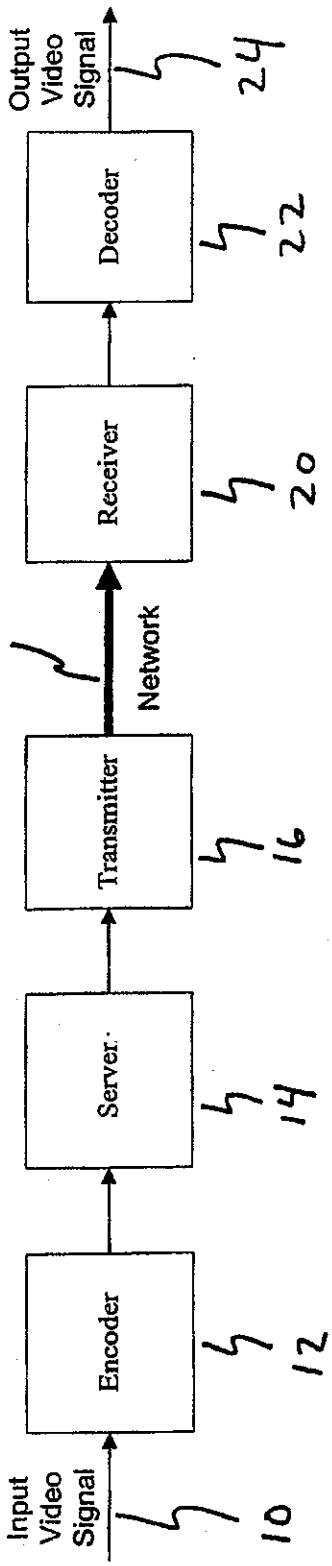

Input Video Signal
10
Encoder
12
Server
14
Transmitter
16
18
Network
Receiver
20
Decoder
22
Output Video Signal
24

Fig. 1

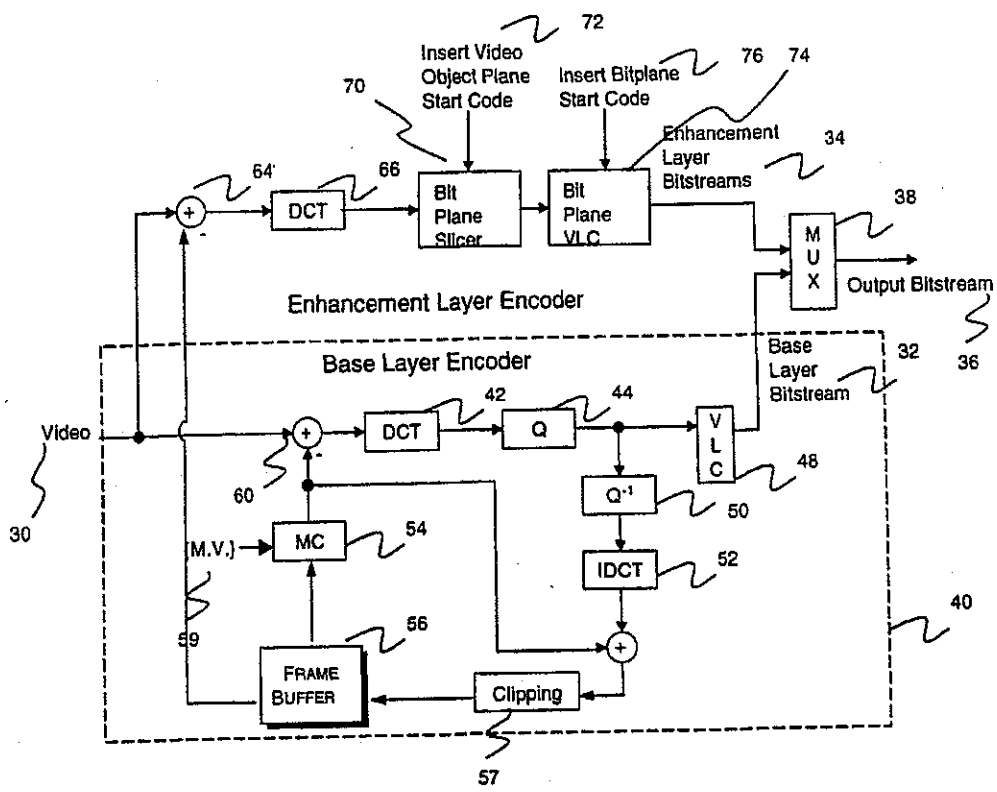

72
Insert Video Object Plane Start Code
70
Insert Bitplane Start Code
76
74
Enhancement Layer Bitstreams
34
64'
66
DCT
Bit Plane Slicer
Bit Plane VLC
38
M U X
Output Bitstream
36
Enhancement Layer Encoder
Base Layer Encoder
Base Layer Bitstream
32
Video
30
42
DCT
44
Q
V L C
48
60
Q-1
50
(M.V.)
MC
54
IDCT
52
40
59
56
FRAME BUFFER
Clipping
57

FIG. 2

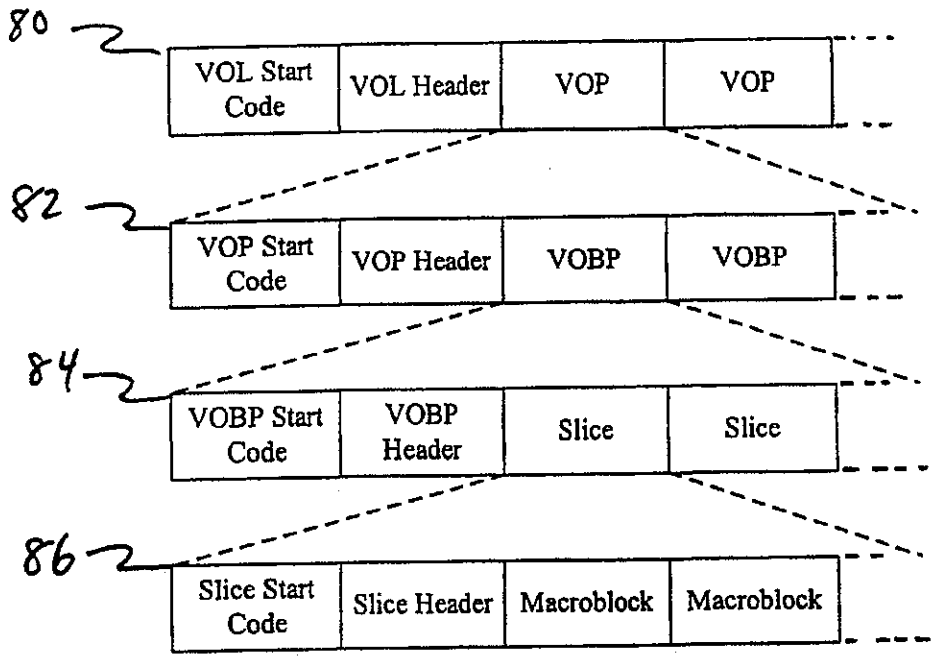

80
VOL Start Code
VOL Header
VOP
VOP
82
VOP Start Code
VOP Header
VOBP
VOBP
84
VOBP Start Code
VOBP Header
Slice
Slice
86
Slice Start Code
Slice Header
Macroblock
Macroblock

Fig. 3

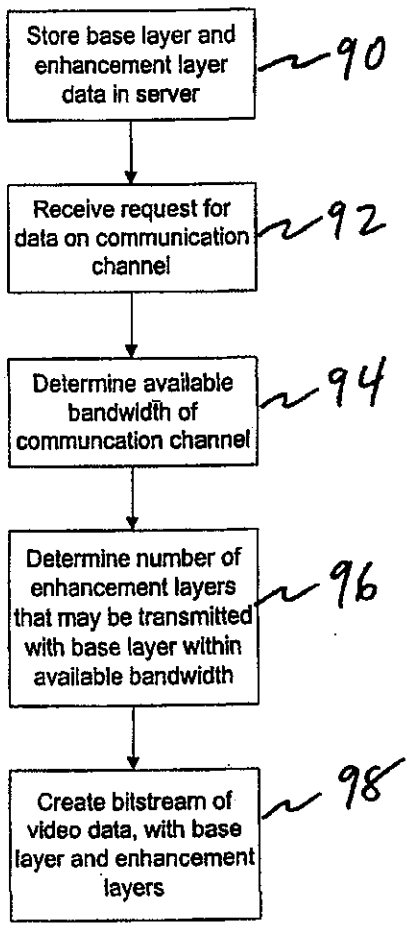

Store base layer and enhancement layer data in server
90
Receive request for data on communication channel
92
Determine available bandwidth of communcation channel
94
Determine number of enhancement layers that may be transmitted with base layer within available bandwidth
96
Create bitstream of video data, with base layer and enhancement layers
98

Fig. 4

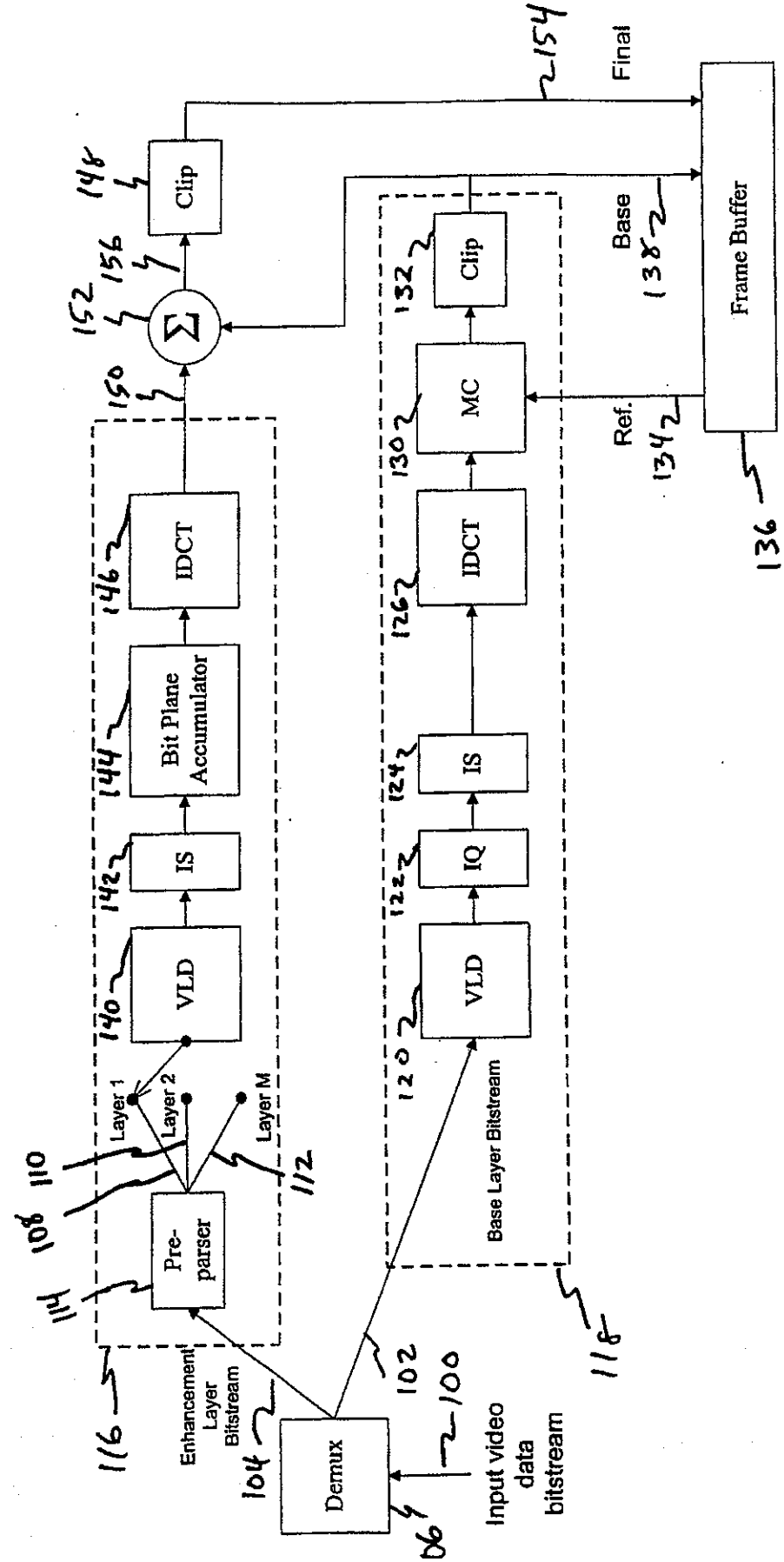

Input video data bitstream
Demux
Pre-parser
Enhancement Layer Bitstream
Base Layer Bitstream
Layer 1
Layer 2
Layer M
VLD
IS
Bit Plane Accumulator
IDCT
VLD
IQ
IS
IDCT
MC
Clip
Clip
Frame Buffer
Base
Ref.
Final
Σ

Fig. 5

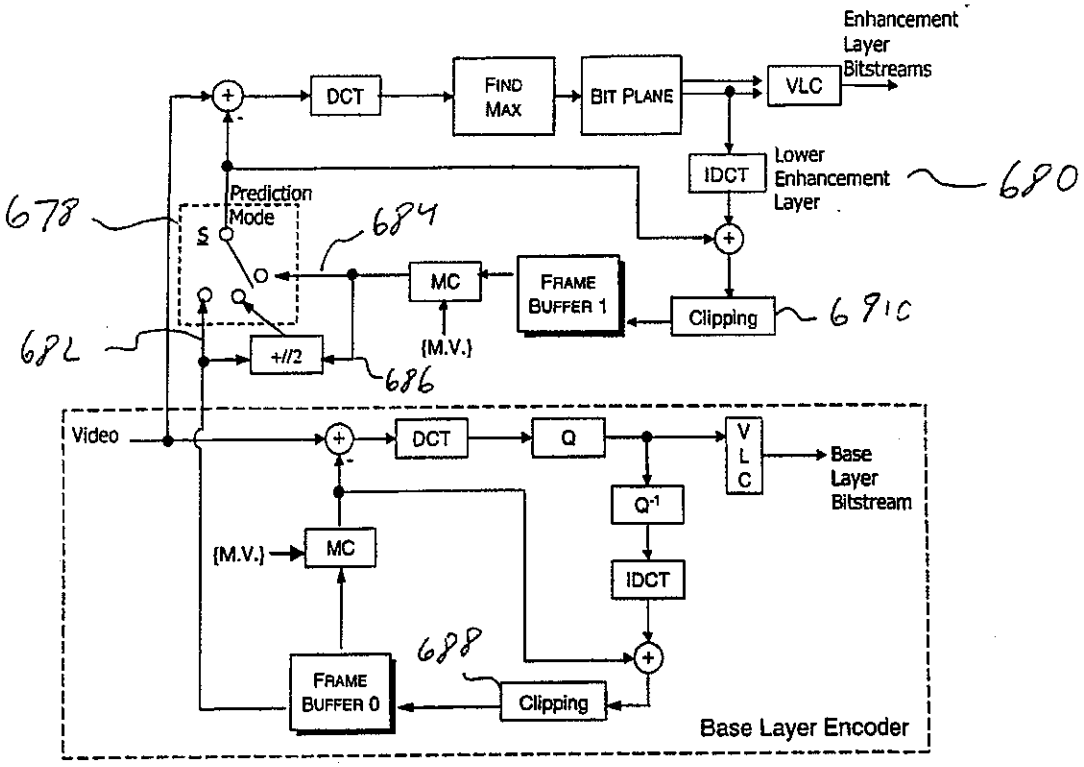

Enhancement Layer Bitstreams
DCT
FIND MAX
BIT PLANE
VLC
IDCT
Lower Enhancement Layer
680
678
Prediction Mode
684
MC
FRAME BUFFER 1
Clipping
691C
682
+//2
686
{M.V.}
Video
DCT
Q
V L C
Base Layer Bitstream
Q-1
IDCT
{M.V.}
MC
688
FRAME BUFFER 0
Clipping
Base Layer Encoder

Fig. 6

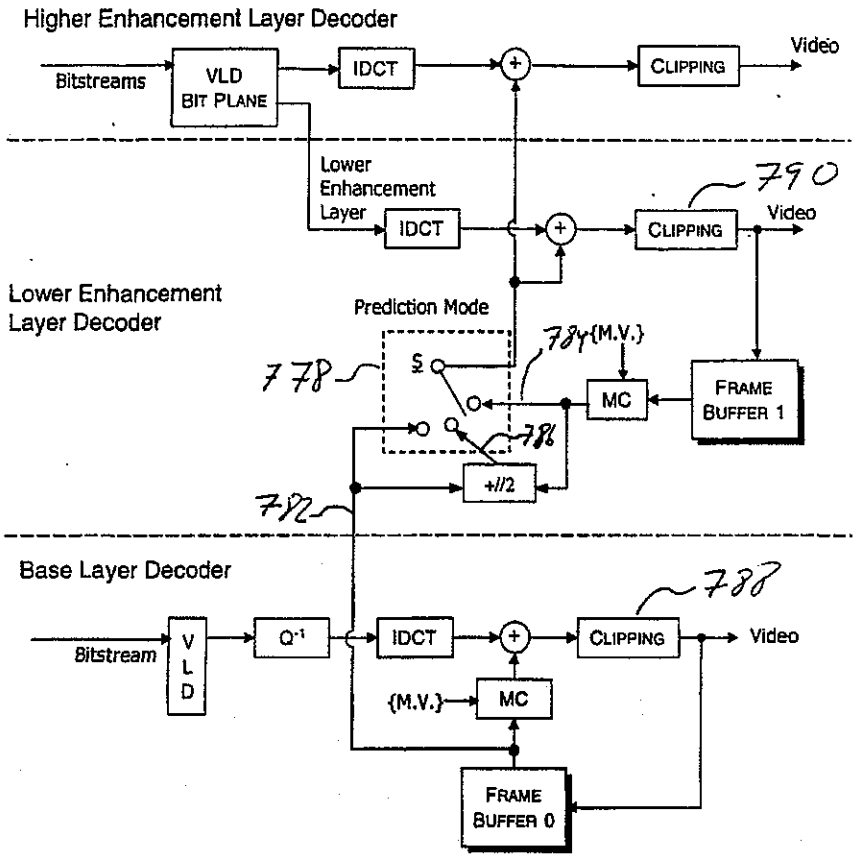

Higher Enhancement Layer Decoder
Bitstreams
VLD BIT PLANE
IDCT
CLIPPING
Video
Lower Enhancement Layer
IDCT
790
CLIPPING
Video
Lower Enhancement Layer Decoder
Prediction Mode
778
784{M.V.}
MC
FRAME BUFFER 1
782
+//2
Base Layer Decoder
788
Bitstream
VLD
Q-1
IDCT
CLIPPING
Video
{M.V.}
MC
FRAME BUFFER 0

Fig. 7