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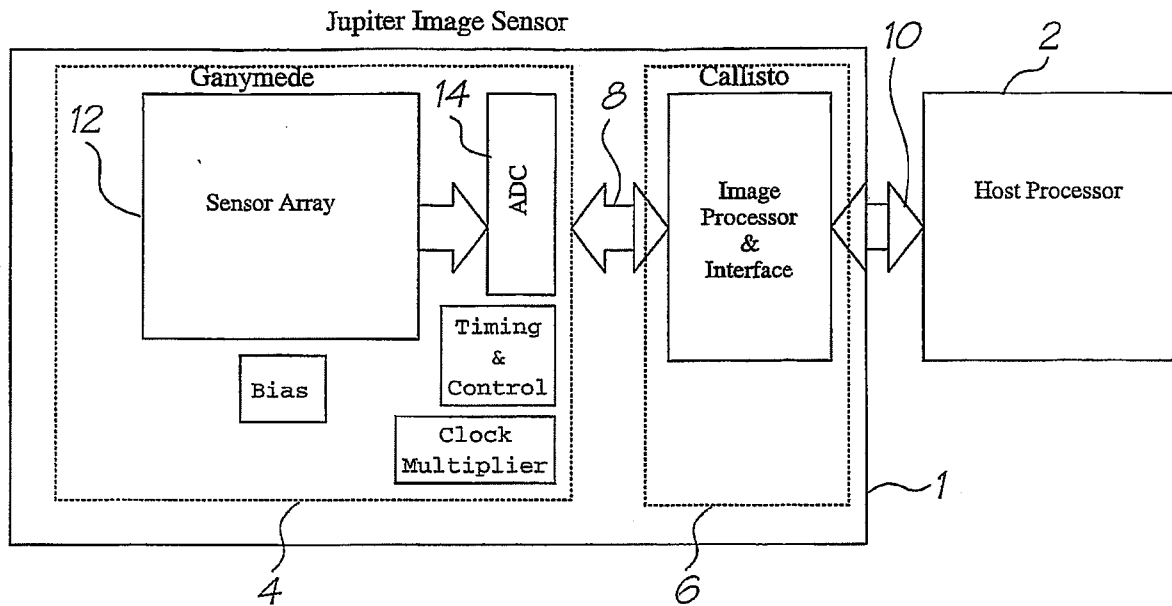


FIG. 1

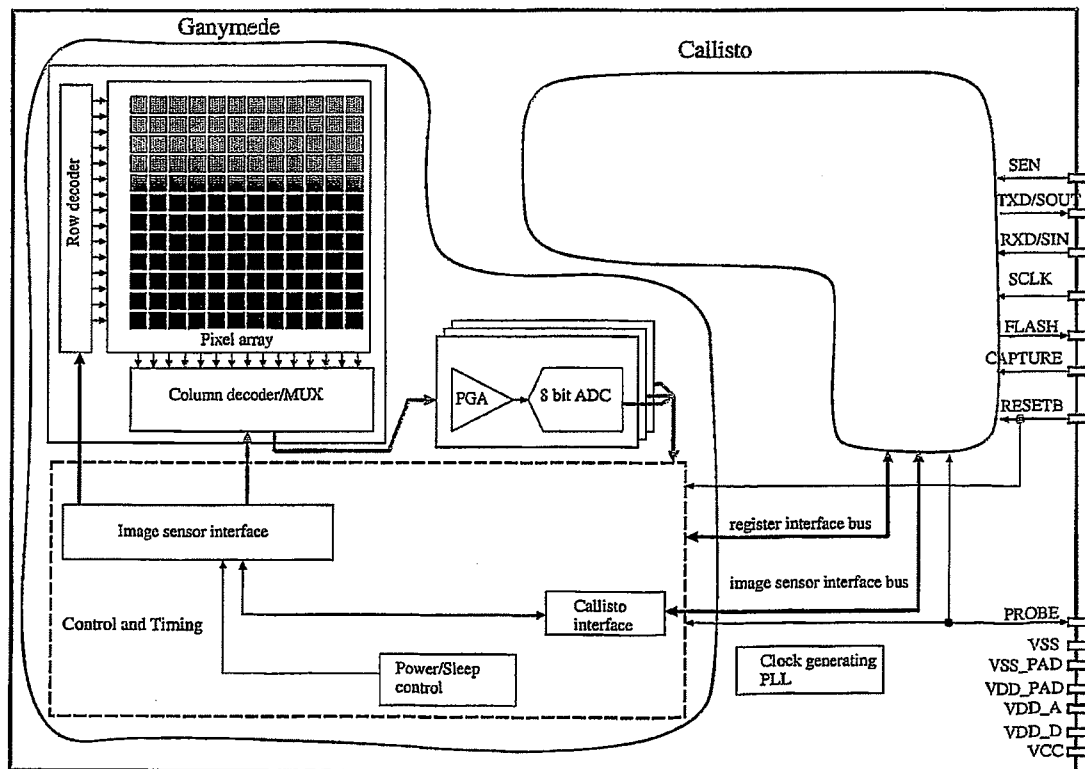


FIG. 2

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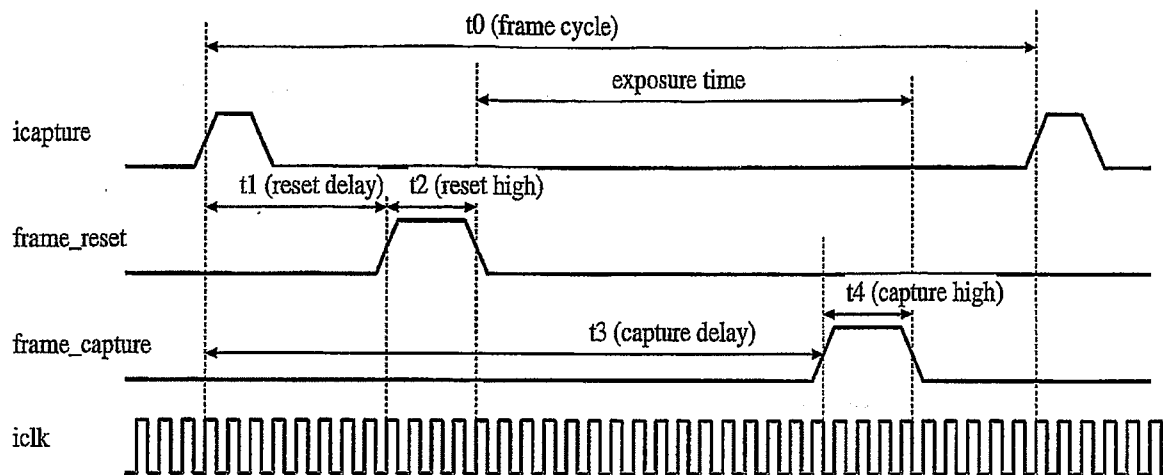
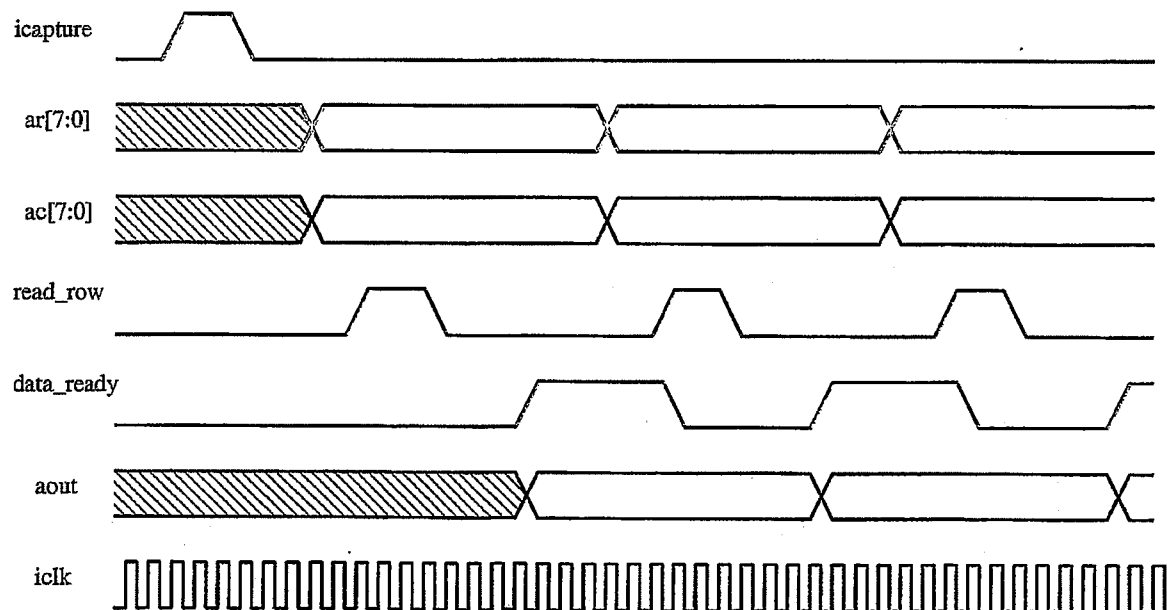


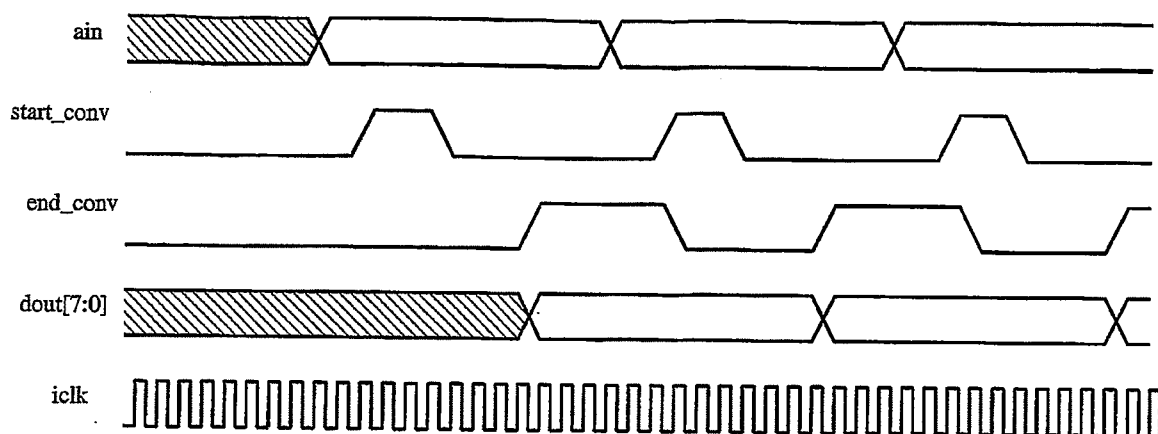
FIG. 3



Note: the number of clock pulses between events is indicative only. The actual values will depend on the particular implementation.

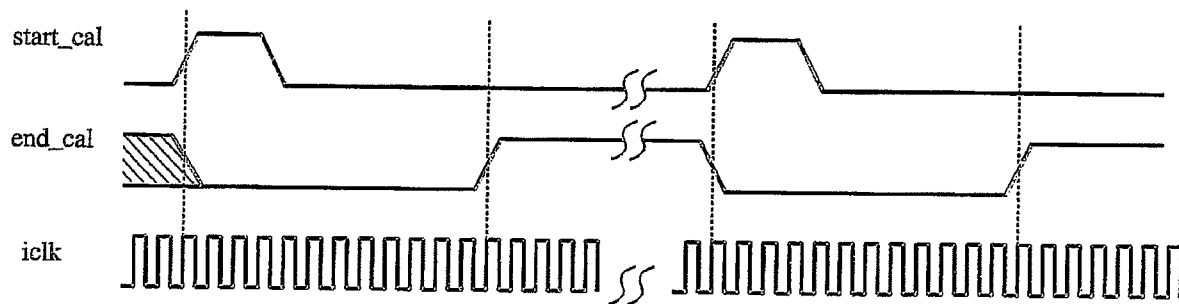
FIG. 4

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Note: the number of clock pulses between events is indicative only.

FIG. 5



Note: the number of clock pulses between events is indicative only. The actual values will depend on the particular implementation.

FIG. 6

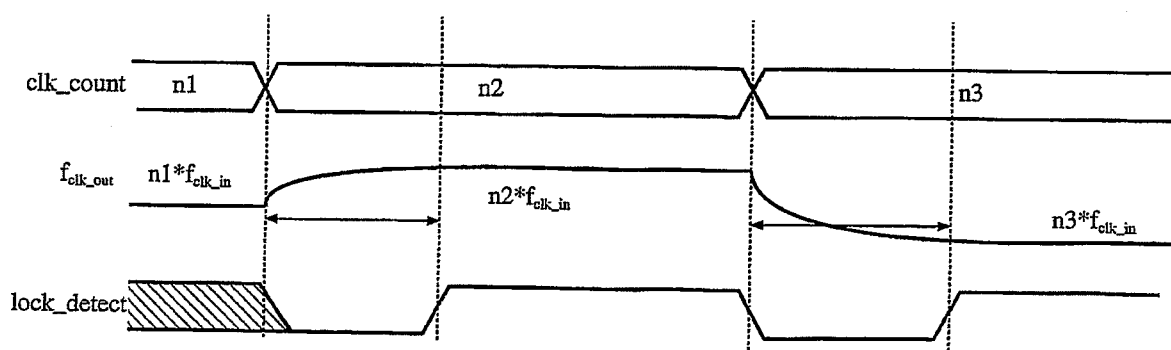


FIG. 7

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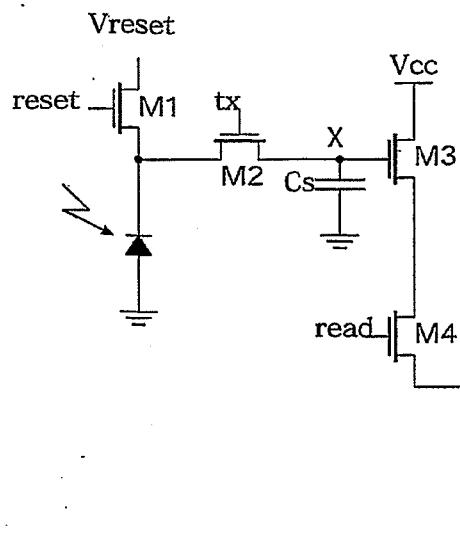


FIG. 8a
(PRIOR ART)

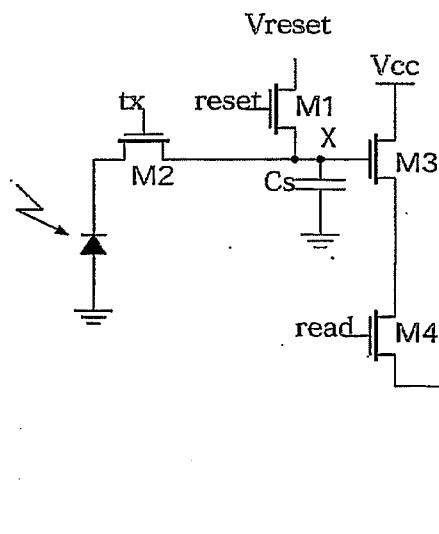


FIG. 8b
(PRIOR ART)

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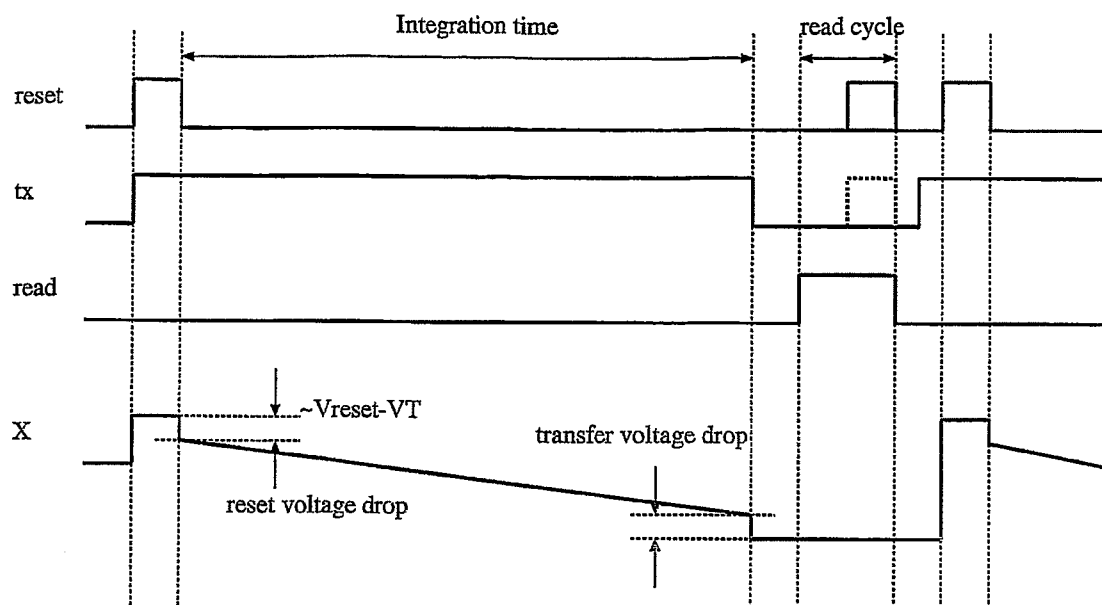


FIG. 9
(PRIOR ART)

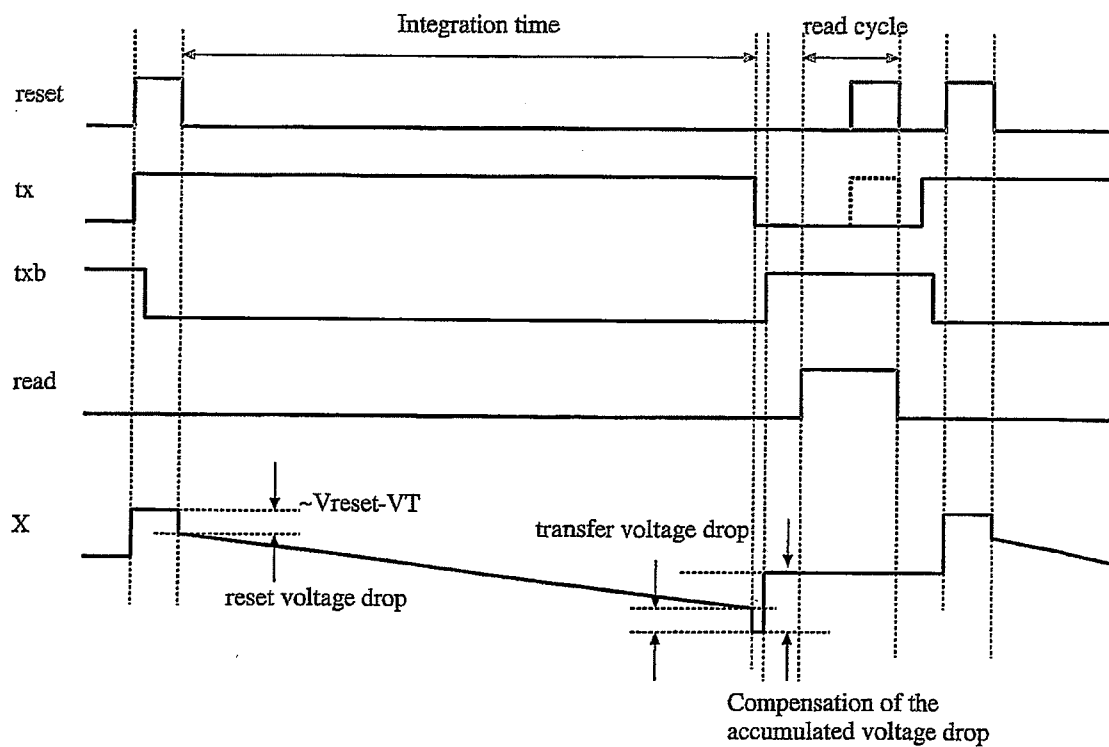


FIG. 9a

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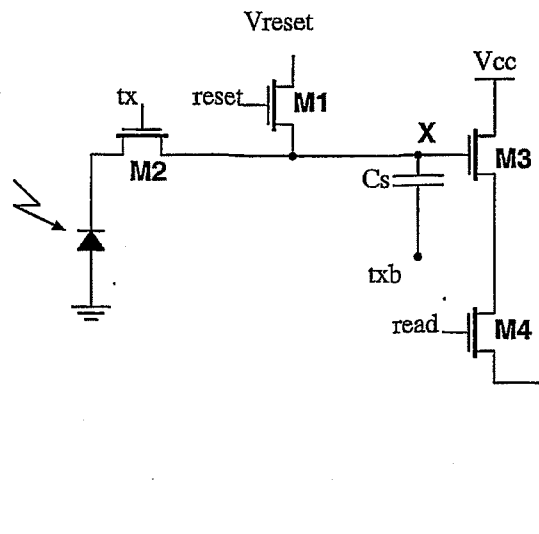


FIG. 10

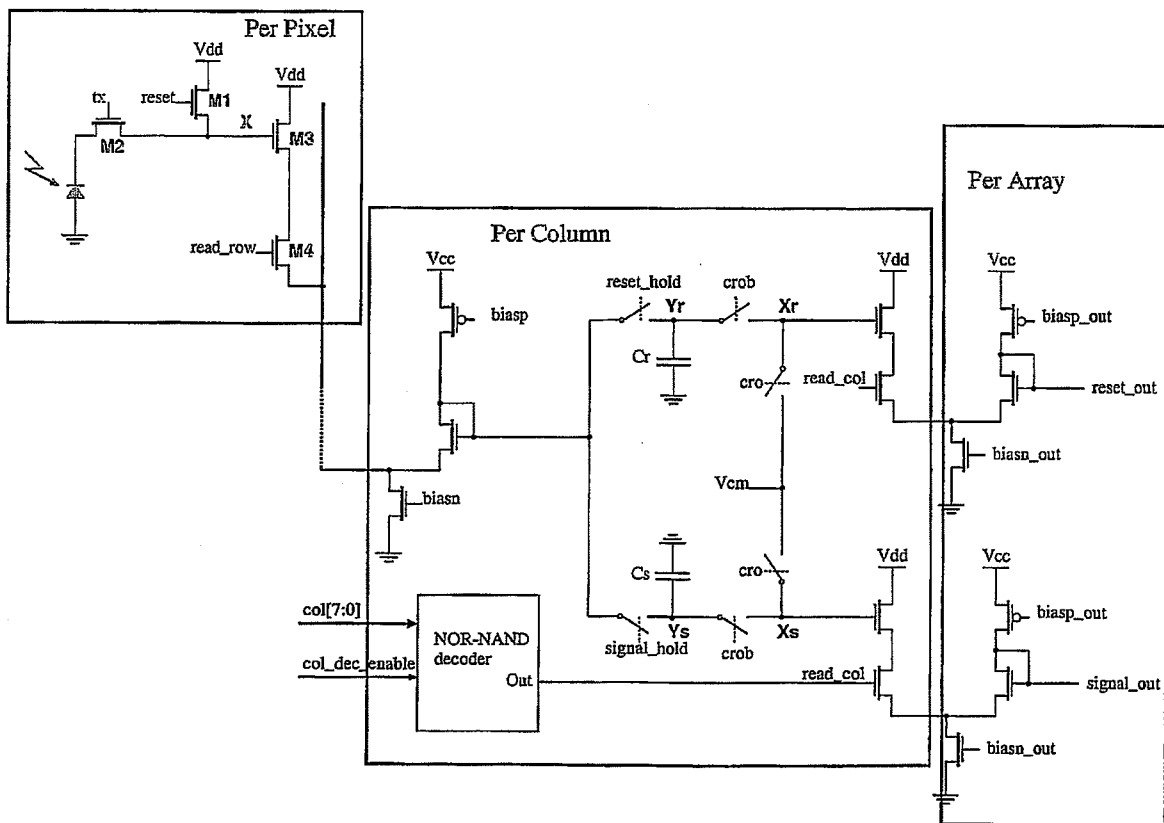


FIG. 11

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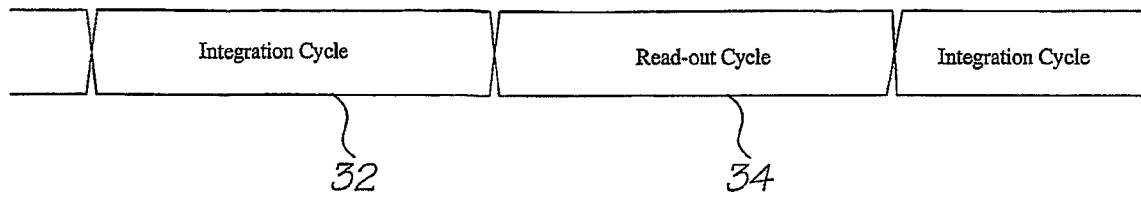


FIG. 11a

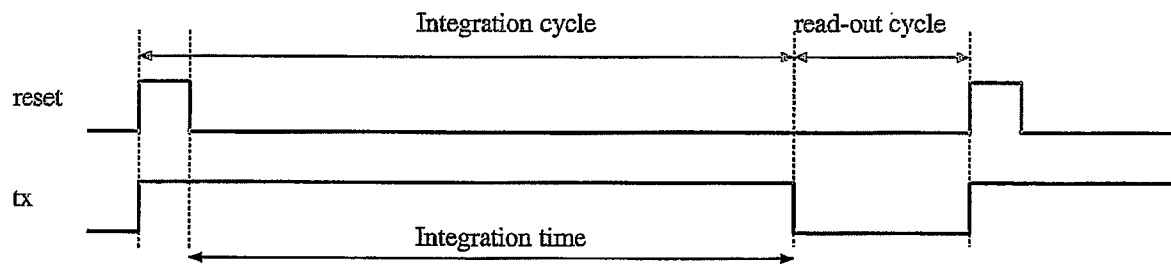


FIG. 12

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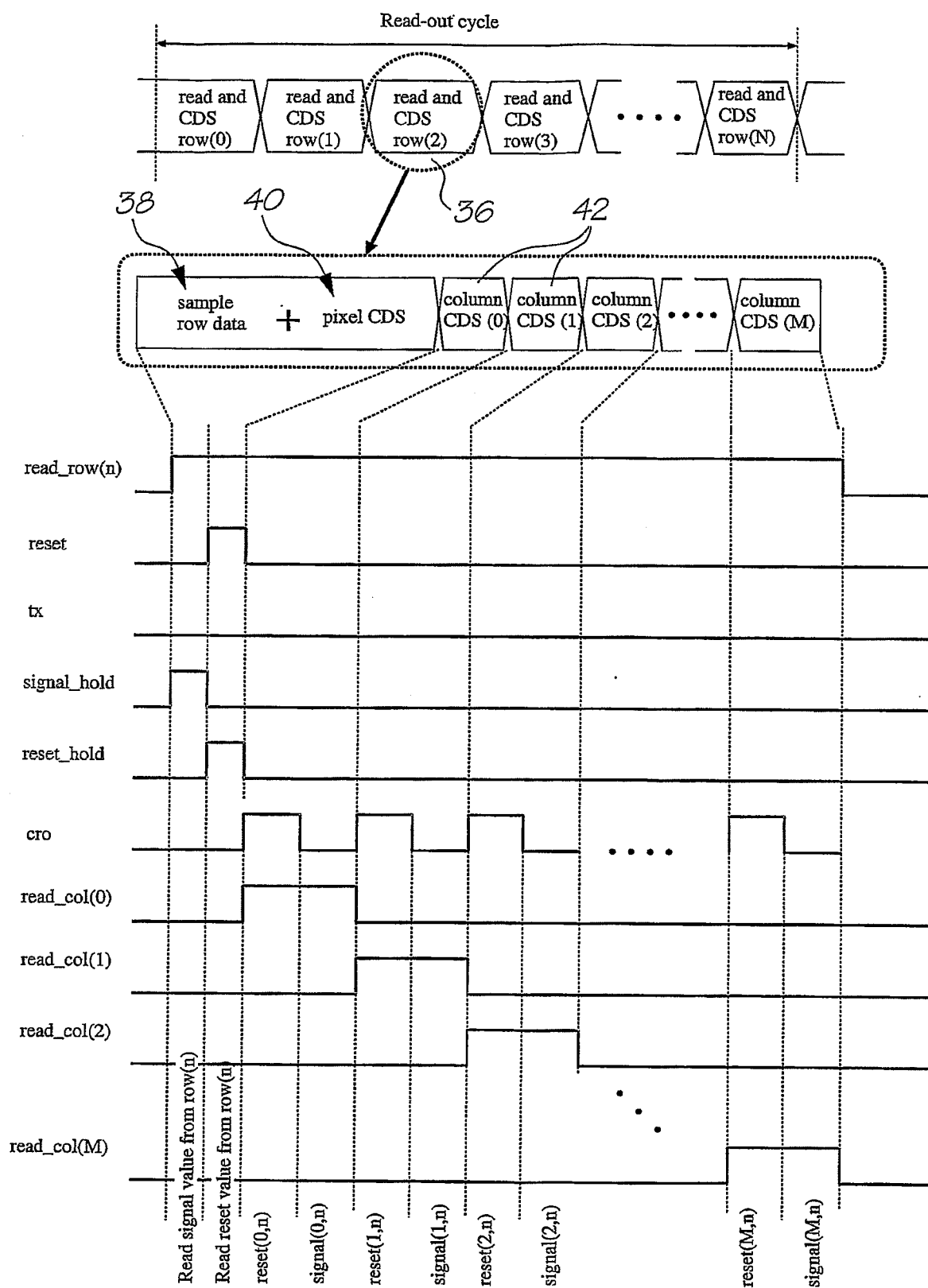


FIG. 13

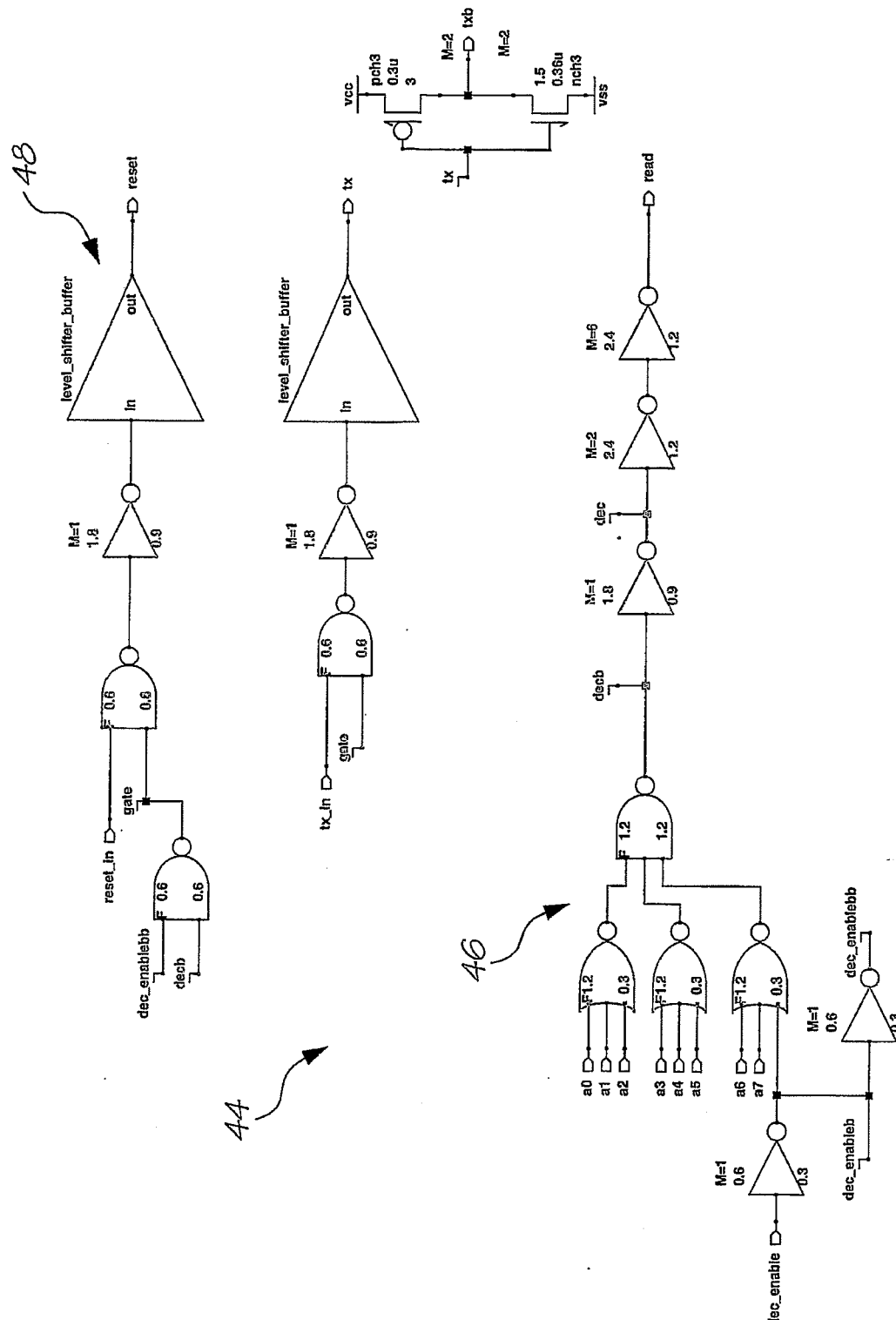


FIG. 14

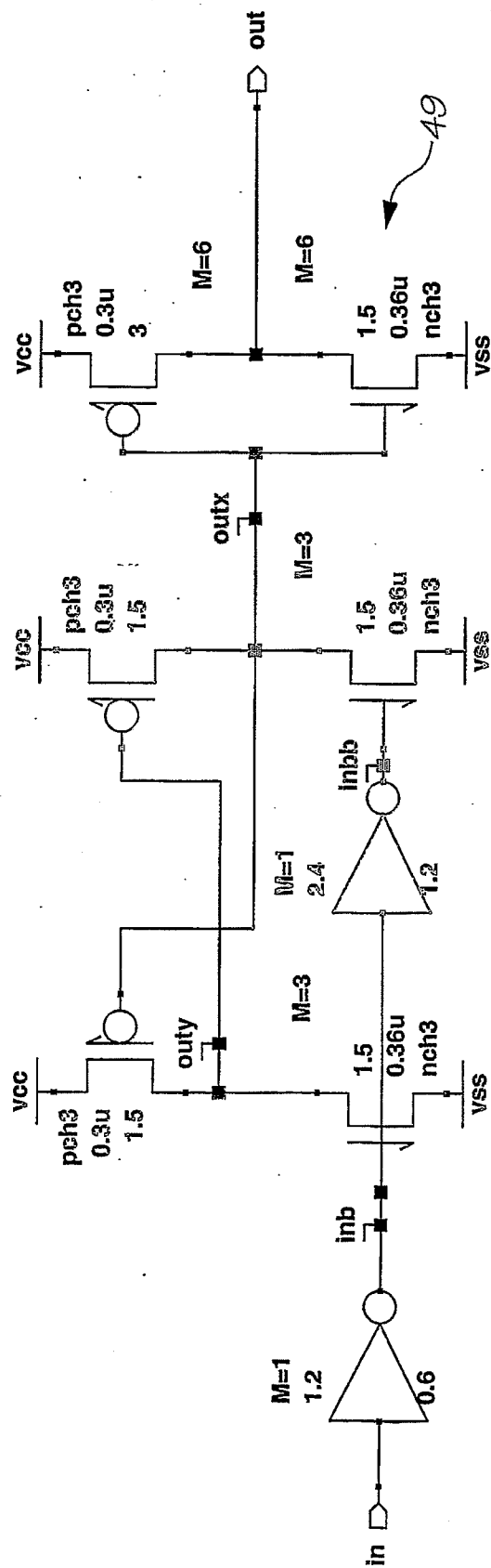


FIG. 15

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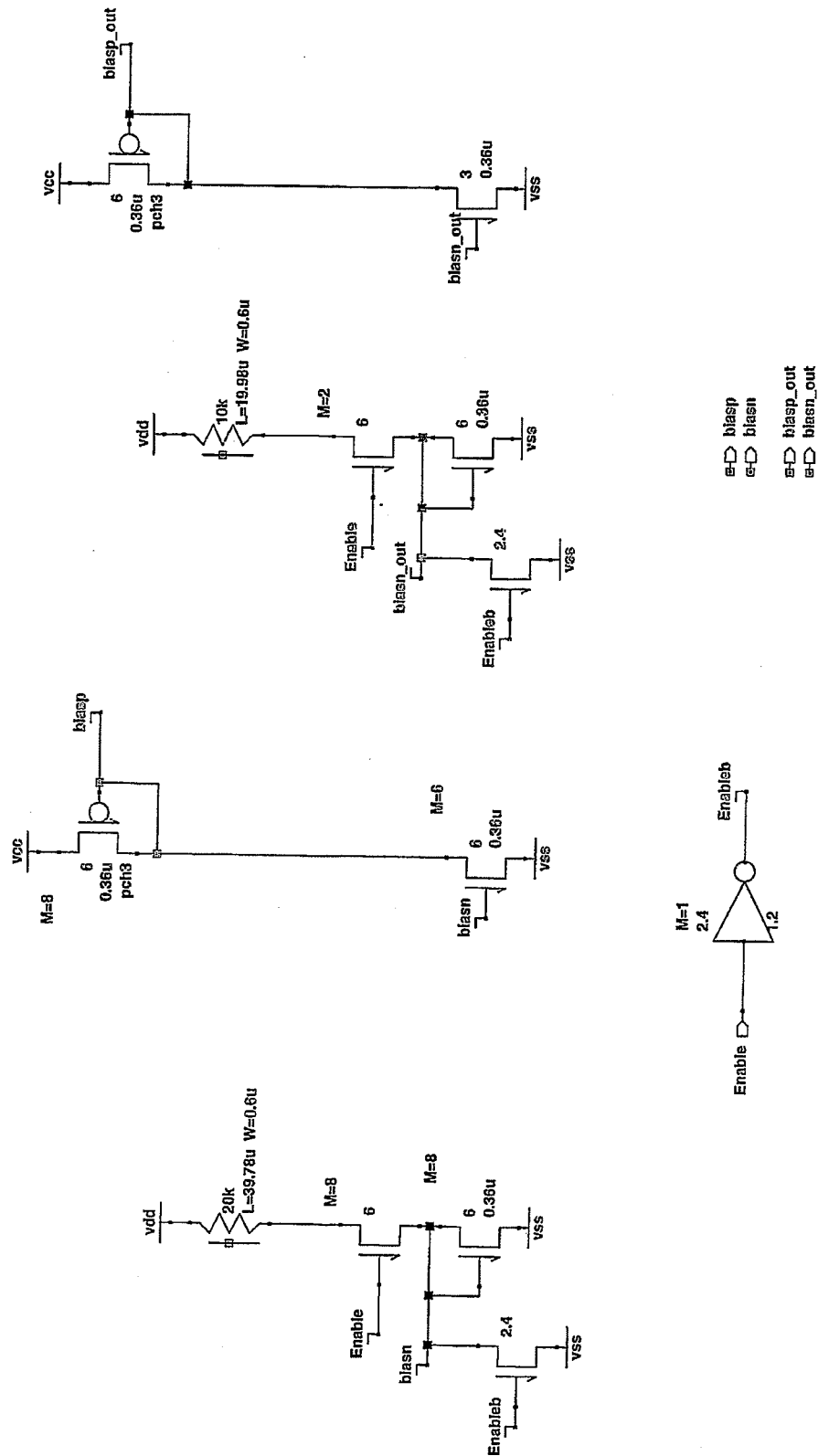


FIG. 16

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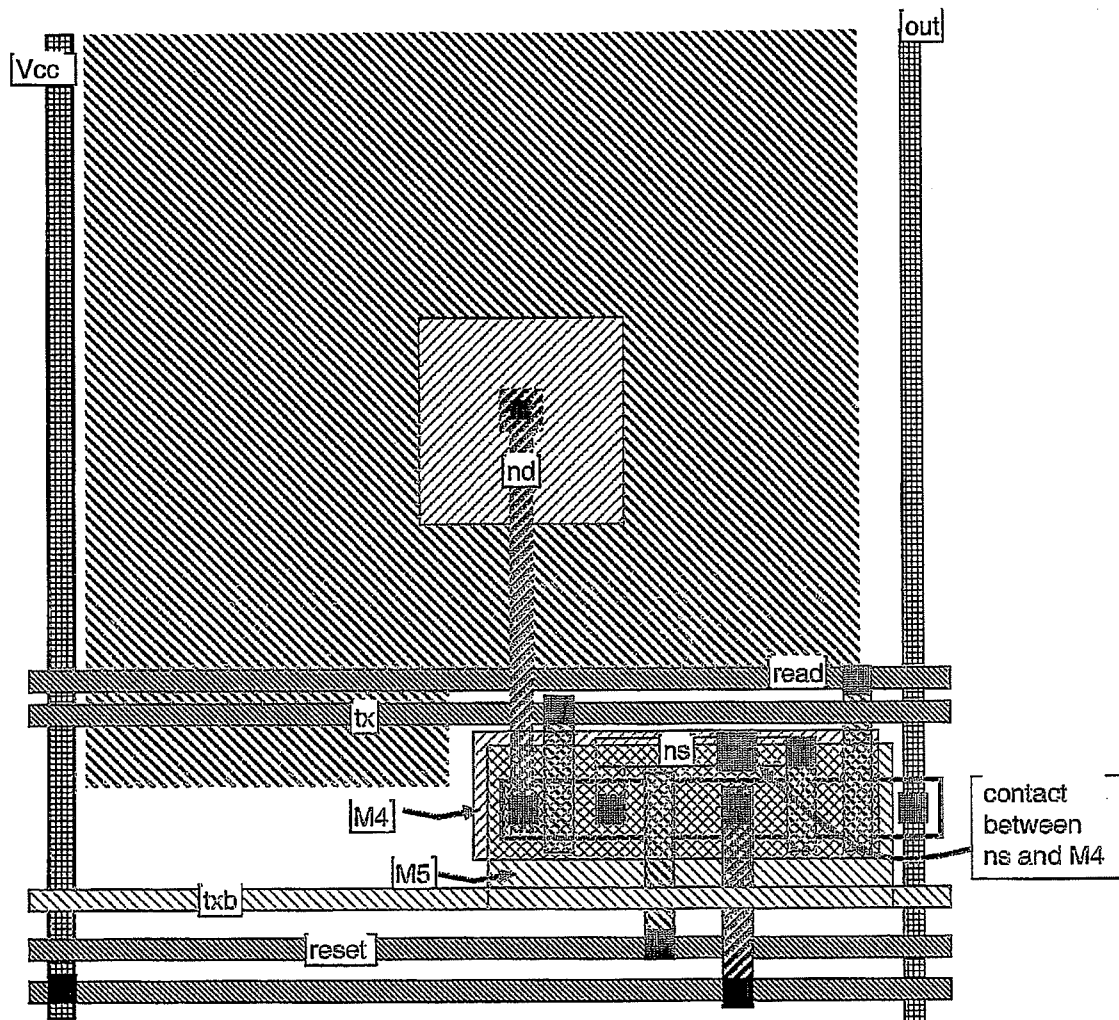


FIG. 17

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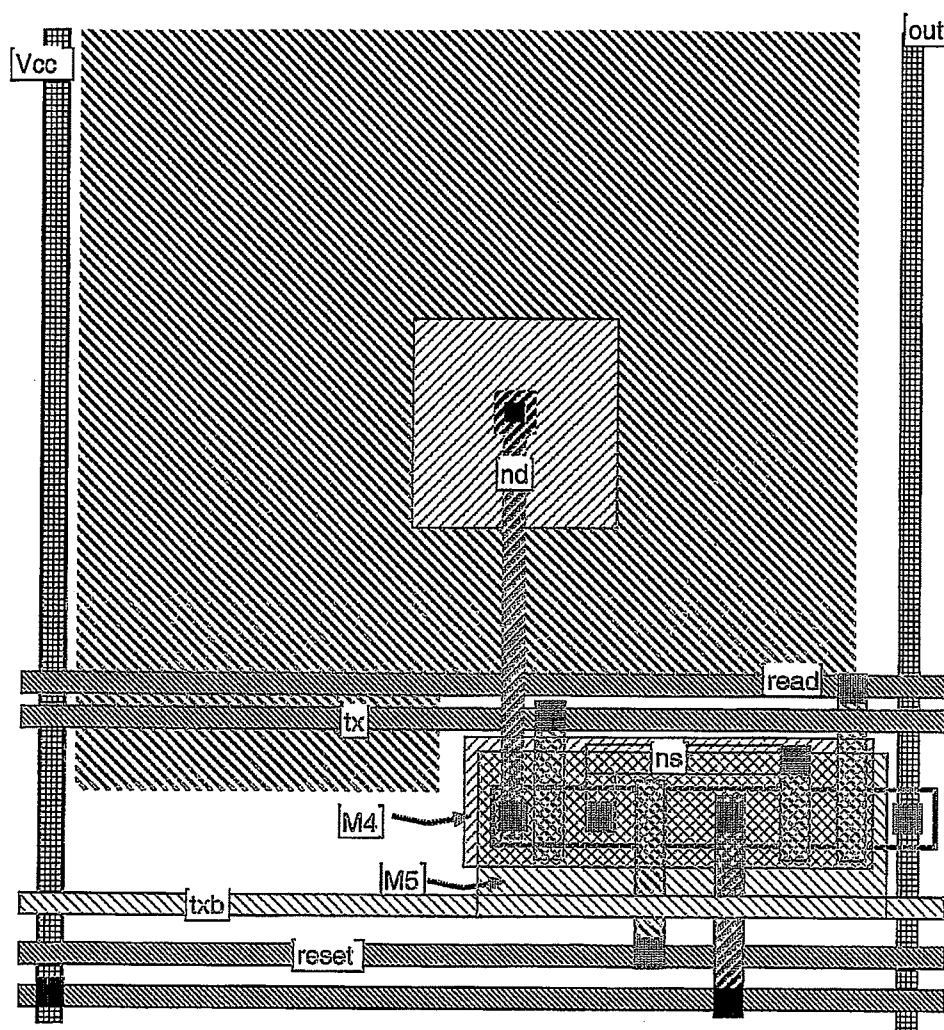


FIG. 18

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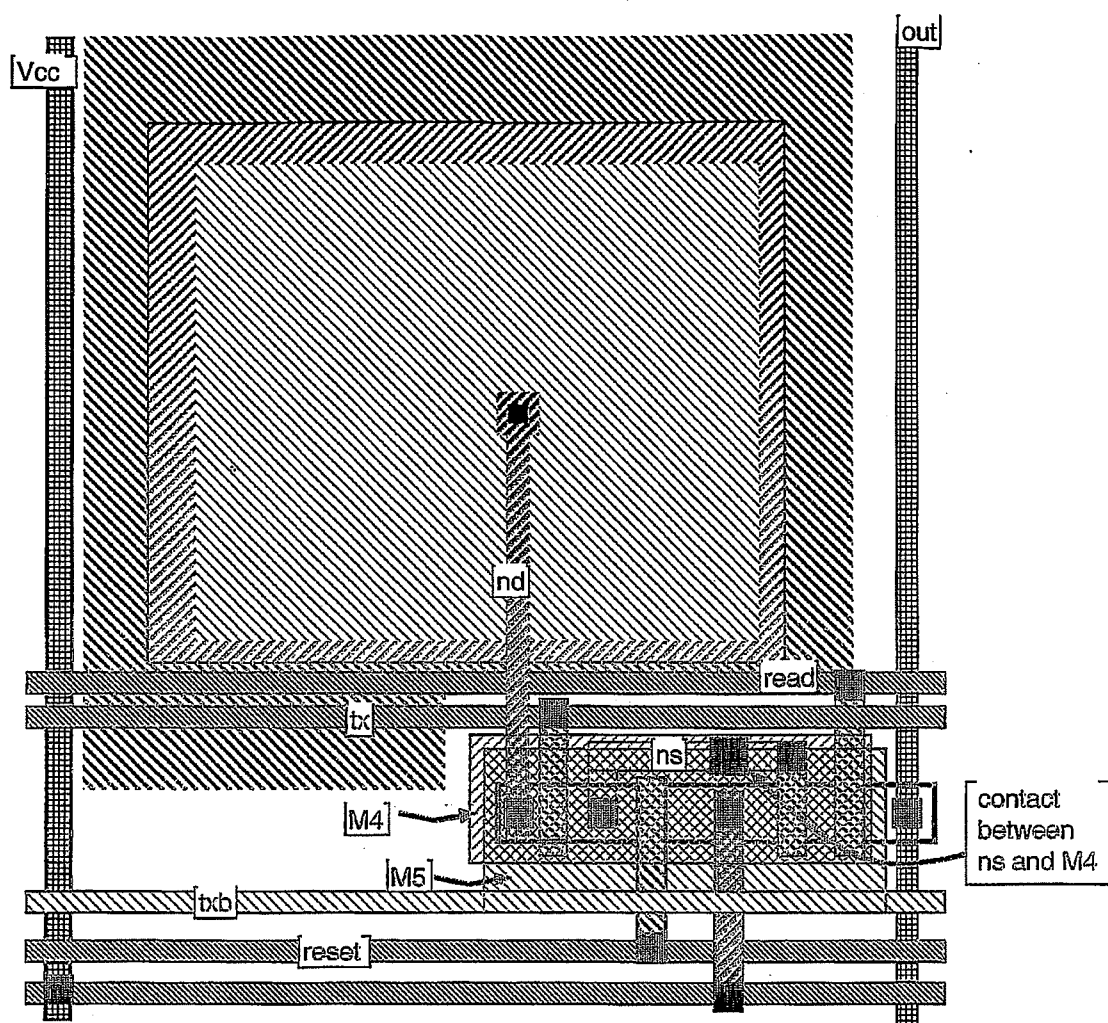


FIG. 19

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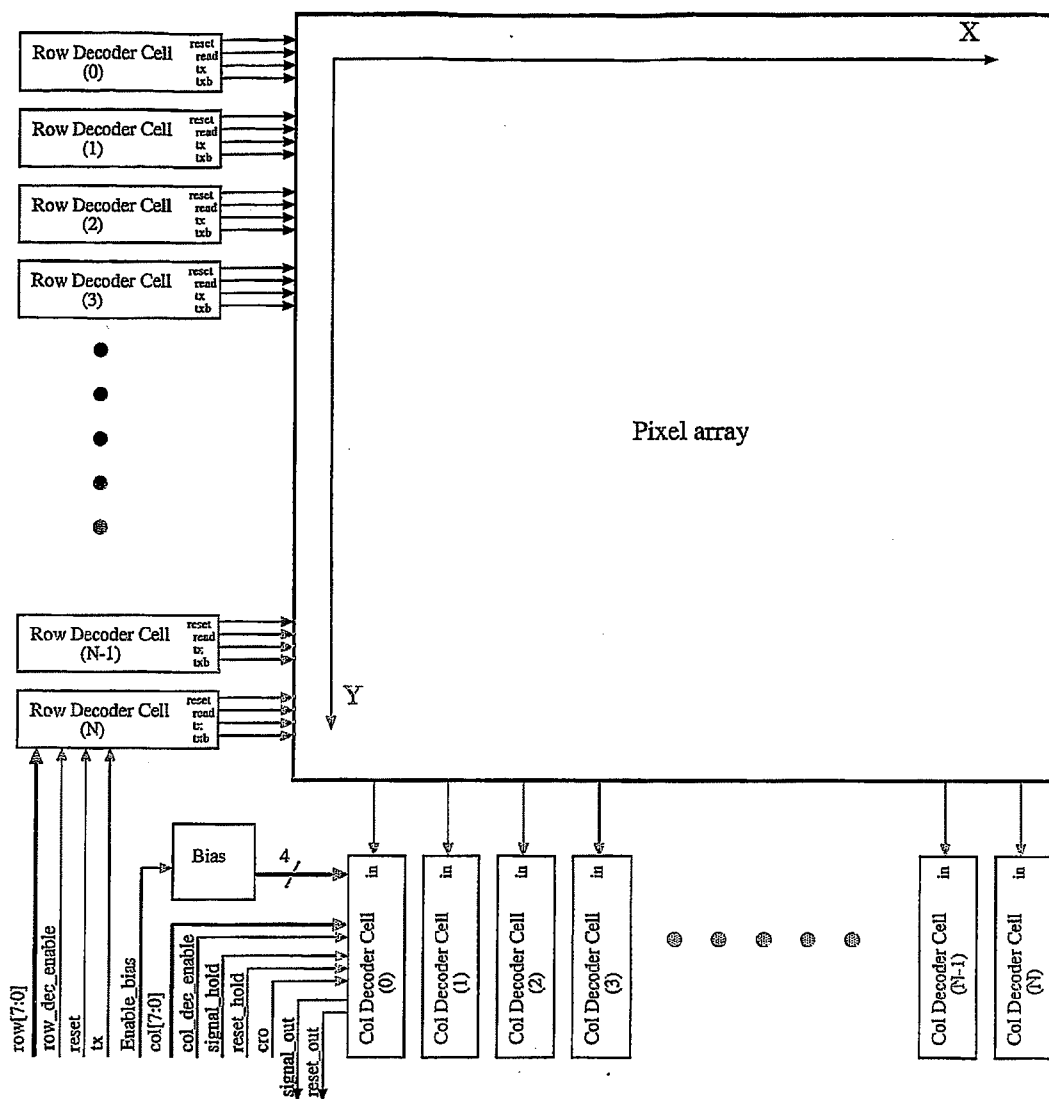


FIG. 20

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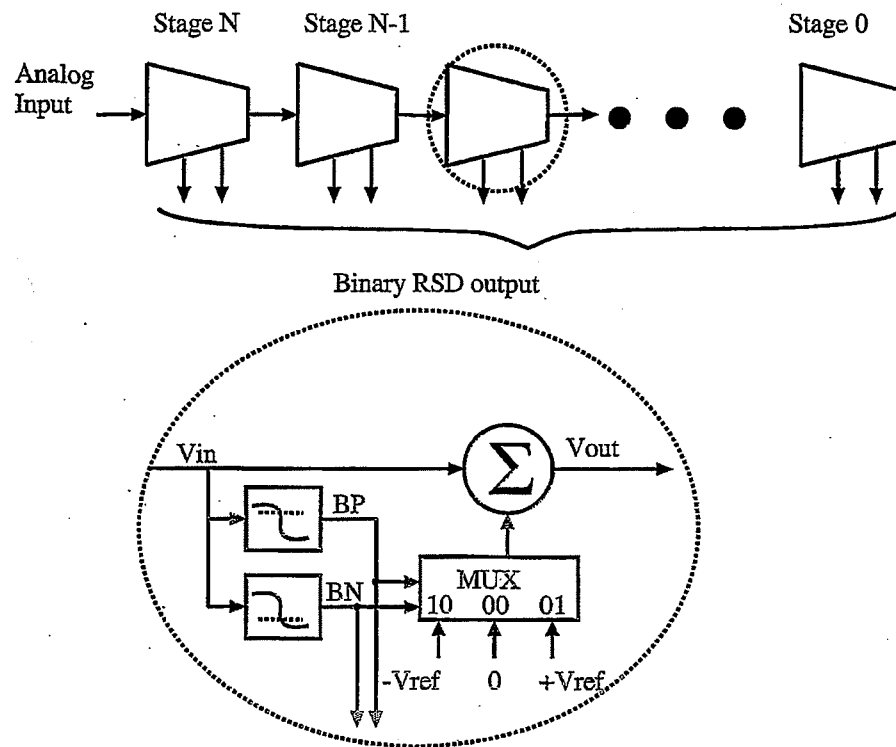


FIG. 21

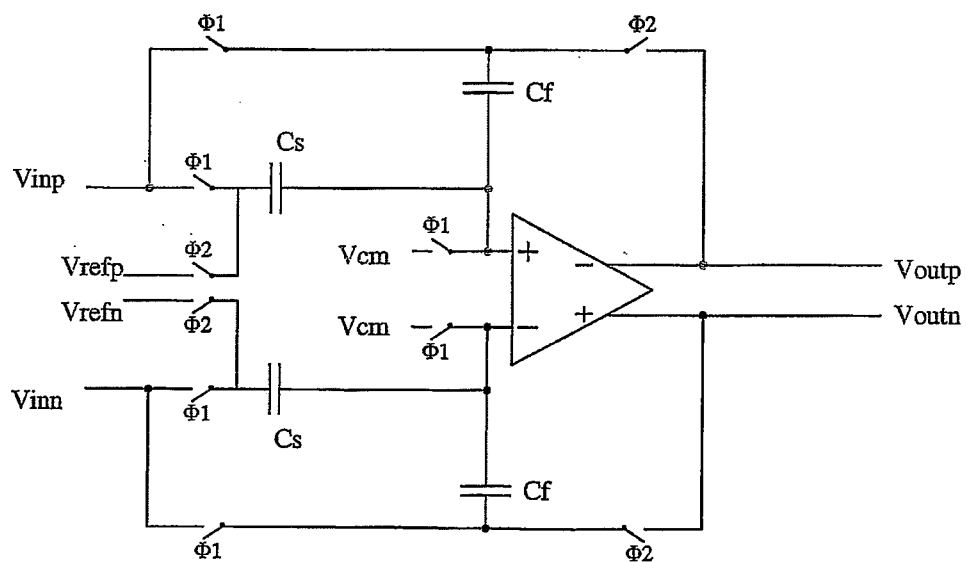


FIG. 22

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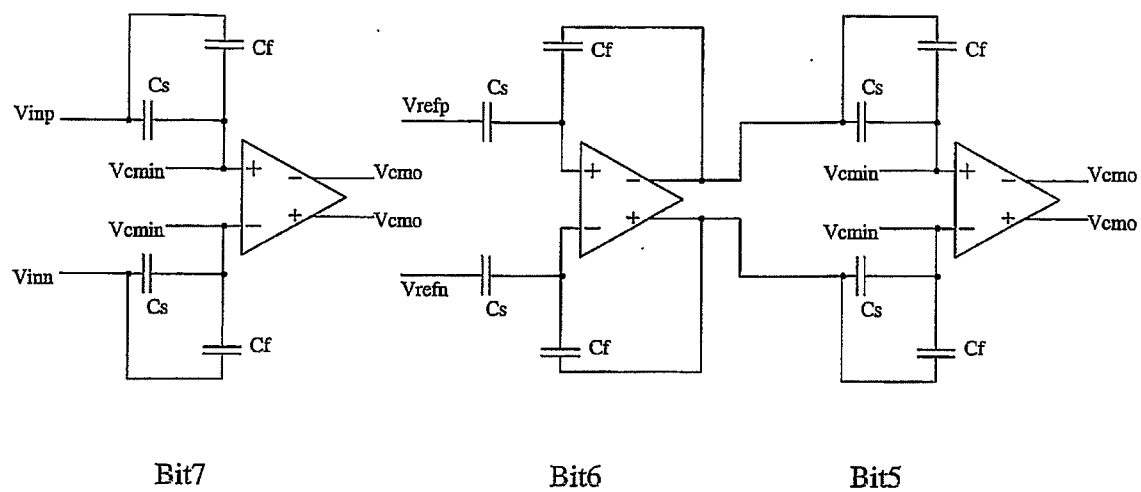


FIG. 23

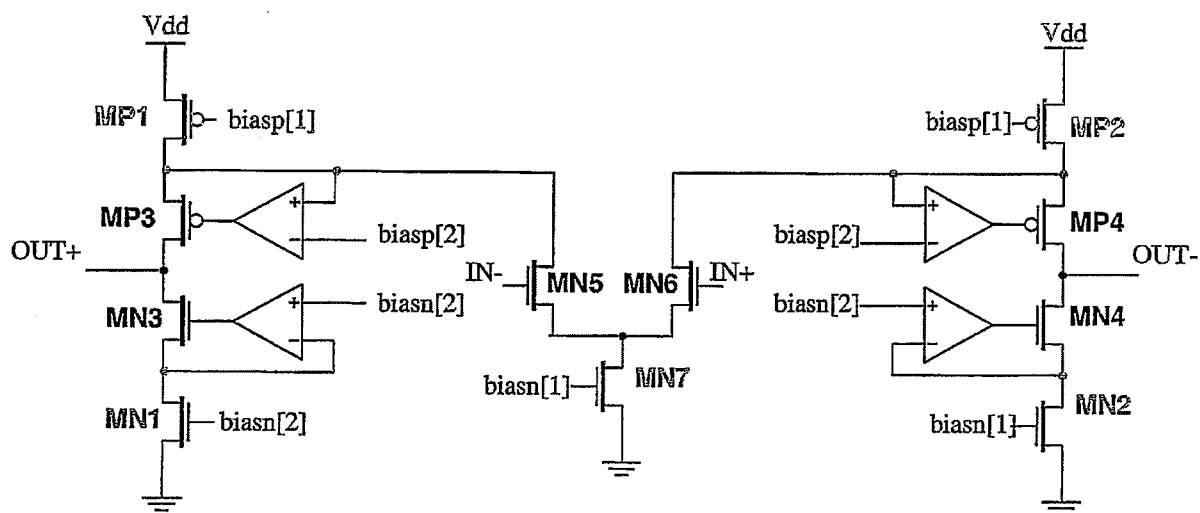


FIG. 24

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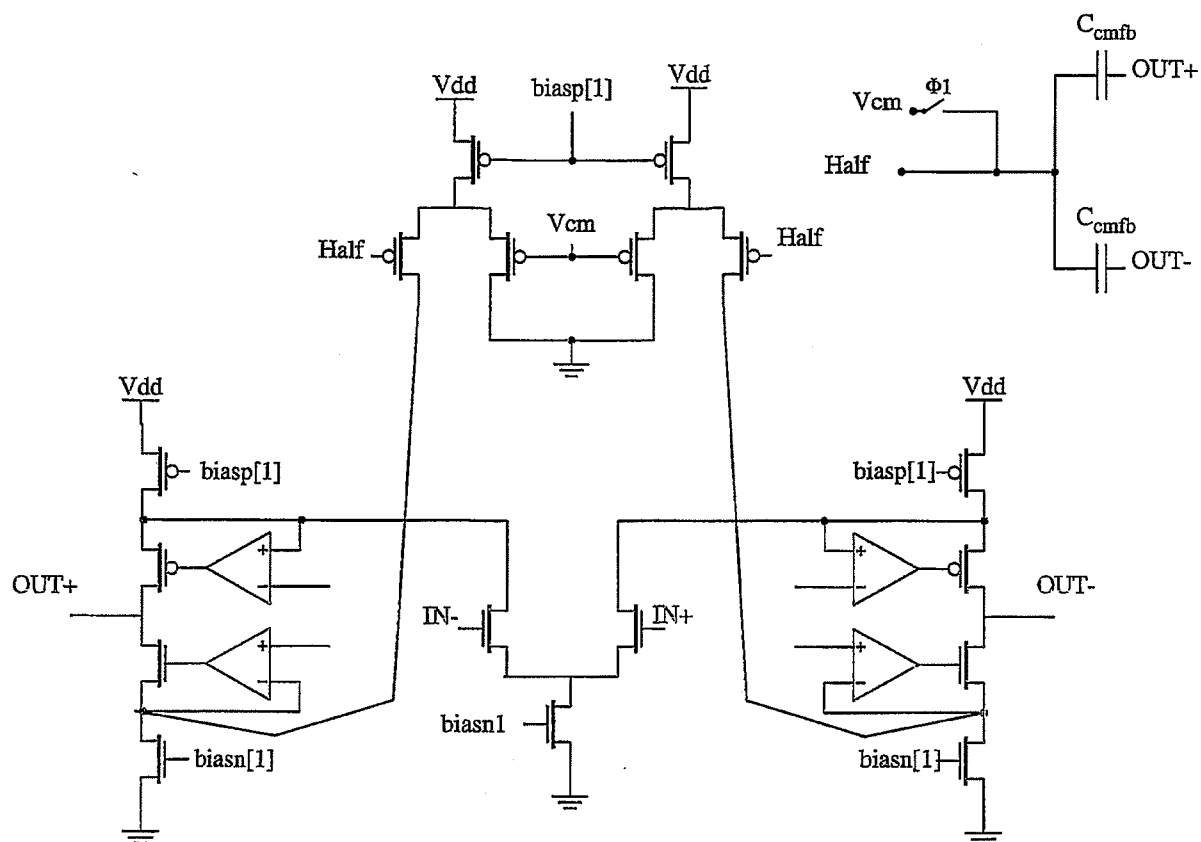


FIG. 26

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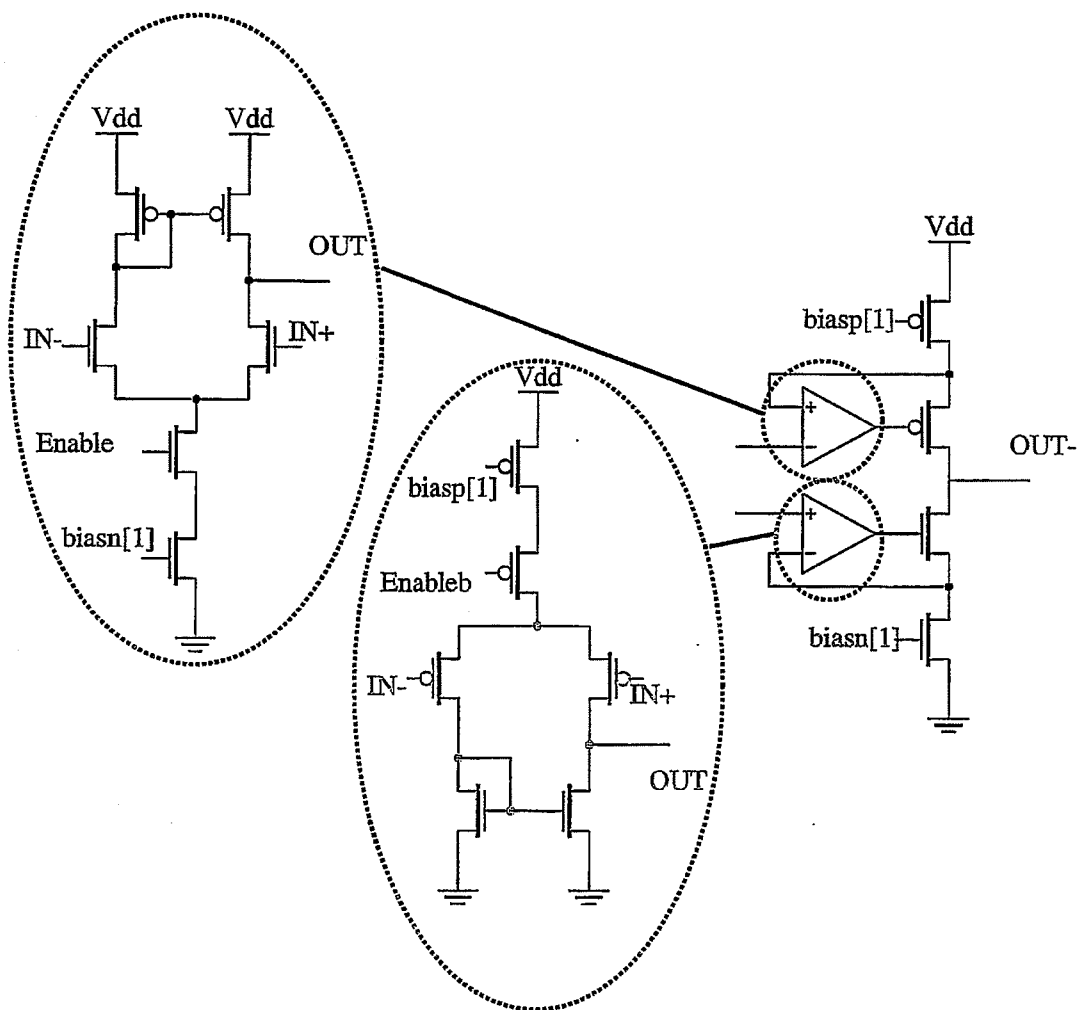


FIG. 27

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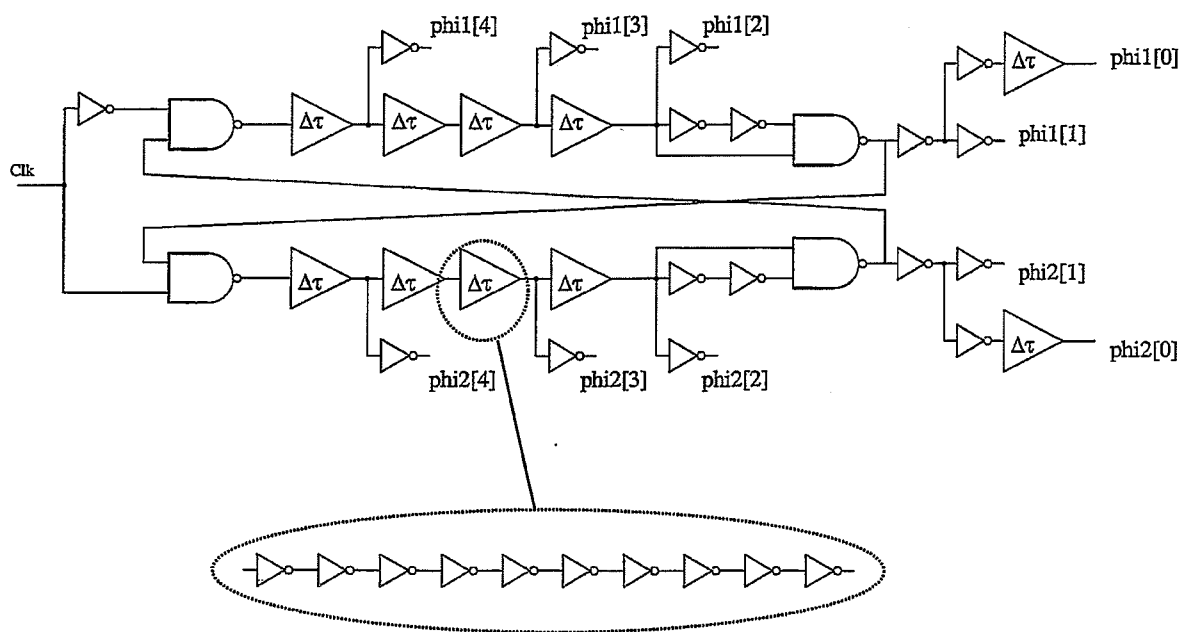


FIG. 28

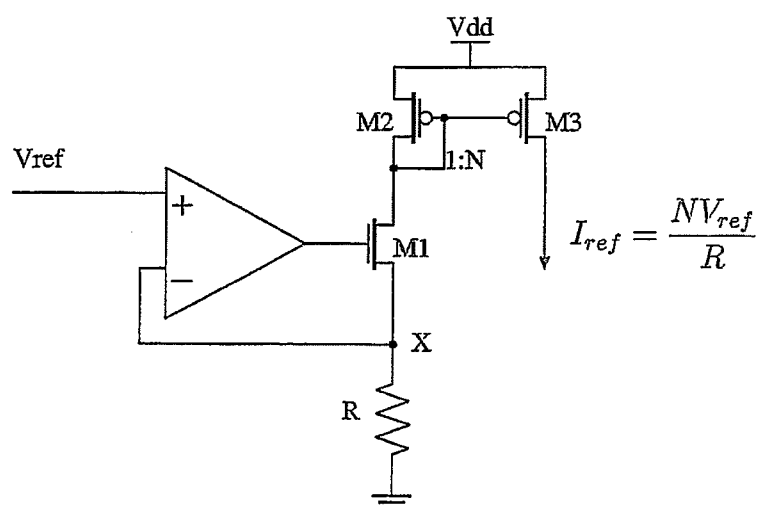


FIG. 29

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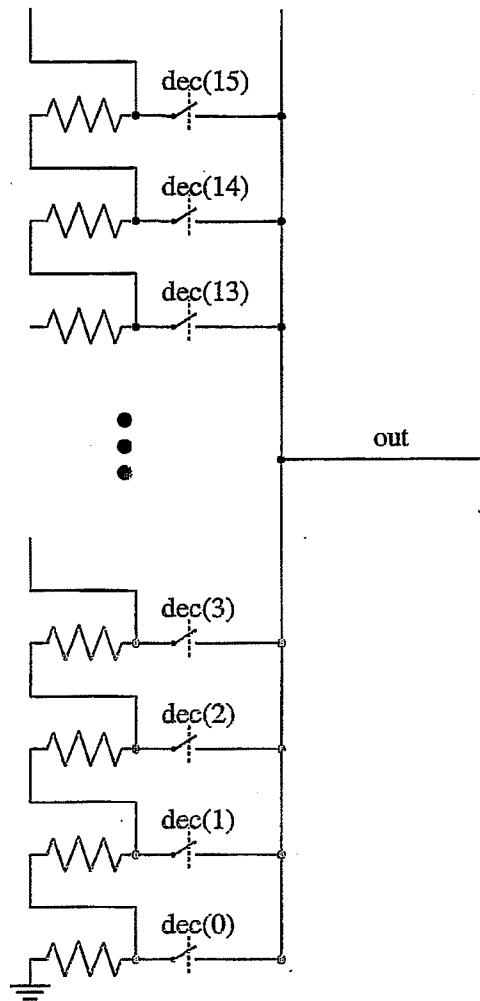


FIG. 30

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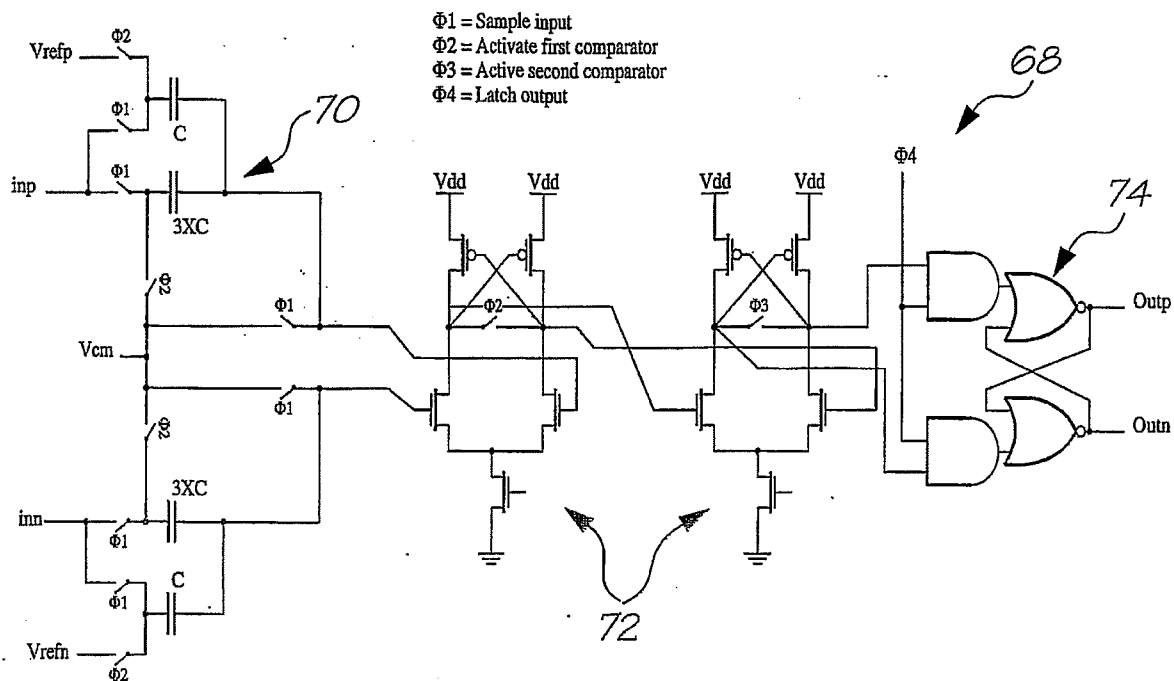


FIG. 31

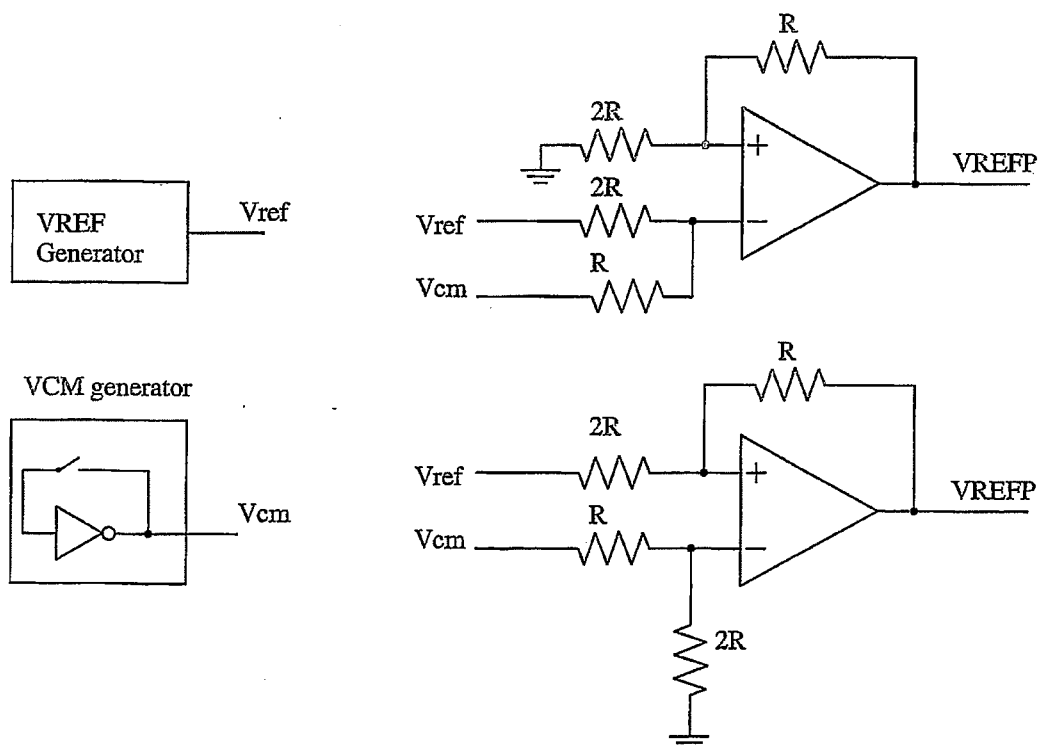


FIG. 32

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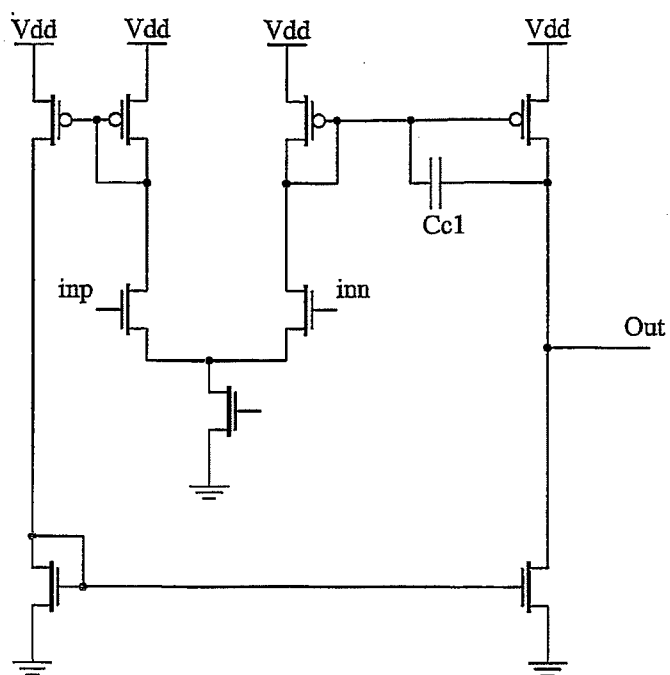


FIG. 33

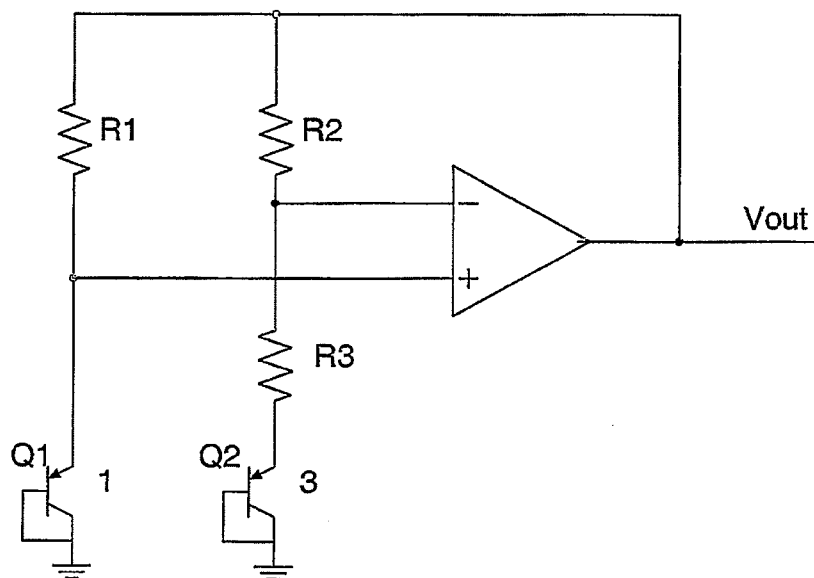


FIG. 34

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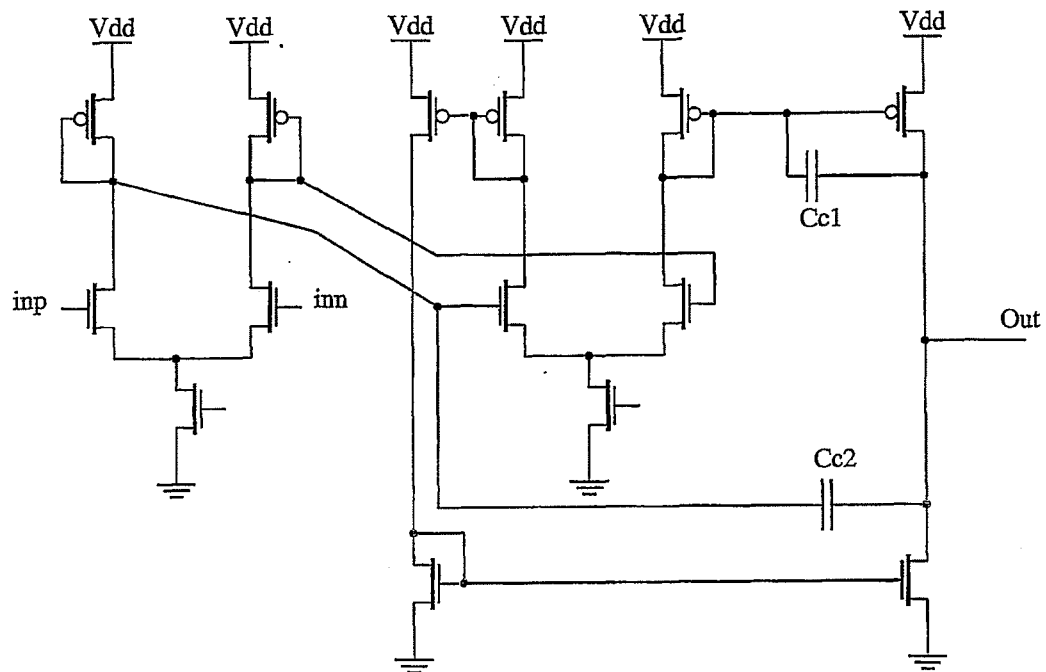


FIG. 35

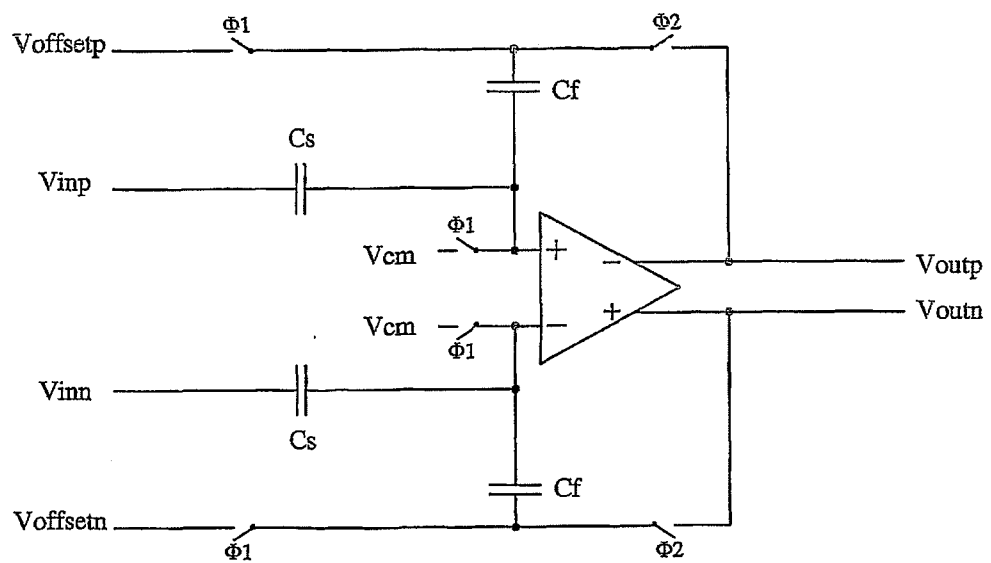


FIG. 36

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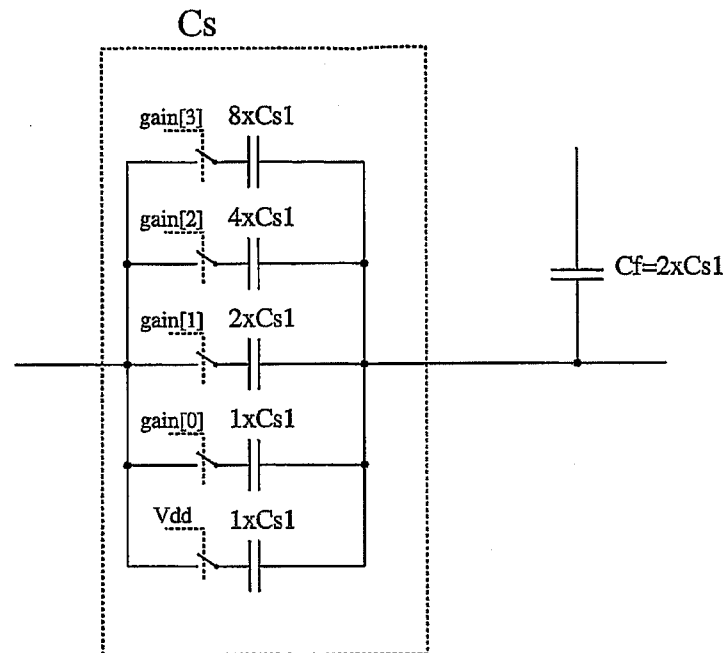


FIG. 37

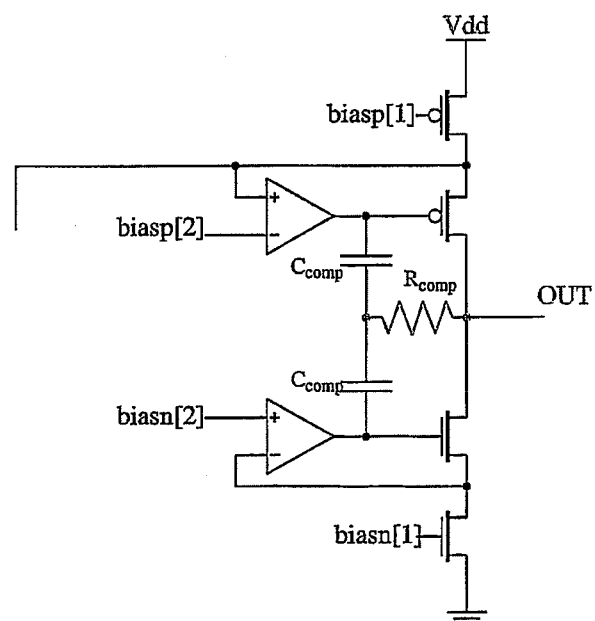


FIG. 38

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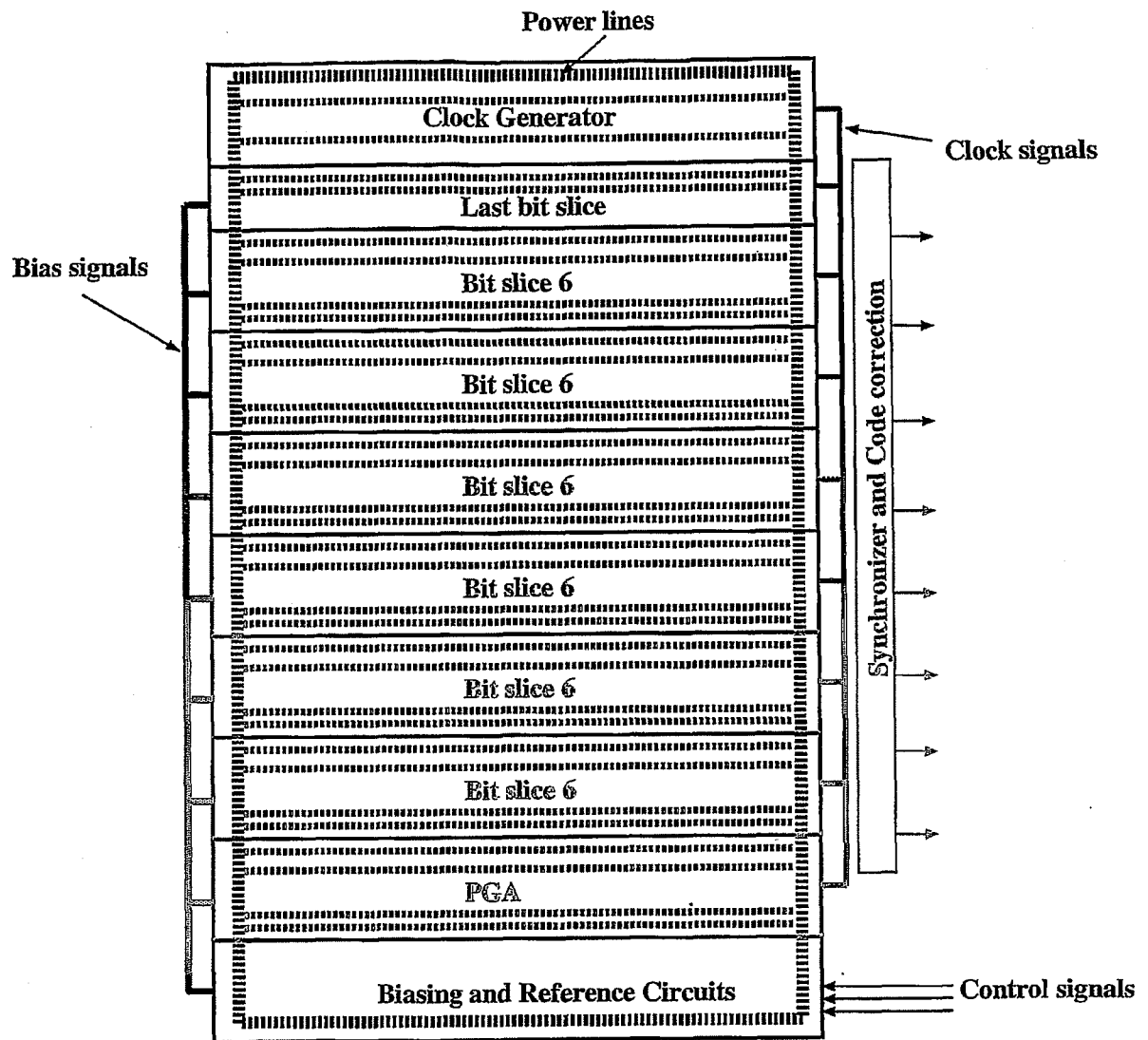


FIG. 39

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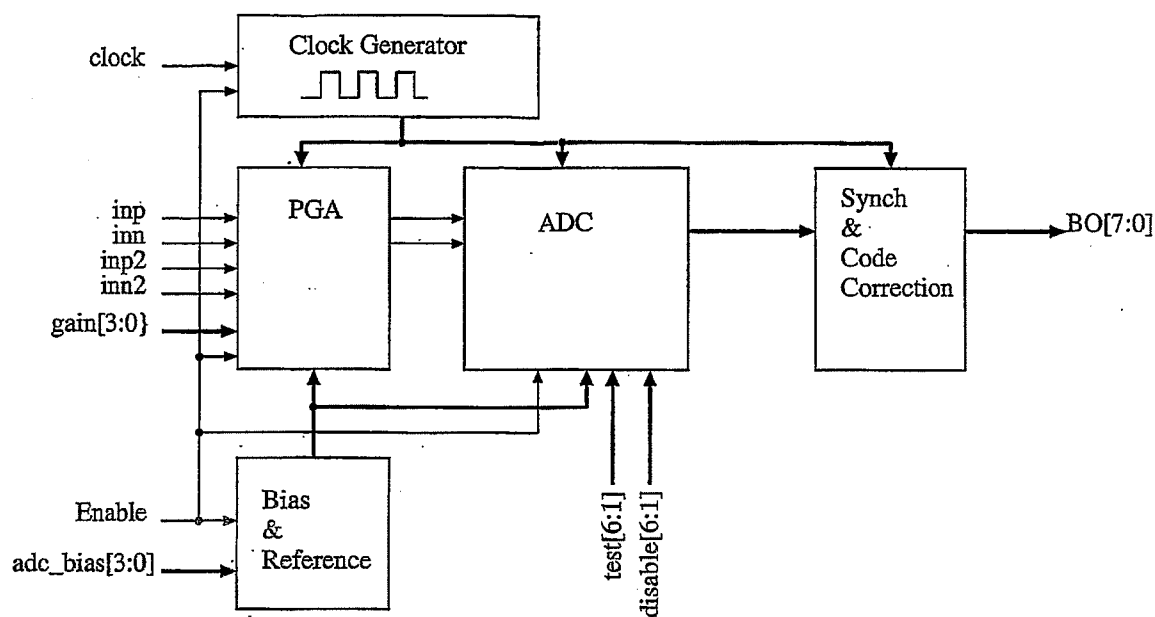


FIG. 40

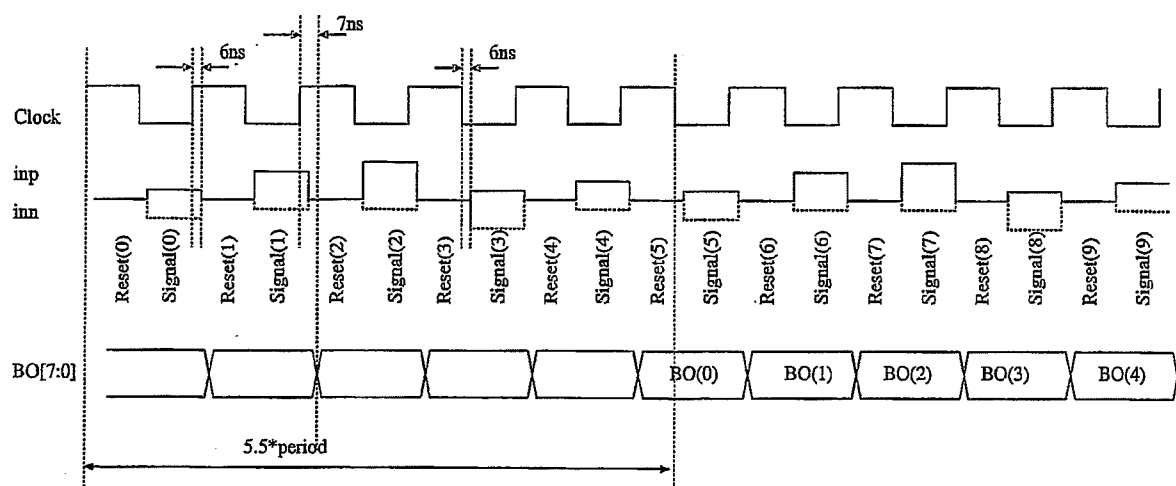


FIG. 41

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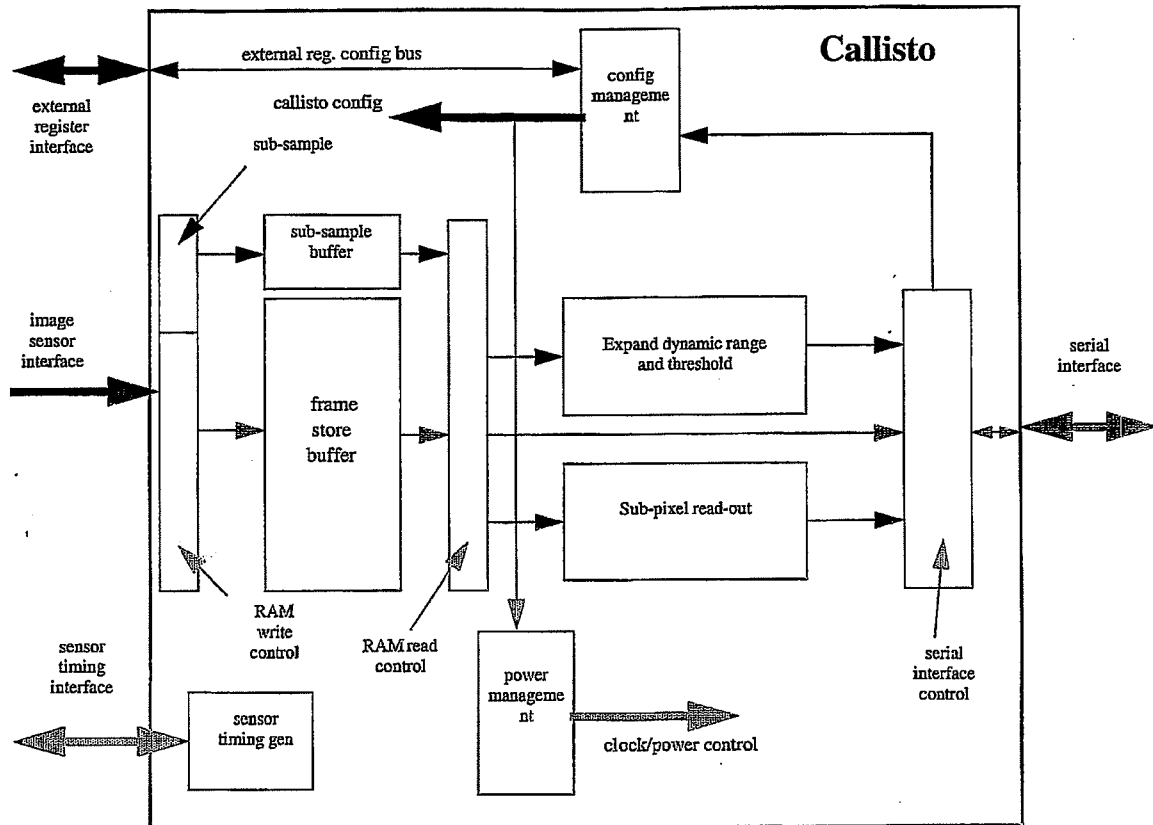


FIG. 42

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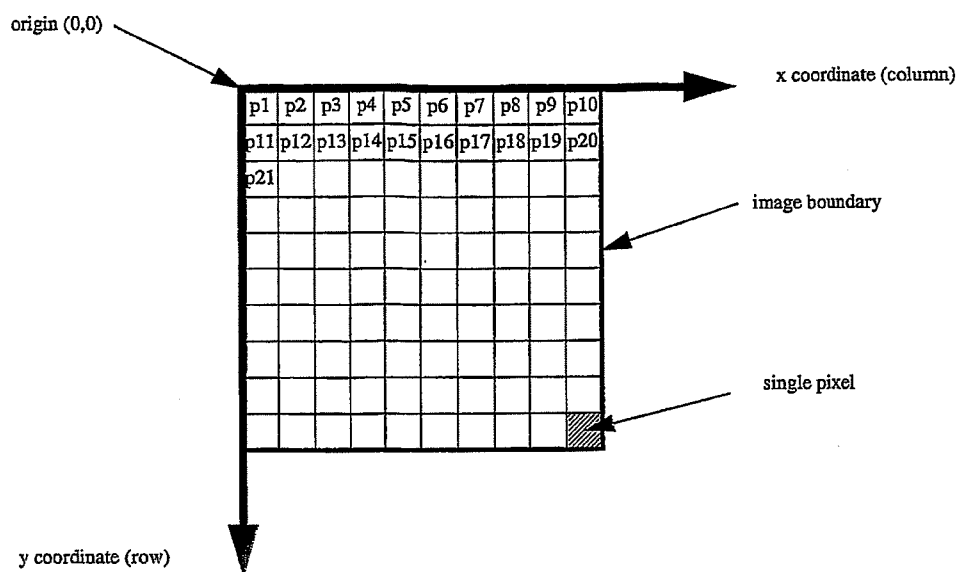


FIG. 43

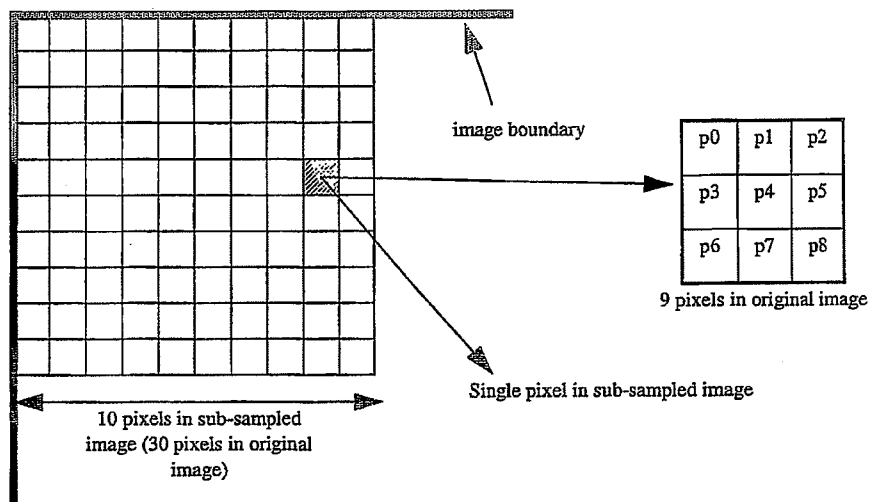


FIG. 44

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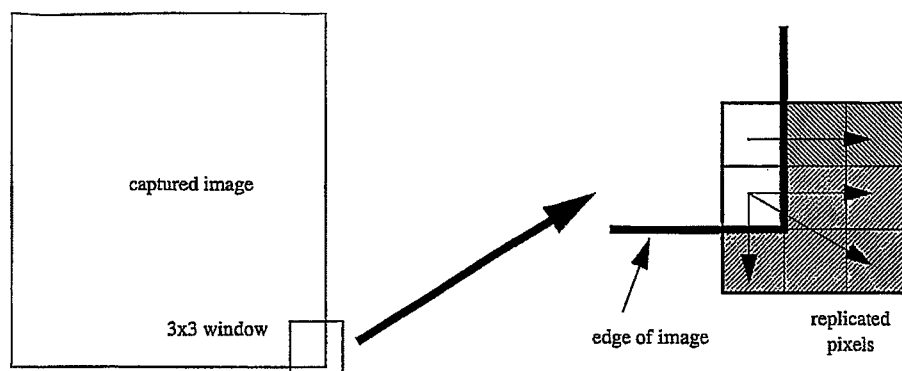


FIG. 45

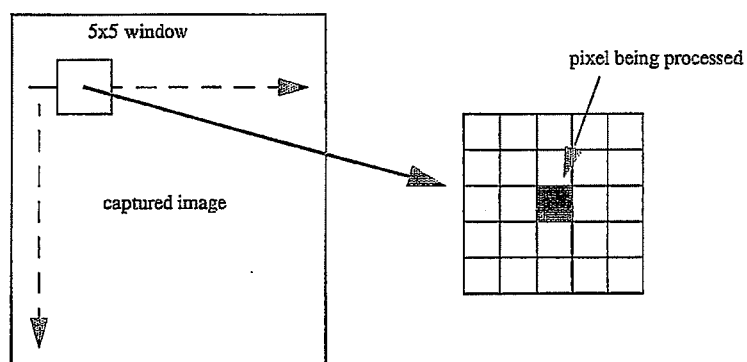


FIG. 46

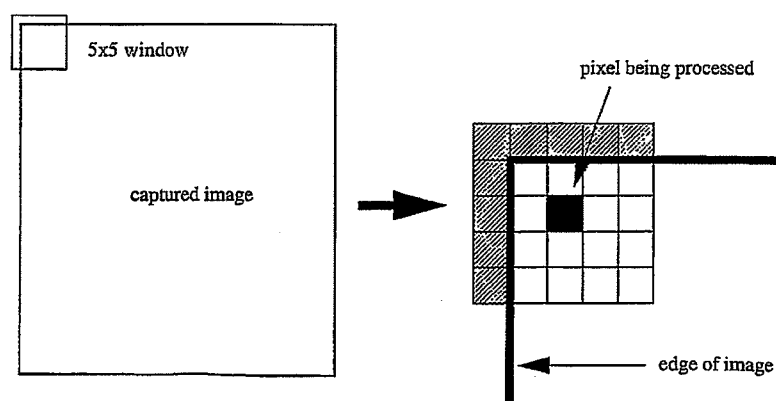


FIG. 47

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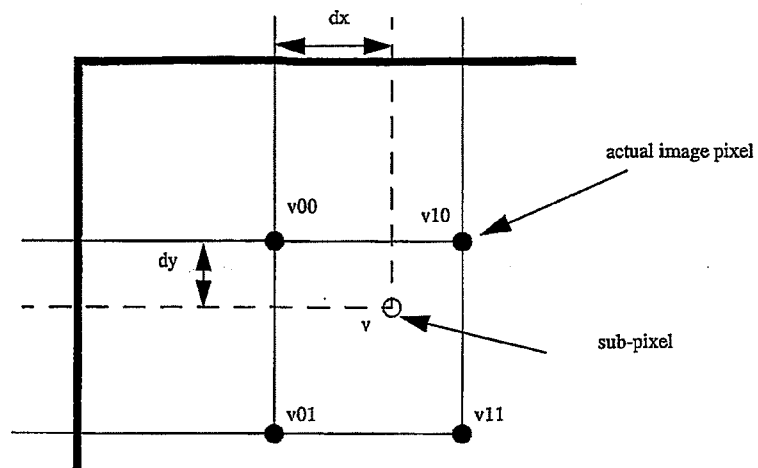


FIG. 48

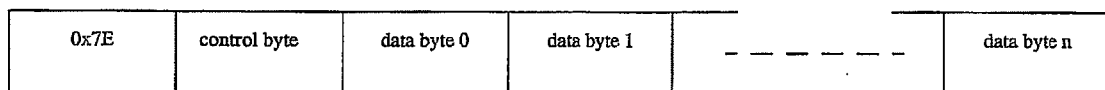


FIG. 49

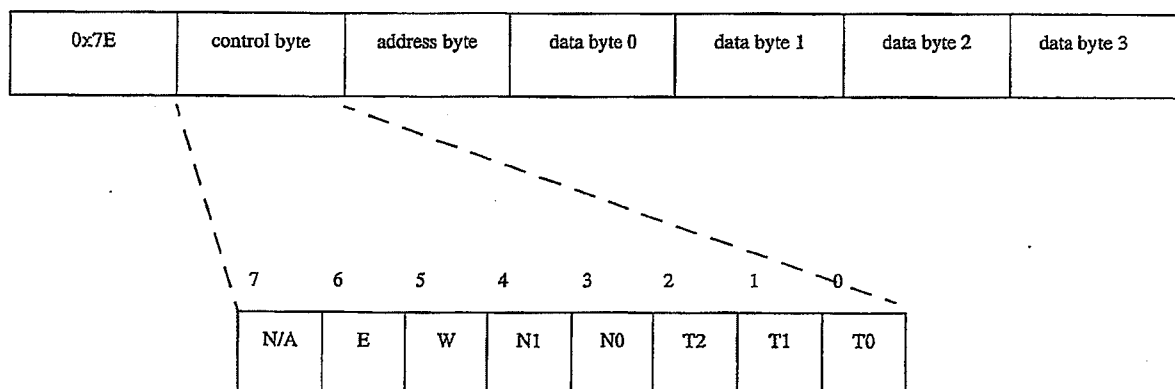


FIG. 50

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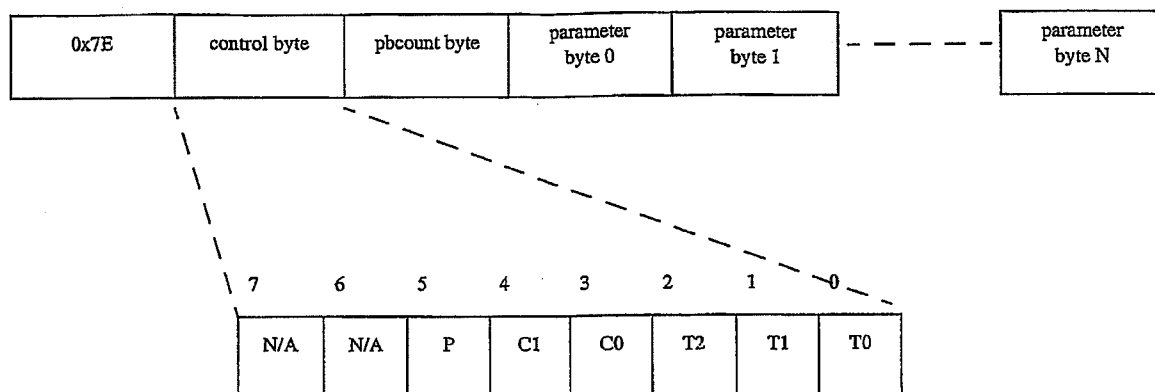


FIG. 51

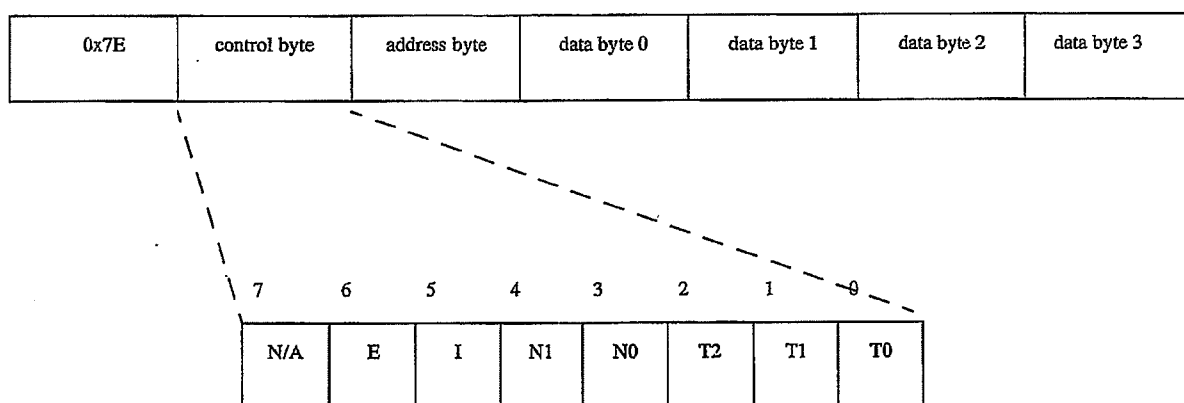


FIG. 52

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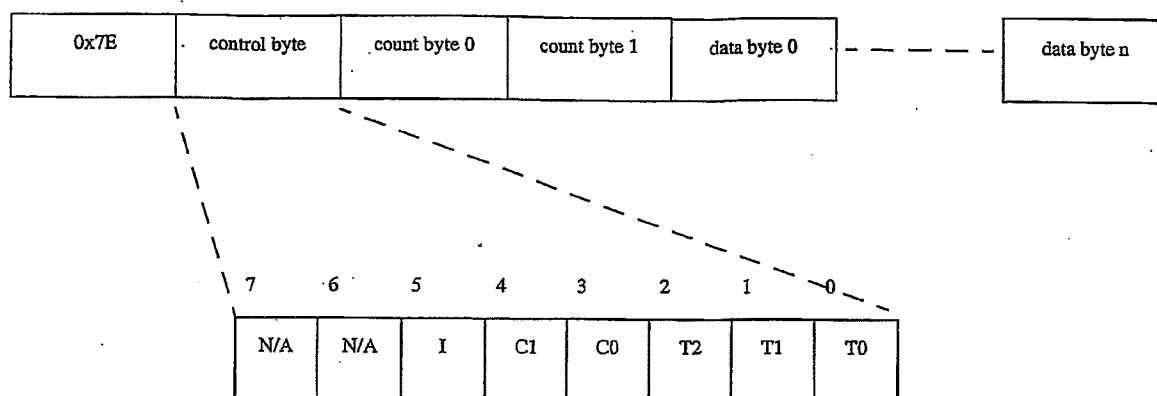


FIG. 53

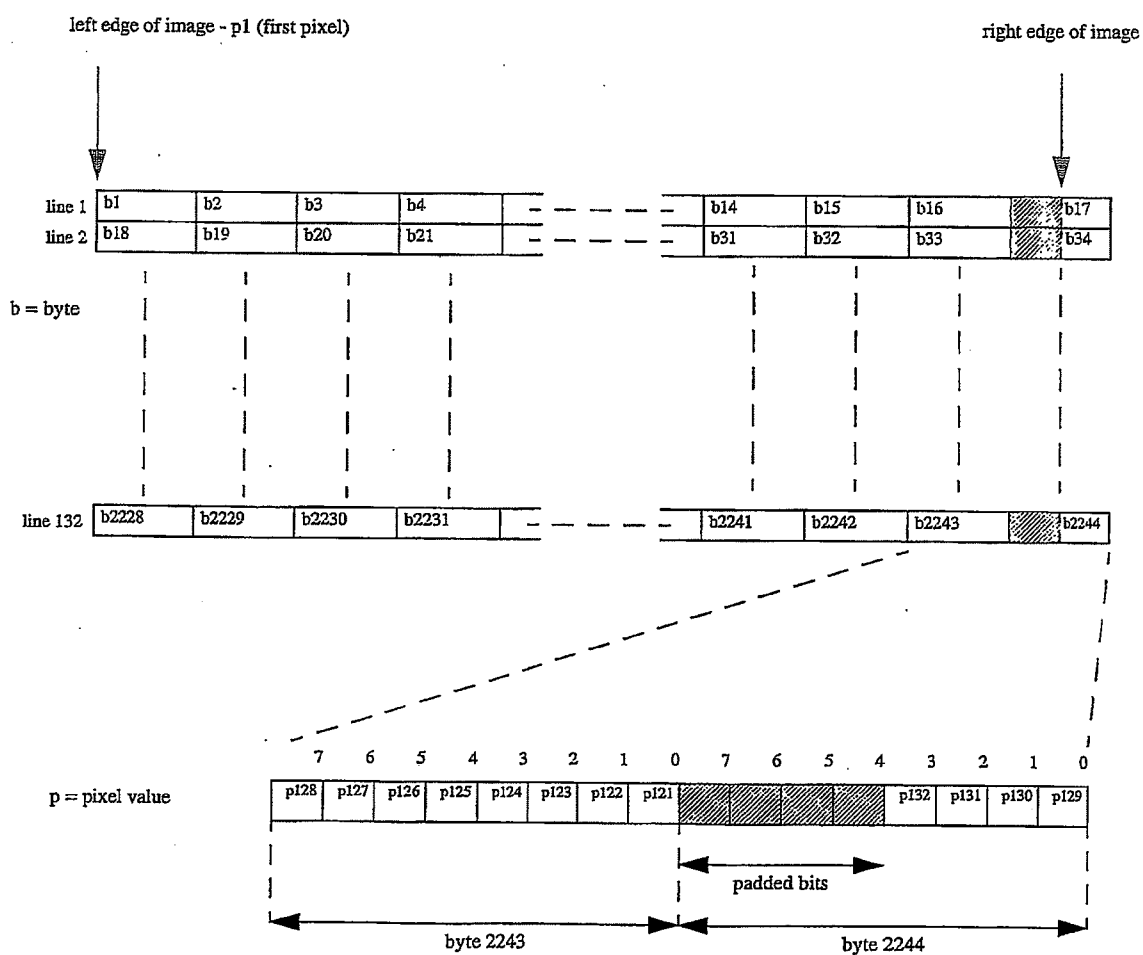


FIG. 54

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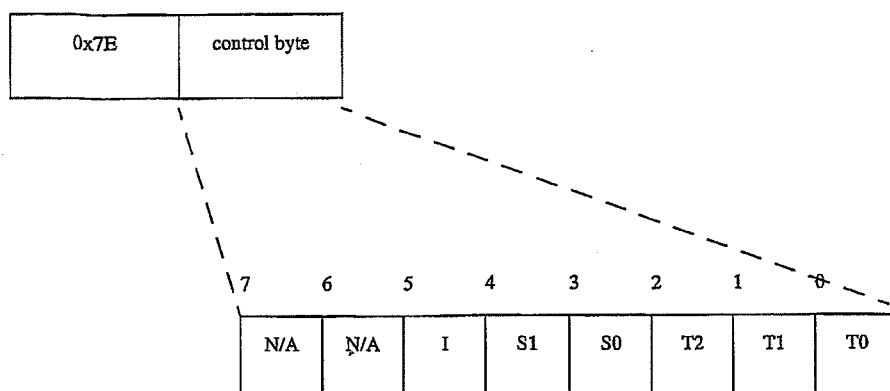


FIG. 55

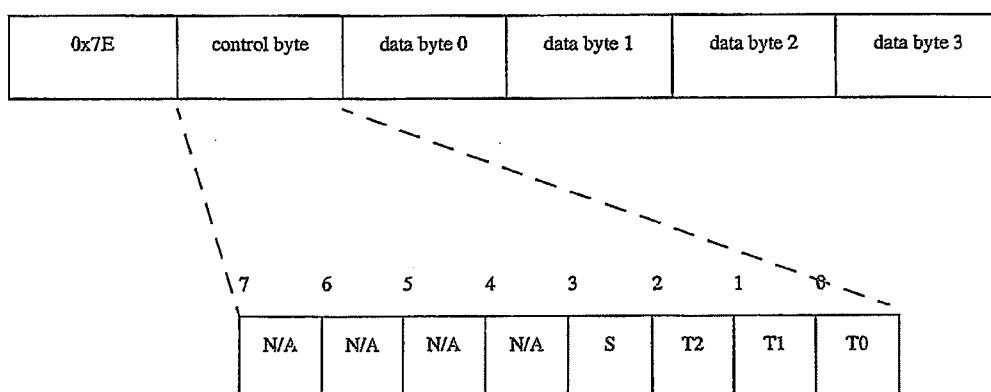


FIG. 56

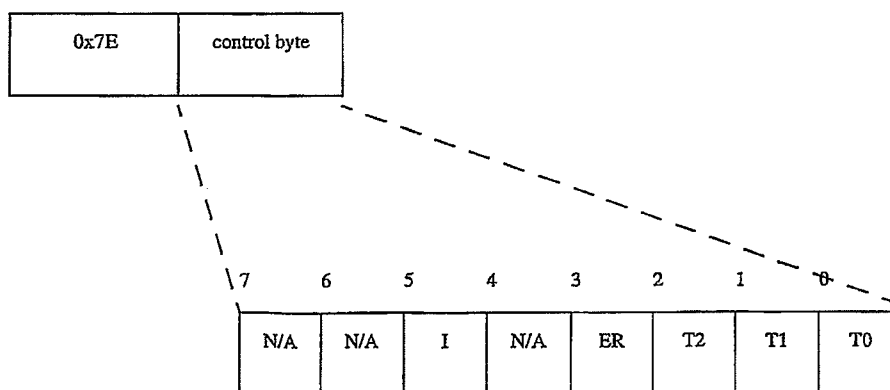


FIG. 57

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0x7E	control byte "00100001"	TopLeftX	TopLeftY
------	----------------------------	----------	----------

Unprocessed image read command

FIG. 58

0x7E	control byte "00111001"	TopLeftX	TopLeftY	SizeX-1	SizeY-1
------	----------------------------	----------	----------	---------	---------

processed image read command with arguments

FIG. 59a

0x7E	control byte "00011001"
------	----------------------------

processed image read command without arguments

FIG. 59b

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0x7E	control byte "00110001"	TopLeftX	TopLeftY	SizeX-1	SizeY-1
------	----------------------------	----------	----------	---------	---------

Sub-sampled image read command with arguments

FIG. 60a

0x7E	control byte "00010001"
------	----------------------------

Sub-sampled image read command without arguments

FIG. 60b

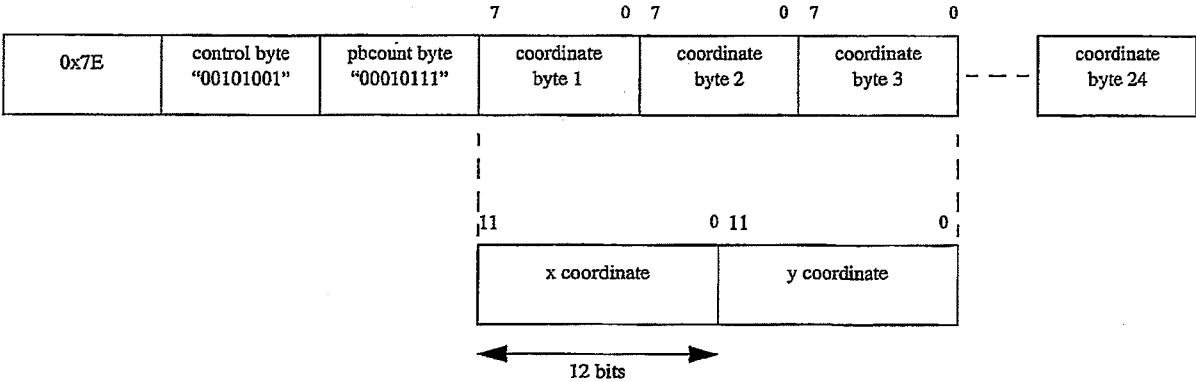


FIG. 61

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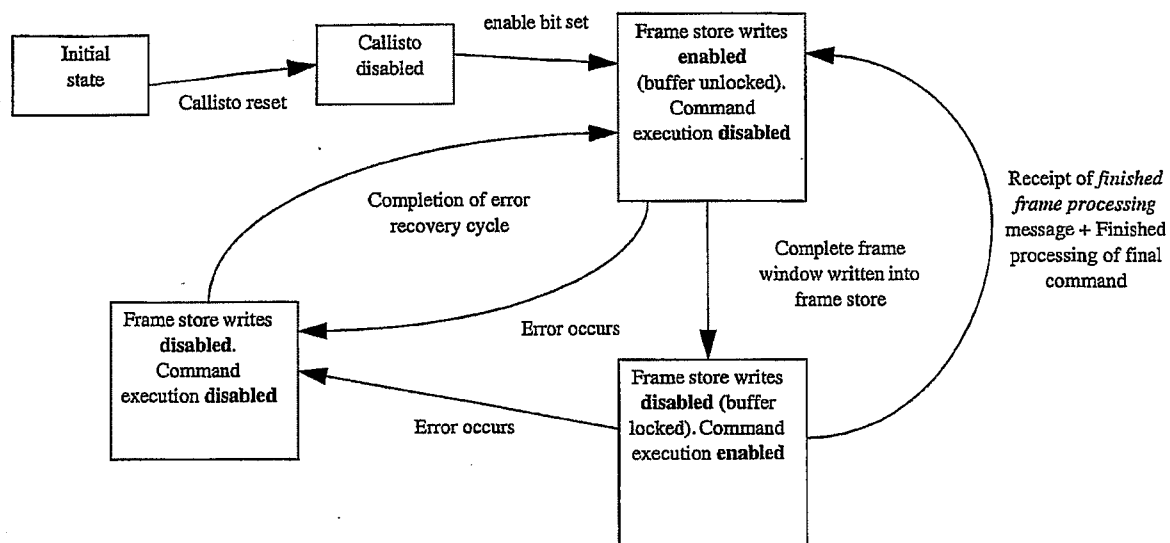


FIG. 62

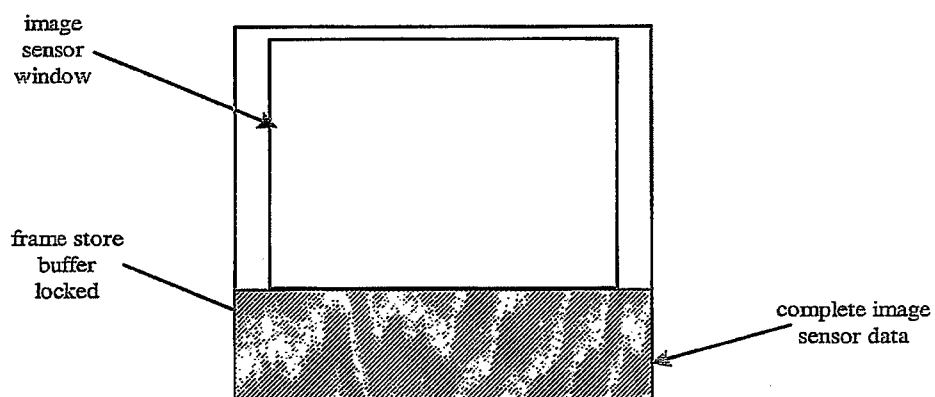


FIG. 63

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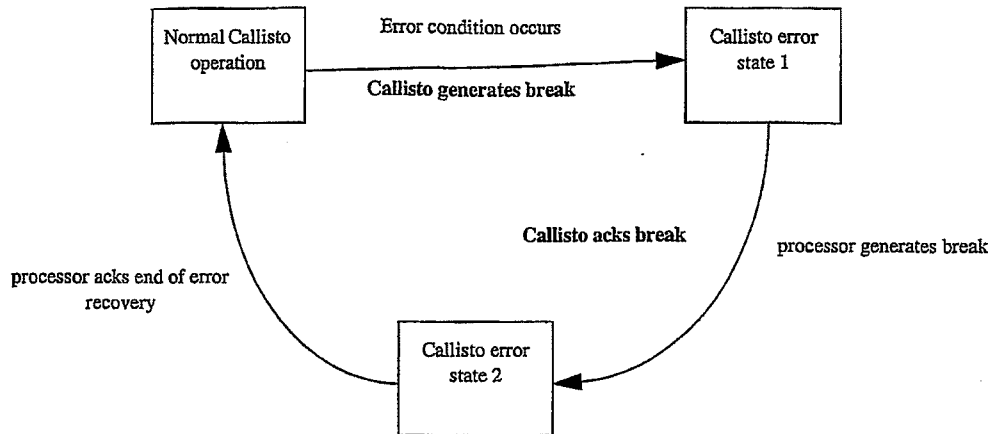


FIG. 64

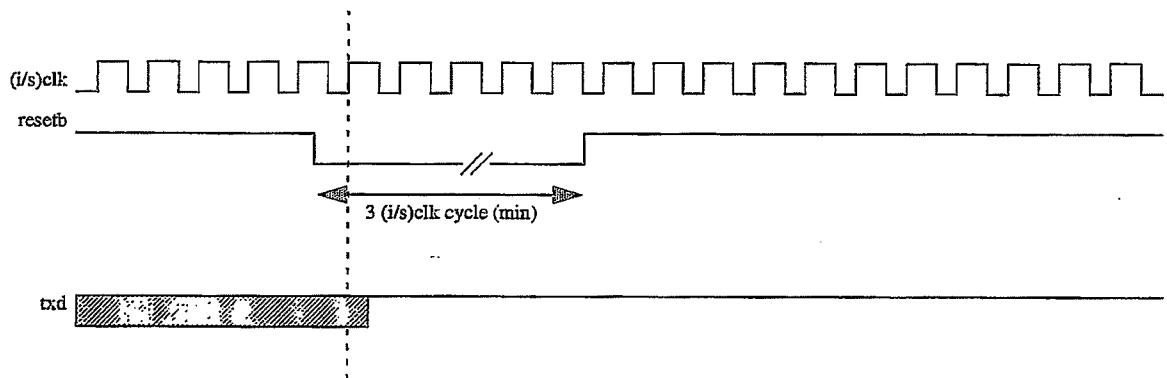


FIG. 65

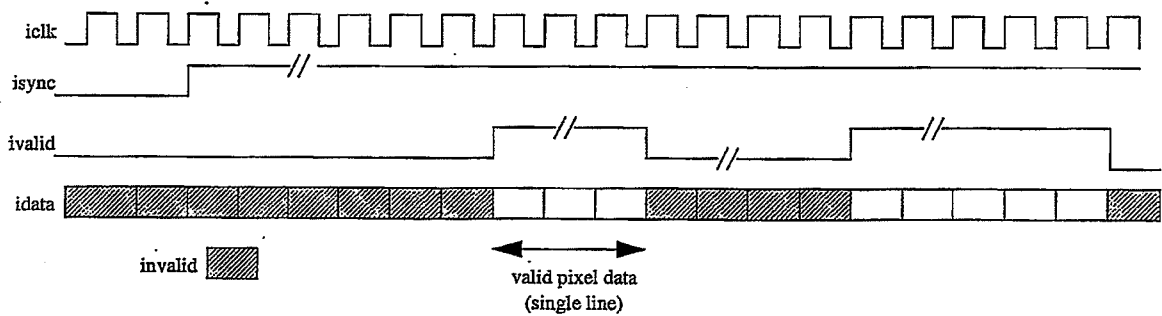


FIG. 66

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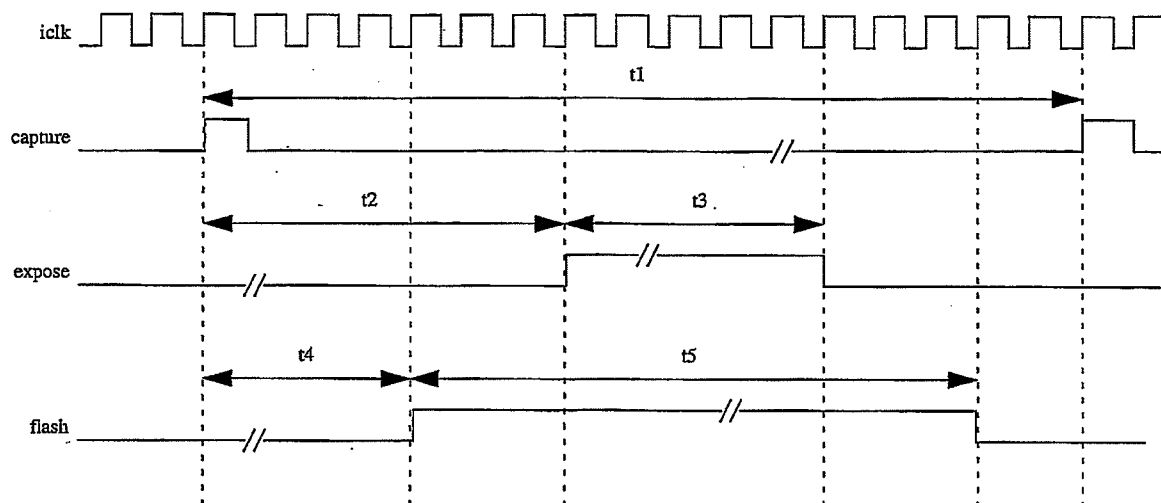


FIG. 67

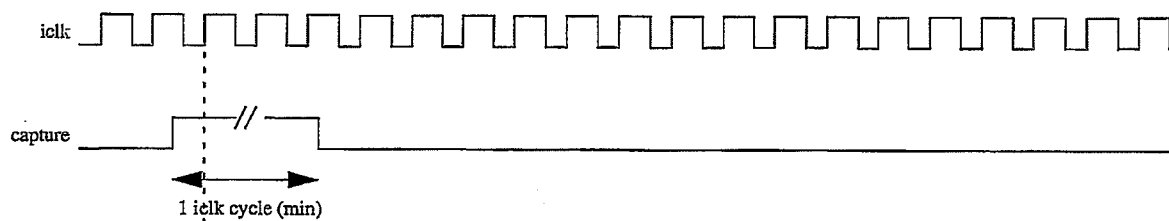


FIG. 68

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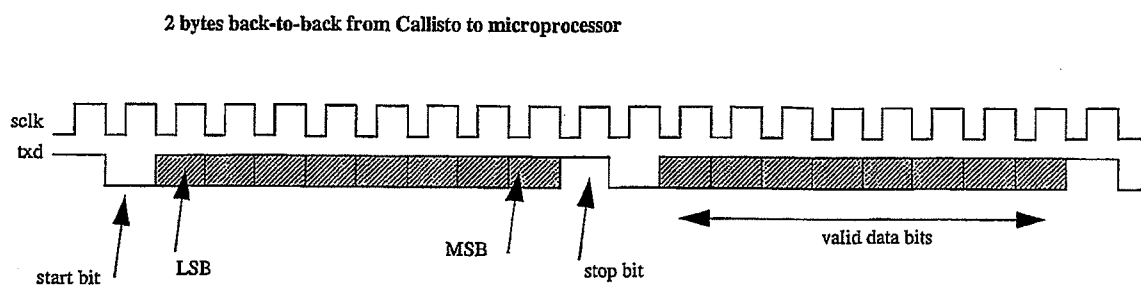


FIG. 69

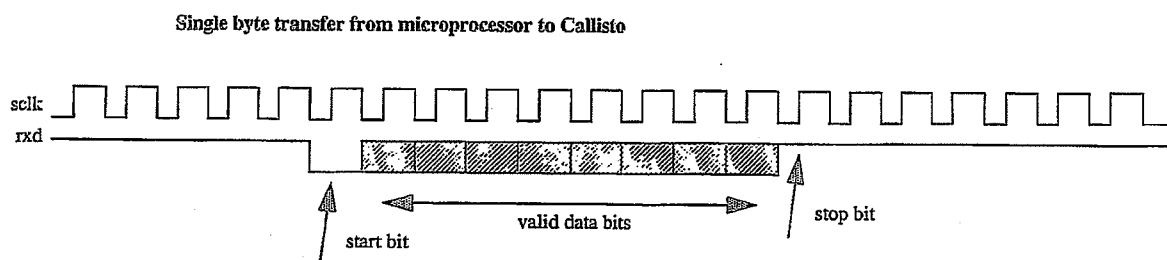


FIG. 70

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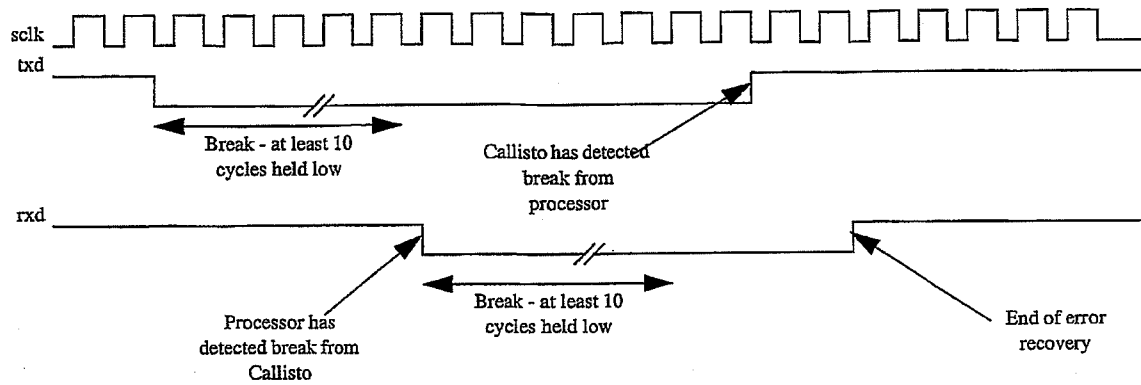


FIG. 71

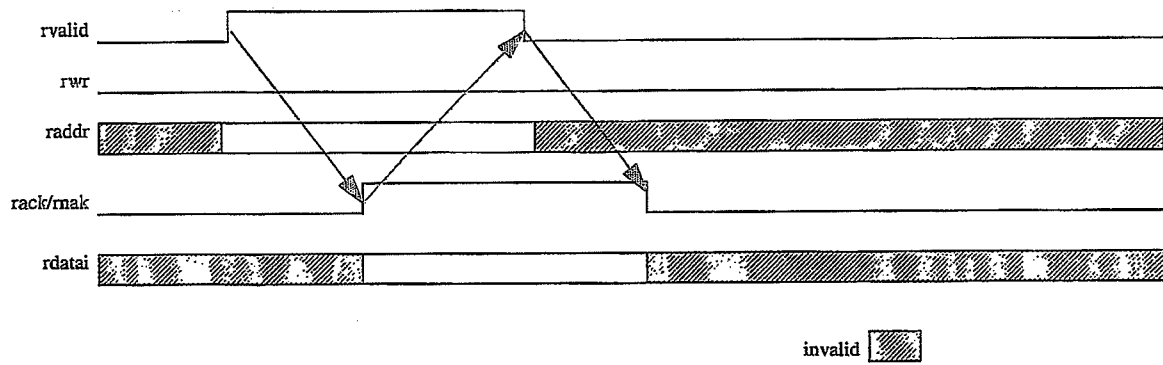


FIG. 72

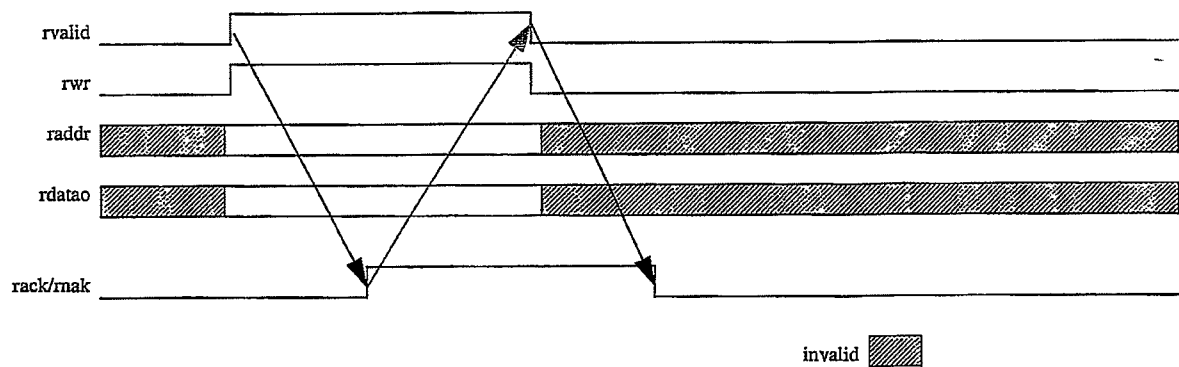


FIG. 73

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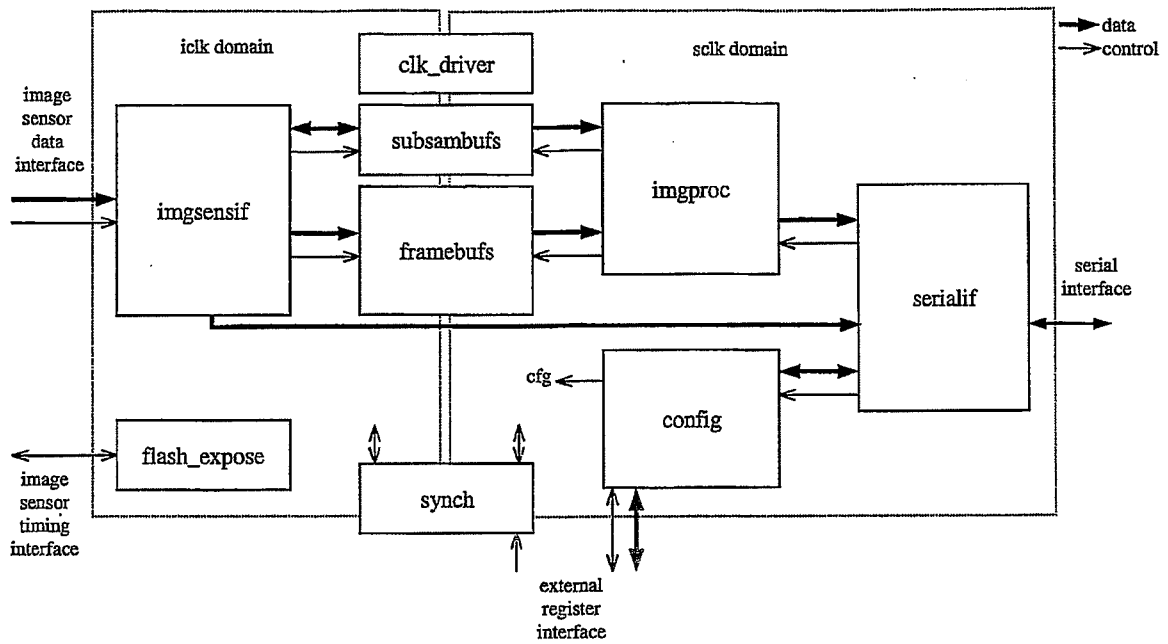


FIG. 74

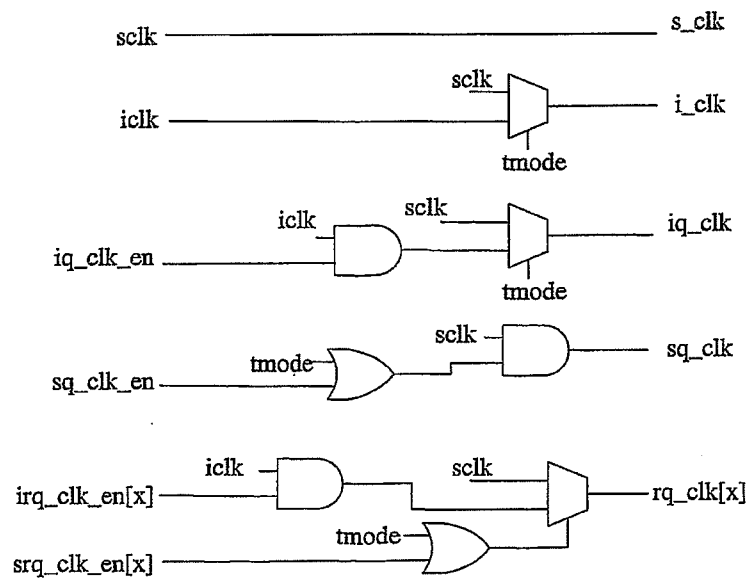


FIG. 75

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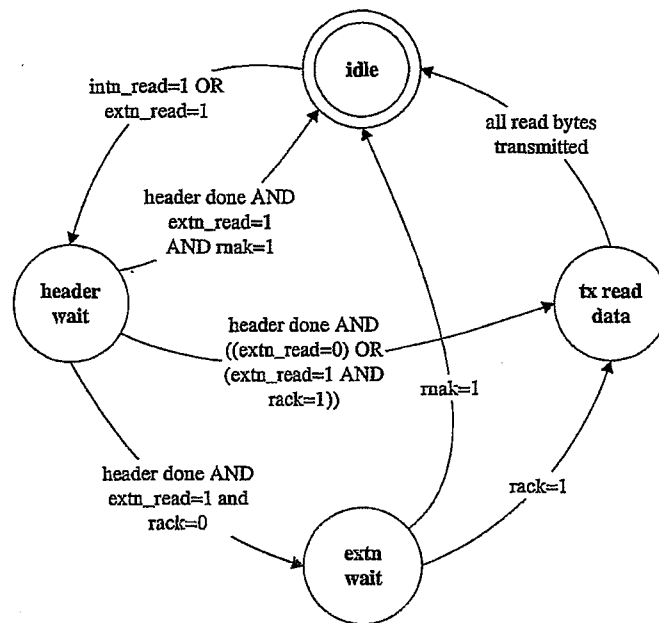


FIG. 76

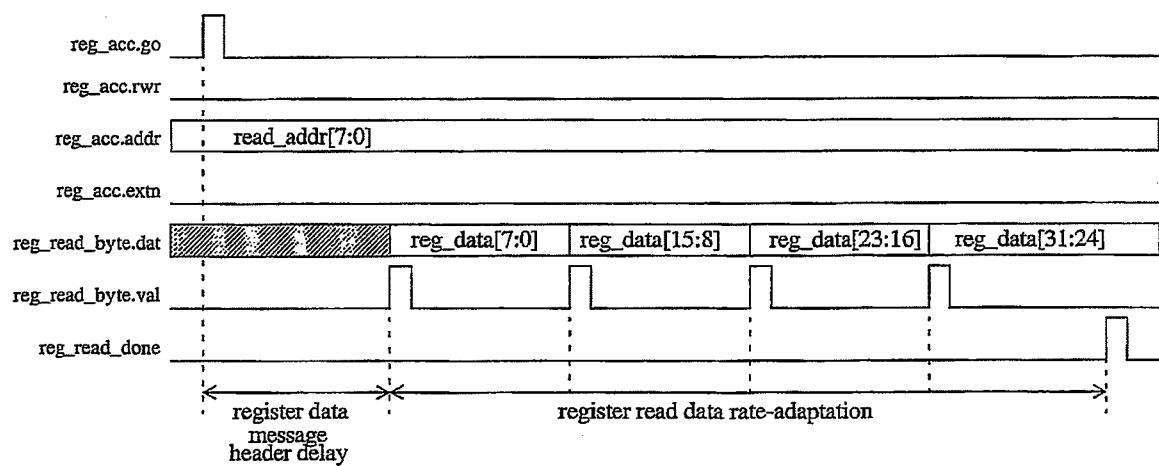


FIG. 76a

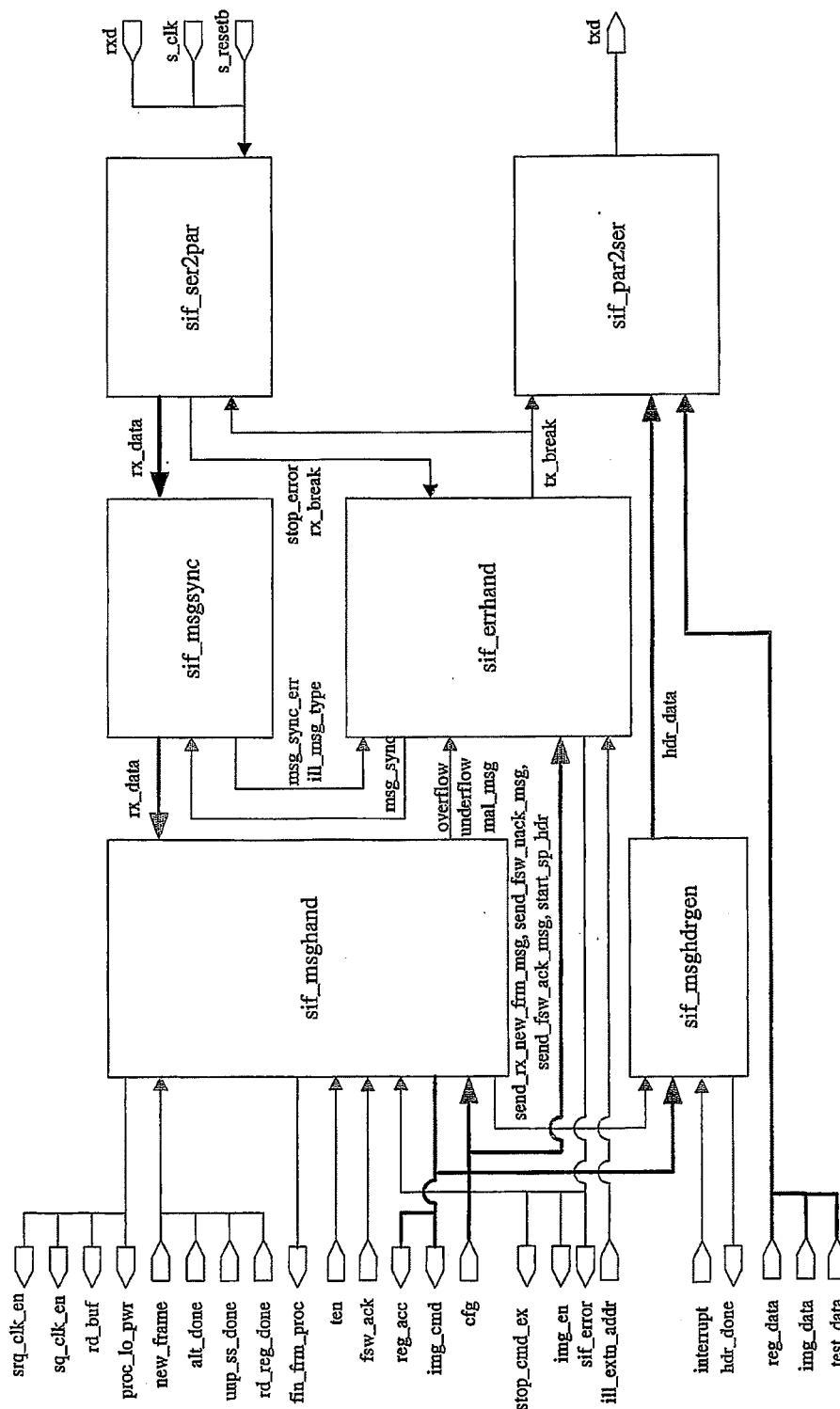


FIG. 77

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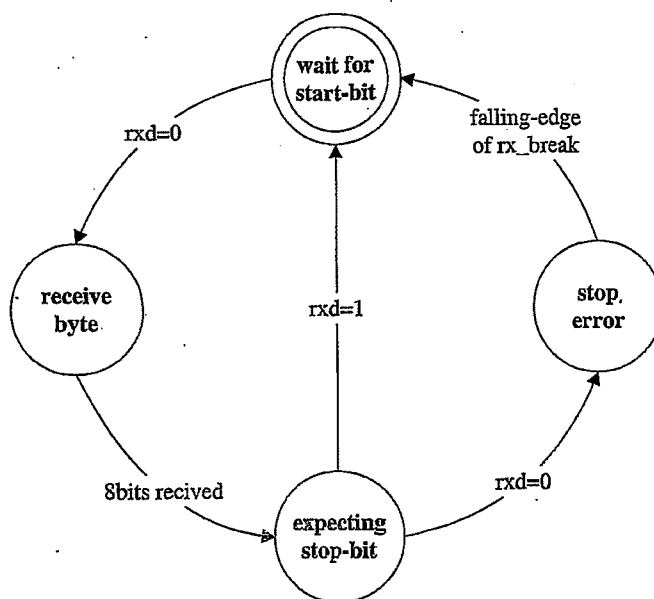


FIG. 78

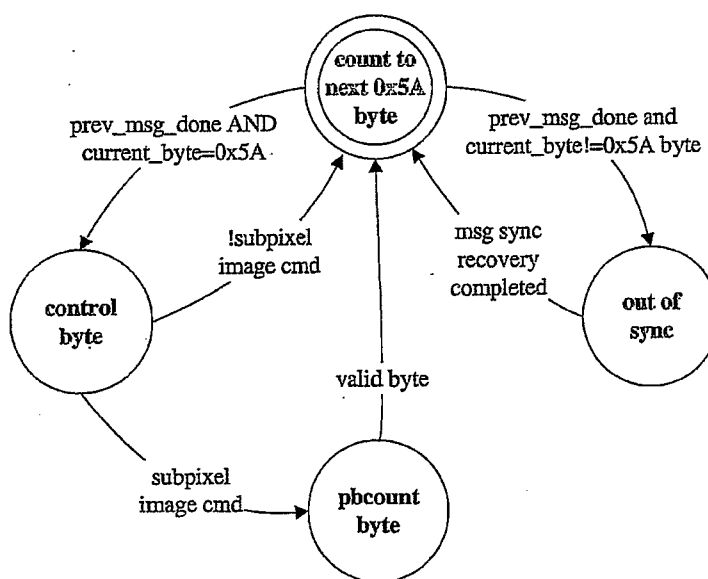


FIG. 79

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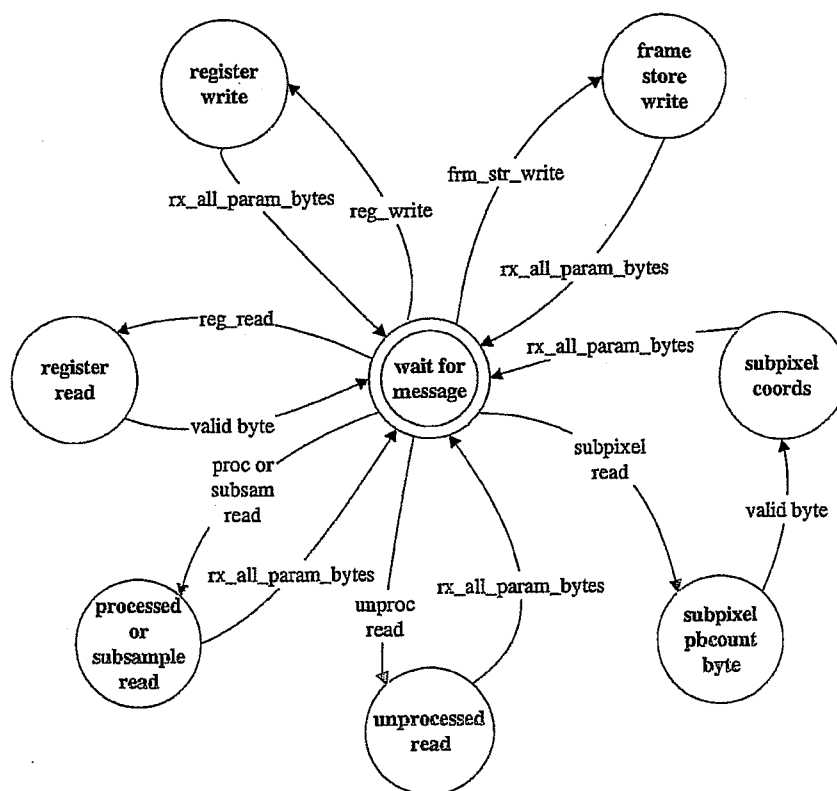


FIG. 80

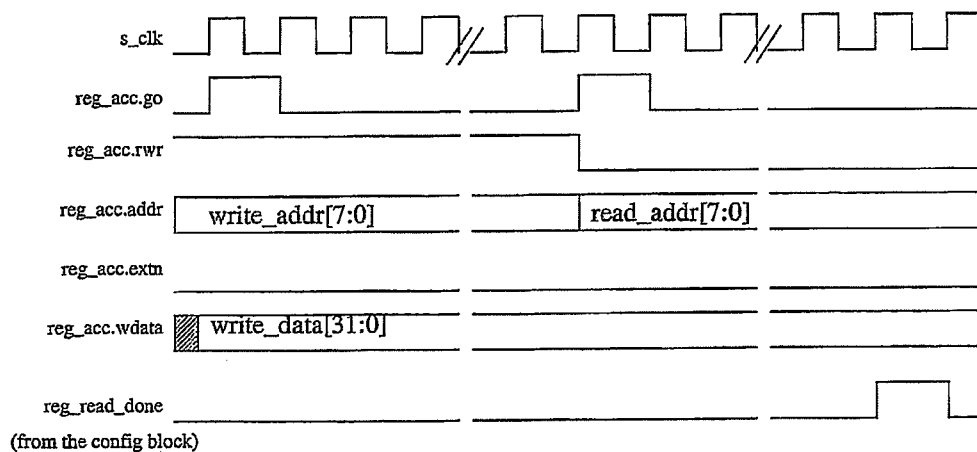


FIG. 81

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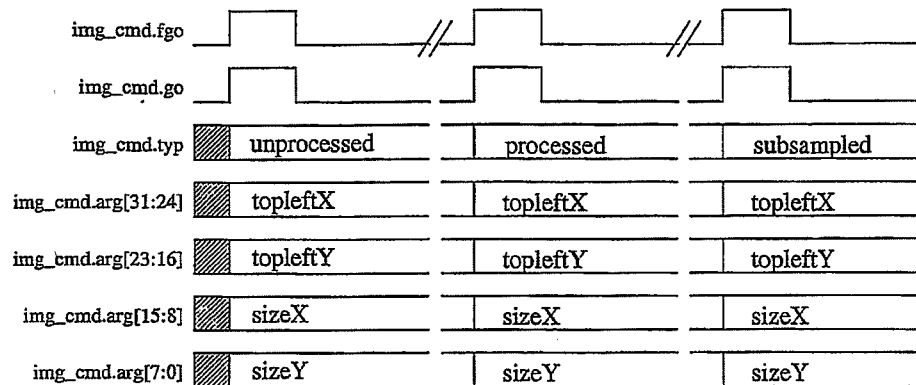


FIG. 82

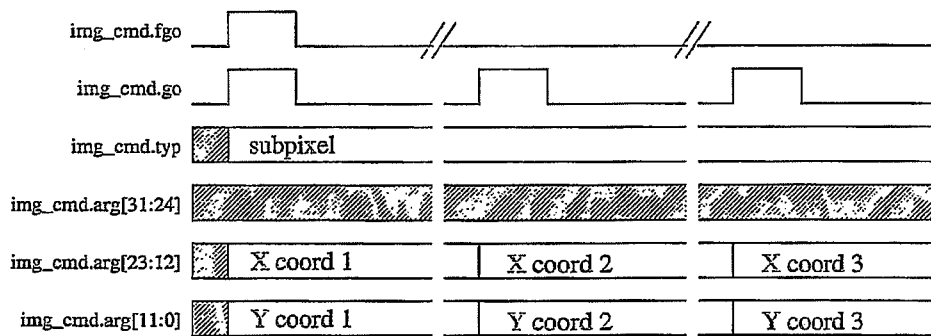


FIG. 83

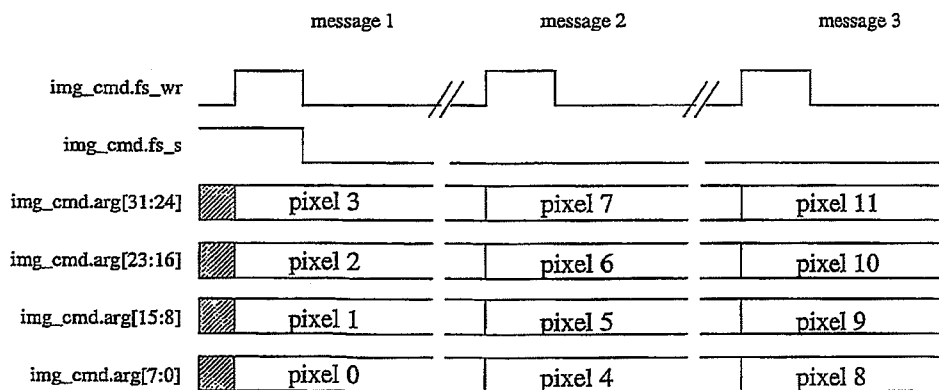


FIG. 84

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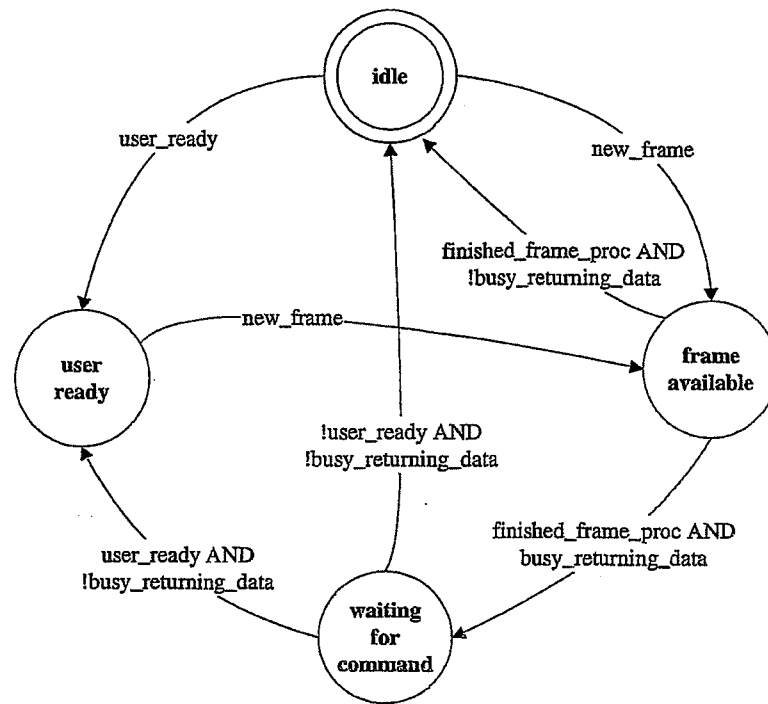


FIG. 85

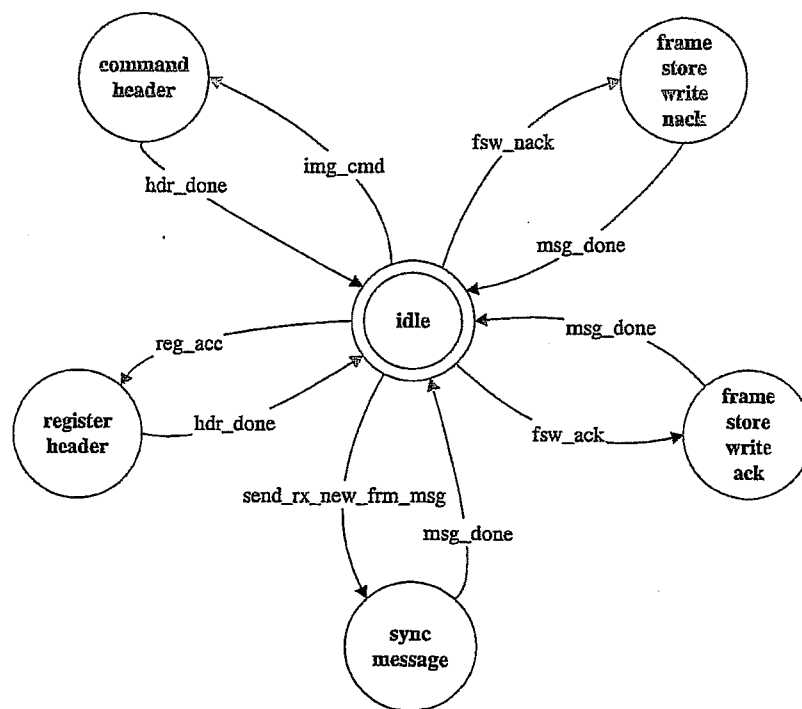


FIG. 86

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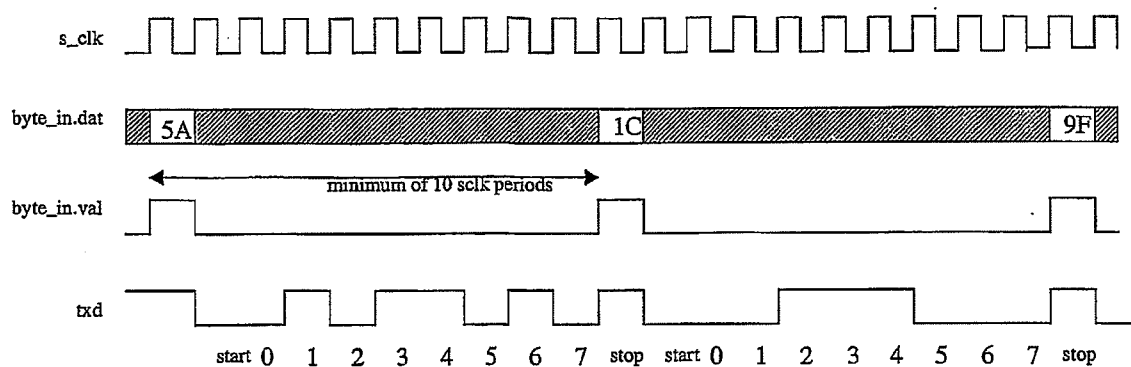


FIG. 87

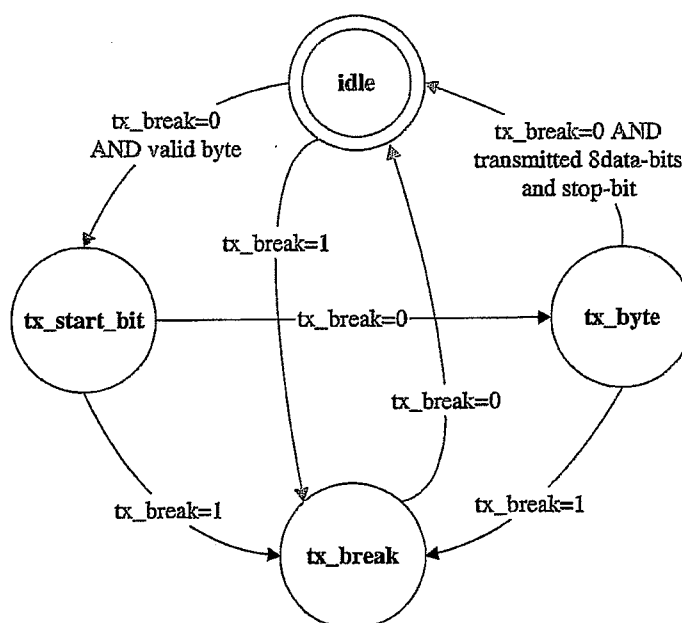


FIG. 88

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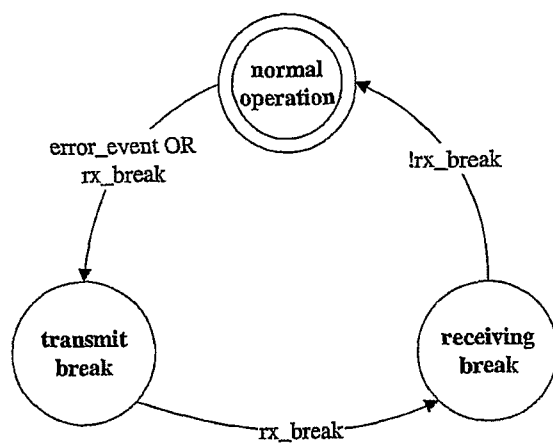


FIG. 89

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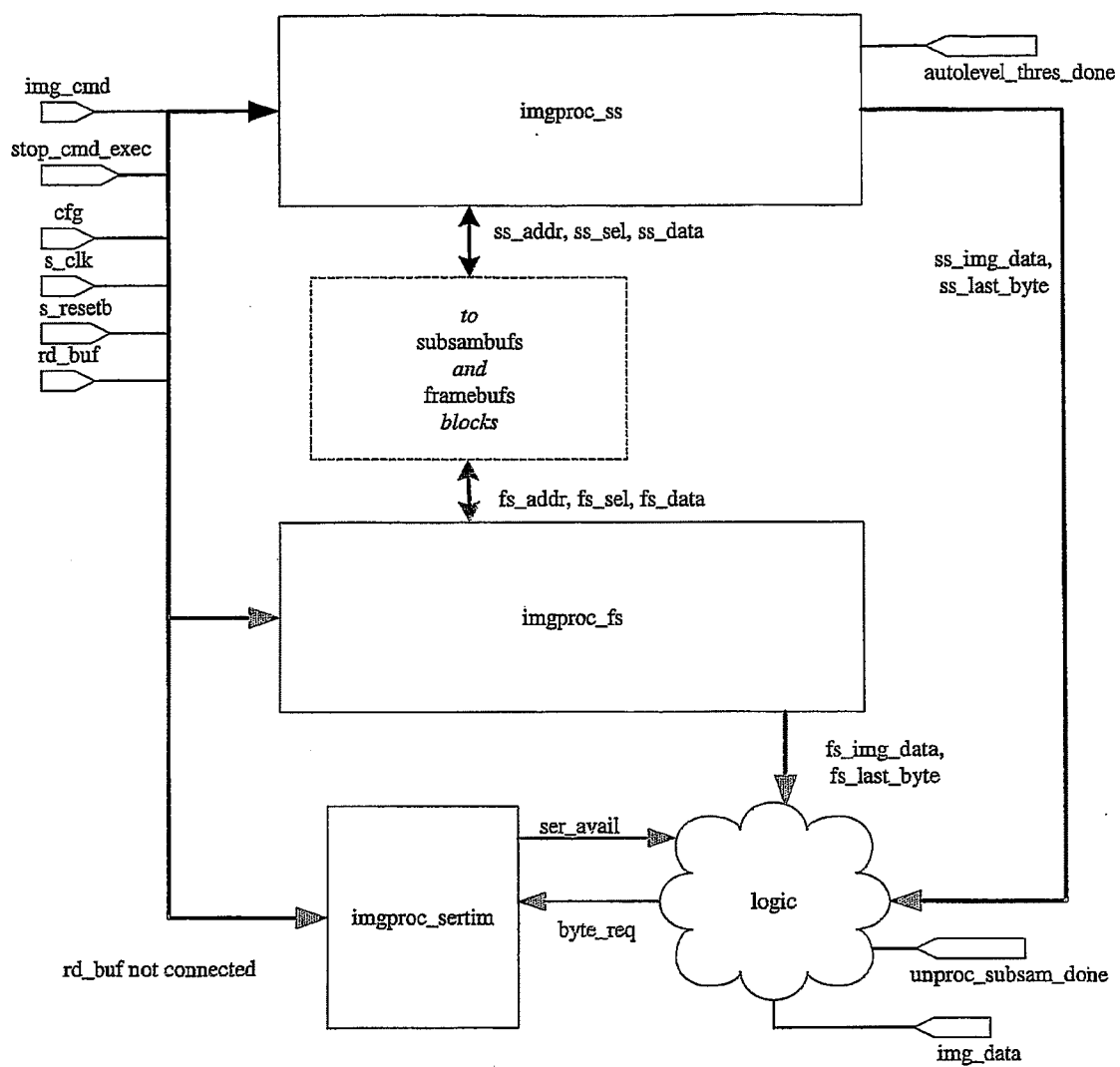


FIG. 90

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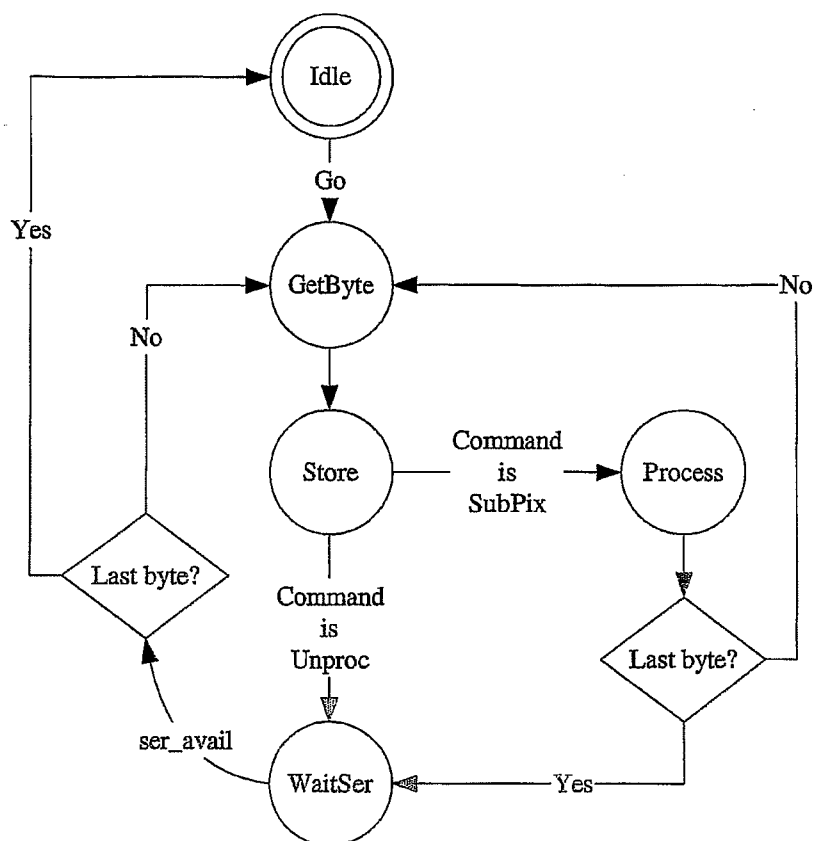


FIG. 91

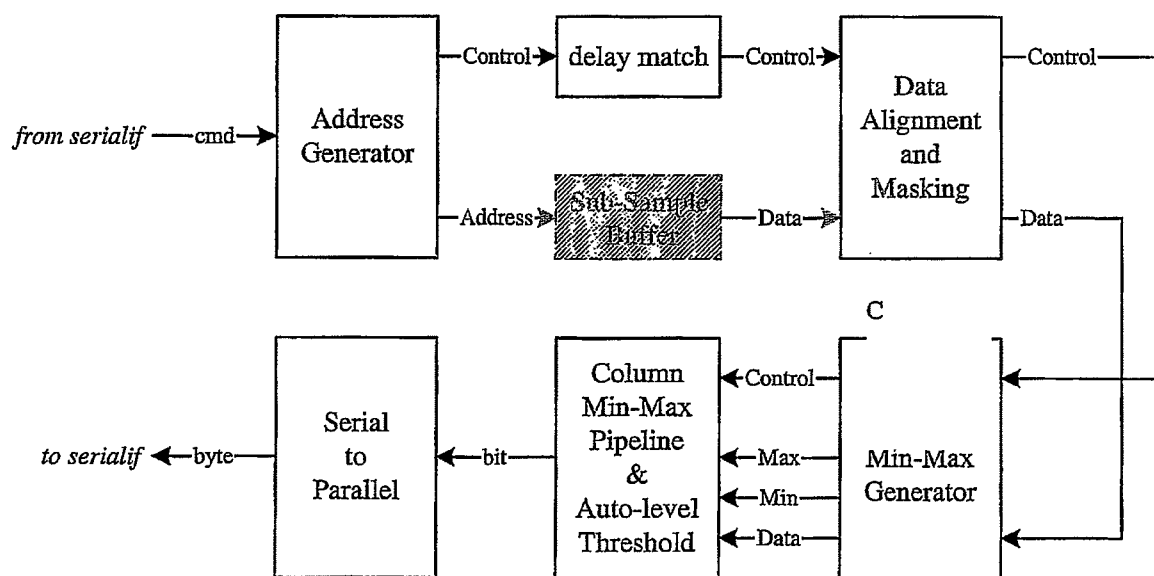


FIG. 92

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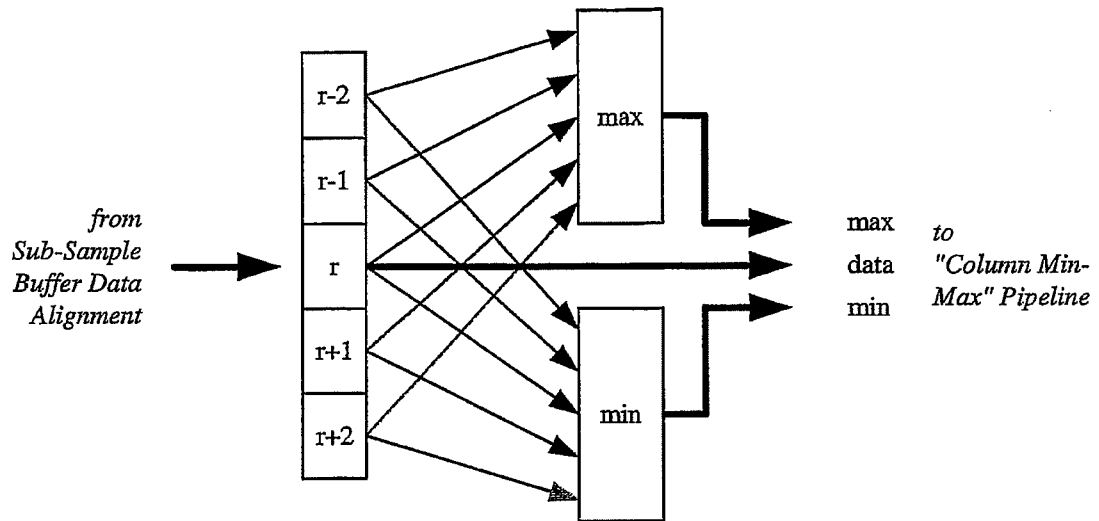


FIG. 93

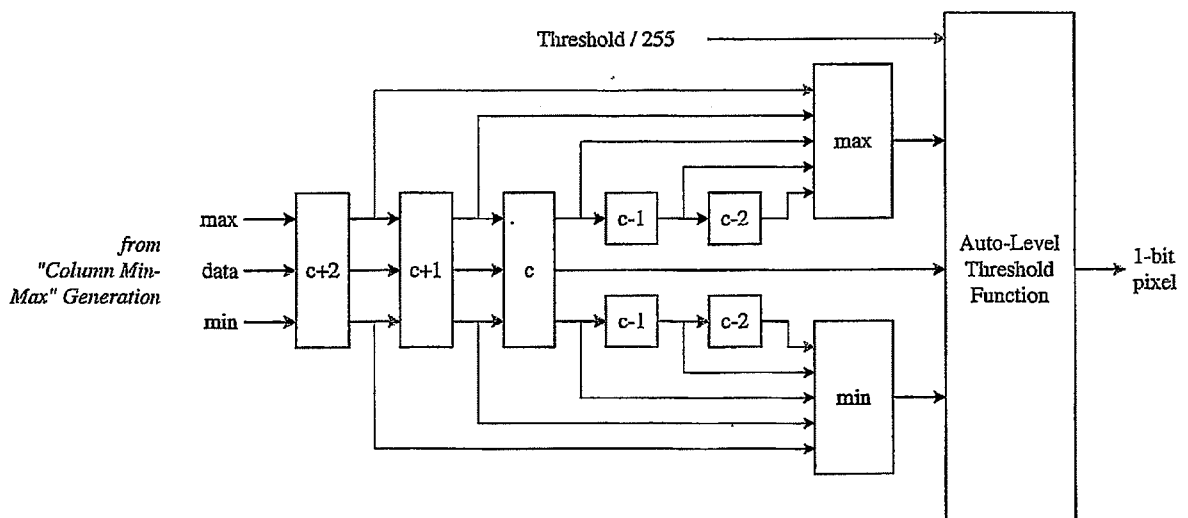


FIG. 94

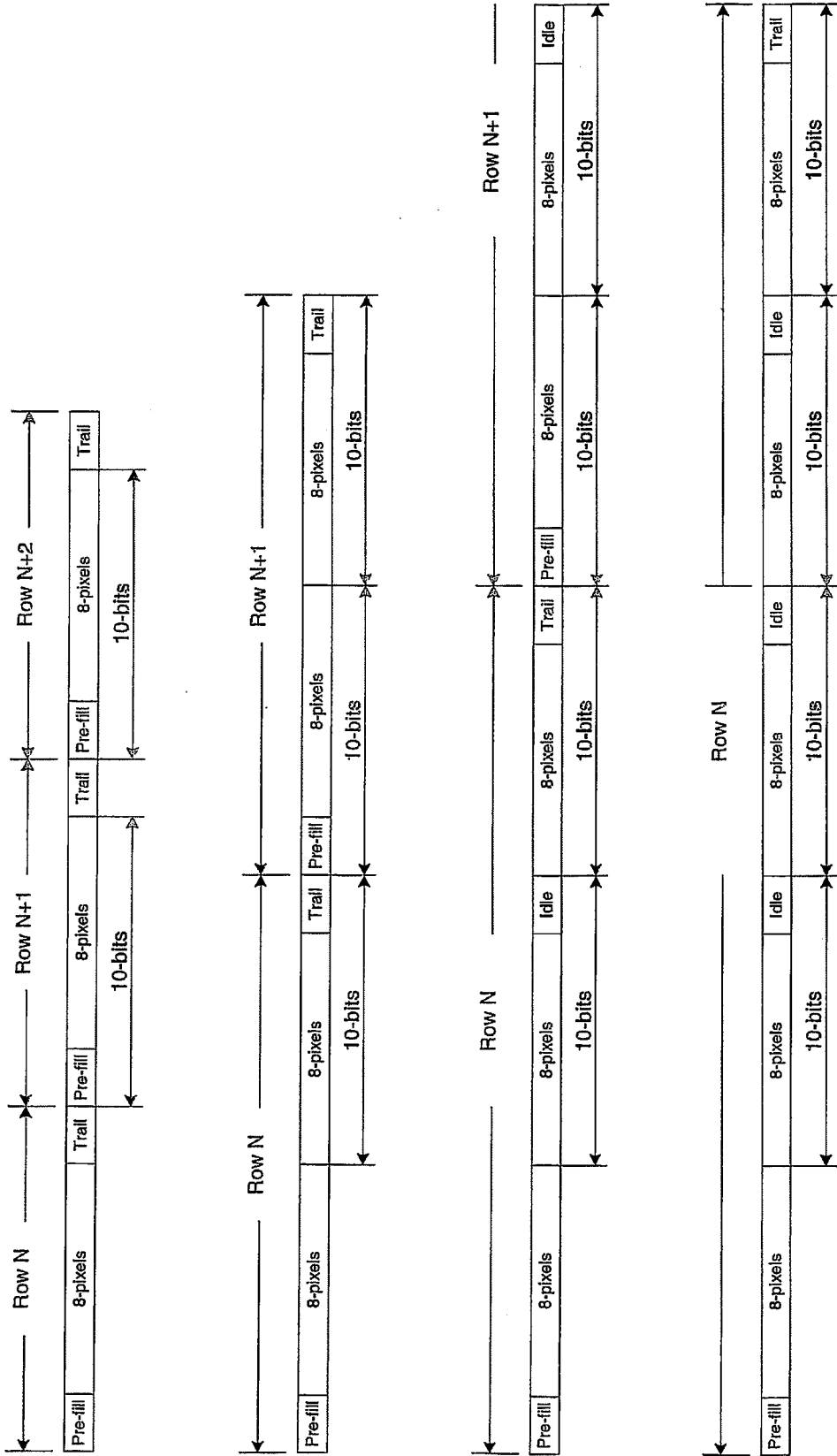
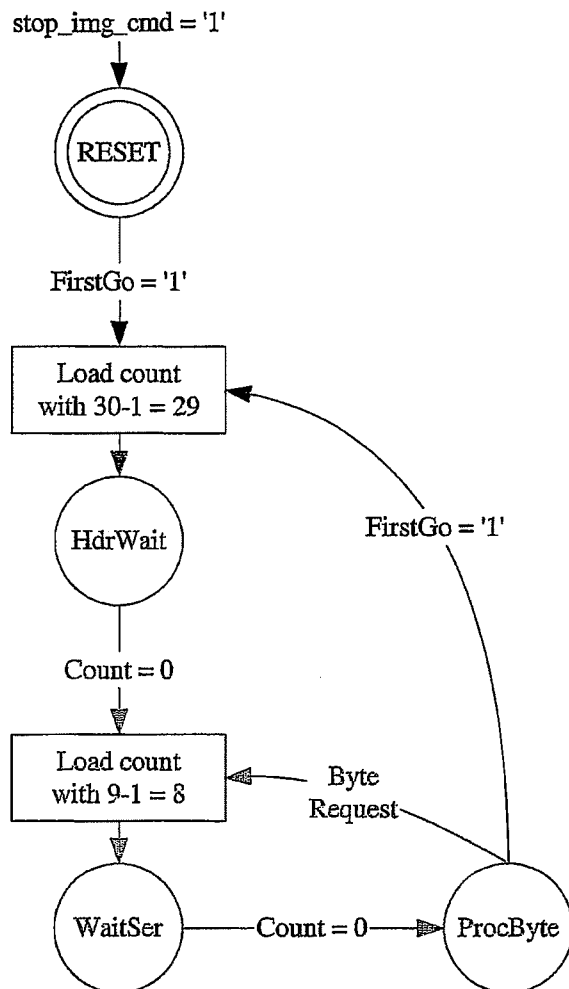


FIG. 95

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**Notes:****1. FirstGo**

This is the 'fgo' field of the image command from the serial_if. This basically says - "Wait for the serial_if to send out a command header before you start."

2. When `stop_img_cmd = '1'`, this acts as a global reset and overrides all other transitions.

3. The `ser_avail` output is '1' only during the ProcByte state. The ByteRequest may come immediately (in the same cycle), so this state may only last for one cycle.

4. The HdrWait state will last for 30 cycles. The WaitSer state will last for 9 cycles, and when added to the minimum one ProcByte state, we get the required 10 cycles for every byte.

FIG. 96

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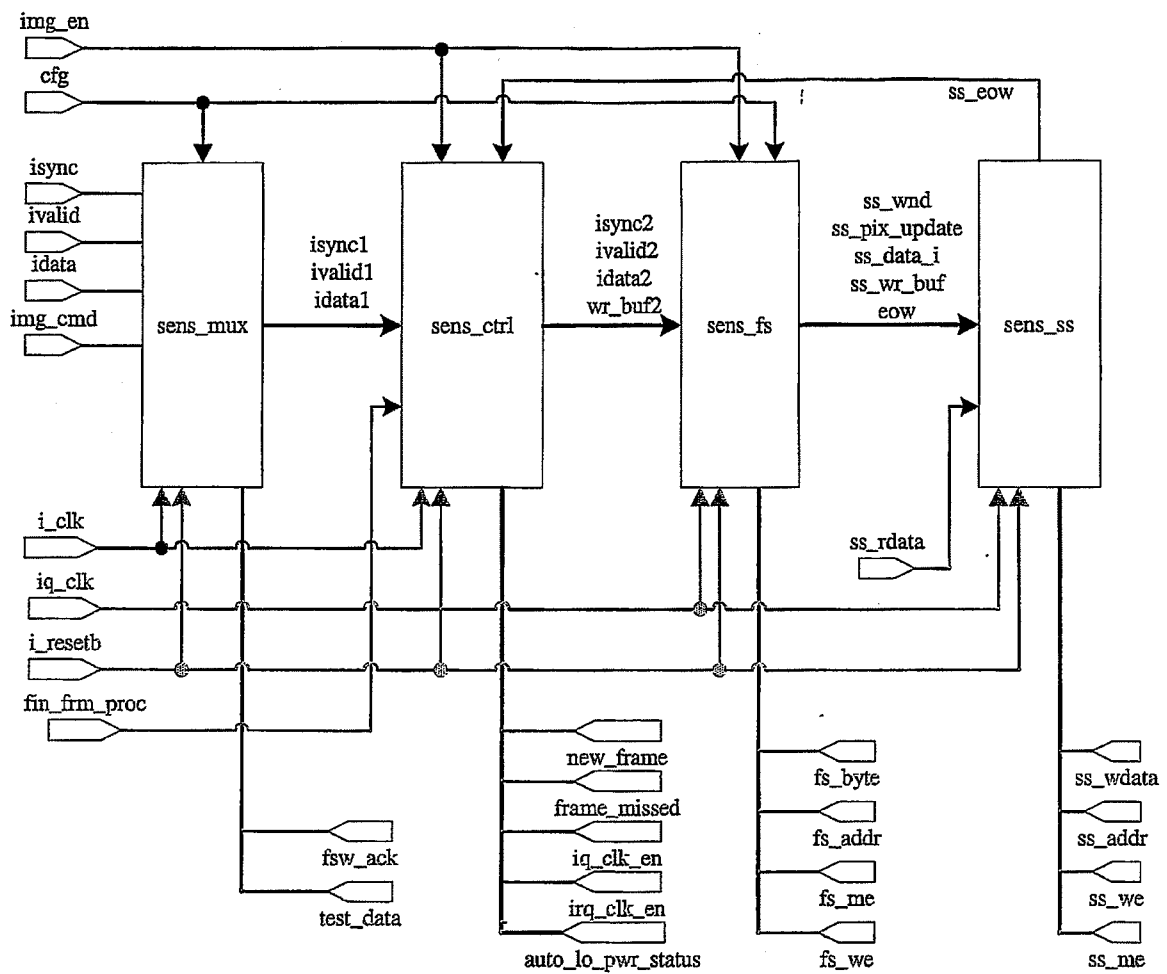
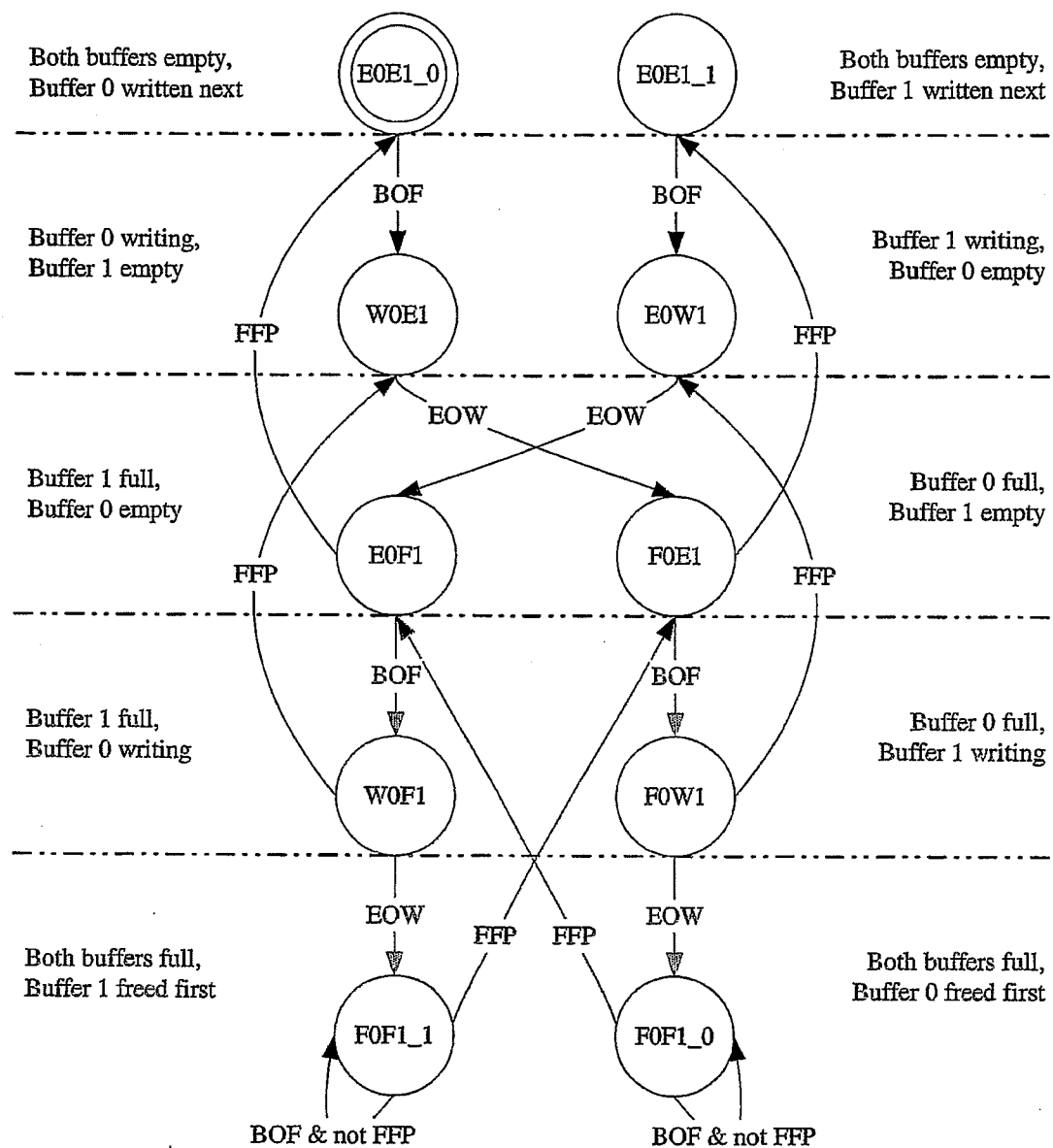


FIG. 97

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Notes:

1. BOF - Beginning Of Frame. isync1 pulse from sens_mux
2. EOW - End Of Window from sens_ss
3. FFP- Finished Frame Processing event from the serialif
4. State names are coded to show the state of both buffers:
E - empty
F - full
W - writing

When both are empty or full, the extra number on the end shows which will be written to next.

5. Transitions from one side to the other generate NewFrame events to the serialif. The NewFrame event includes the number of the buffer just filled.

6. Where the head of a FFP transition meets the tail of a BOF or EOW transition, the tail transition will be followed (if true) before entering the state.

For example:

From state E0F1, if FFP is true but BOF is false, E0E1 is the next state. If FFP is true and BOF is true, W0E1 is the destination.

FIG. 98

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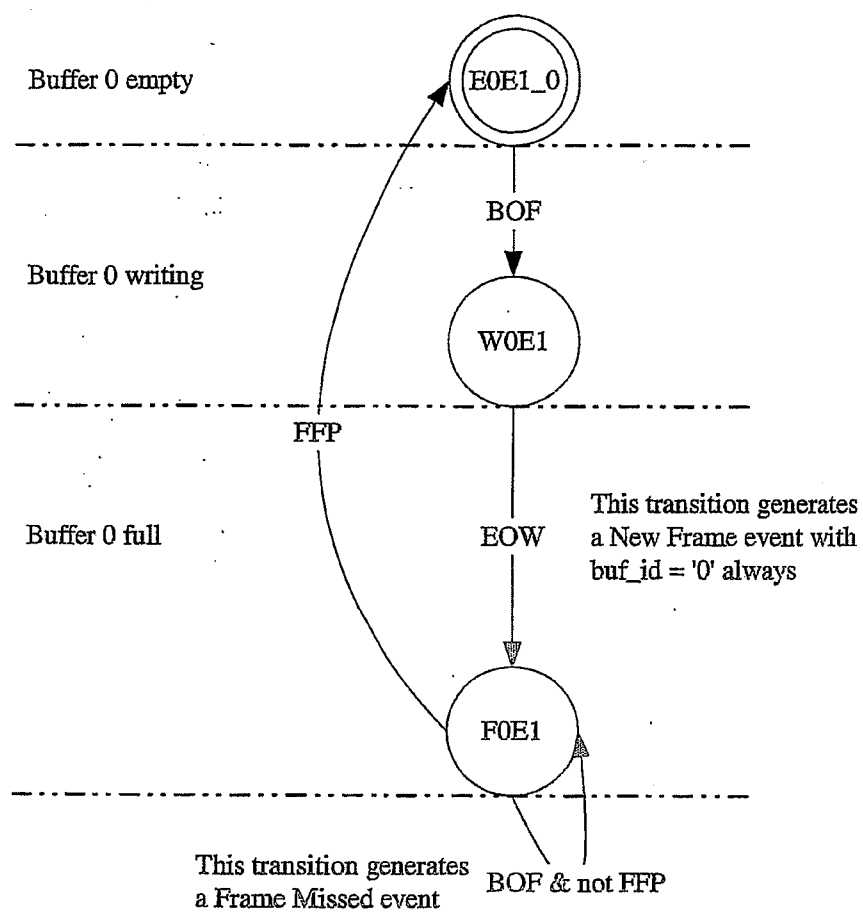


FIG. 99

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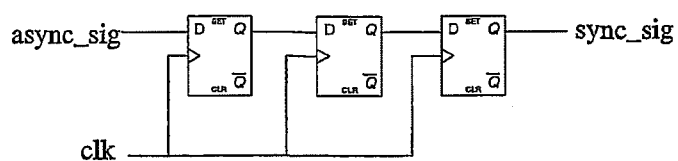


FIG. 100

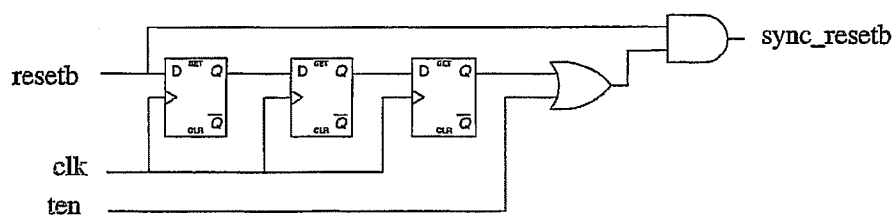


FIG. 101

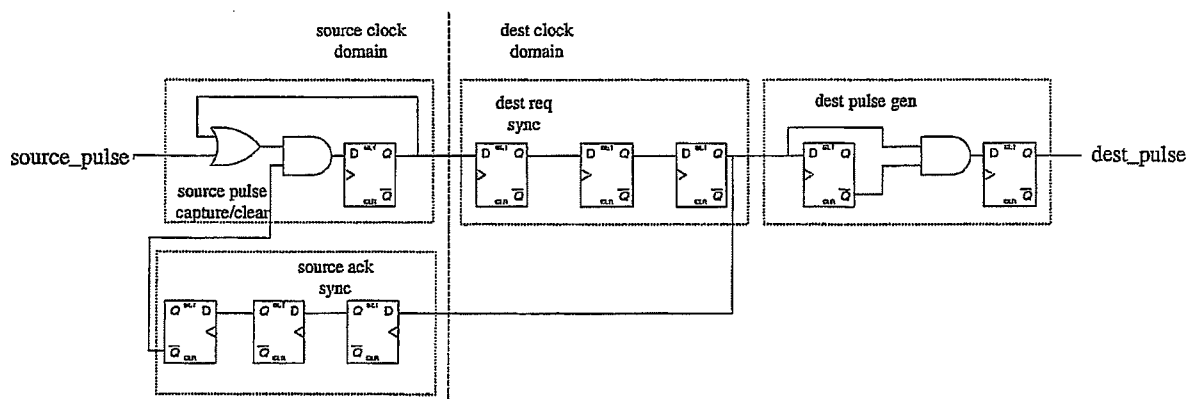


FIG. 102

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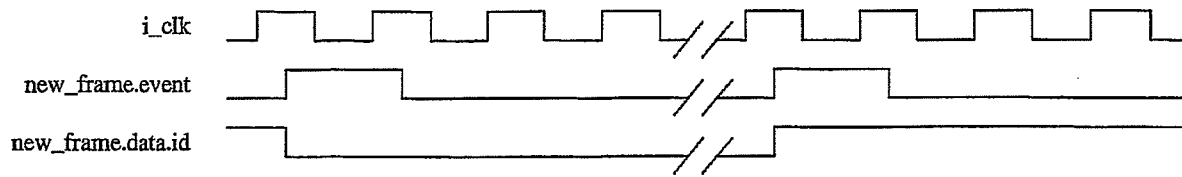


FIG. 103

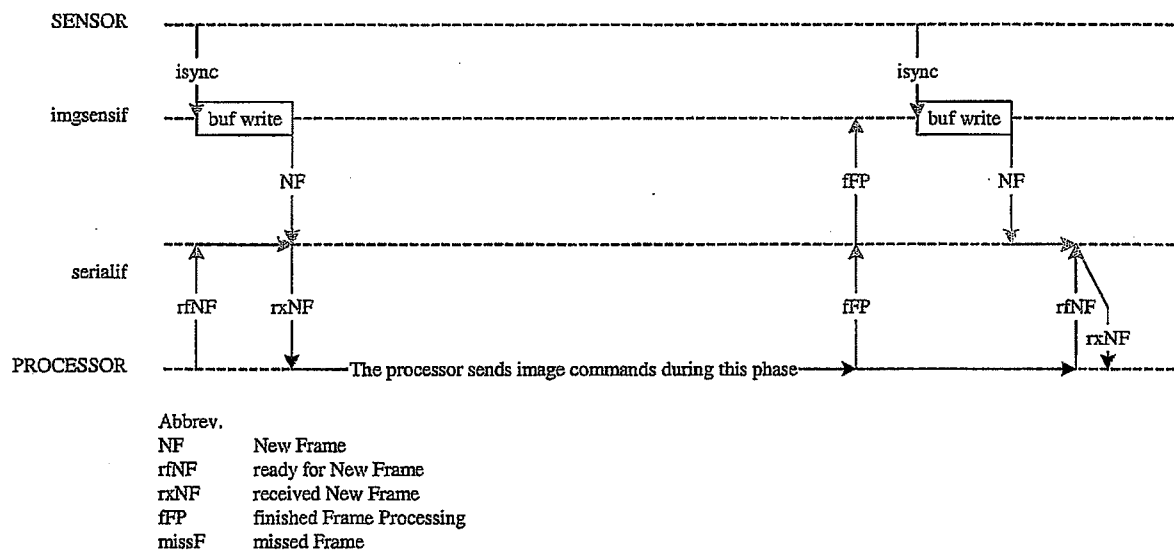


FIG. 104

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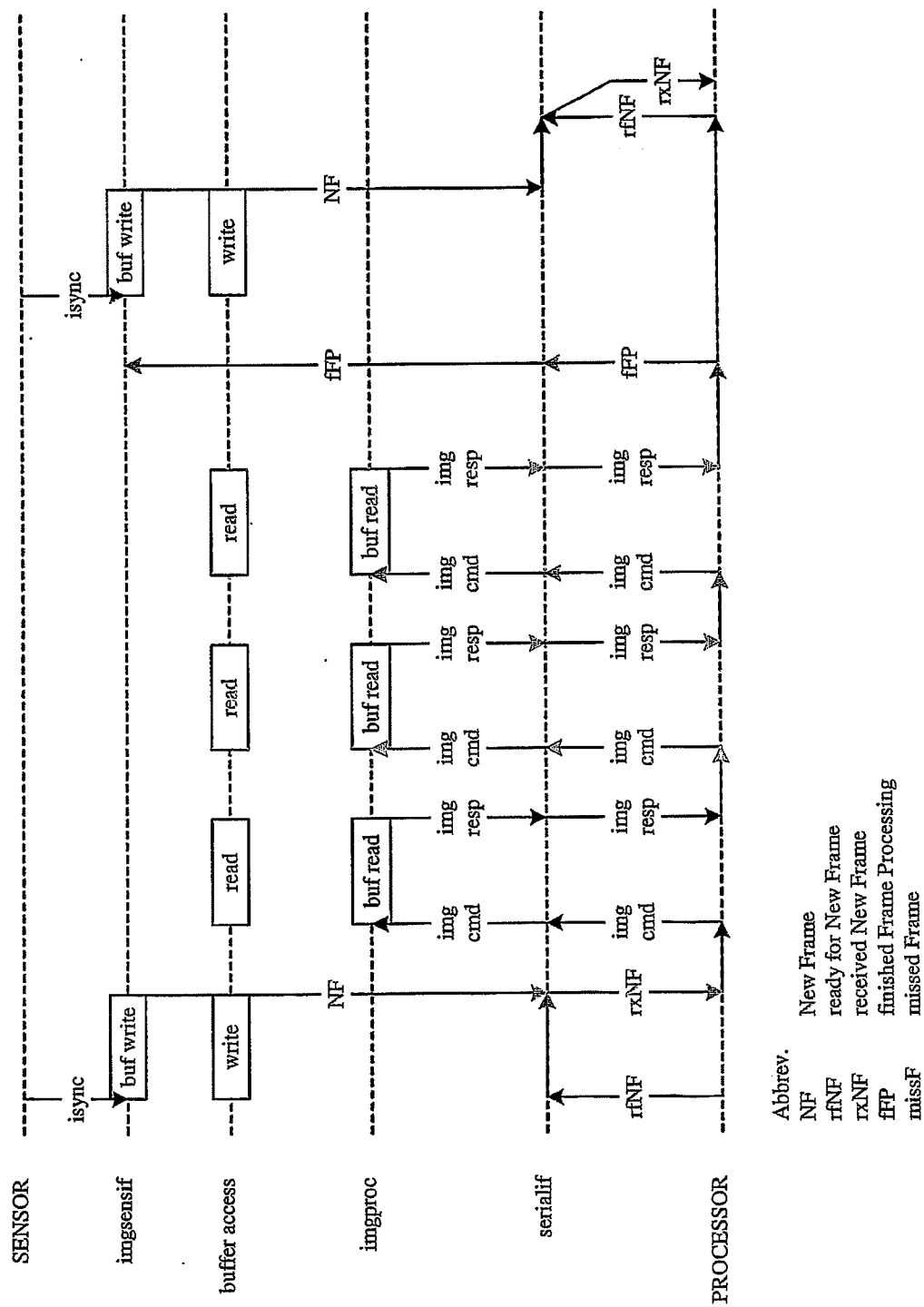


FIG. 105

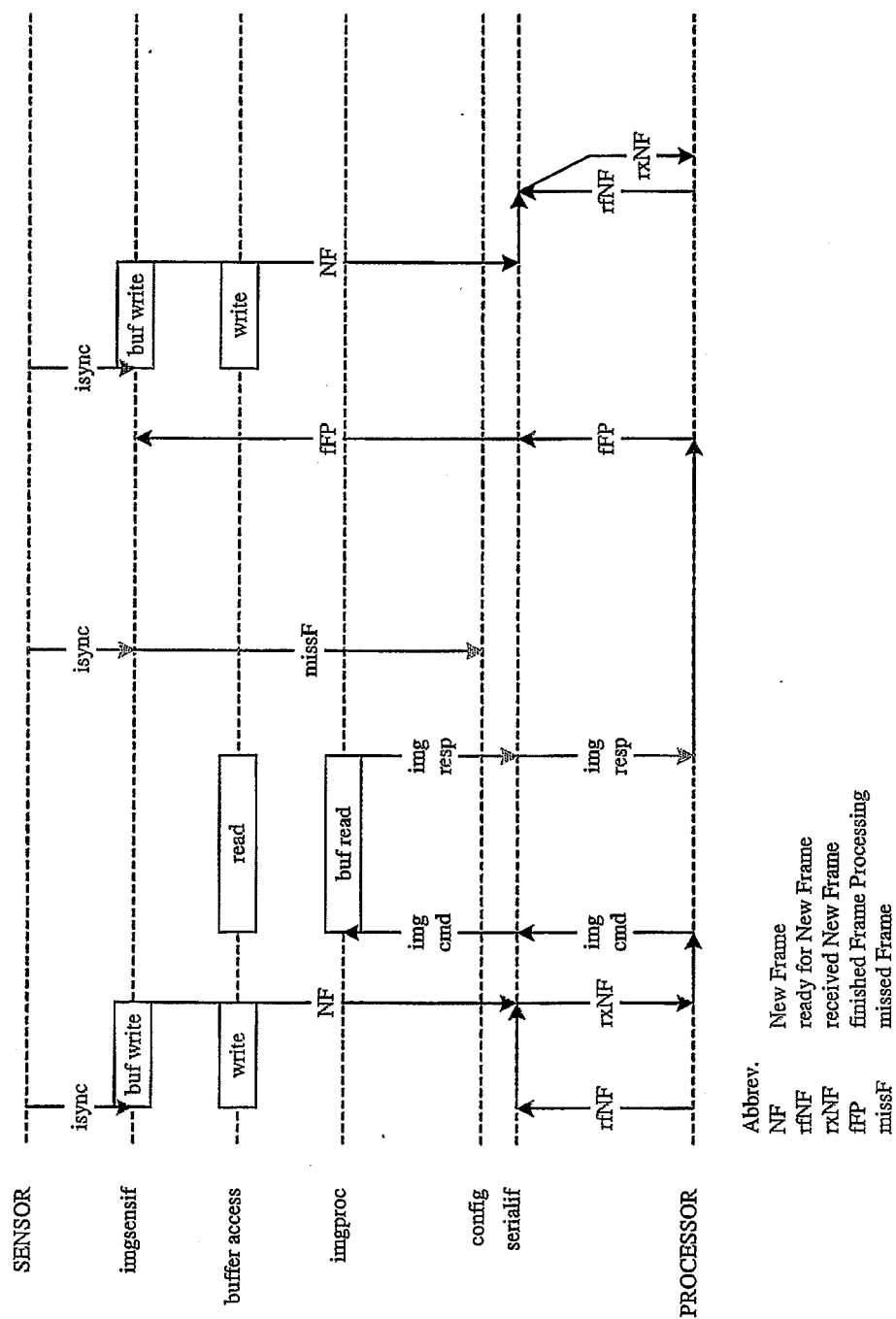
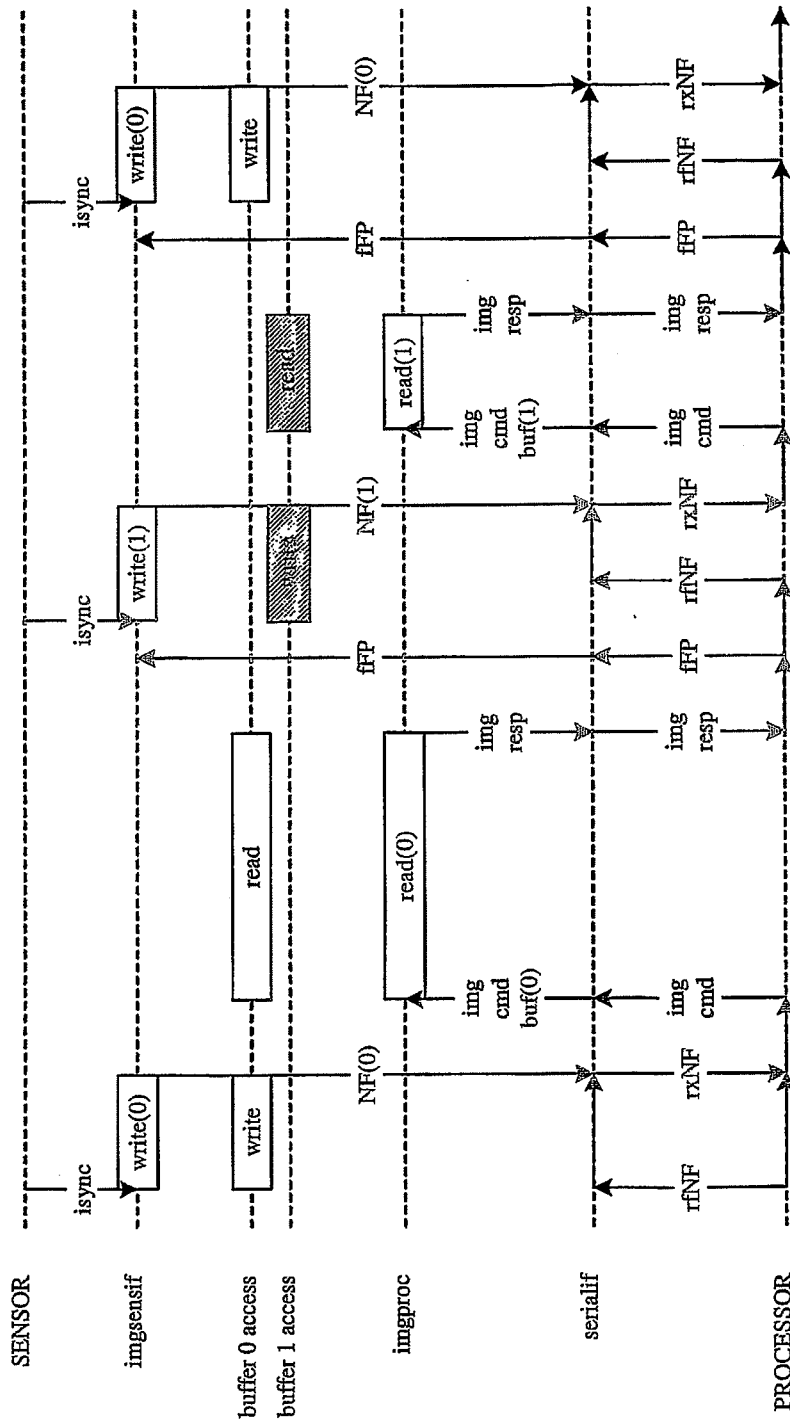


FIG. 106

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Abbrev.
 NF New Frame
 rfNF ready for New Frame
 rxNF received New Frame
 ffNF finished New Frame Processing
 missF missed Frame

FIG. 107

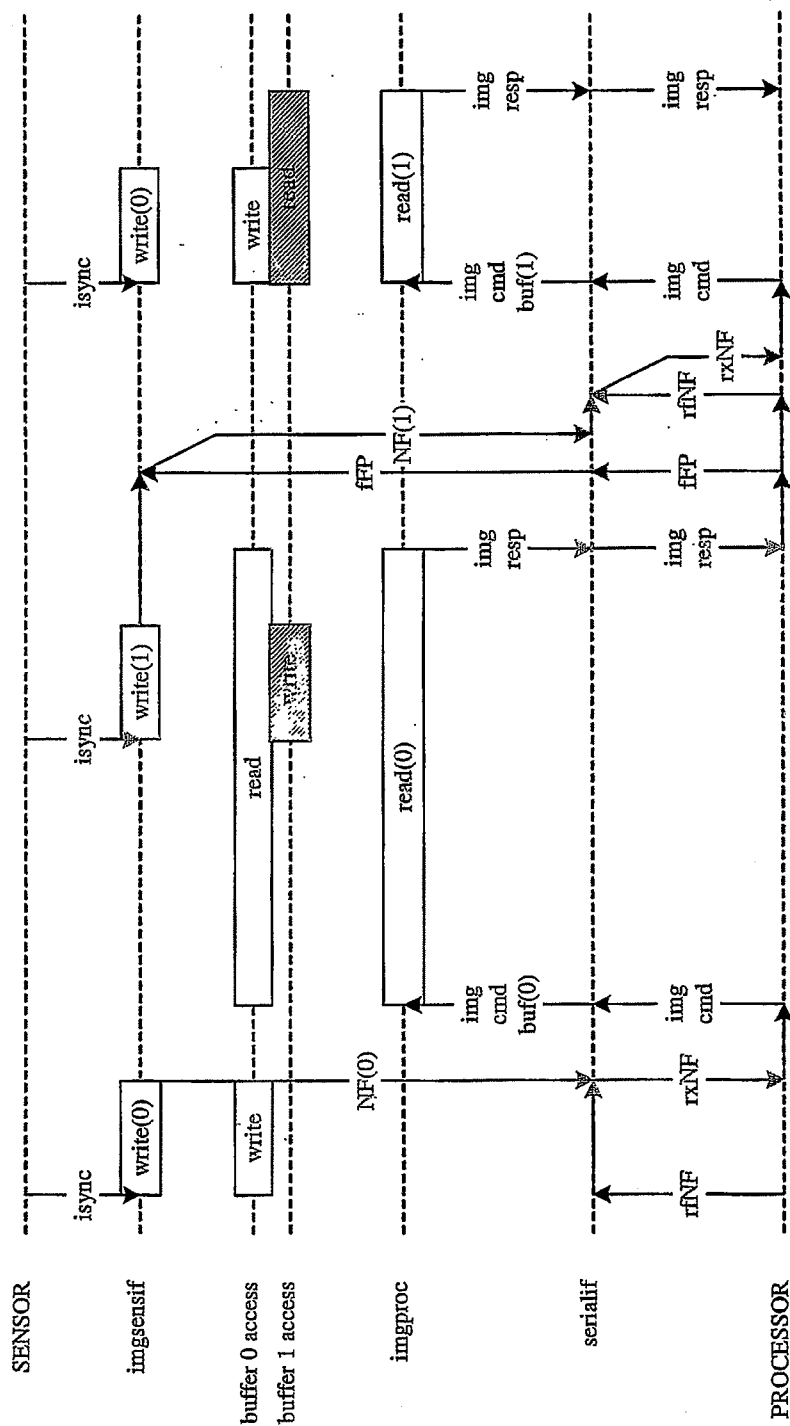
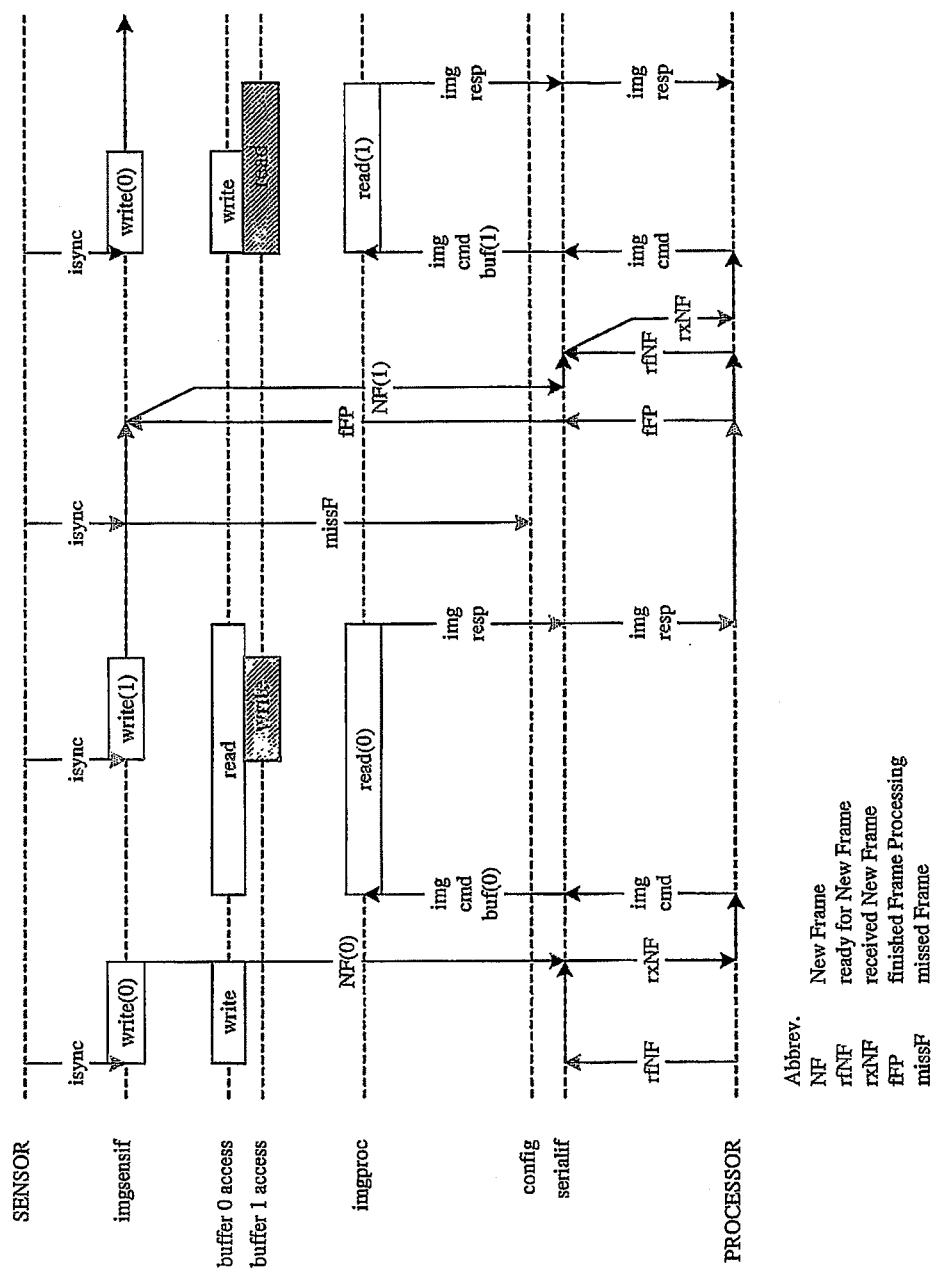


FIG. 108



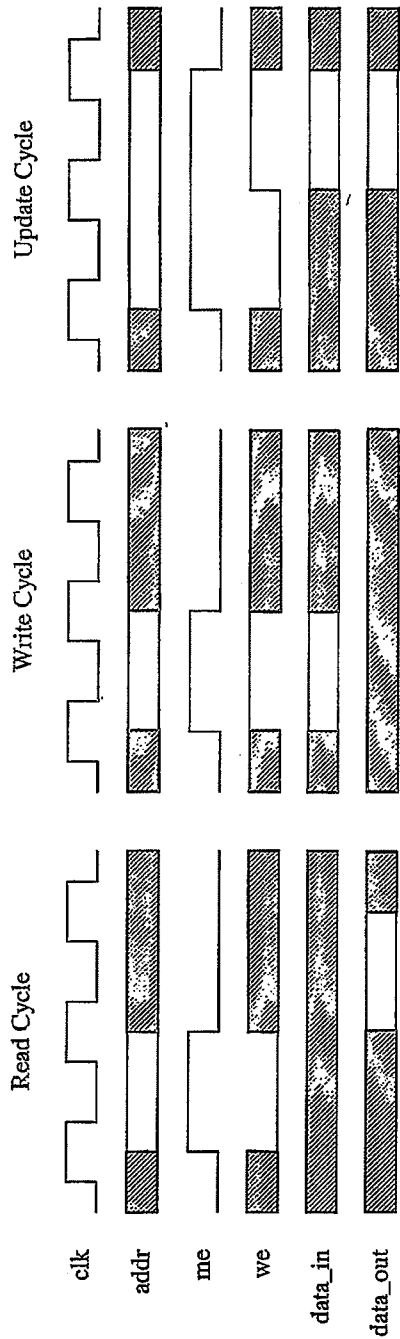


FIG. 110

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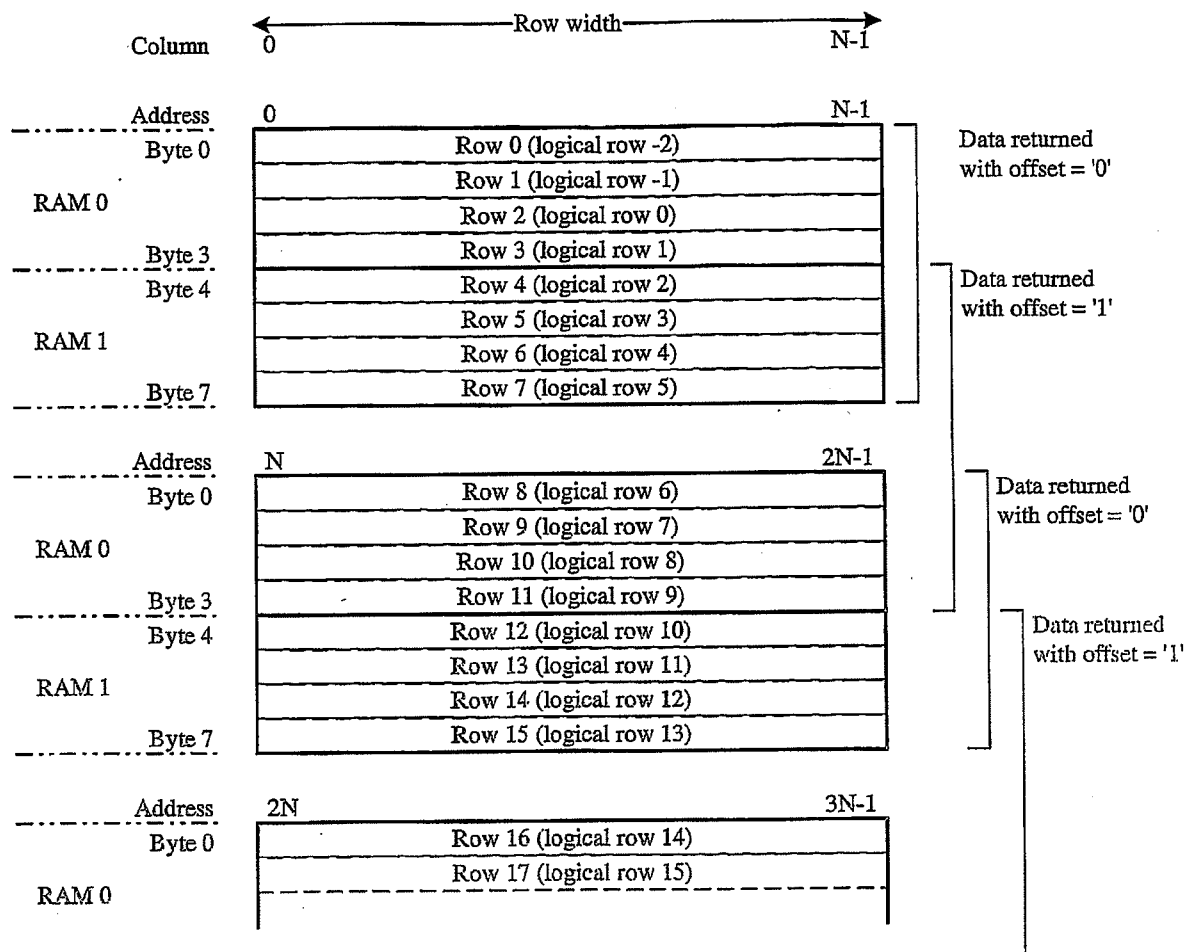


FIG. 111

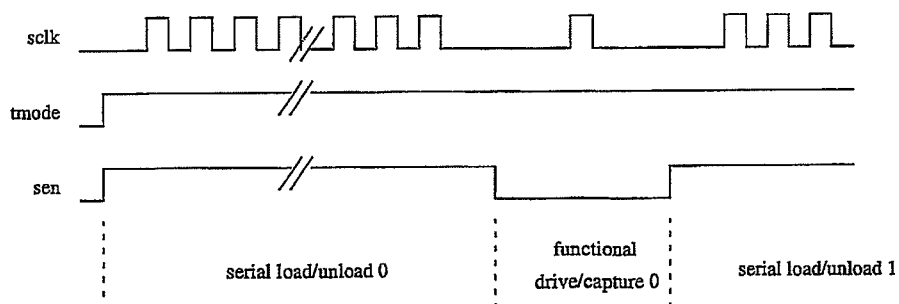


FIG. 112

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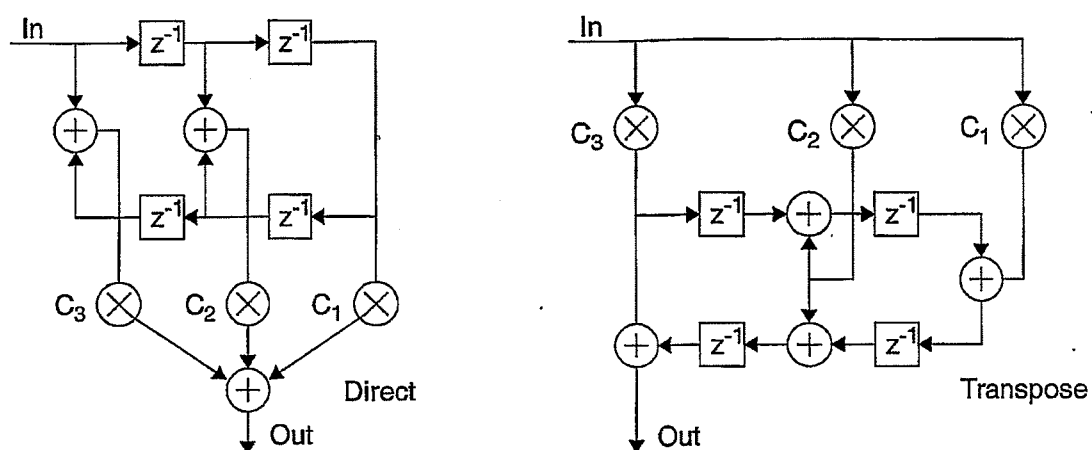


FIG. 113

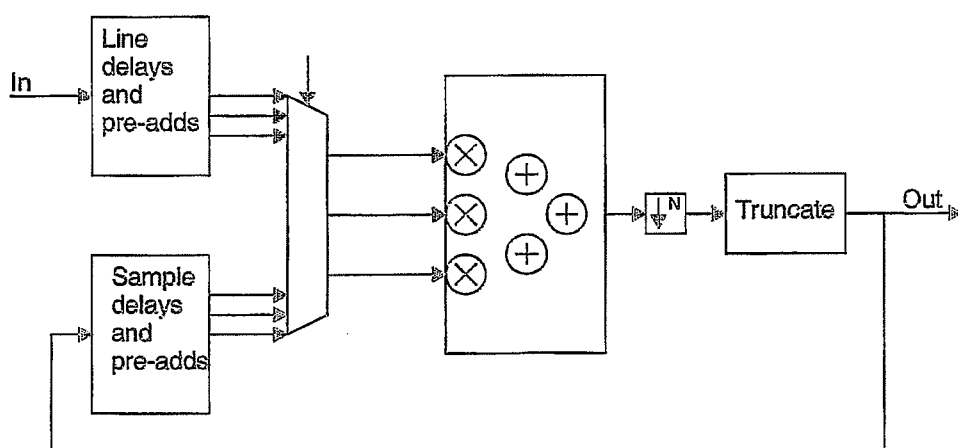


FIG. 114

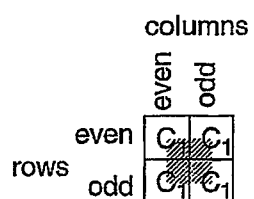


FIG. 115

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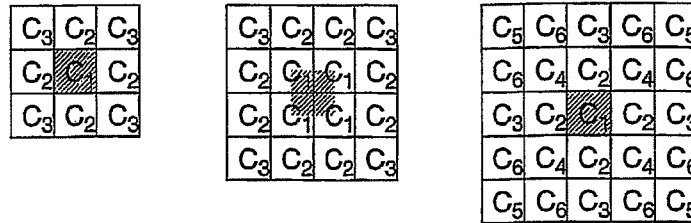


FIG. 116

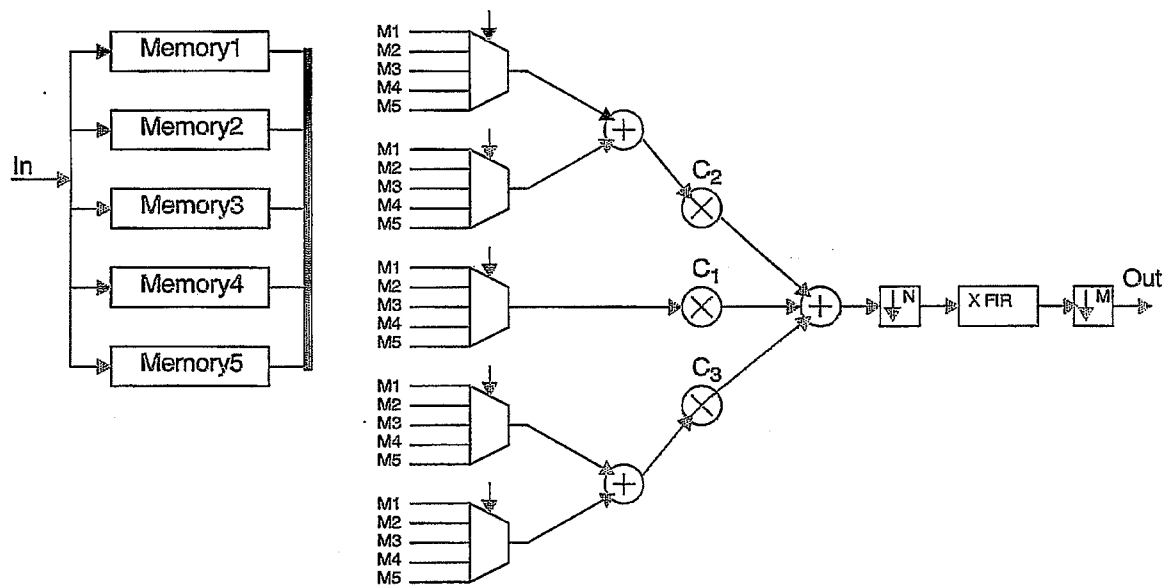


FIG. 117

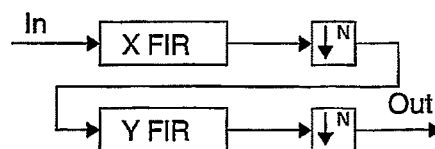


FIG. 118

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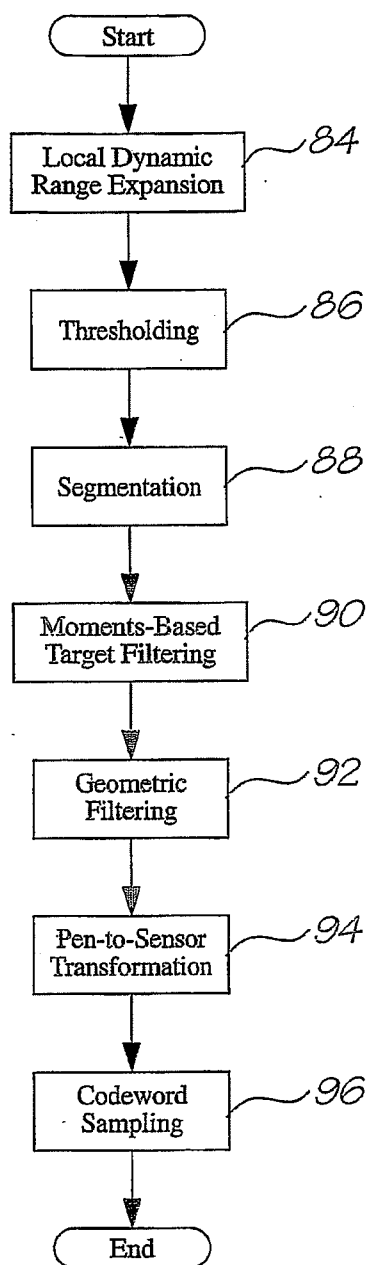


FIG. 119

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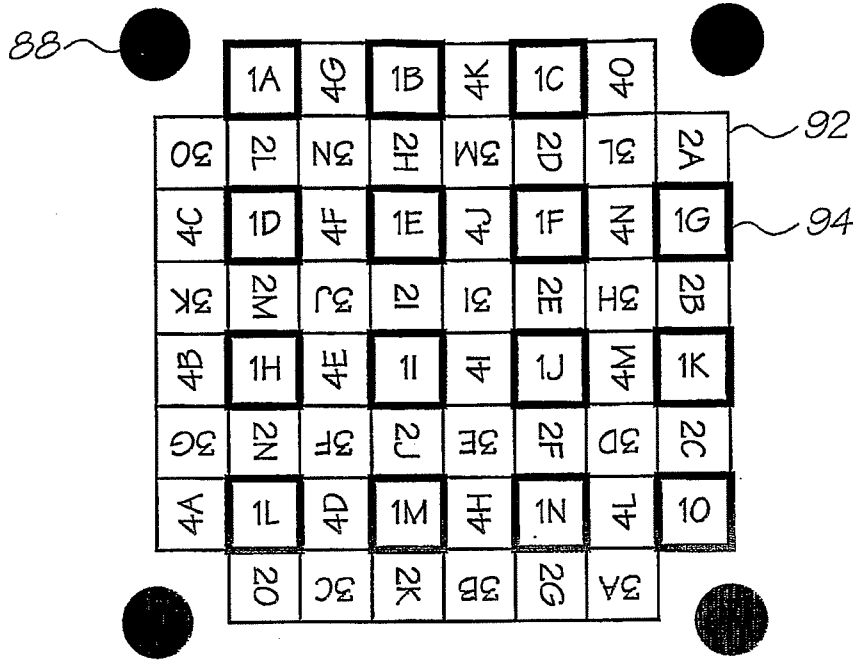


FIG. 120

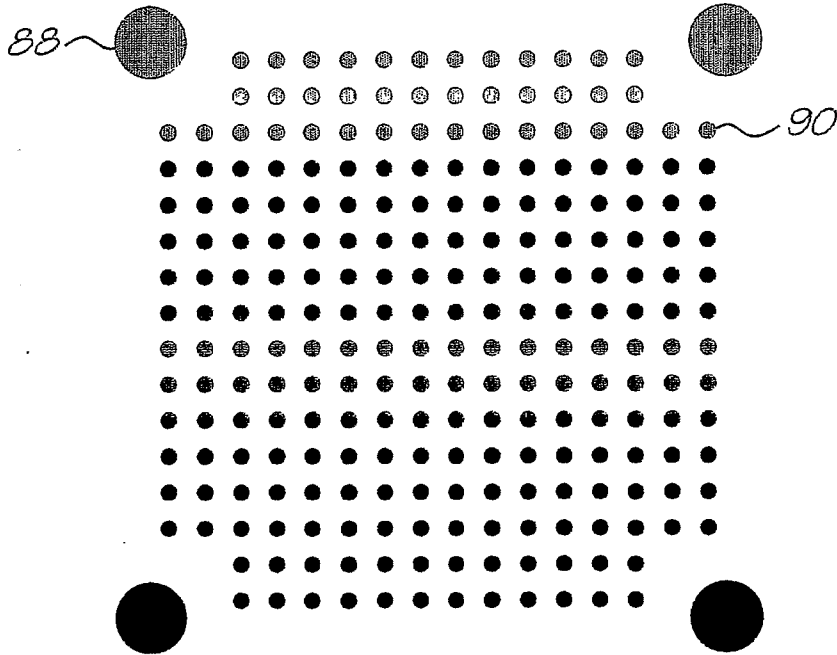


FIG. 121

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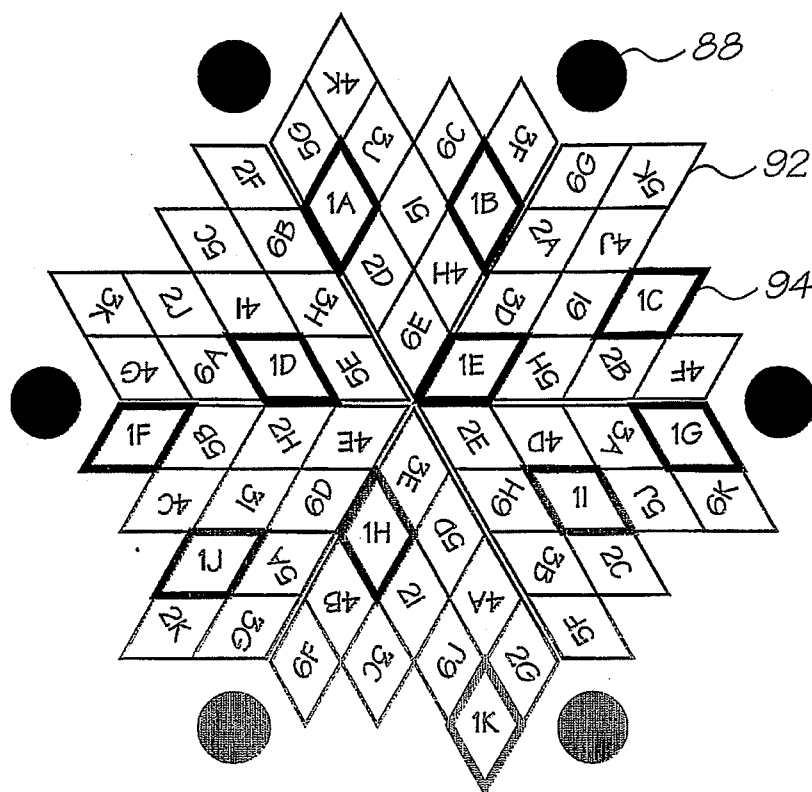


FIG. 122

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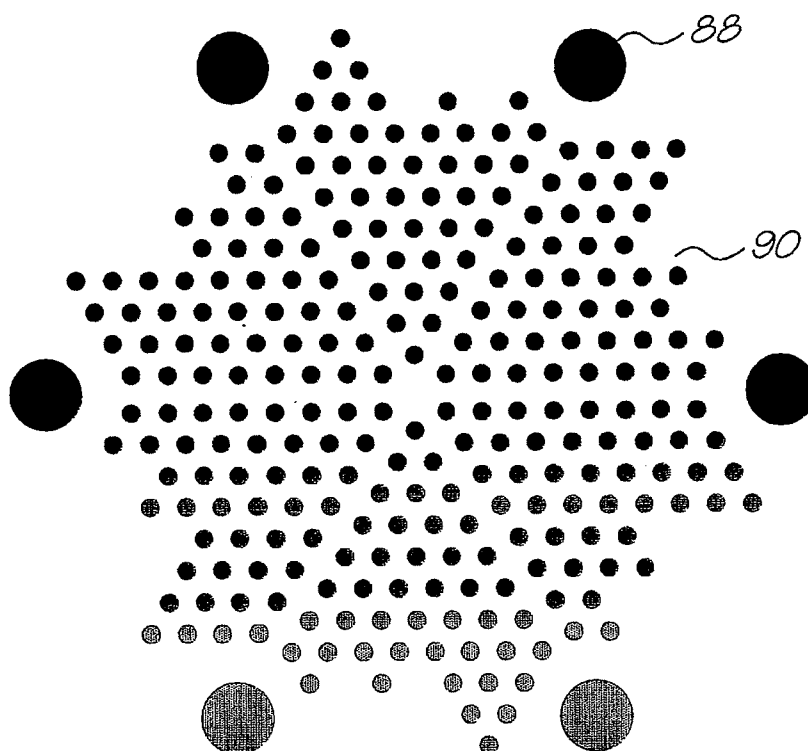


FIG. 123