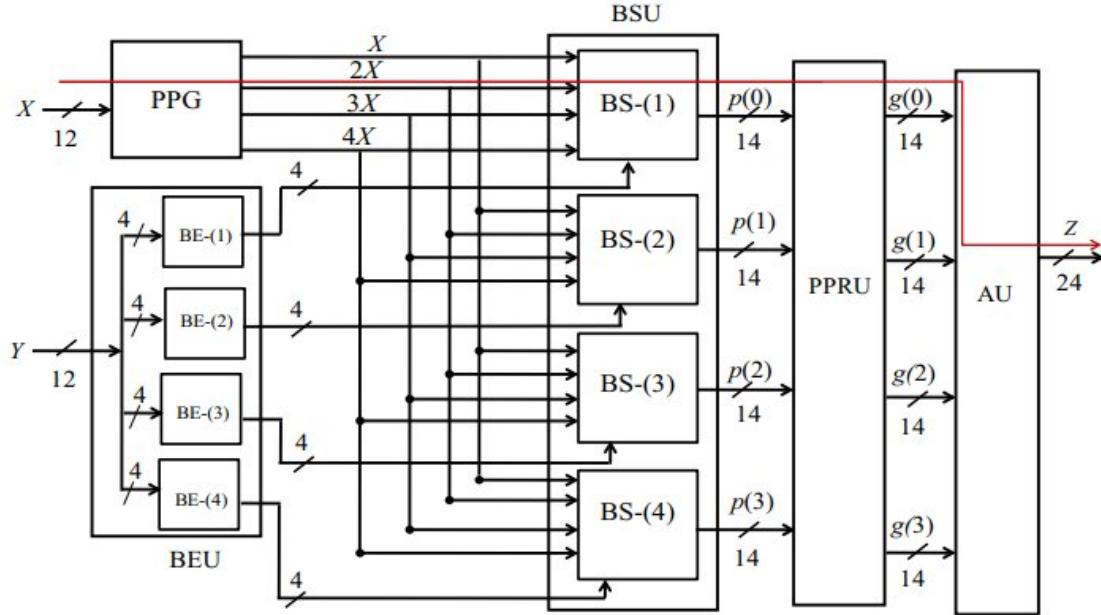
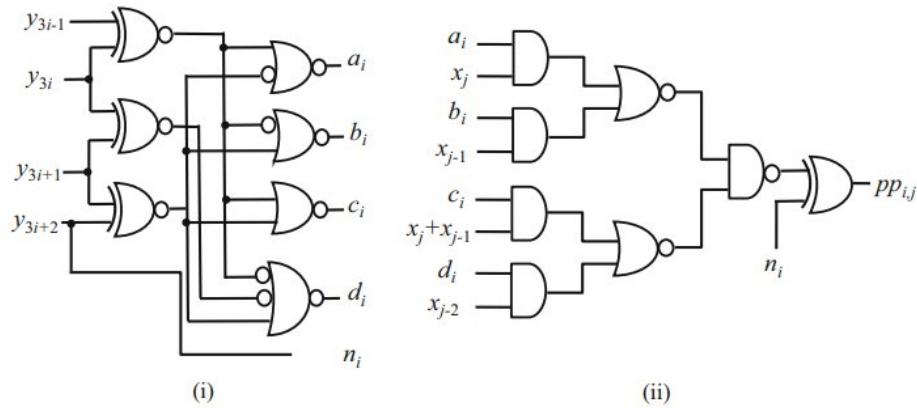


# Radix-8 Modified Booth Encoder Multiplier Design



**Fig. 3** Block diagram of proposed radix-8 Booth multiplier structure for 12-bit. The *red-colored arrow* shows the critical path (Color figure online)



**Fig. 4** Internal structure of Booth encoder (BE) and Booth selector (BS)

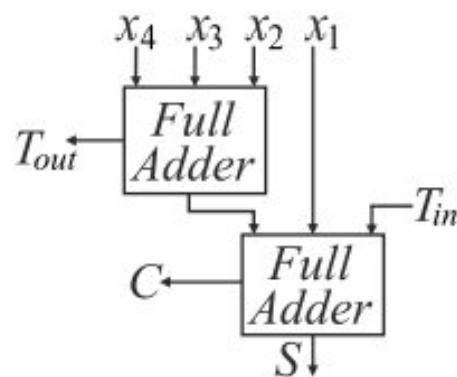
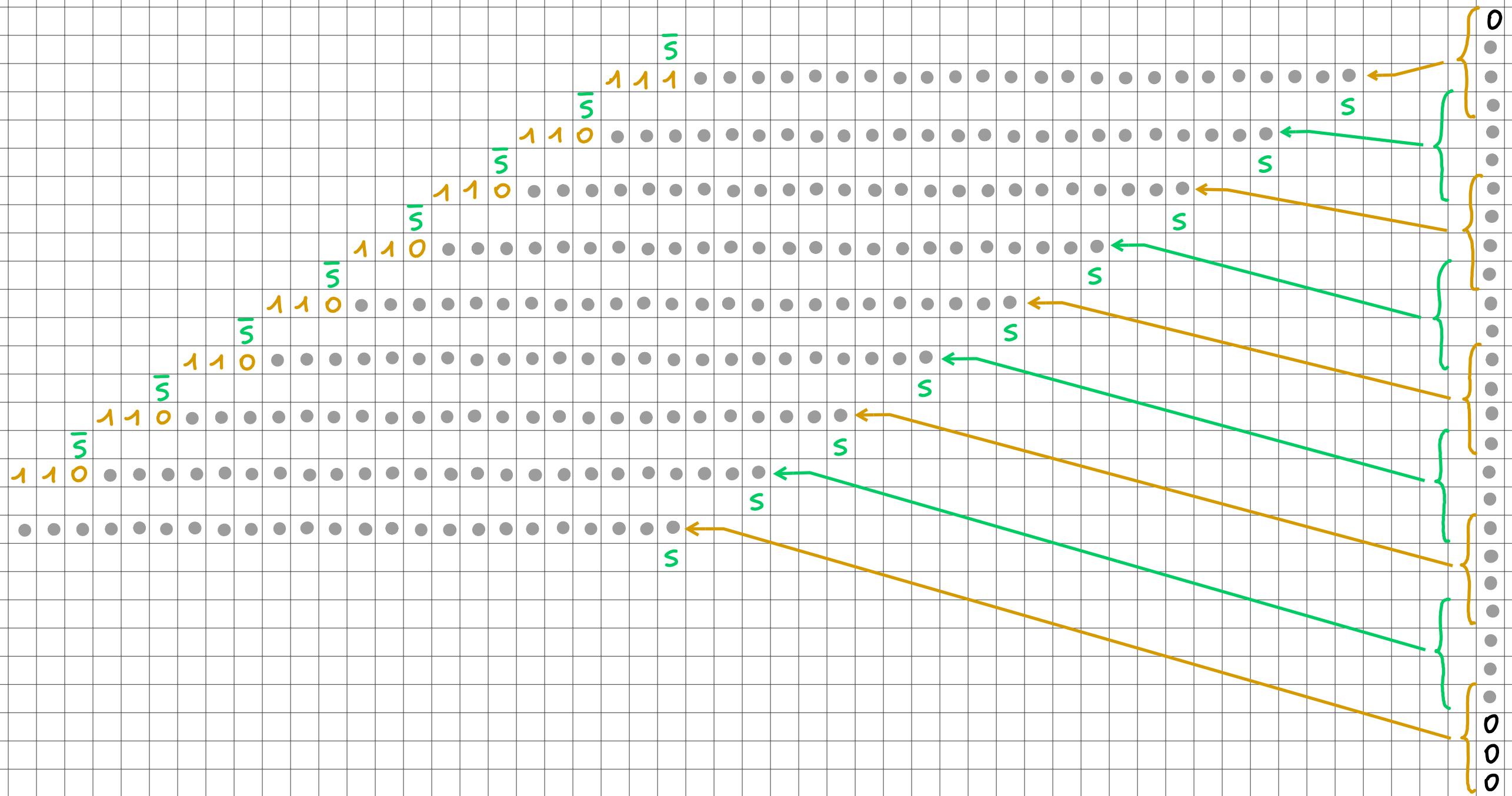
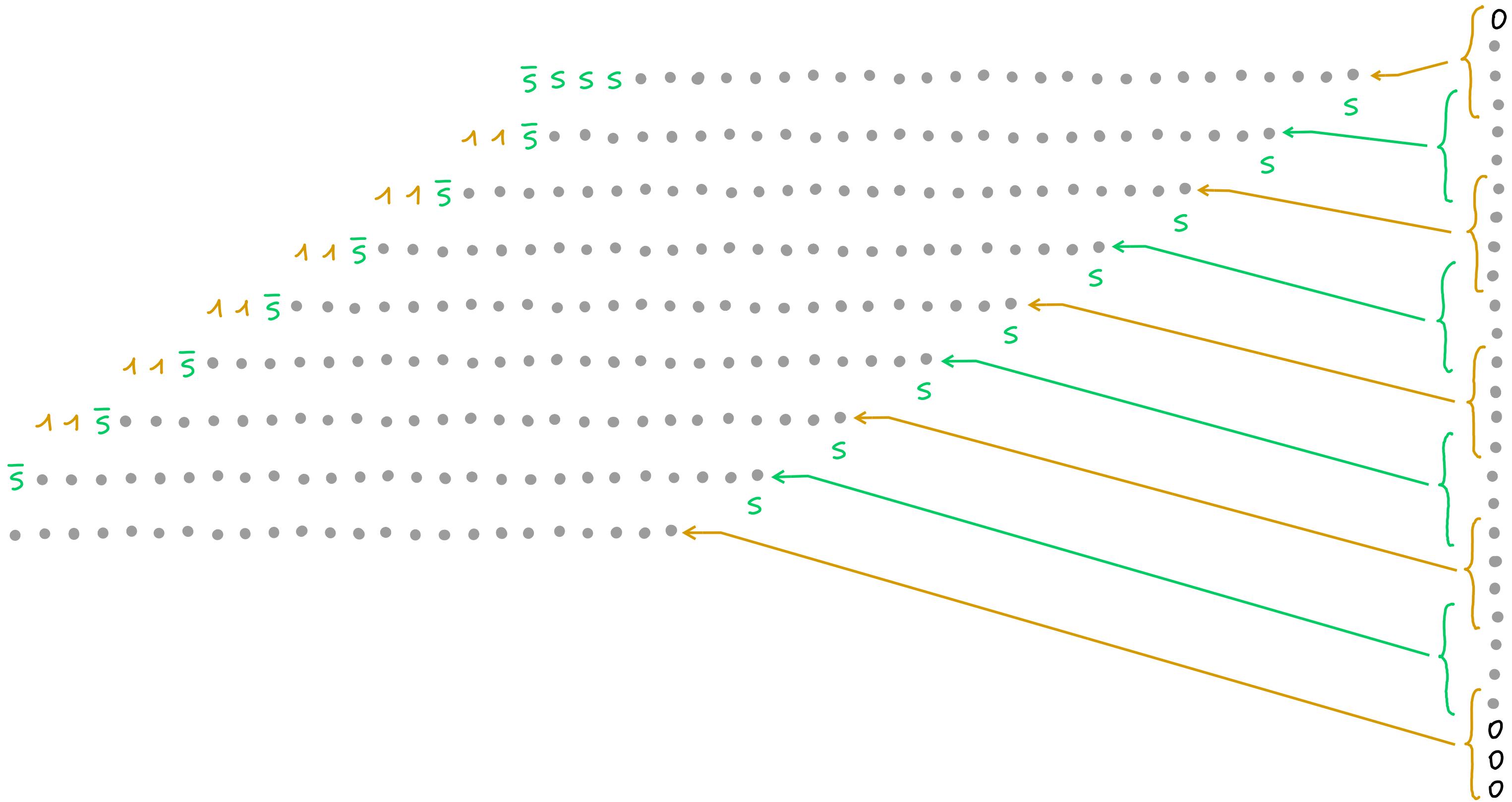


Fig. 1. An exact 4-2 compressor implemented with two full-adders.



## ESTENSIONE DEL SEGNO



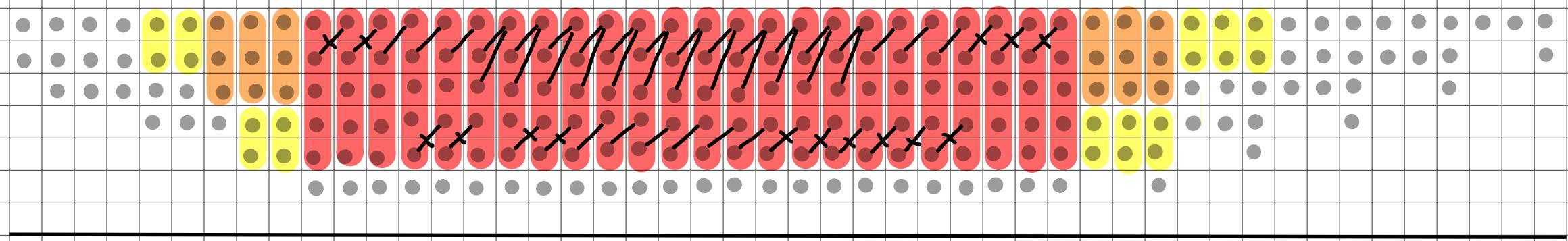
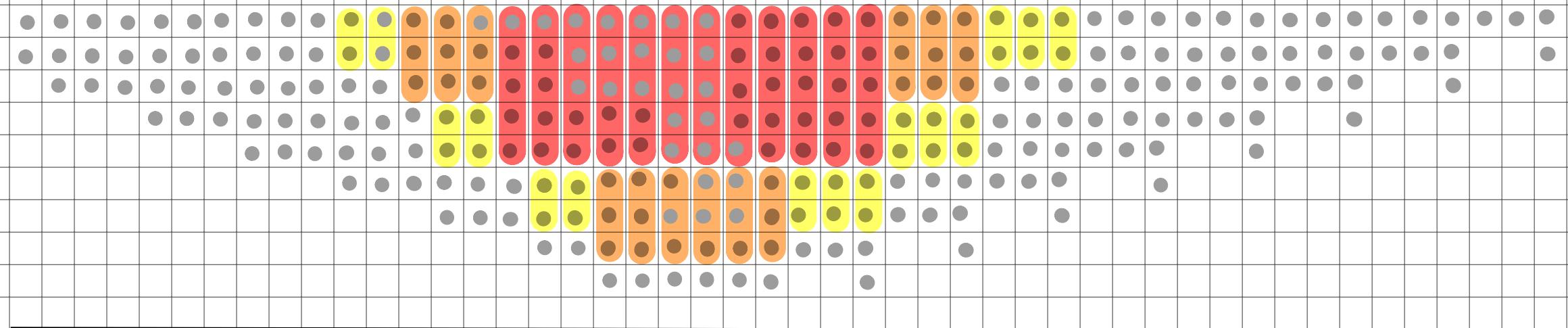


## Dadda Tree Design

10 operands to be added together = 6 levels required to obtain the sum

$\begin{array}{cccccccccccccccccccccc} 46 & 44 & 42 & 40 & 38 & 36 & 34 & 32 & 30 & 28 & 26 & 24 & 22 & 20 & 18 & 16 & 14 & 12 & 10 & 8 & 6 & 4 & 2 & 0 \\ 47 & 45 & 43 & 41 & 39 & 37 & 35 & 33 & 31 & 29 & 27 & 25 & 23 & 21 & 19 & 17 & 15 & 13 & 11 & 9 & 7 & 5 & 3 & 1 \end{array}$

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$\begin{array}{cccccccccccccccccccccc} 46 & 44 & 42 & 40 & 38 & 36 & 34 & 32 & 30 & 28 & 26 & 24 & 22 & 20 & 18 & 16 & 14 & 12 & 10 & 8 & 6 & 4 & 2 & 0 \\ 47 & 45 & 43 & 41 & 39 & 37 & 35 & 33 & 31 & 29 & 27 & 25 & 23 & 21 & 19 & 17 & 15 & 13 & 11 & 9 & 7 & 5 & 3 & 1 \end{array}$

# Dadda Tree Design

10 operands to be added together = 6 levels required to obtain the sum

