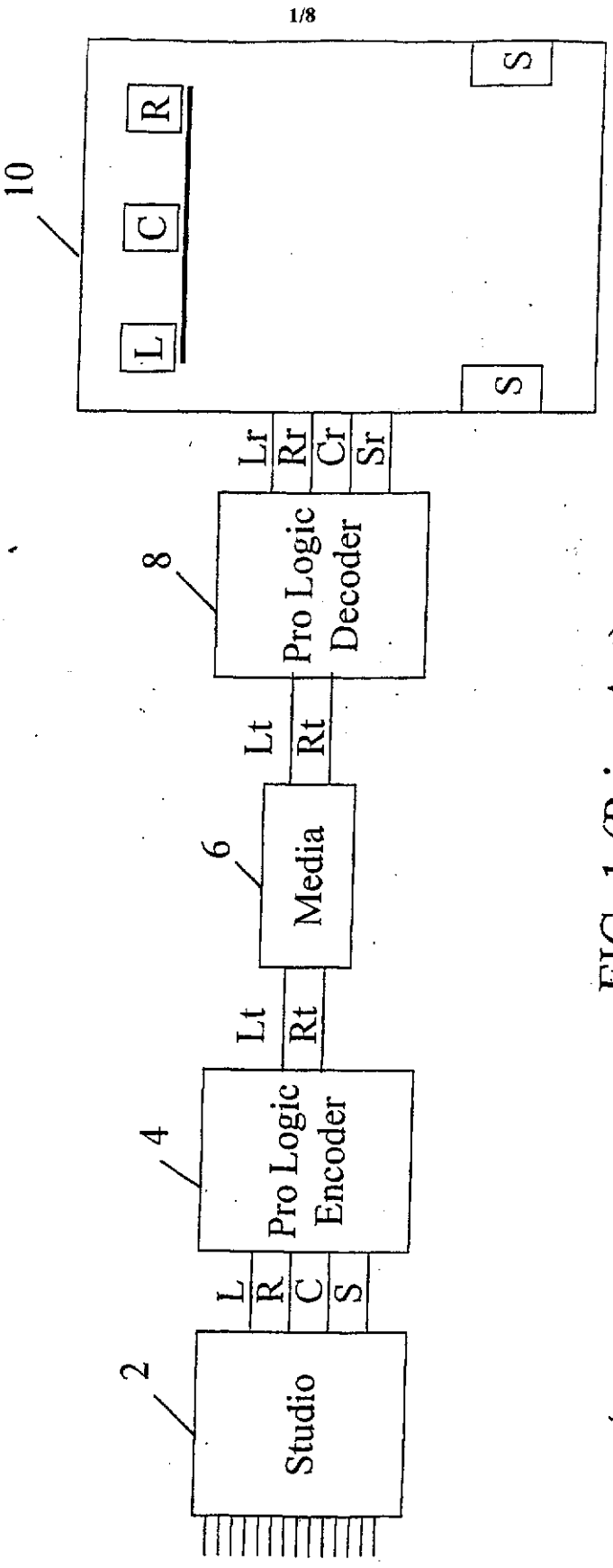


FIG. 1 (Prior Art)

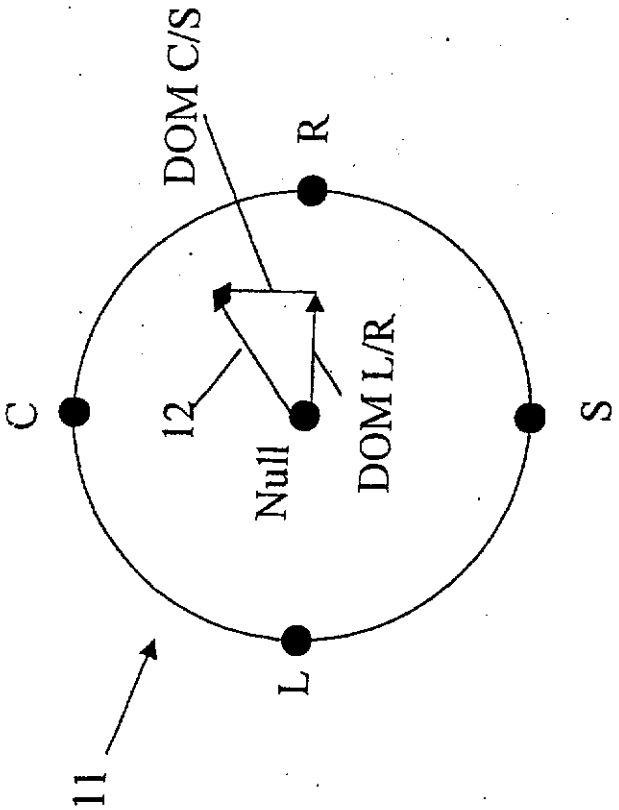


FIG. 2 (Prior Art)

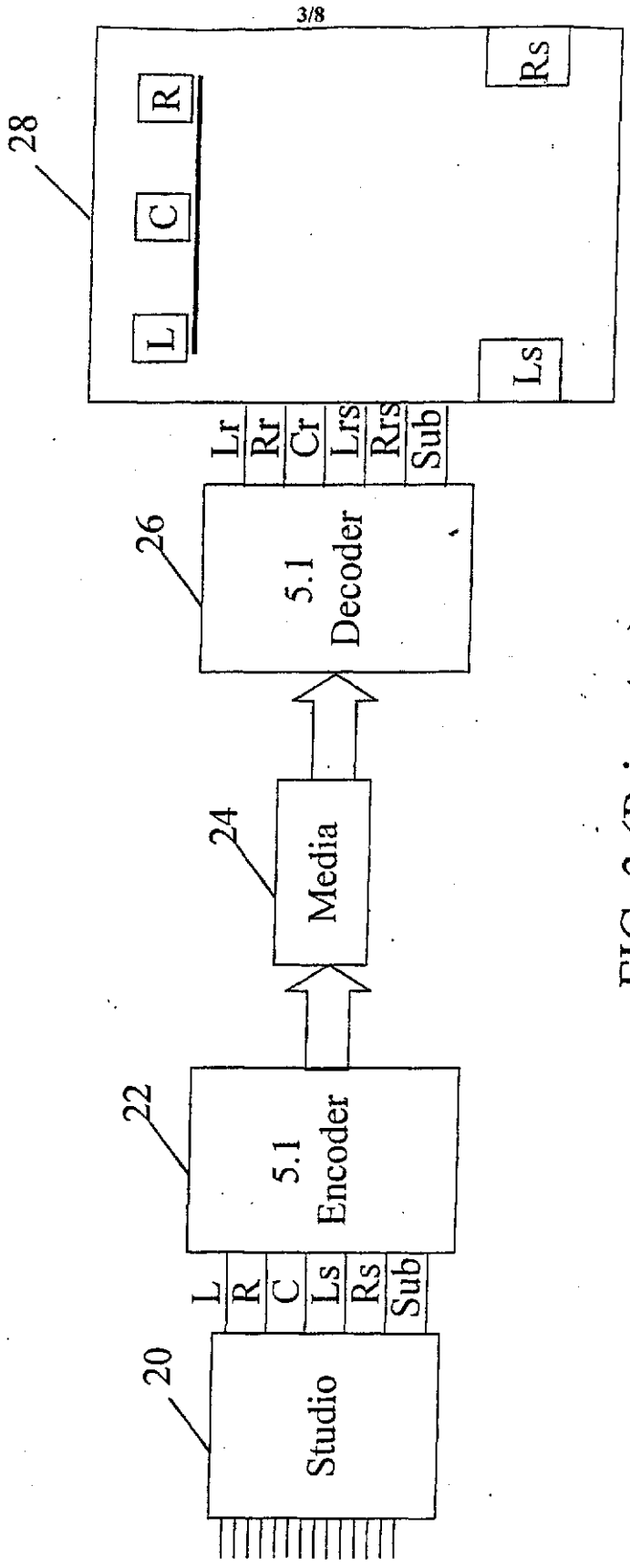


FIG. 3 (Prior Art)

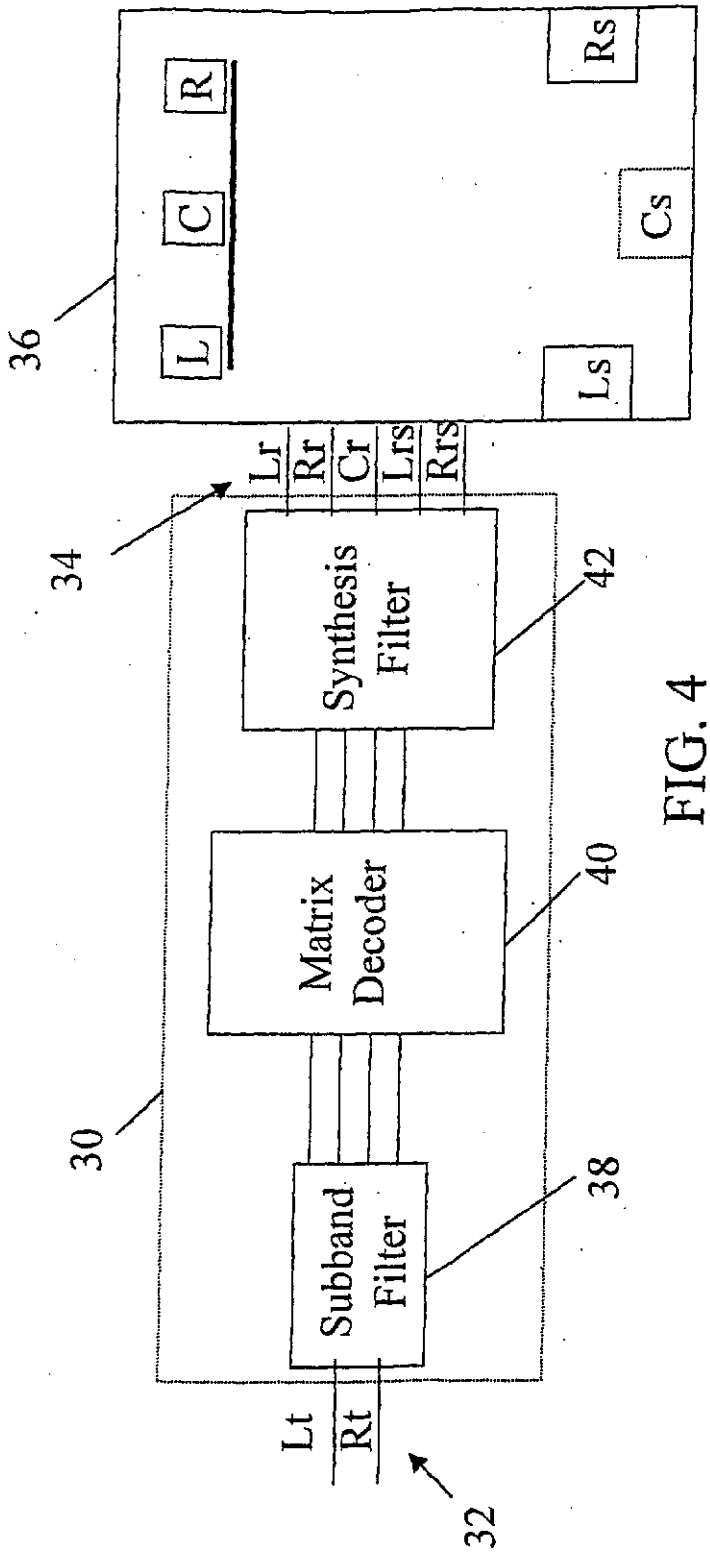

36
L
C
R
Ls
Cs
Rs
Lr
Rr
Cr
Lrs
Rrs
34
Synthesis Filter
42
Matrix Decoder
40
30
Subband Filter
38
Lt
Rt
32

FIG. 4

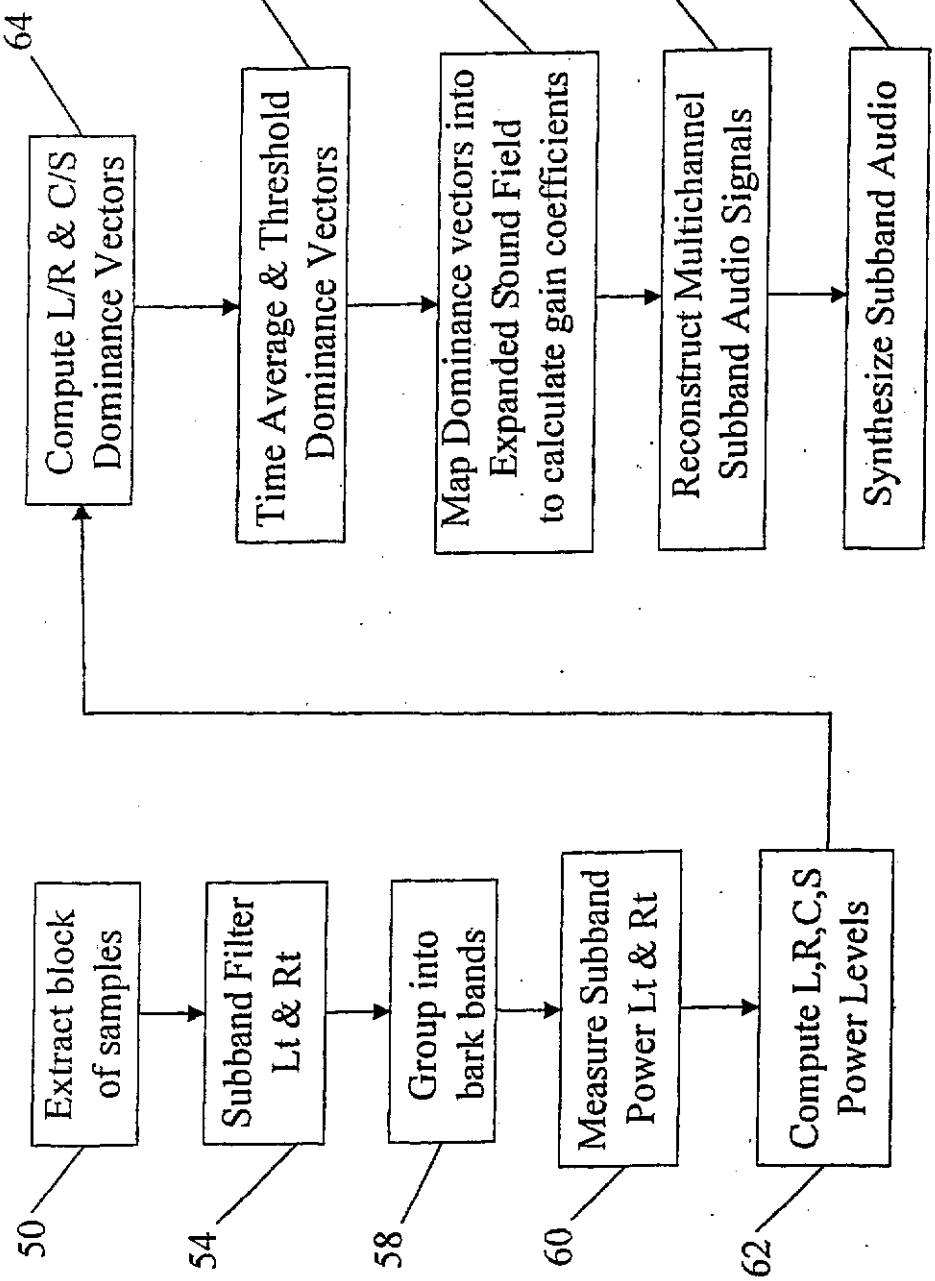

Extract block of samples
Subband Filter Lt & Rt
Group into bark bands
Measure Subband Power Lt & Rt
Compute L,R,C,S Power Levels
Compute L/R & C/S Dominance Vectors
Time Average & Threshold Dominance Vectors
Map Dominance vectors into Expanded Sound Field to calculate gain coefficients
Reconstruct Multichannel Subband Audio Signals
Synthesize Subband Audio
50
54
58
60
62
64
66
70
74
78

FIG. 5

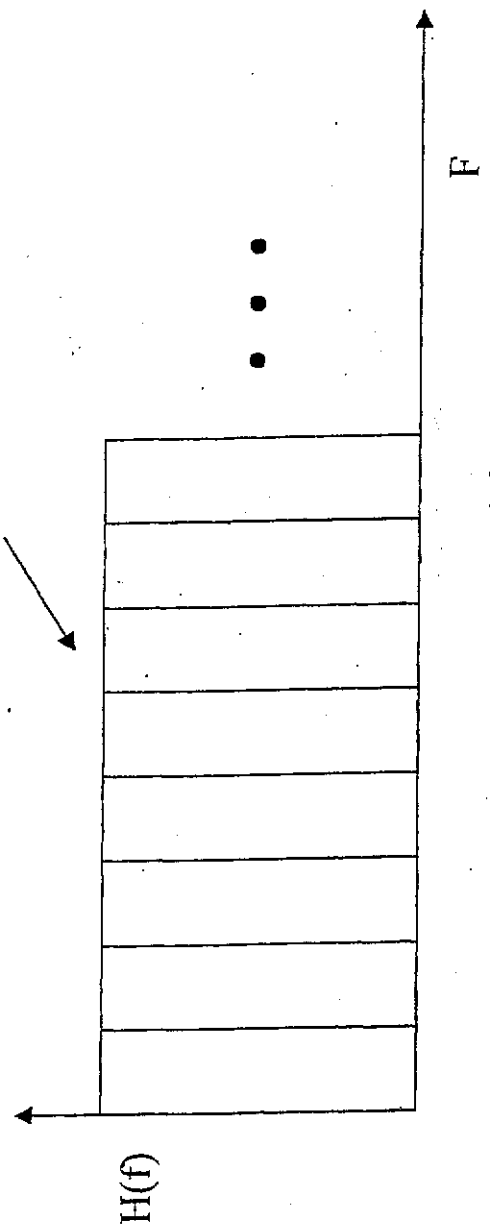


FIG. 6a

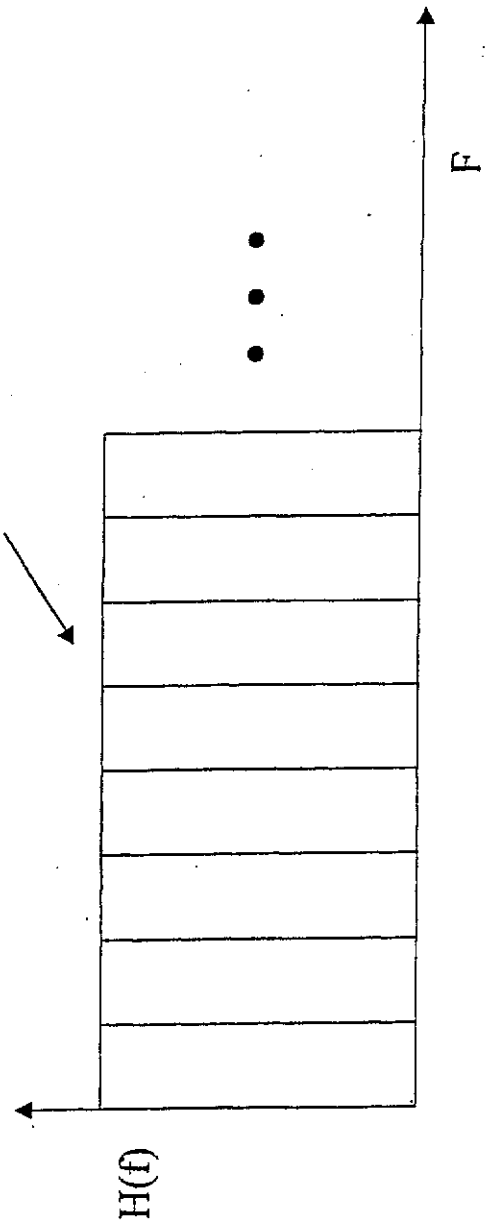


FIG. 6b

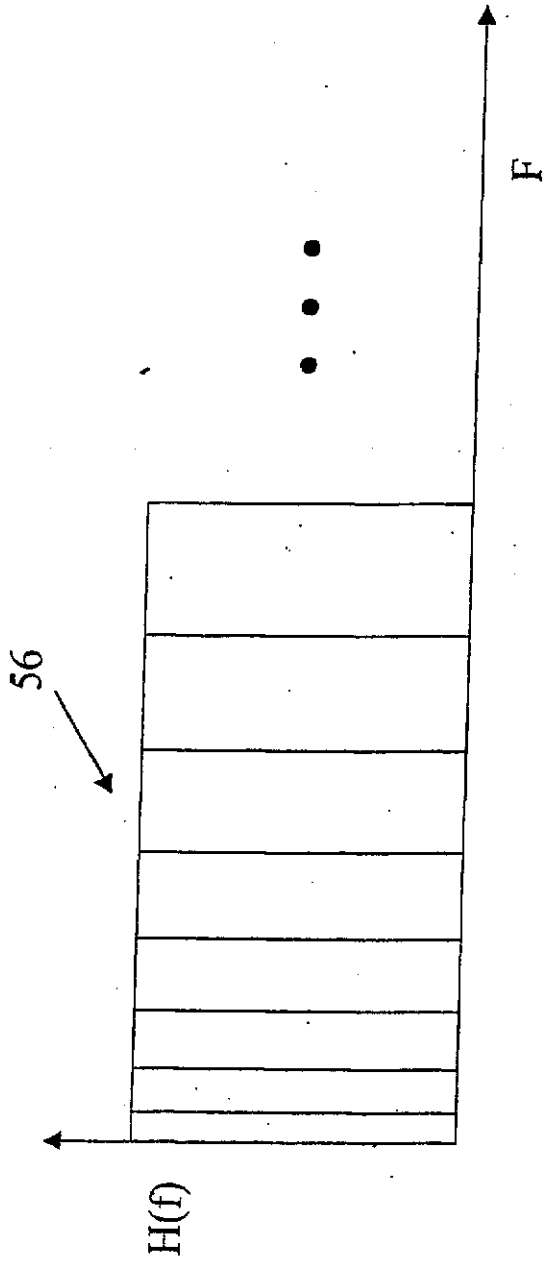


FIG. 7

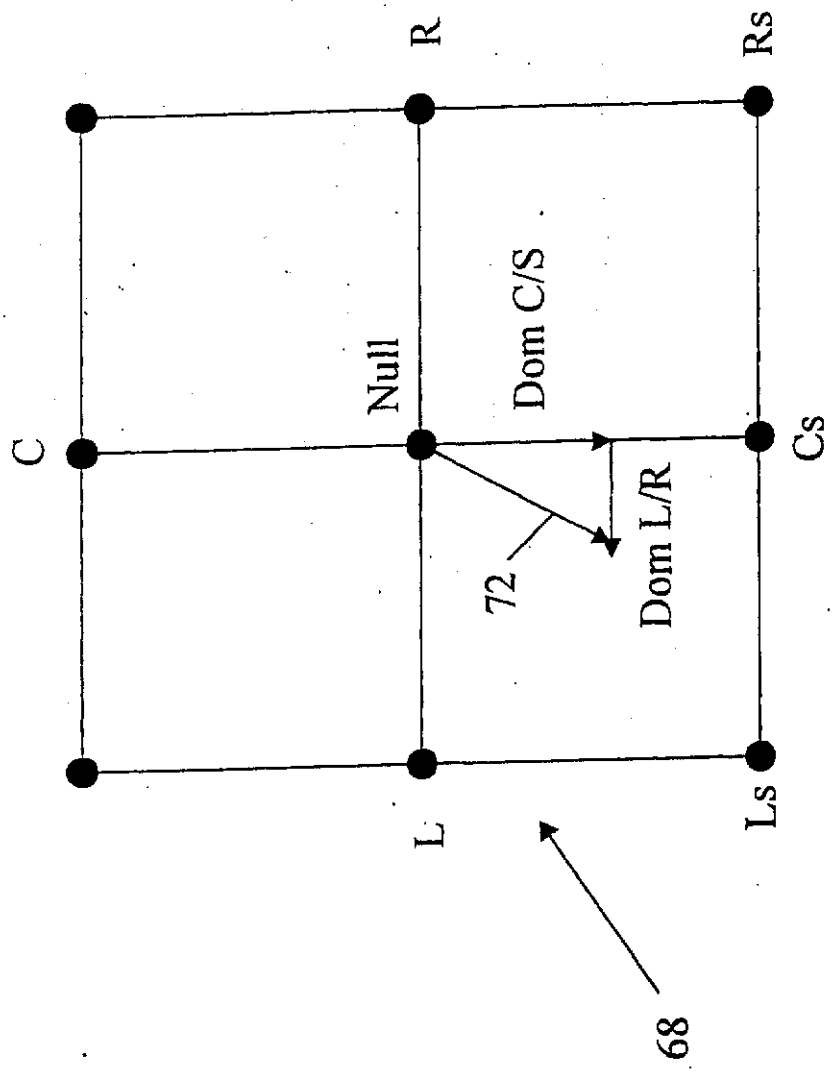


FIG. 8