



SNS COLLEGE OF TECHNOLOGY

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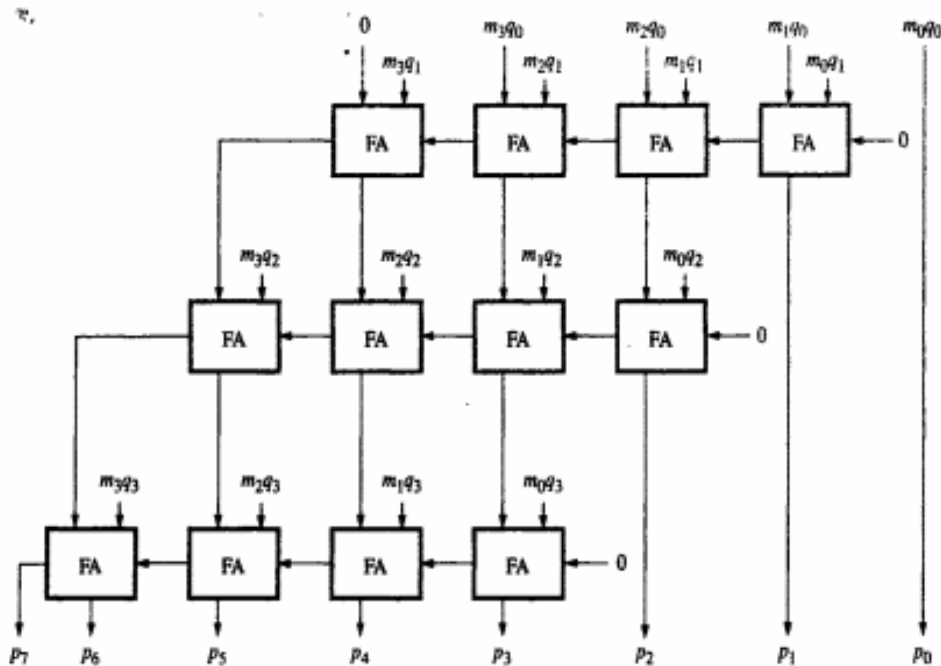
COURSE NAME : 23ITT202 – COMPUTER ORGANIZATION AND ARCHITECTURE

II YEAR/ III SEMESTER

UNIT – II ARITHMETIC OPERATIONS

Topic: Carry –Save Addition of Summands

Carry-Save Addition of Summands



(a) Ripple-carry array (Figure 6.6 structure)

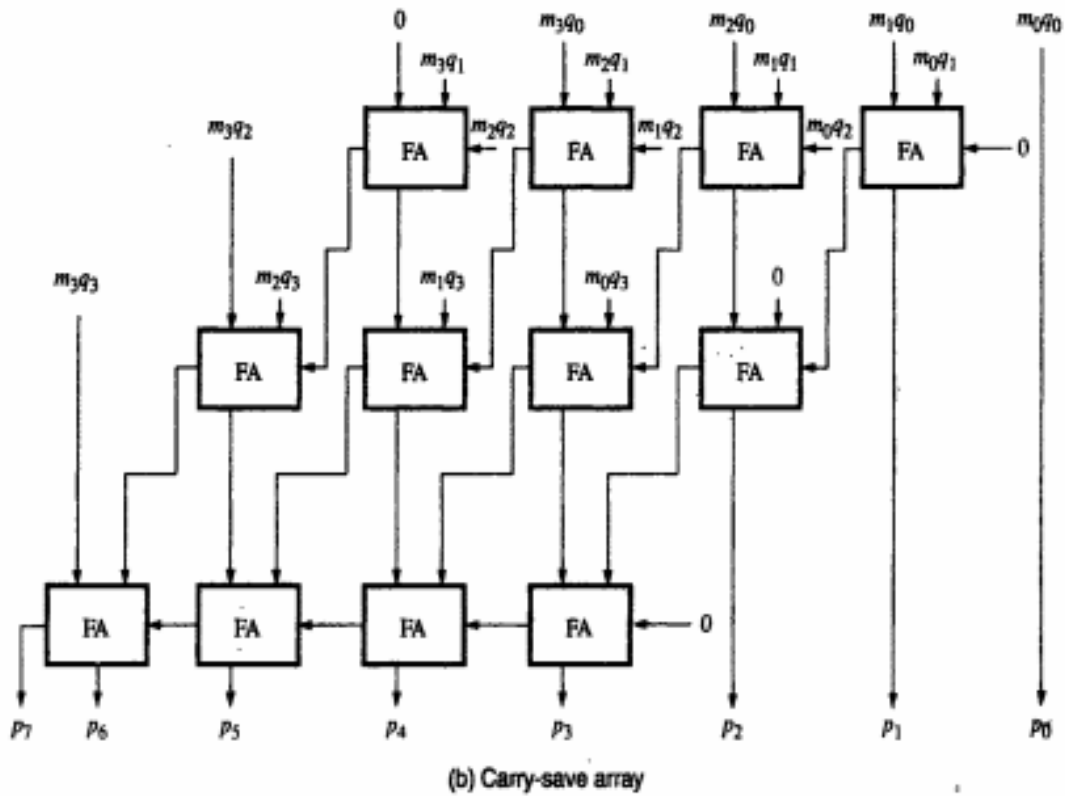


Figure 6.16 Ripple-carry and carry-save arrays for the multiplication operation $M \times Q = P$ for 4-bit operands.

	1 0 1 1 0 1	(45)	M
x	1 1 1 1 1 1	(63)	Q
	1 0 1 1 0 1	A	
	1 0 1 1 0 1	B	
	1 0 1 1 0 1	C	
	1 0 1 1 0 1	D	
	1 0 1 1 0 1	E	
	1 0 1 1 0 1	F	
	1 0 1 1 0 0 0 1 0 0 1 1	(2,835)	Product

Figure 6.17 A multiplication example used to illustrate carry-save addition as shown in Figure 6.18.

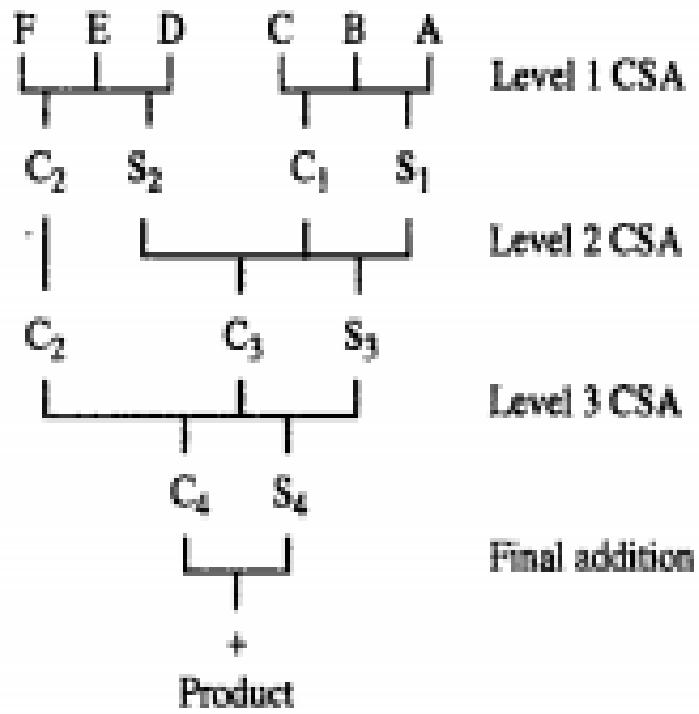


Figure 6.19 Schematic representation of the carry-save addition operations in Figure 6.18.

