have to be logically combined in the shift register. Comparator-offsets introduce no error, as long as  $\pm V_{ref}$  is done correctly.