

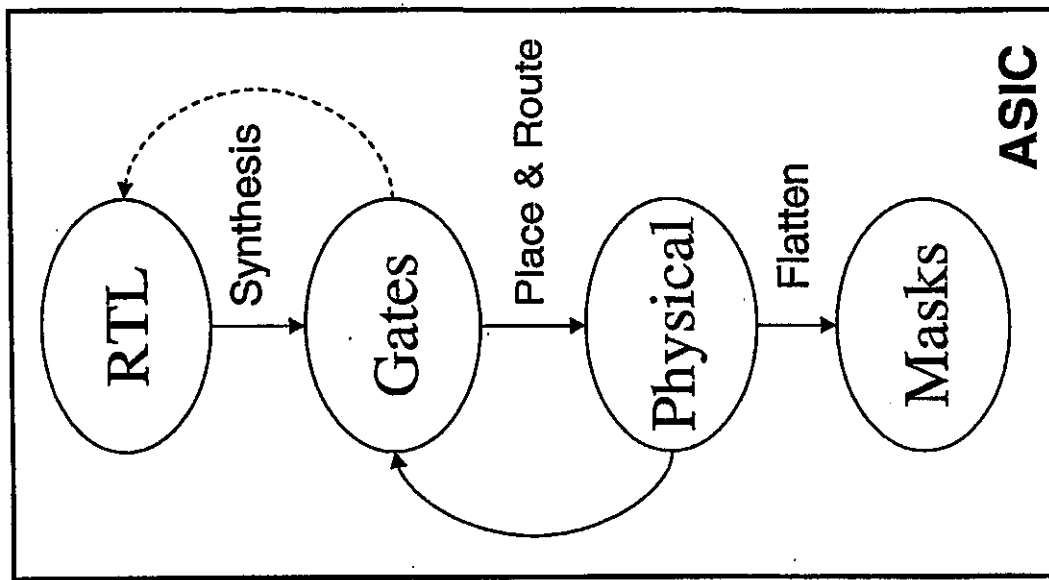
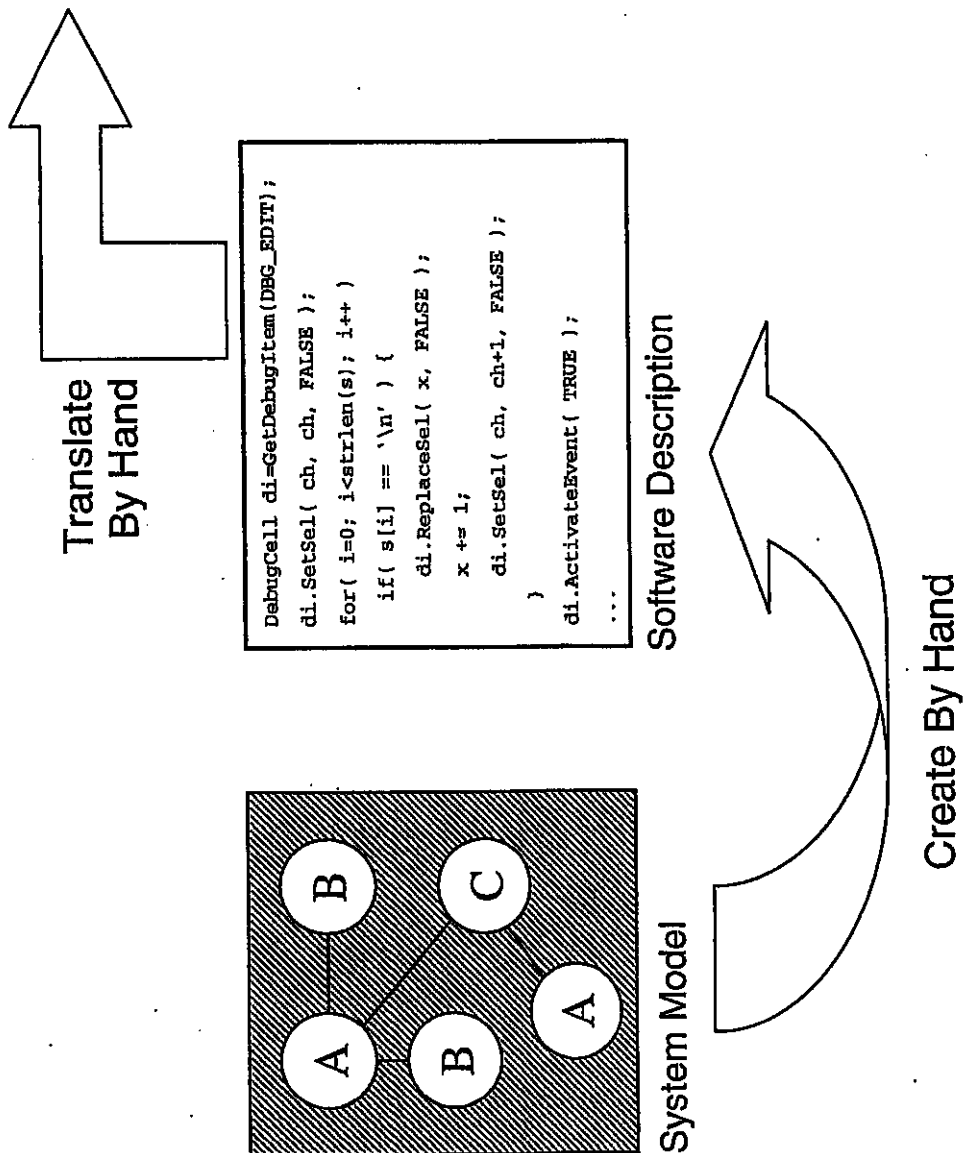


FIG 1A
(Conventional)



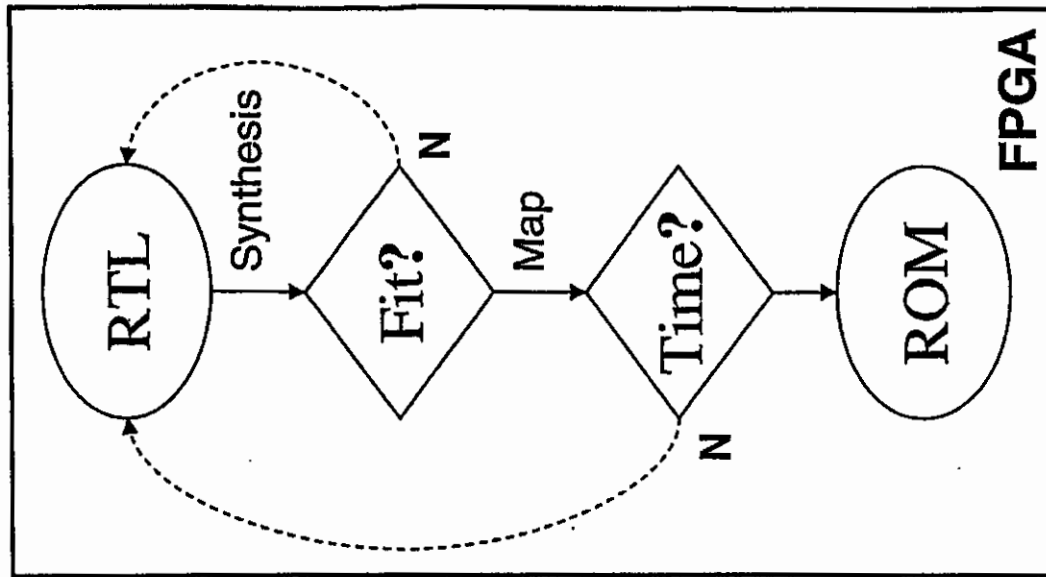
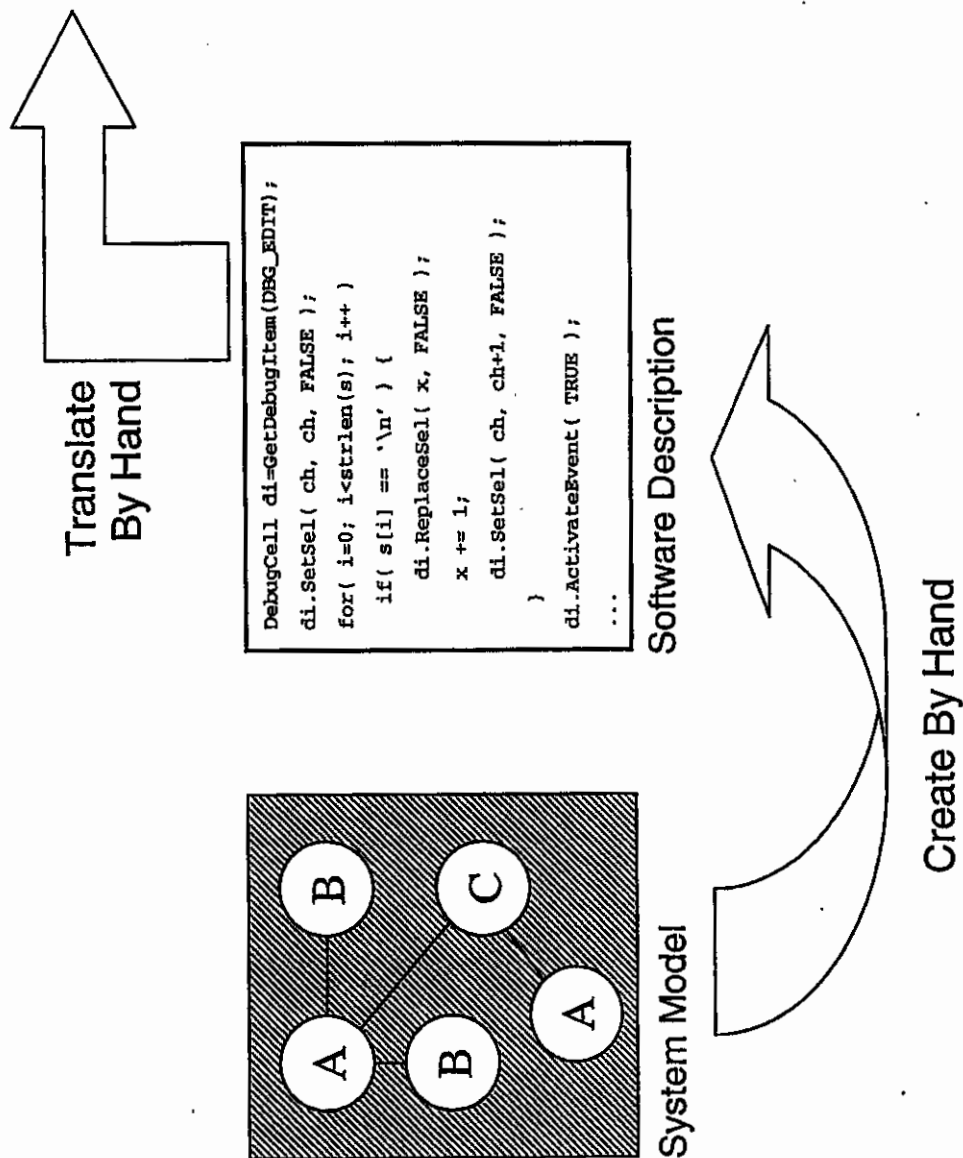


FIG. 1B
(Conventional)



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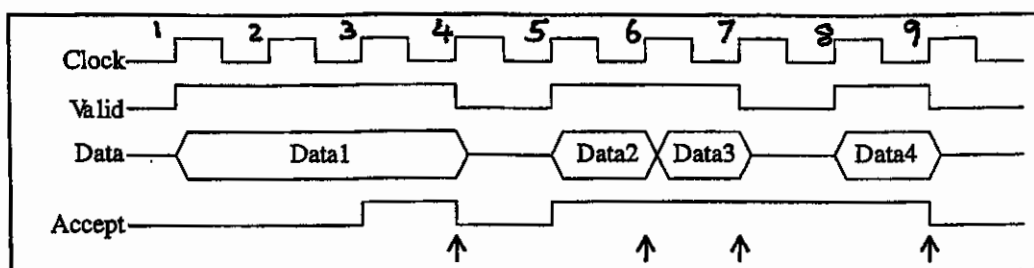


FIG 2

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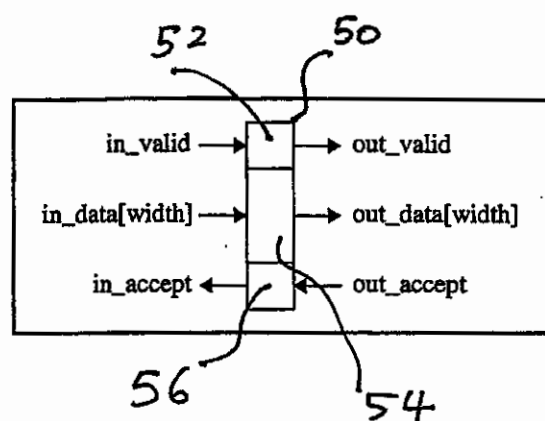


FIG 3

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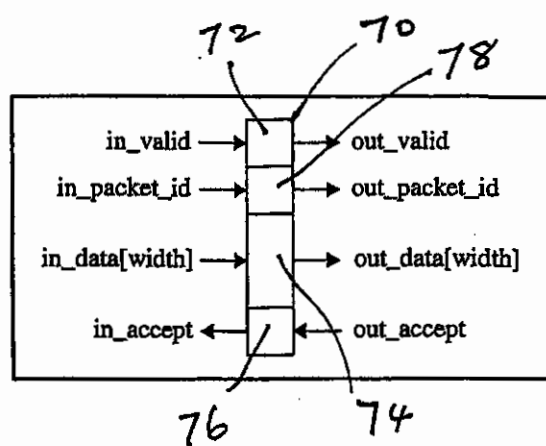


FIG 4

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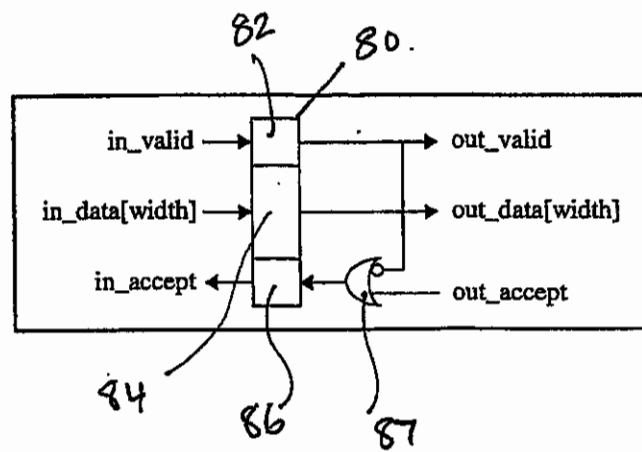


FIG 5

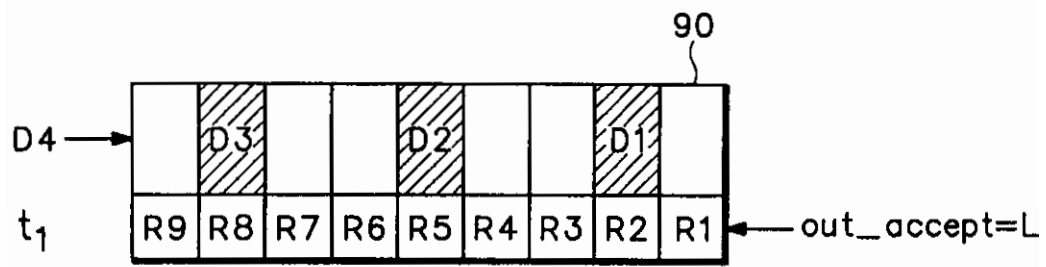


FIG. 6A

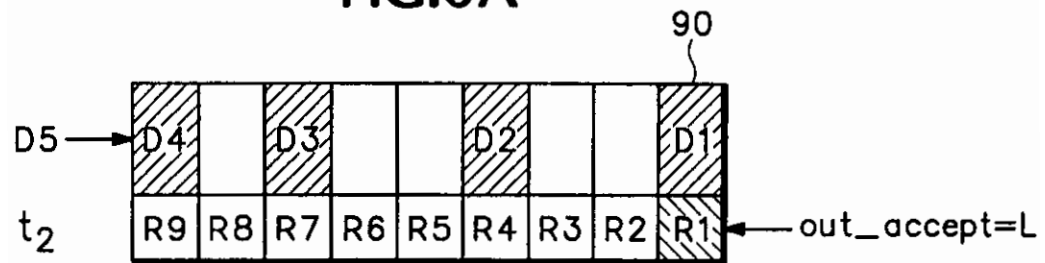


FIG. 6B

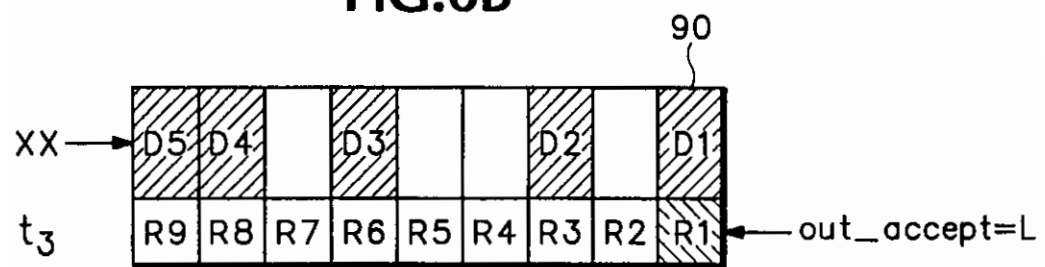


FIG. 6C

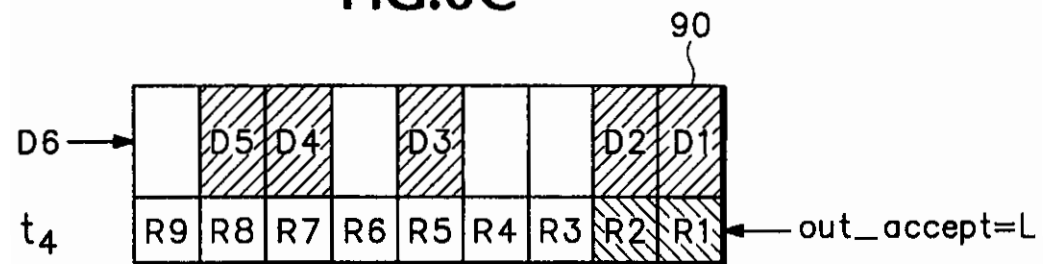


FIG. 6D

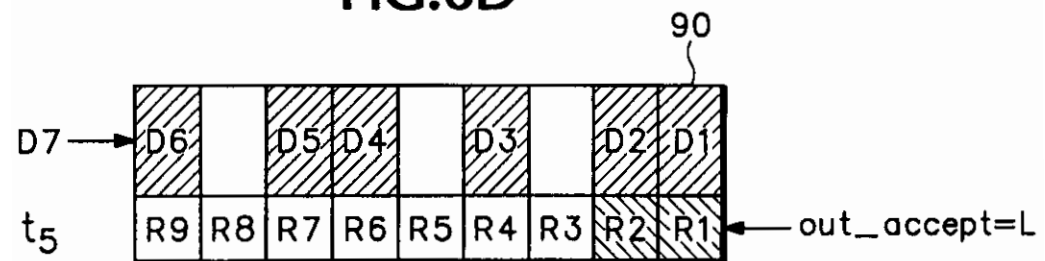


FIG. 6E

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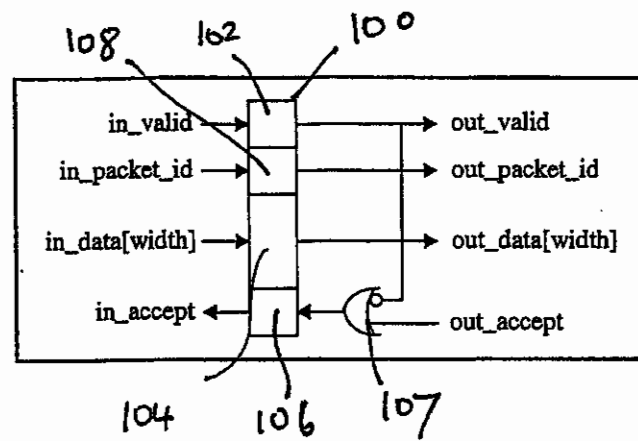


FIG 7

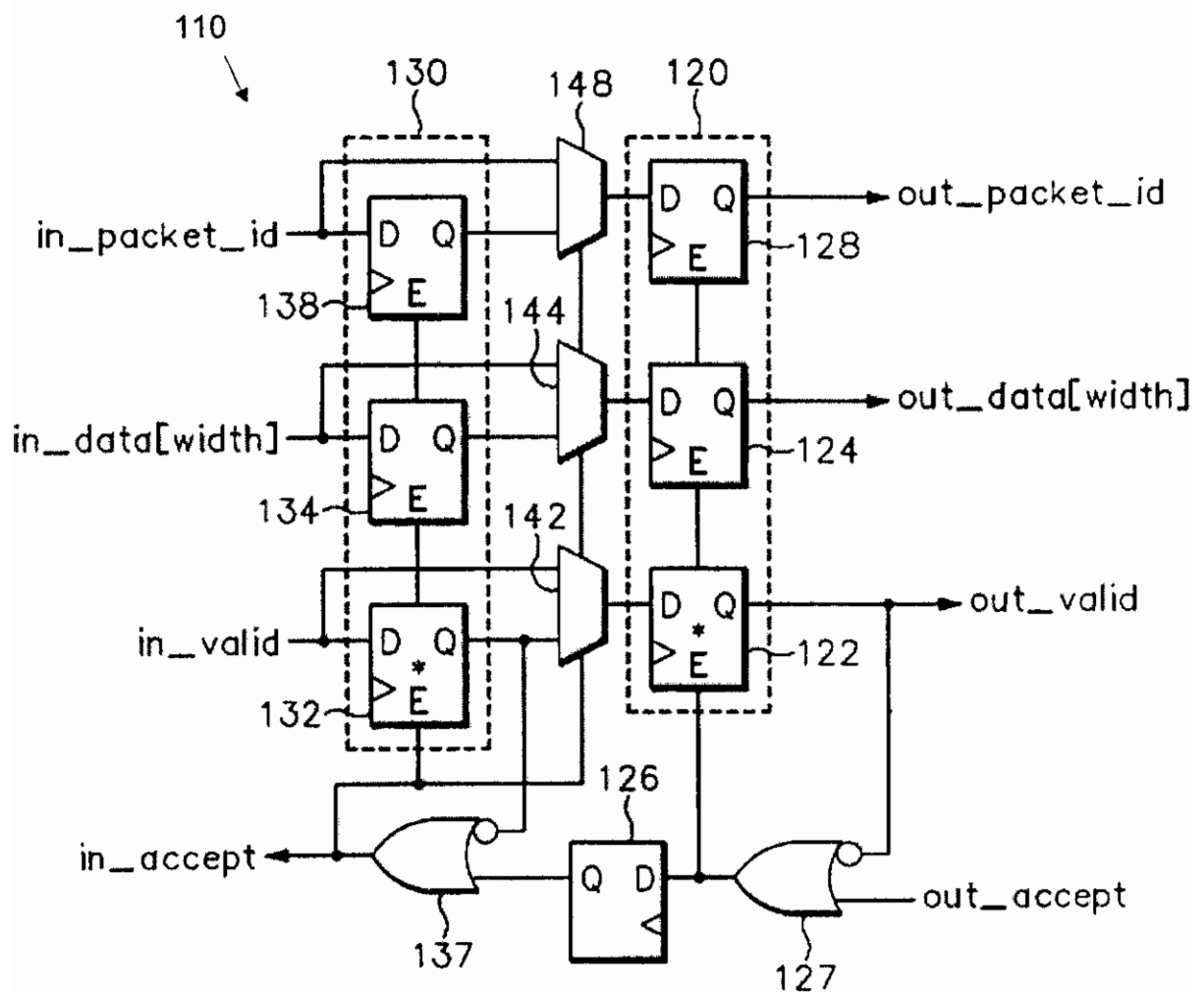


FIG.8

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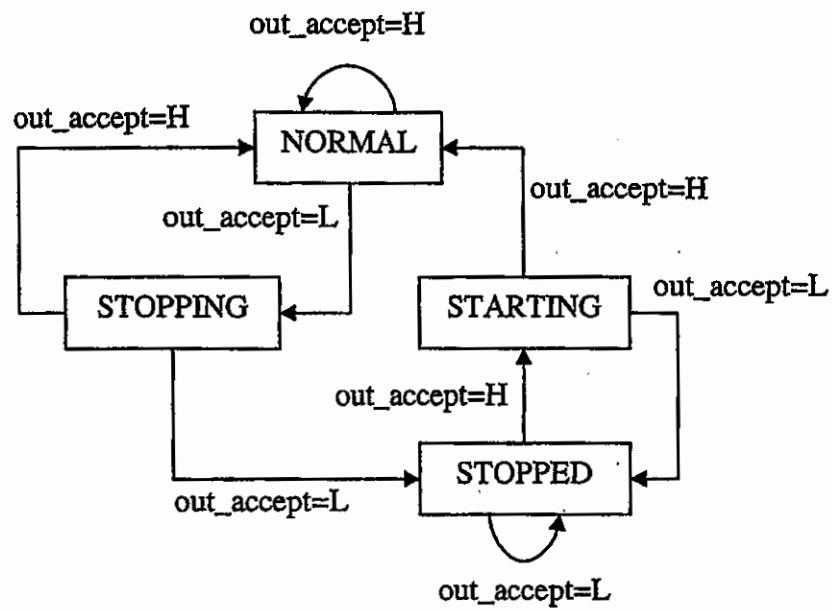


FIG 9

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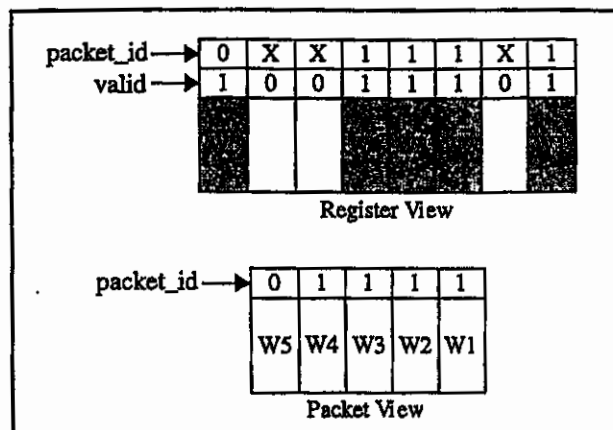
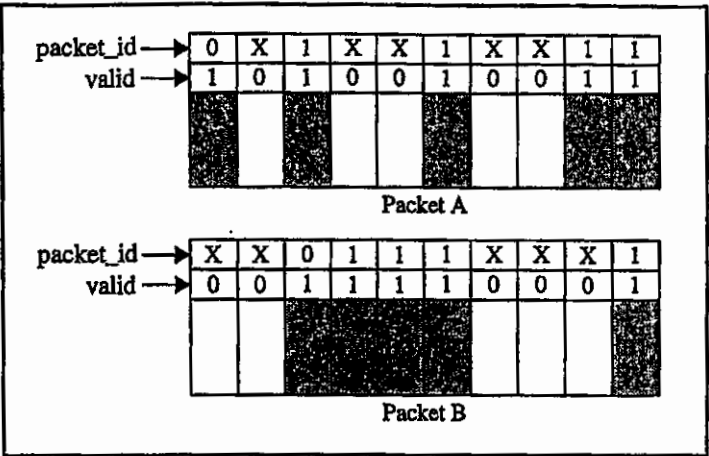


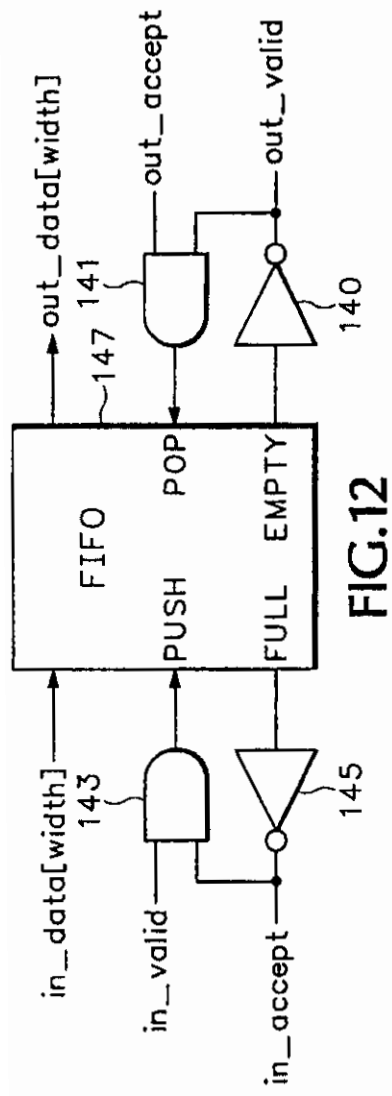
FIG 10



Clock	Accept	Wait For	Output
T1	A1,B1		A1+B1
T2	A2	B2	
T3		B2	
T4		B2	
T5	A3,B2	B3	A2+B2
T6	B3		A3+B3
T7	B4	A4	
T8	A4,B5	A5	A4+B4
T9		A5	
T10	A5		A5+B5

Table 1: Adding PacketA to PacketB

FIG 11



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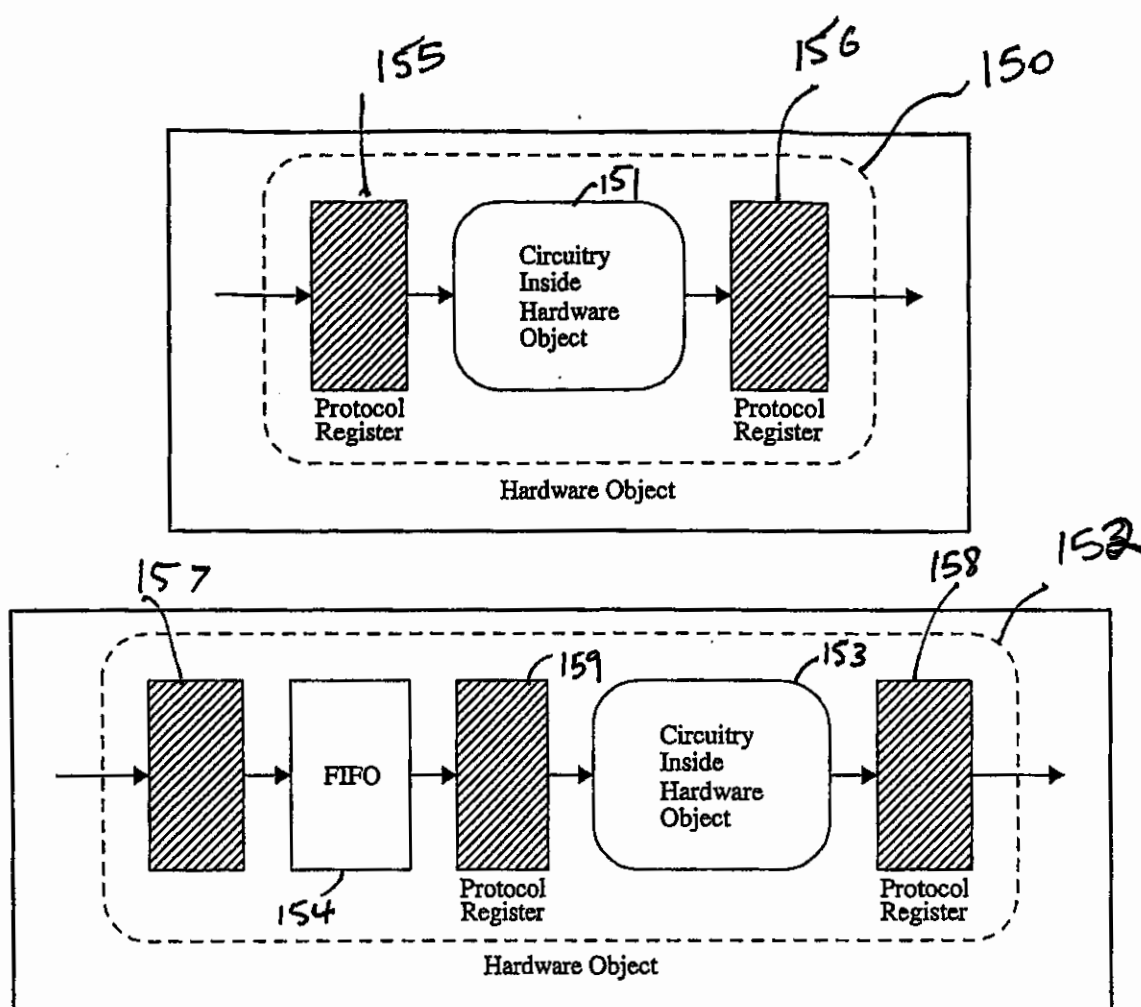


FIG 13

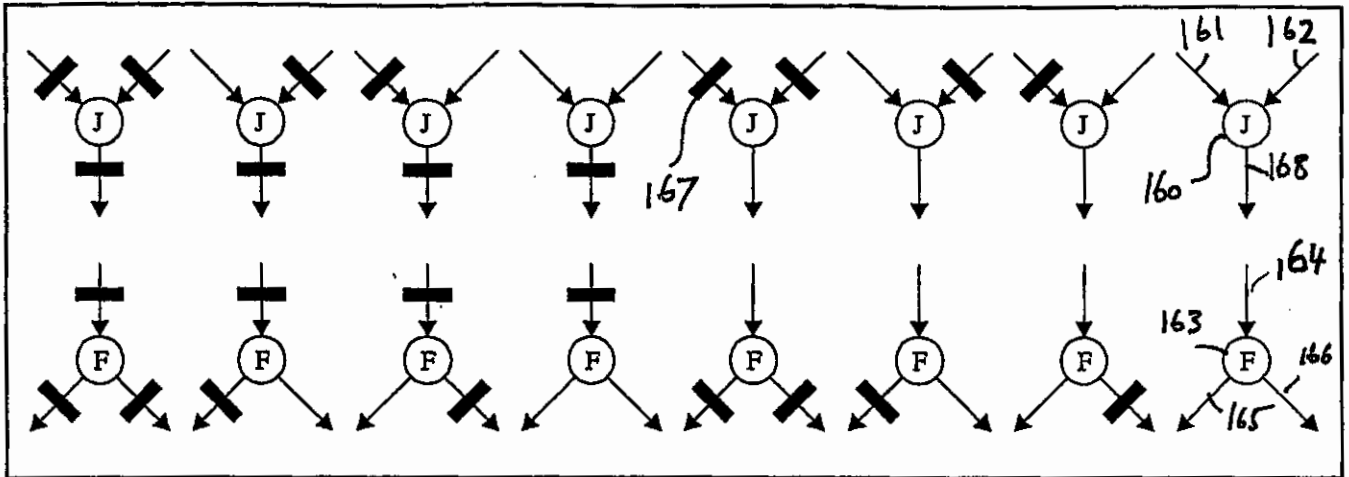


FIG 14

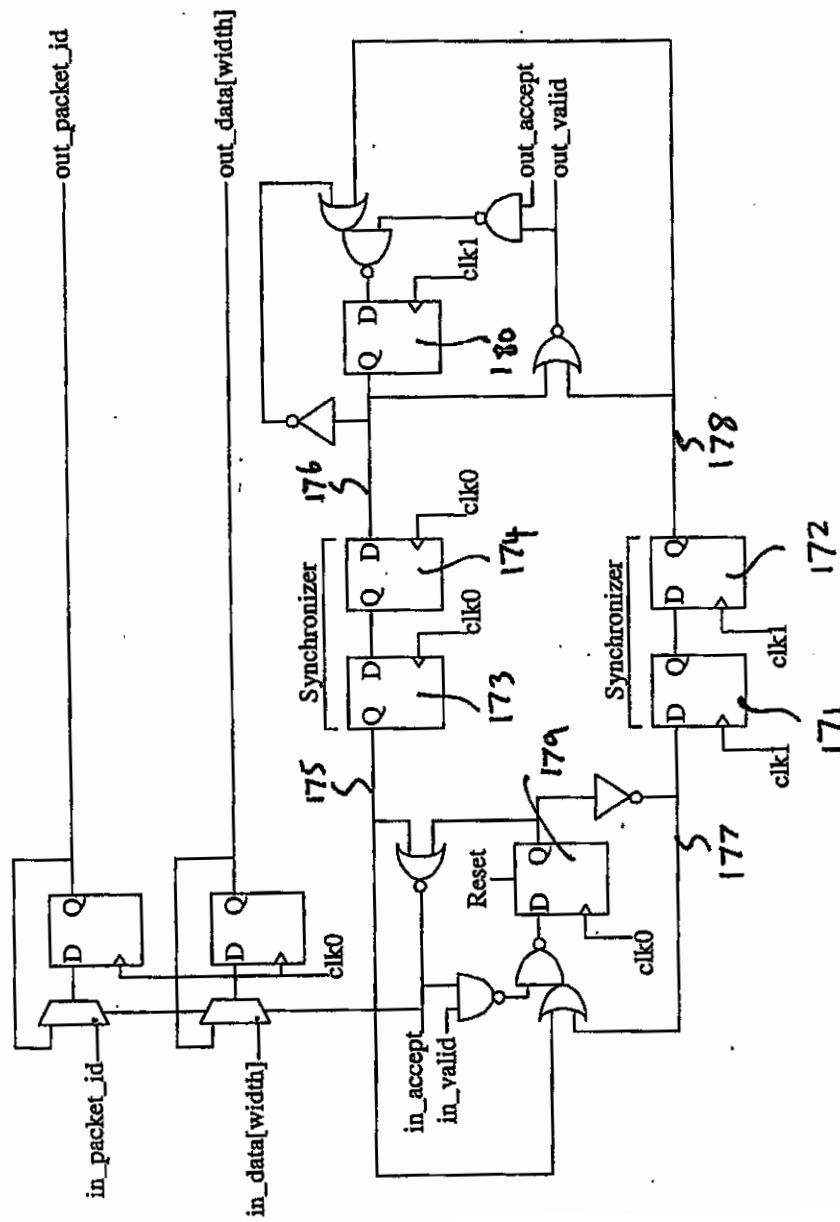


FIG 15

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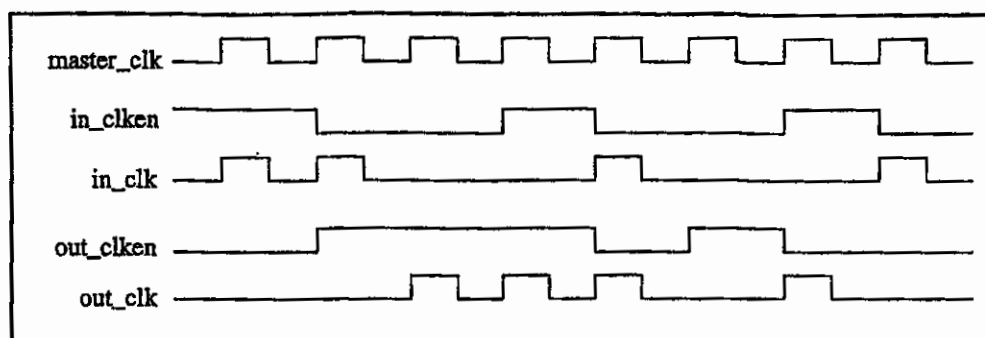


FIG 16

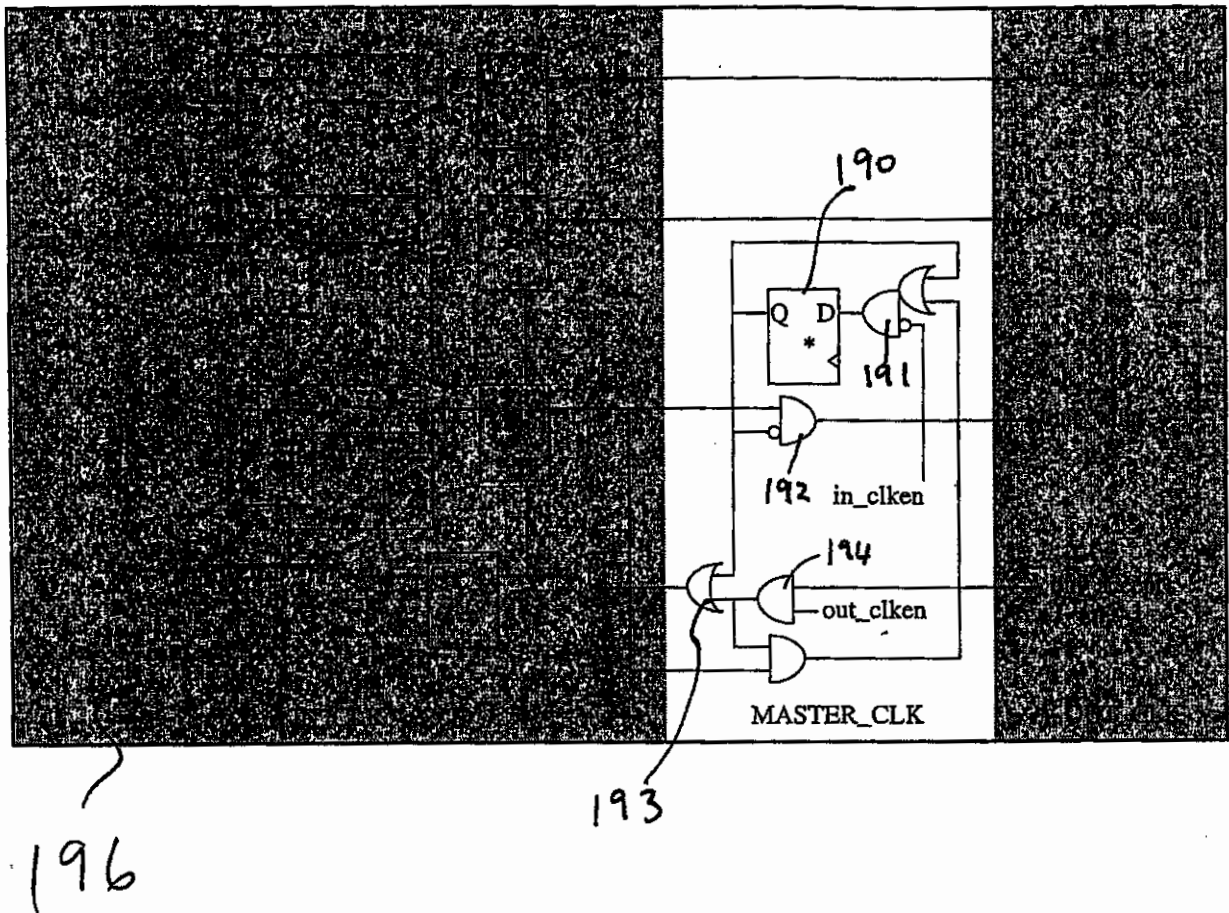


FIG 17

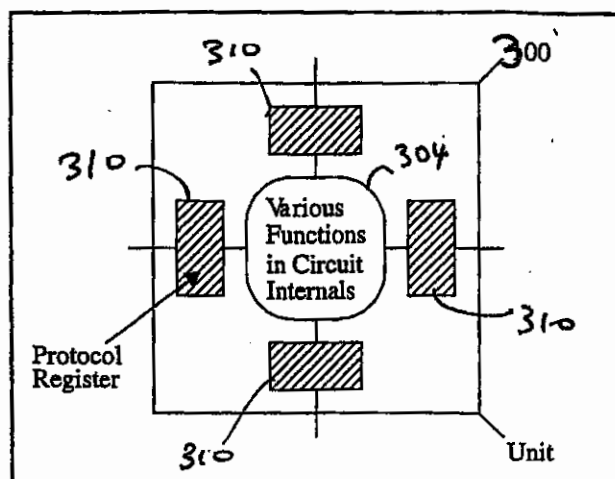


FIG 18

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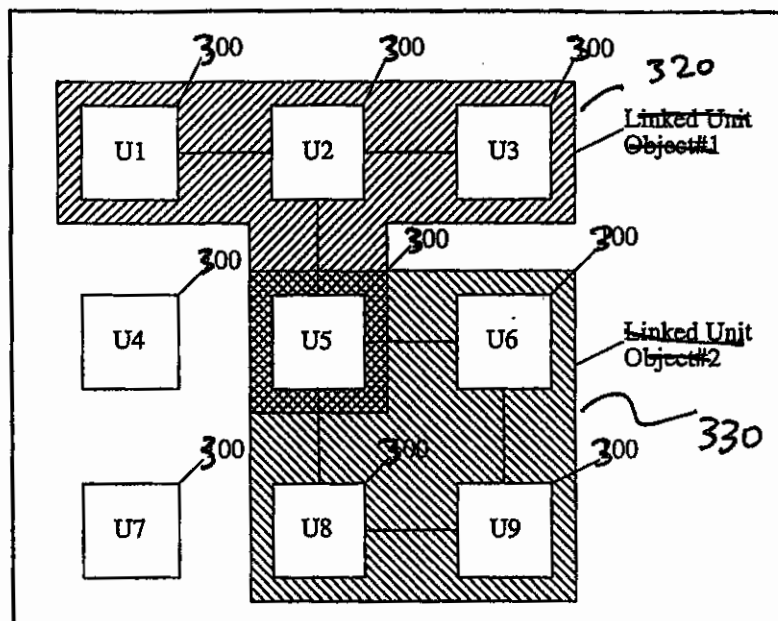


FIG. 19

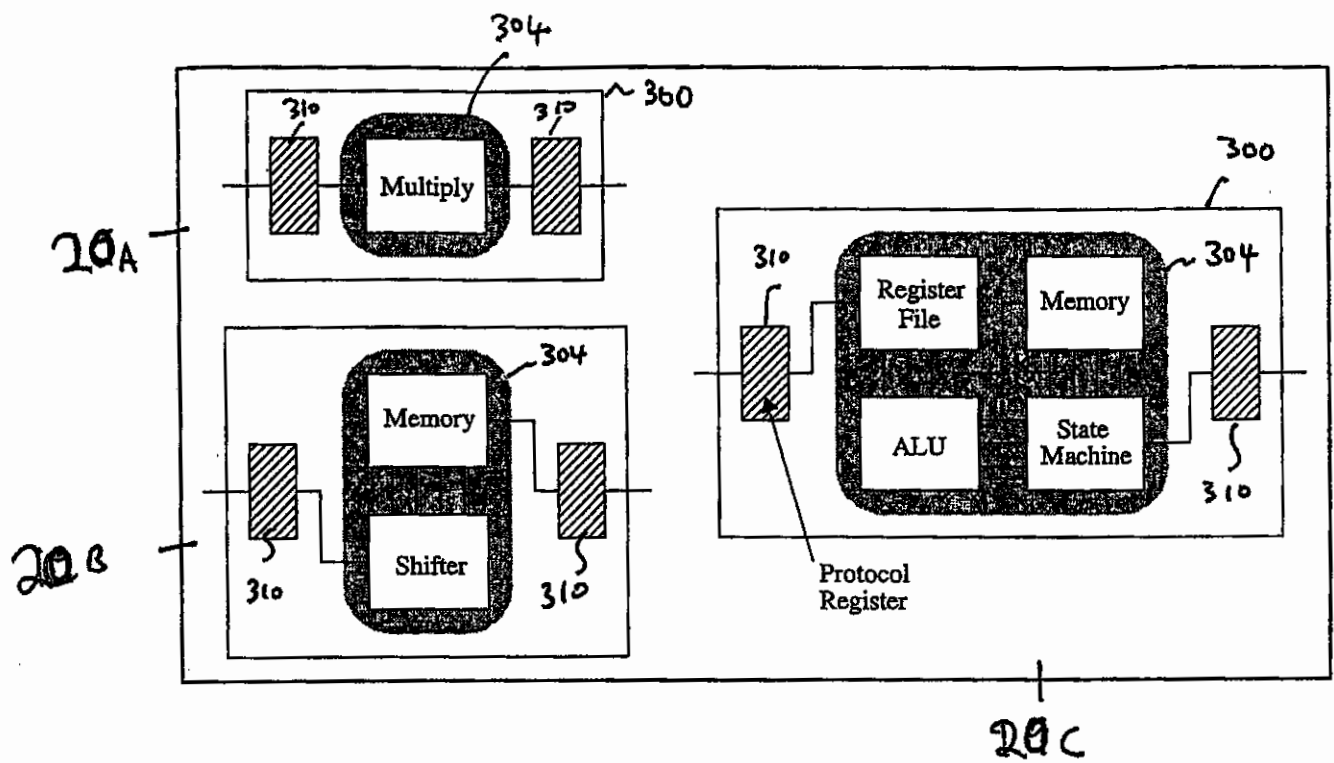


FIG 20

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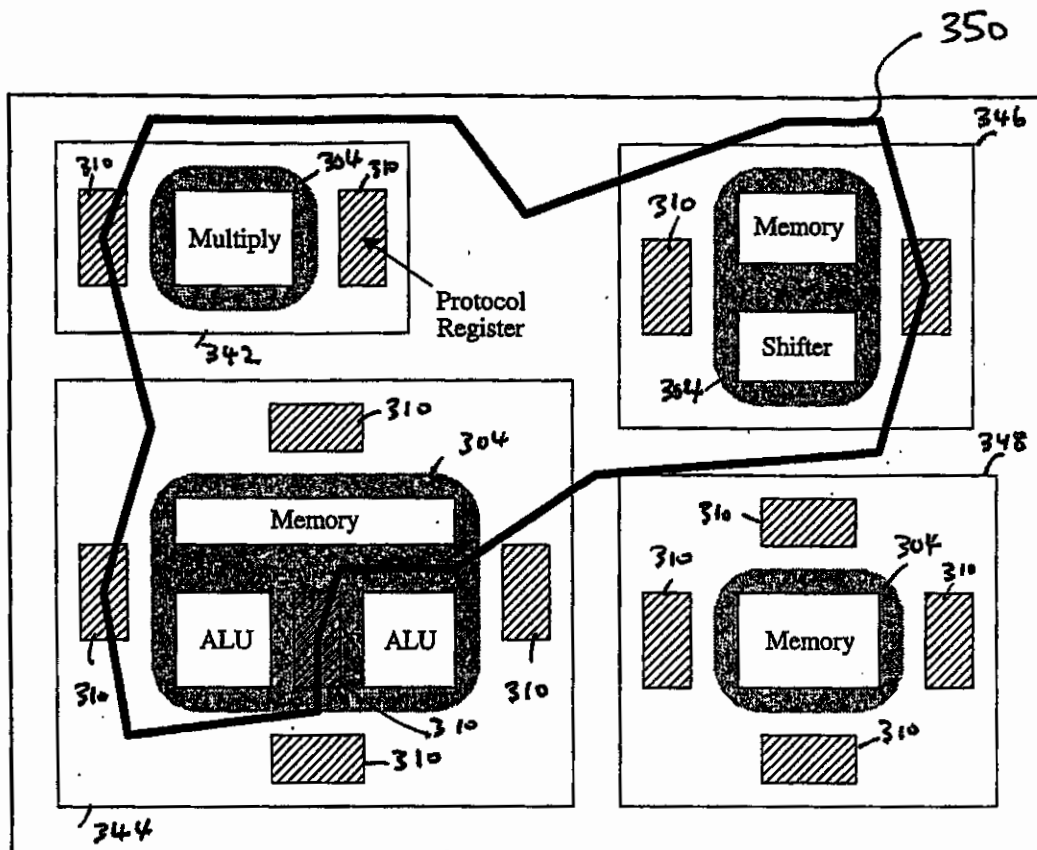


FIG 21

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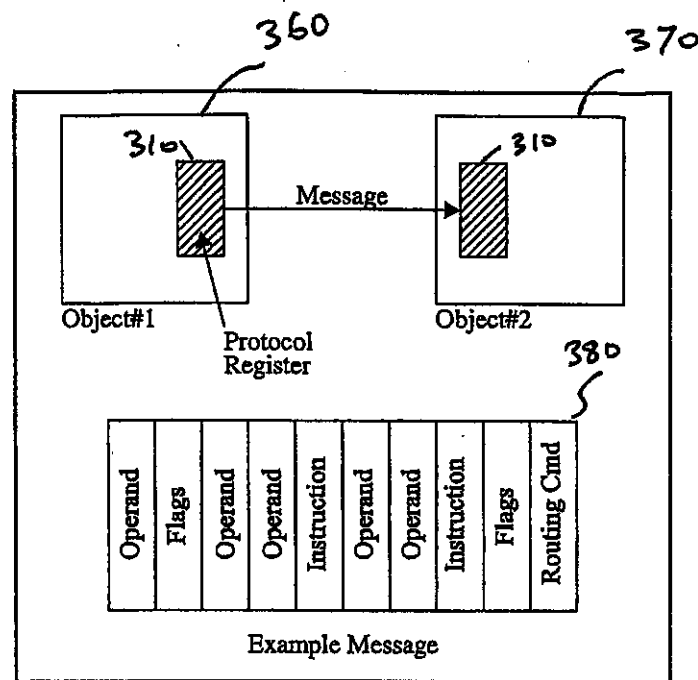


FIG 22

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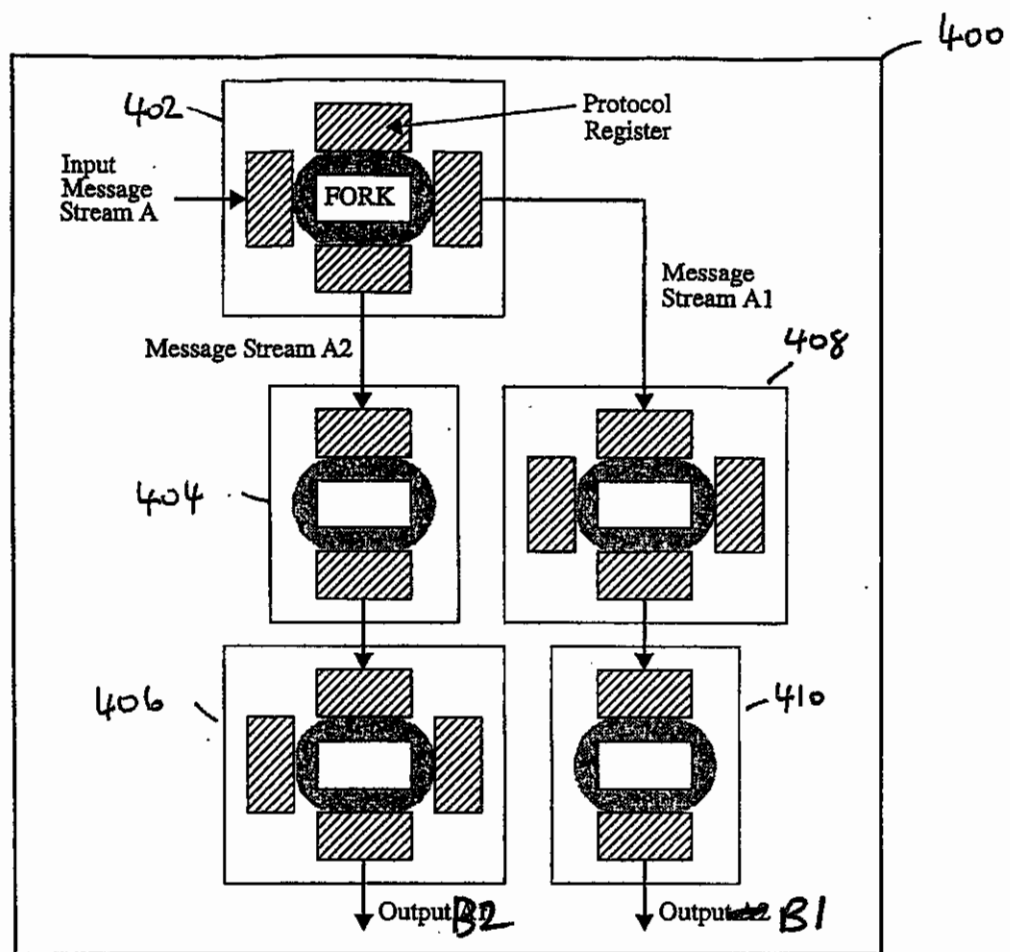


FIG 23

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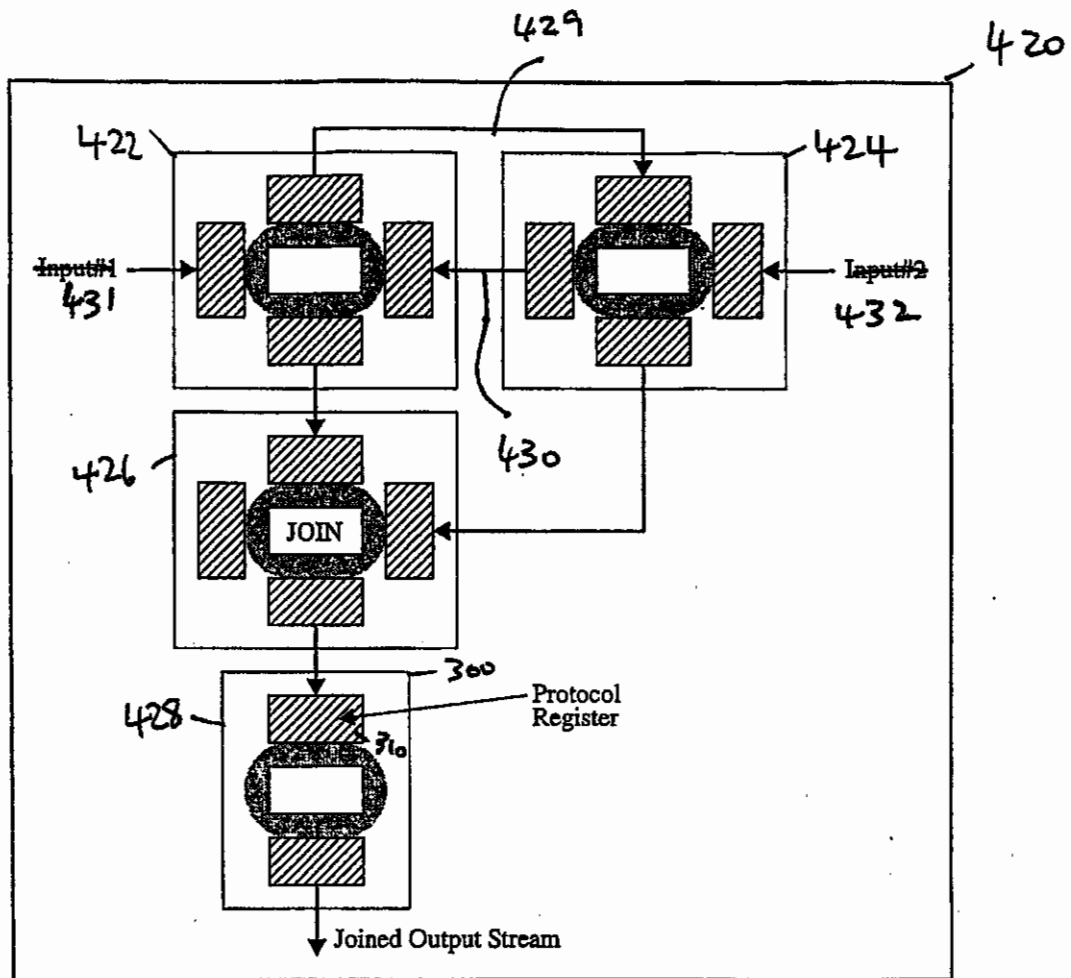


FIG 24

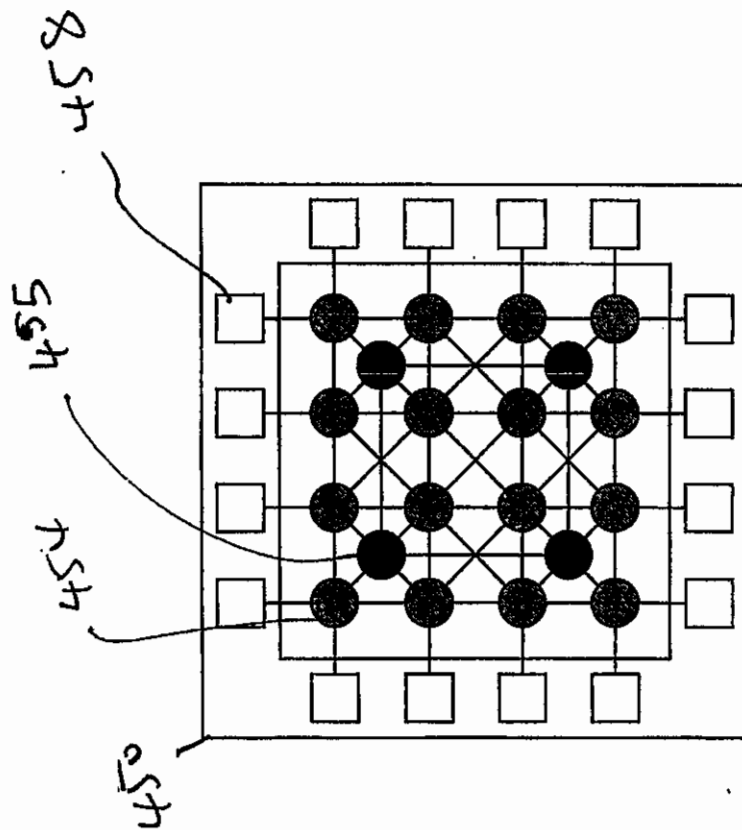


FIG 25

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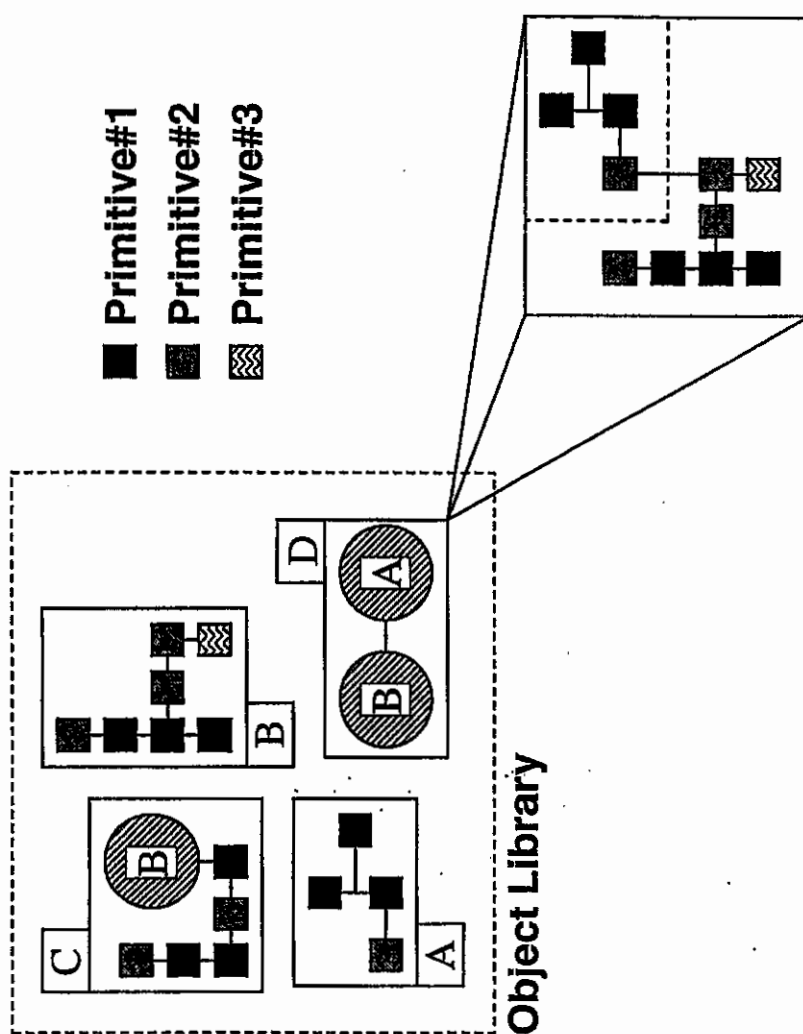


FIG 26

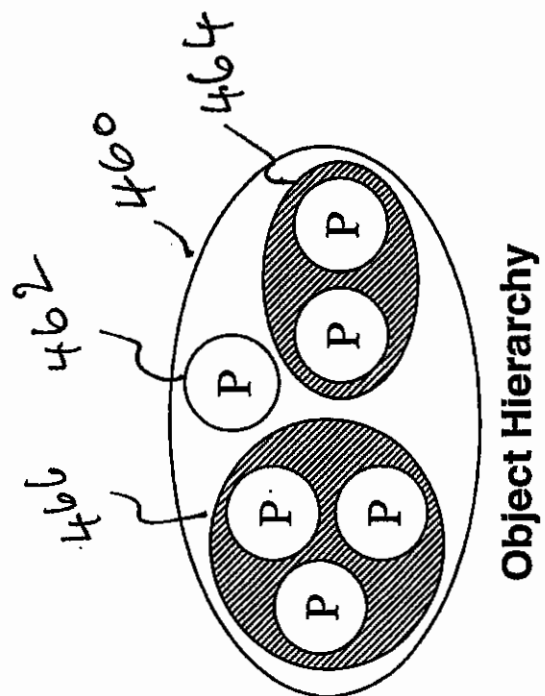


Fig. 27

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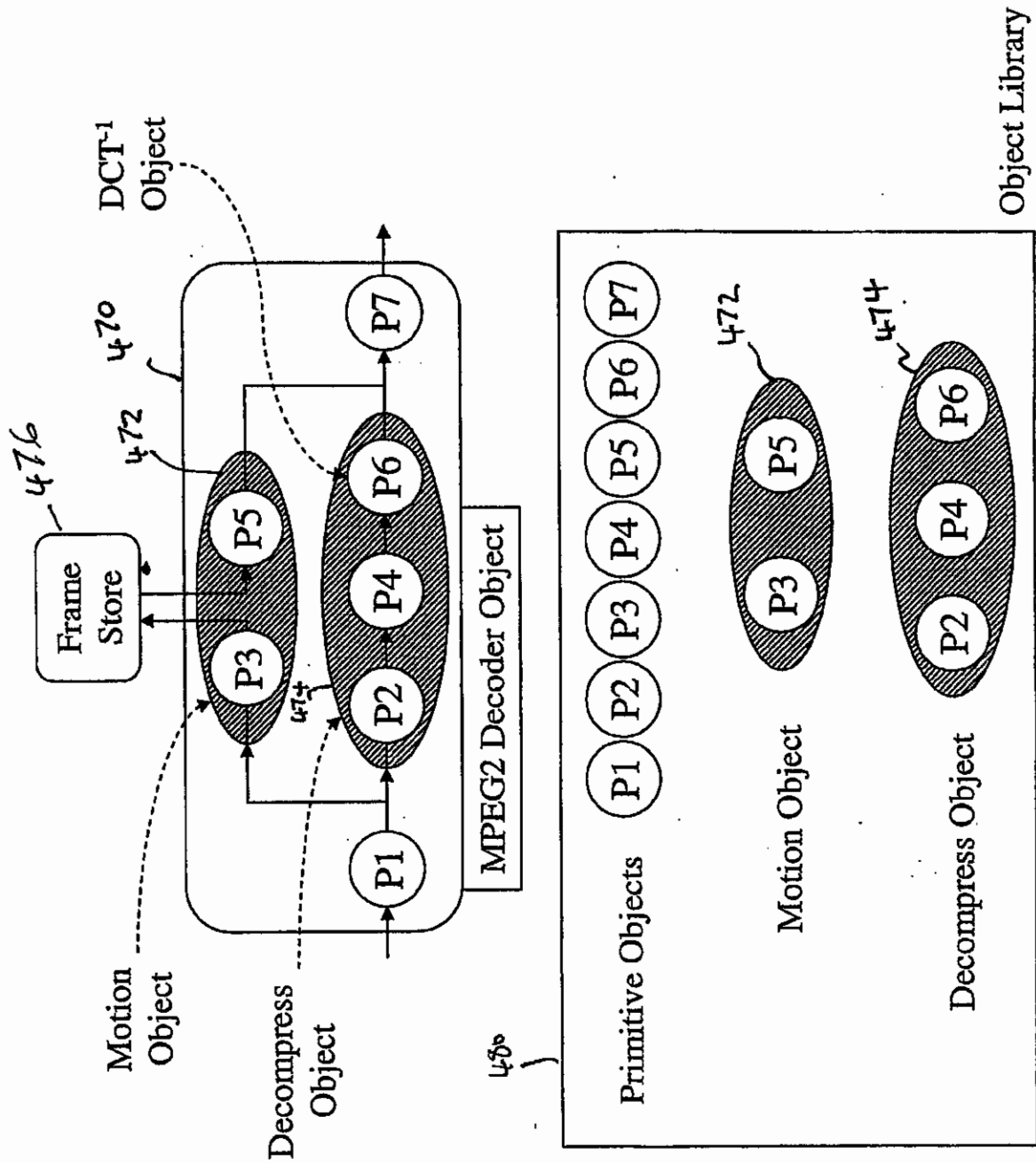


FIG 28

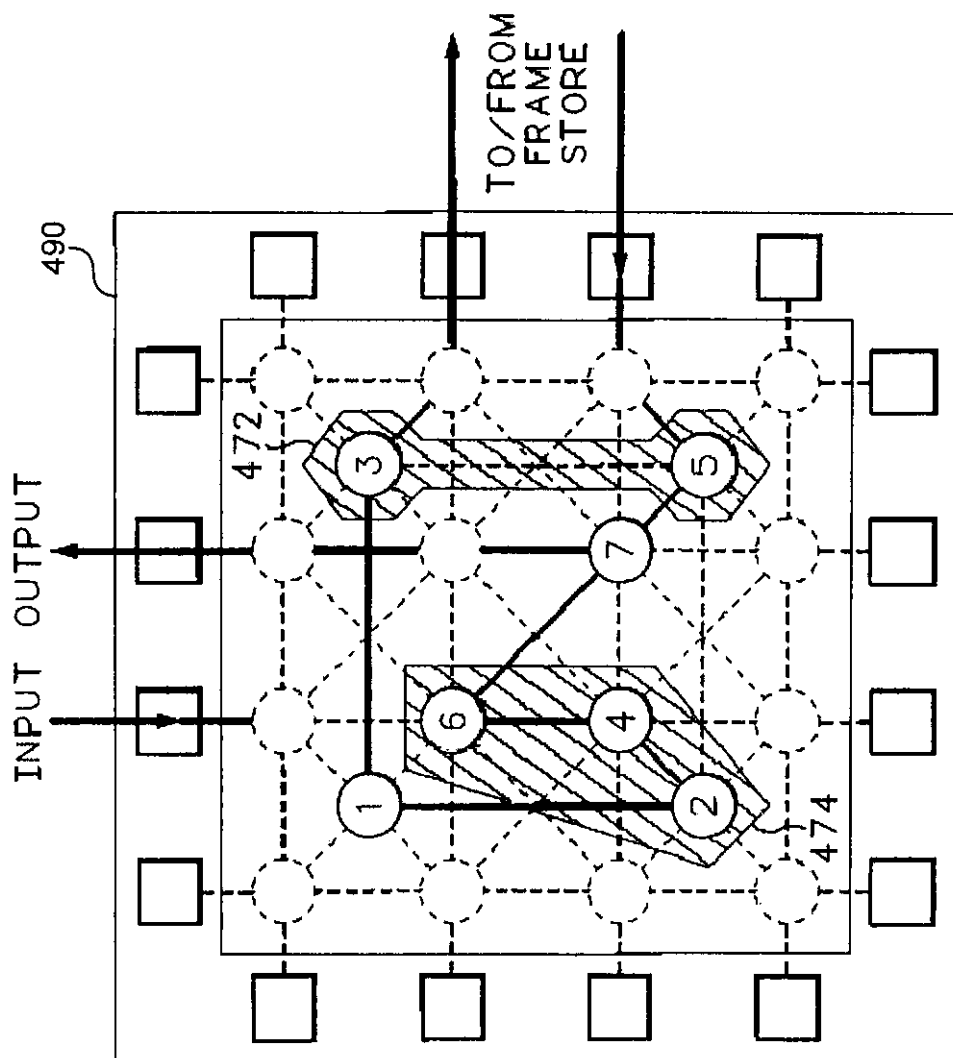
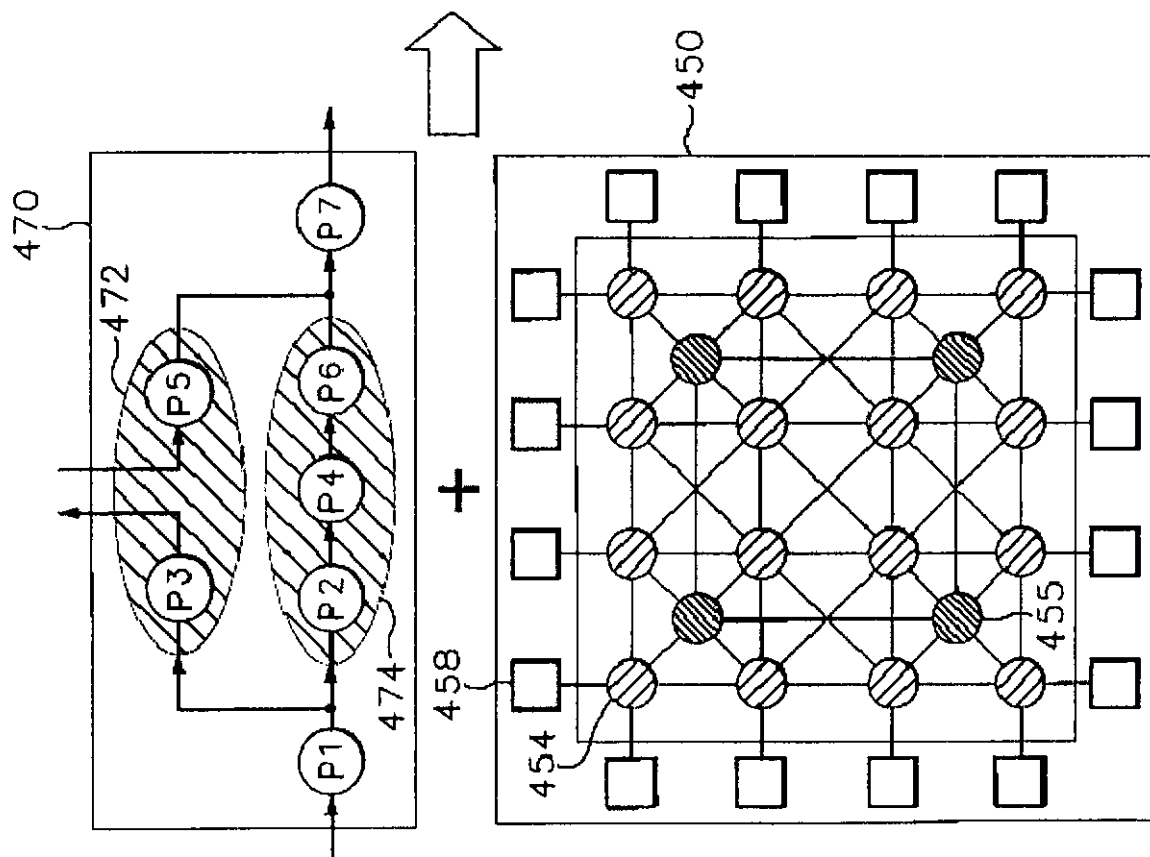


FIG. 29



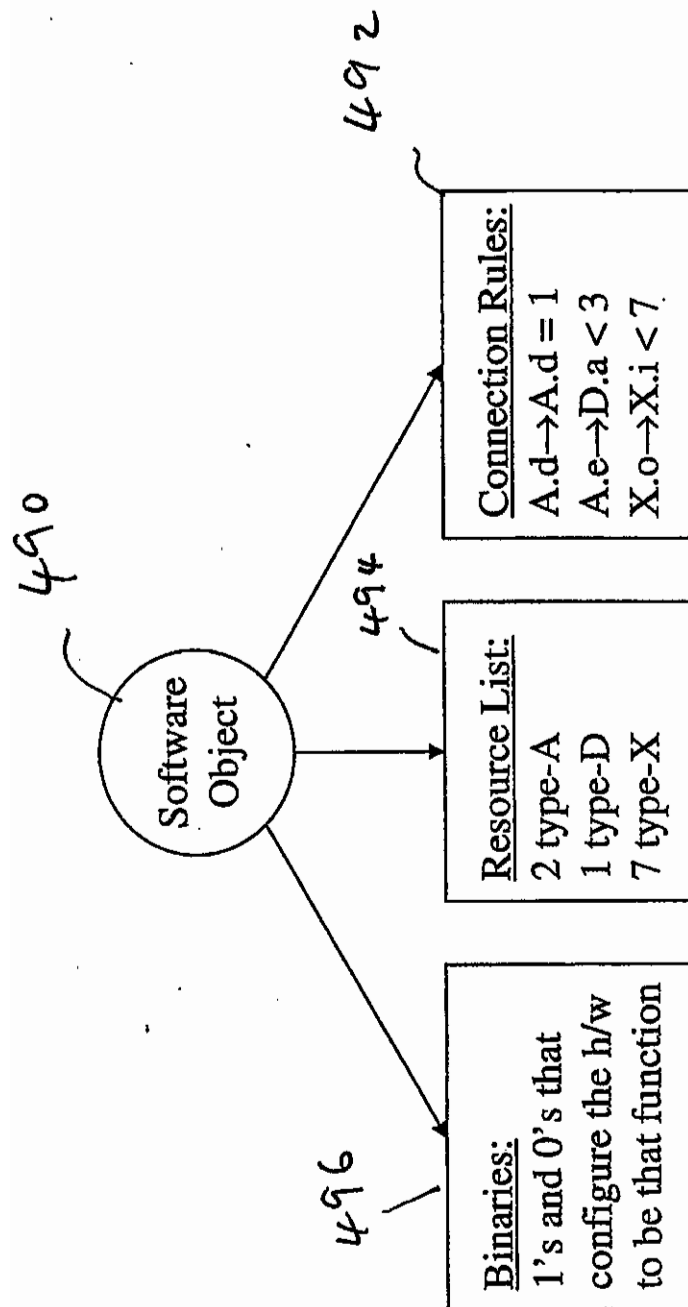


FIG-30

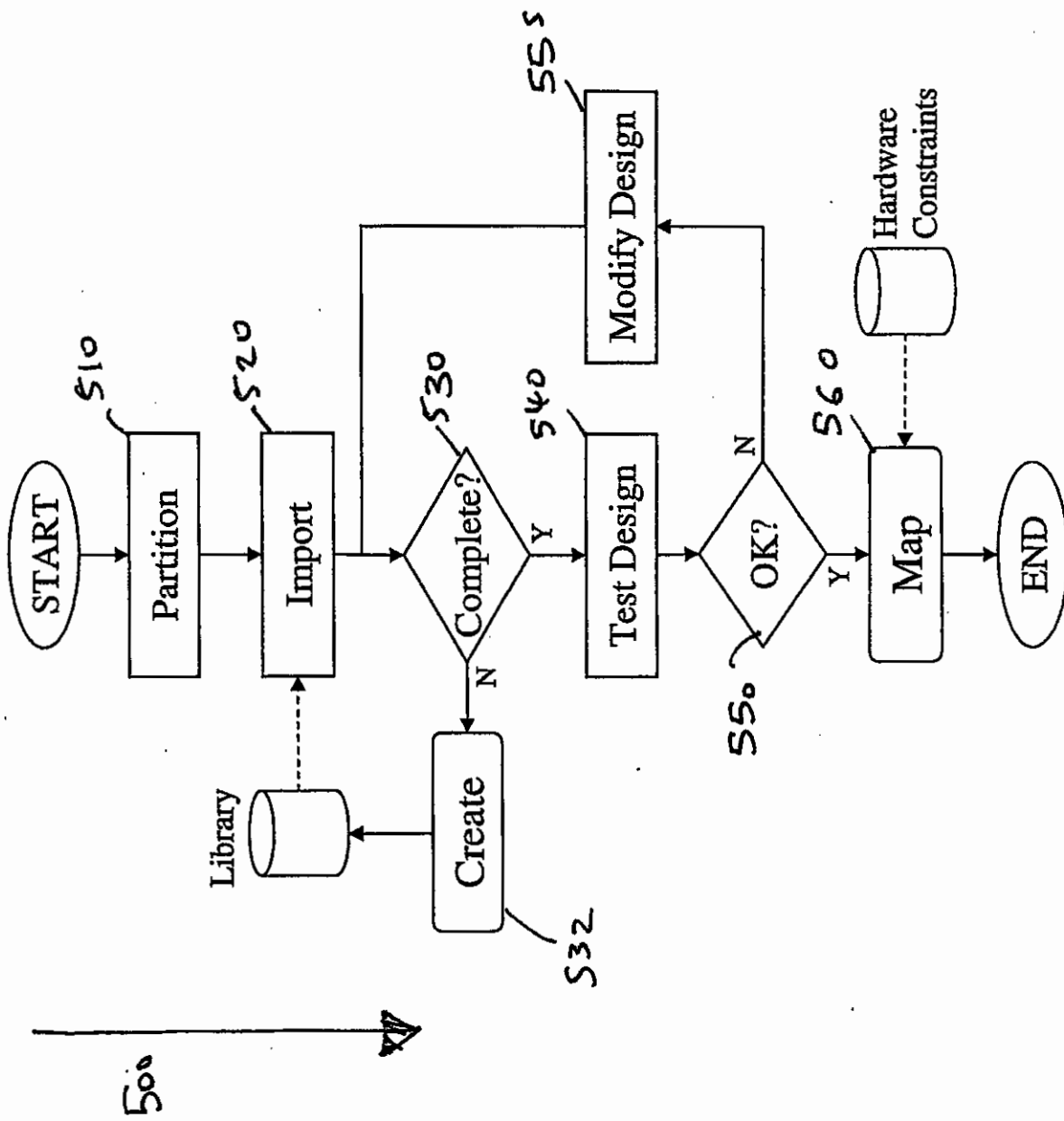
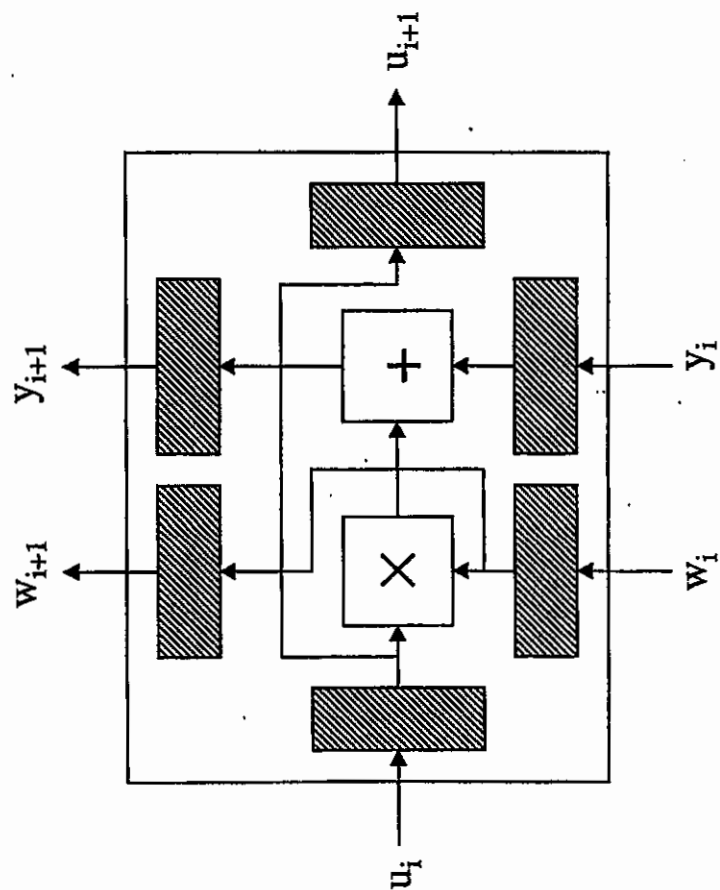
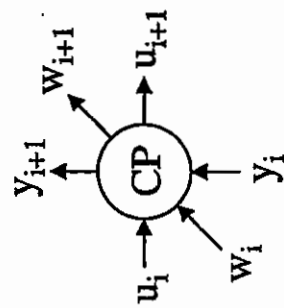


FIG 31



Convolution Primitive



Schematic View

FIG 32

```
PROCEDURE Convolve
  INPORT a, b, c: TYPE Channel;
  OUTPORT d, e, f: TYPE Channel;

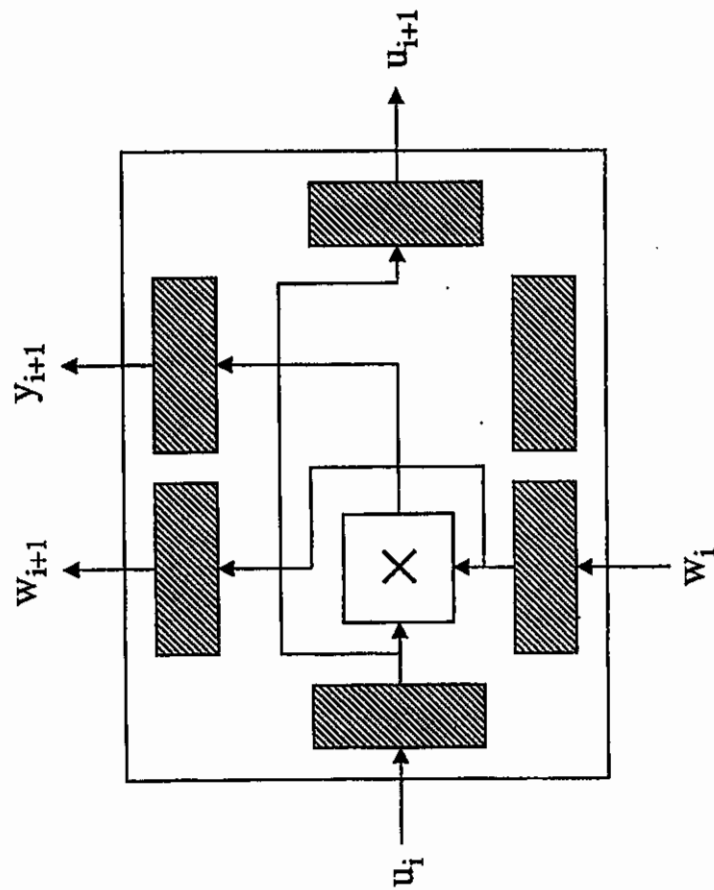
  VAR ui, wi, yi: TYPE Integer;
  join(a->ui,b->wi); // does not complete until both
                      // channels a and b are valid

  d<-ui; // copy u(i) to become u(i+1)
  e<-wi; // copy w(i) to become w(i+1)
  c->yi; // does not complete until
          // channel c is valid

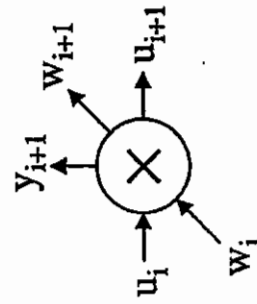
  f<-(ui*wi+yi); // y(i+1) = u(i)*w(i) + y(i)
ENDPROCEDURE
```

Pseudo-code for the Convolution Primitive

FIG 33



Convolution Multiply Primitive



Schematic View

FIG-34

Convolution of Two Sequences

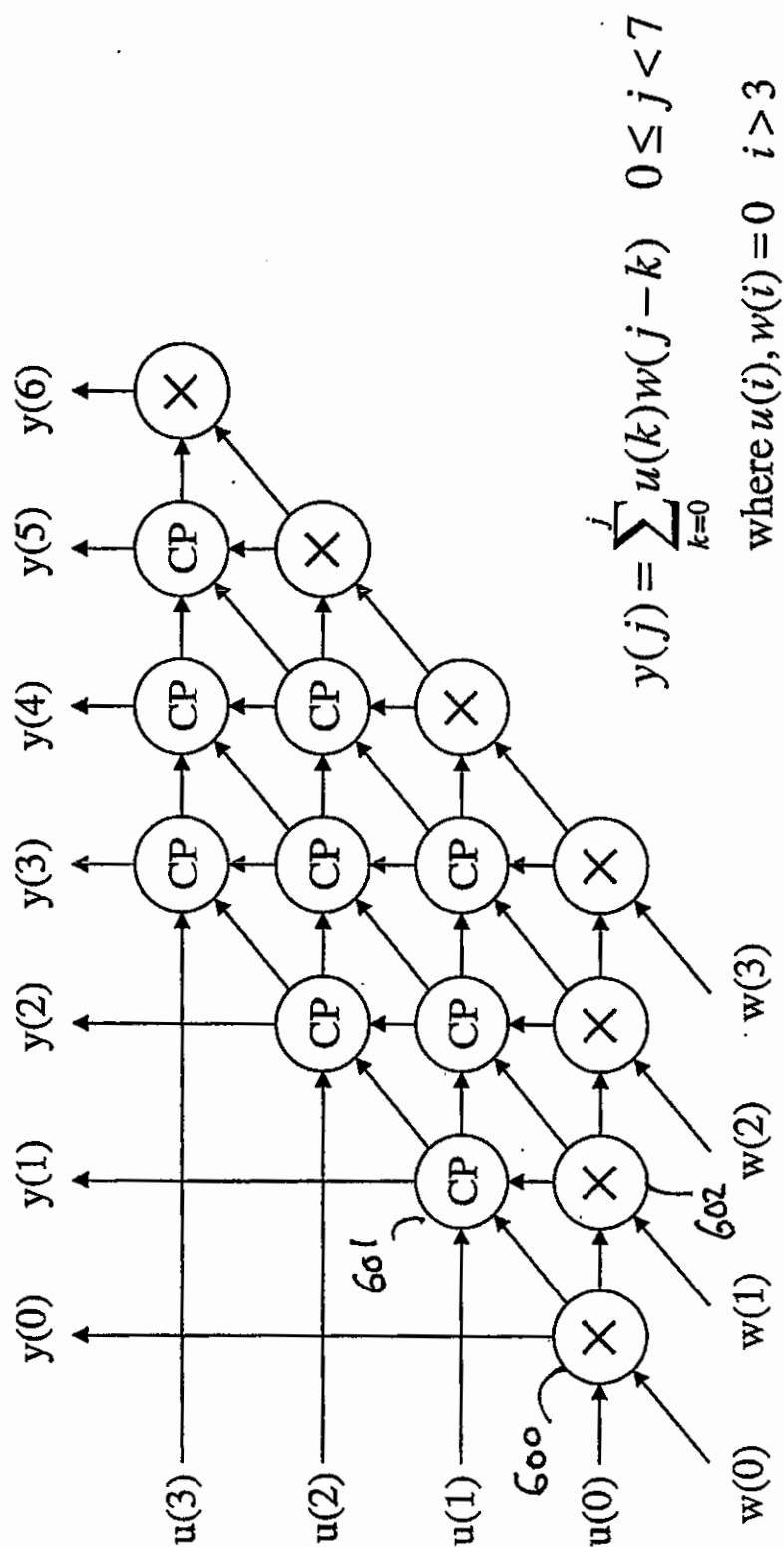


FIG- 35