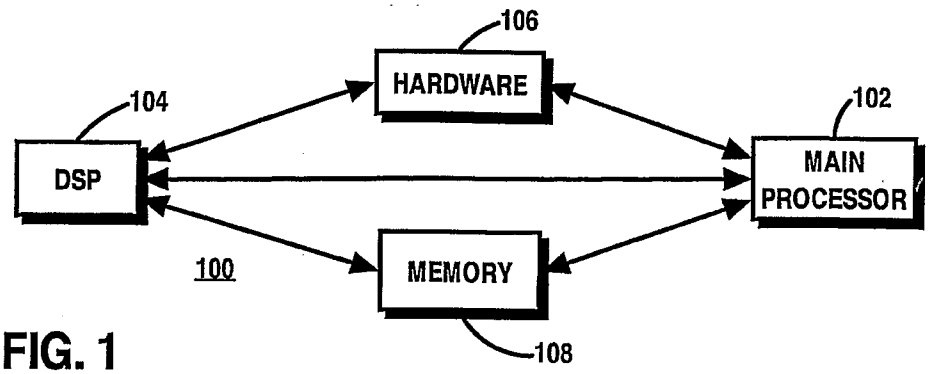

106
HARDWARE
104
102
DSP
MAIN PROCESSOR
100
MEMORY
108

FIG. 1

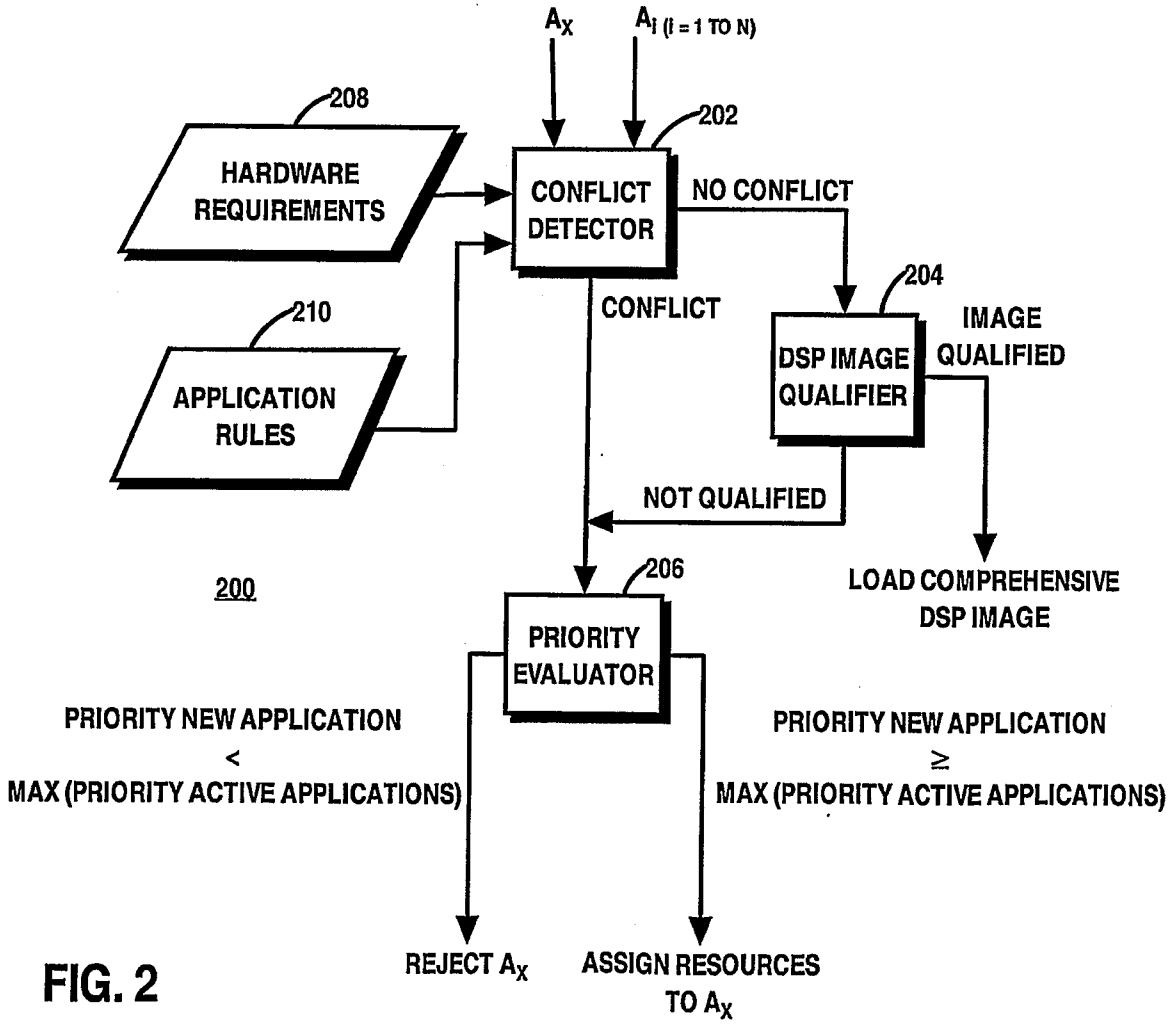

A_X
$A_{I\ (I = 1\ TO\ N)}$
208
202
HARDWARE REQUIREMENTS
CONFLICT DETECTOR
NO CONFLICT
204
CONFLICT
IMAGE QUALIFIED
210
DSP IMAGE QUALIFIER
APPLICATION RULES
NOT QUALIFIED
200
206
LOAD COMPREHENSIVE DSP IMAGE
PRIORITY EVALUATOR
PRIORITY NEW APPLICATION < MAX (PRIORITY ACTIVE APPLICATIONS)
PRIORITY NEW APPLICATION ≥ MAX (PRIORITY ACTIVE APPLICATIONS)
REJECT A_X
ASSIGN RESOURCES TO A_X

FIG. 2

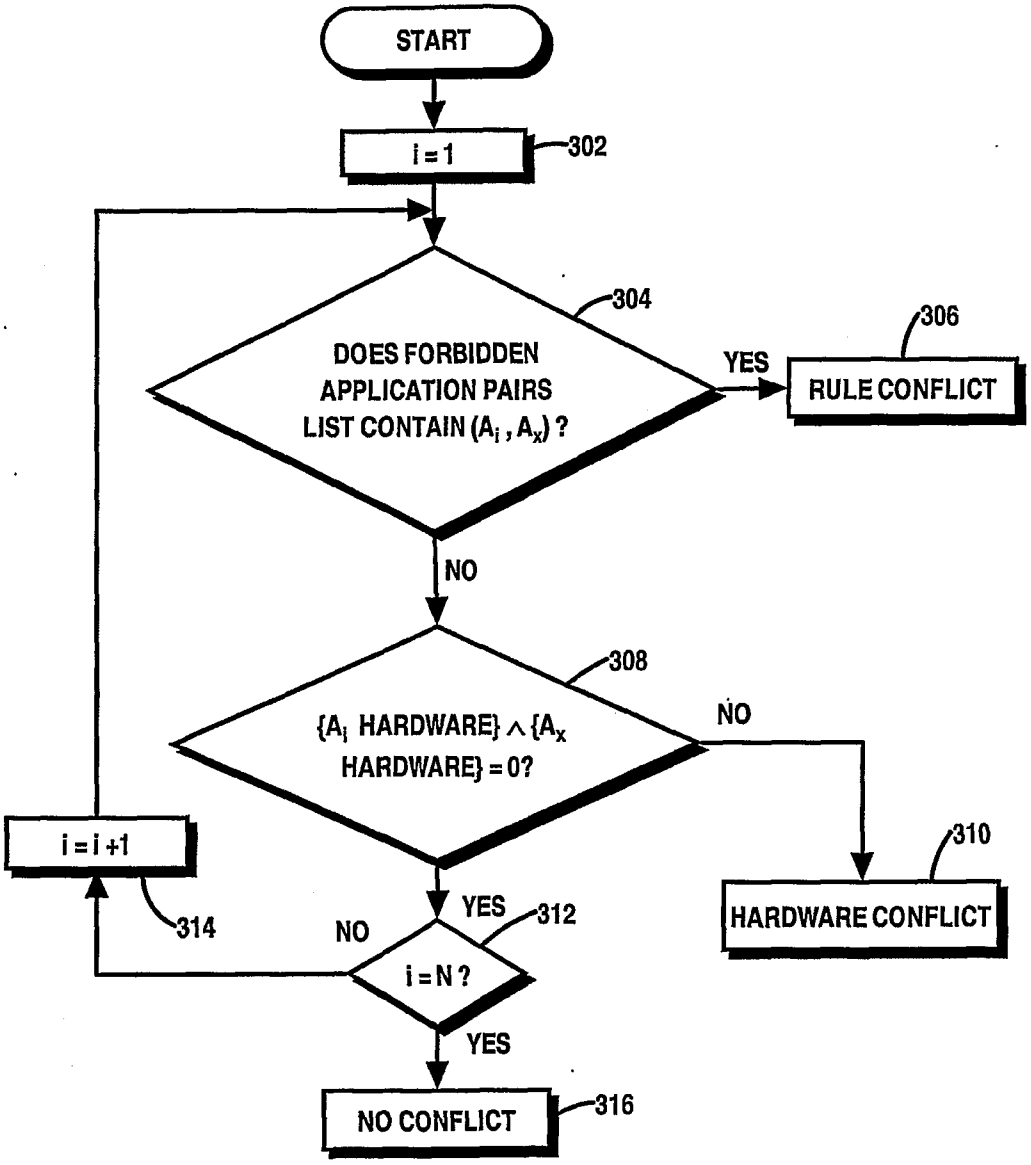

START
i = 1
302
304
DOES FORBIDDEN APPLICATION PAIRS LIST CONTAIN (A_i , A_x) ?
YES
306
RULE CONFLICT
NO
308
{A_i HARDWARE} ∧ {A_x HARDWARE} = 0?
NO
310
HARDWARE CONFLICT
i = i +1
314
YES
312
NO
i = N ?
YES
NO CONFLICT
316

FIG. 3

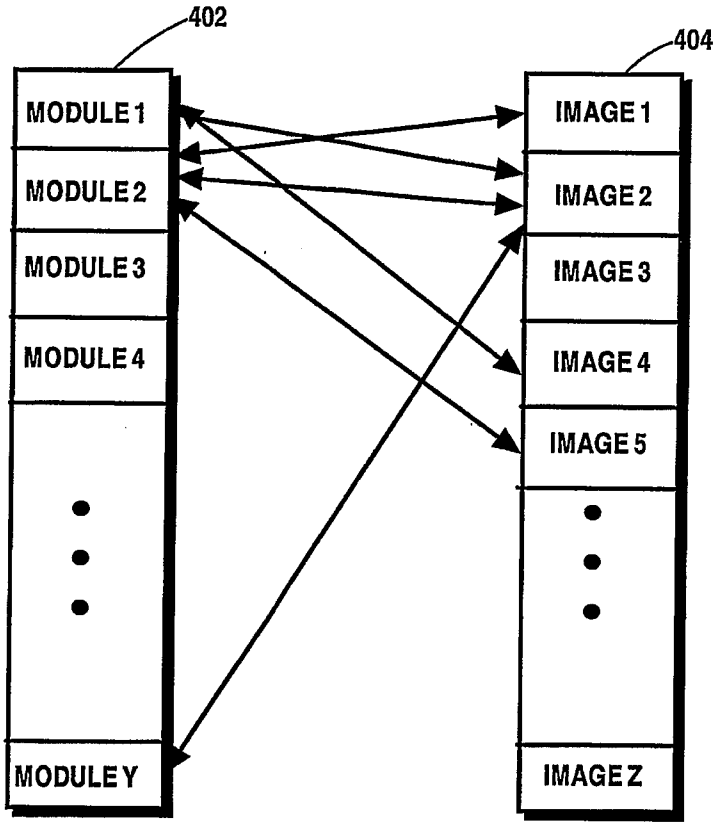

402
404
MODULE 1
MODULE 2
MODULE 3
MODULE 4
MODULE Y
IMAGE 1
IMAGE 2
IMAGE 3
IMAGE 4
IMAGE 5
IMAGE Z
400

FIG. 4

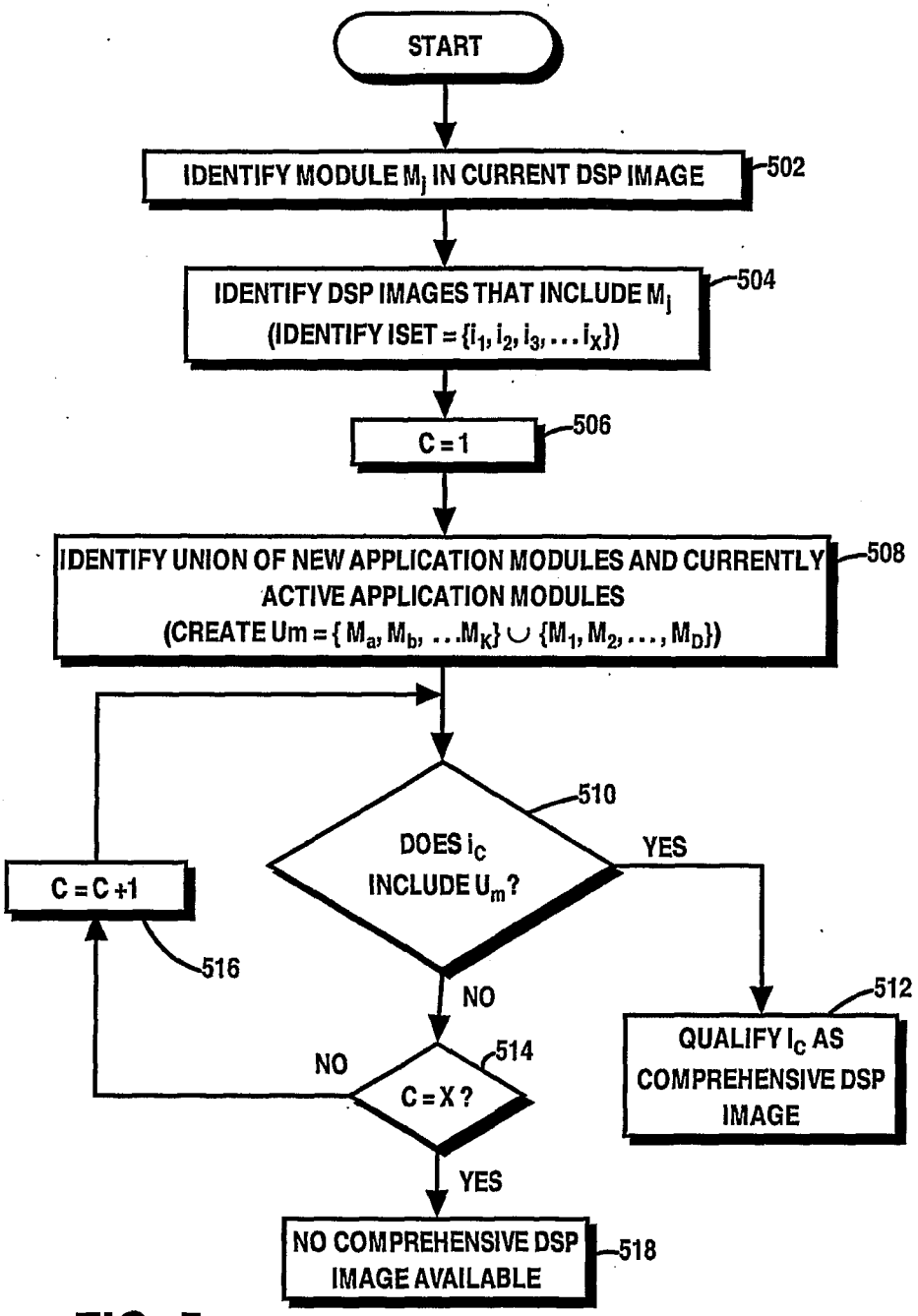

START
IDENTIFY MODULE M_j IN CURRENT DSP IMAGE
502
IDENTIFY DSP IMAGES THAT INCLUDE M_j
(IDENTIFY ISET = $\{i_1, i_2, i_3, \ldots i_X\}$)
504
C = 1
506
IDENTIFY UNION OF NEW APPLICATION MODULES AND CURRENTLY ACTIVE APPLICATION MODULES
(CREATE Um = $\{M_a, M_b, \ldots M_K\} \cup \{M_1, M_2, \ldots, M_D\}$)
508
DOES i_C INCLUDE U_m?
510
YES
NO
C = C +1
516
C = X ?
514
NO
YES
QUALIFY I_C AS COMPREHENSIVE DSP IMAGE
512
NO COMPREHENSIVE DSP IMAGE AVAILABLE
518

FIG. 5