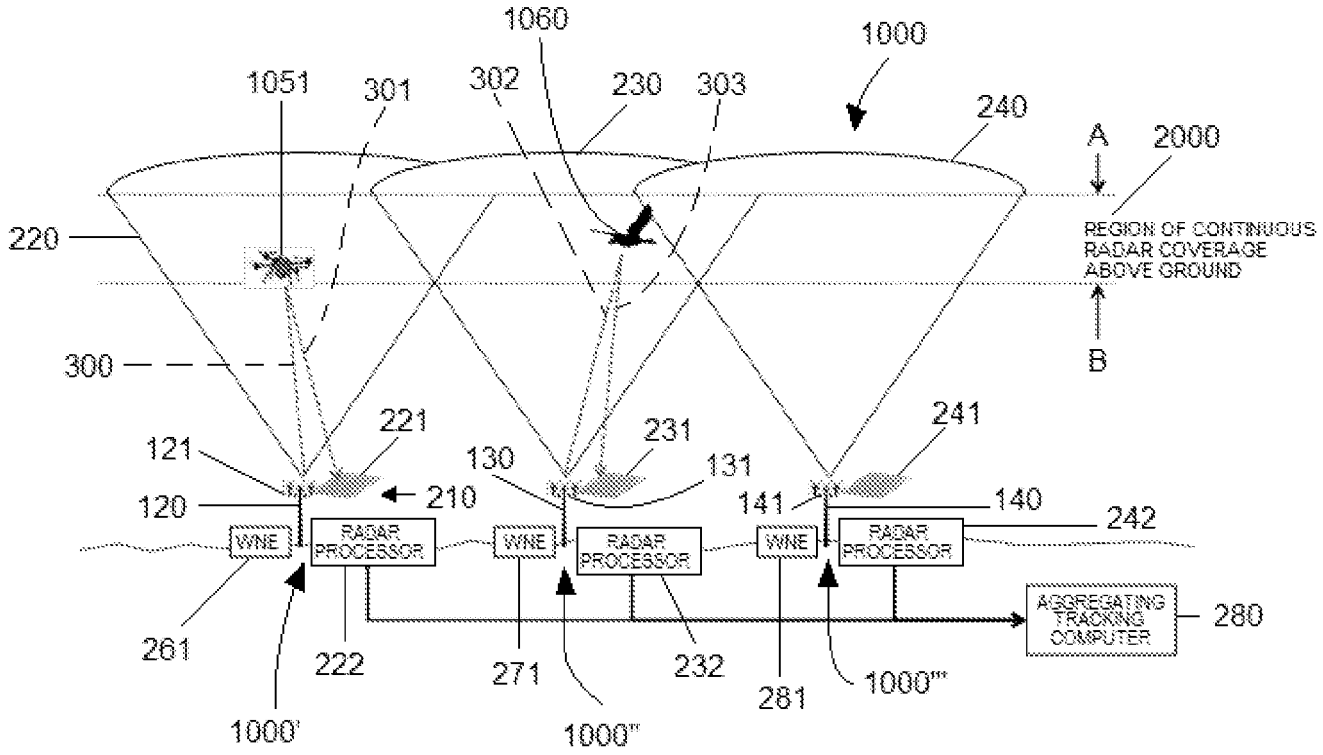

1060
1000
1051
301
302
230
303
240
A
2000
220
REGION OF CONTINUOUS RADAR COVERAGE ABOVE GROUND
B
300
221
231
241
121
130
131
120
210
141
140
242
WNE
RADAR PROCESSOR
WNE
RADAR PROCESSOR
WNE
RADAR PROCESSOR
AGGREGATING TRACKING COMPUTER
280
261
222
271
232
281
1000''''
1000'
1000''

FIG. 1

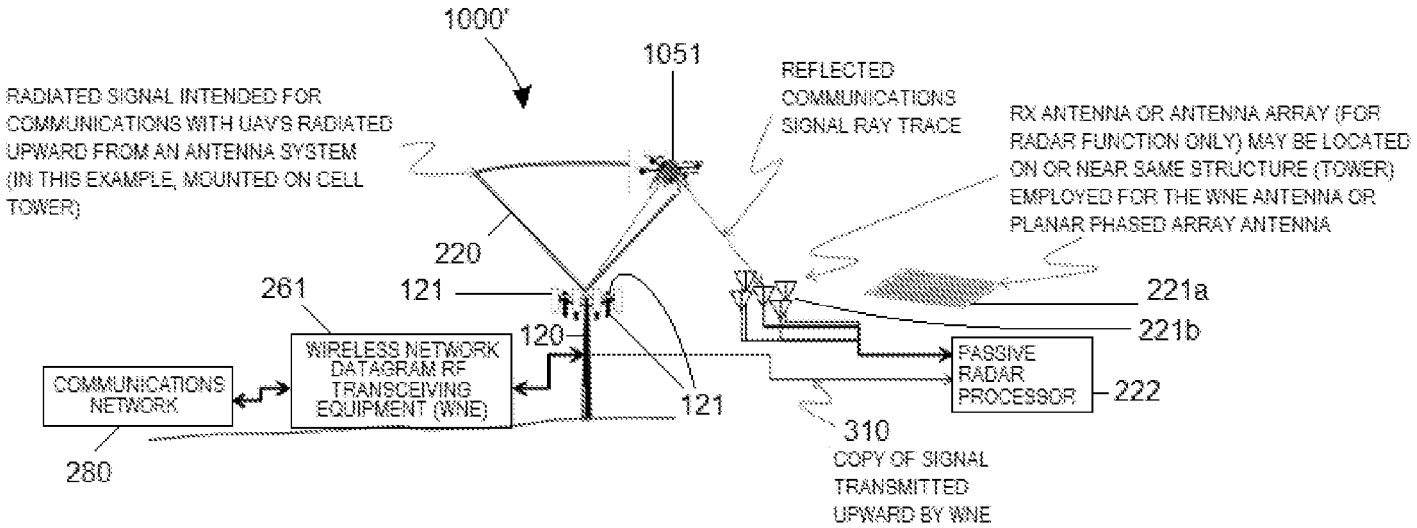

1000'
1051
RADIATED SIGNAL INTENDED FOR COMMUNICATIONS WITH UAVS RADIATED UPWARD FROM AN ANTENNA SYSTEM (IN THIS EXAMPLE, MOUNTED ON CELL TOWER)
REFLECTED COMMUNICATIONS SIGNAL RAY TRACE
RX ANTENNA OR ANTENNA ARRAY (FOR RADAR FUNCTION ONLY) MAY BE LOCATED ON OR NEAR SAME STRUCTURE (TOWER) EMPLOYED FOR THE WNE ANTENNA OR PLANAR PHASED ARRAY ANTENNA
220
261
121
221a
221b
120
WIRELESS NETWORK DATAGRAM RF TRANSCEIVING EQUIPMENT (WNE)
PASSIVE RADAR PROCESSOR
222
COMMUNICATIONS NETWORK
121
310
280
COPY OF SIGNAL TRANSMITTED UPWARD BY WNE

FIG. 2

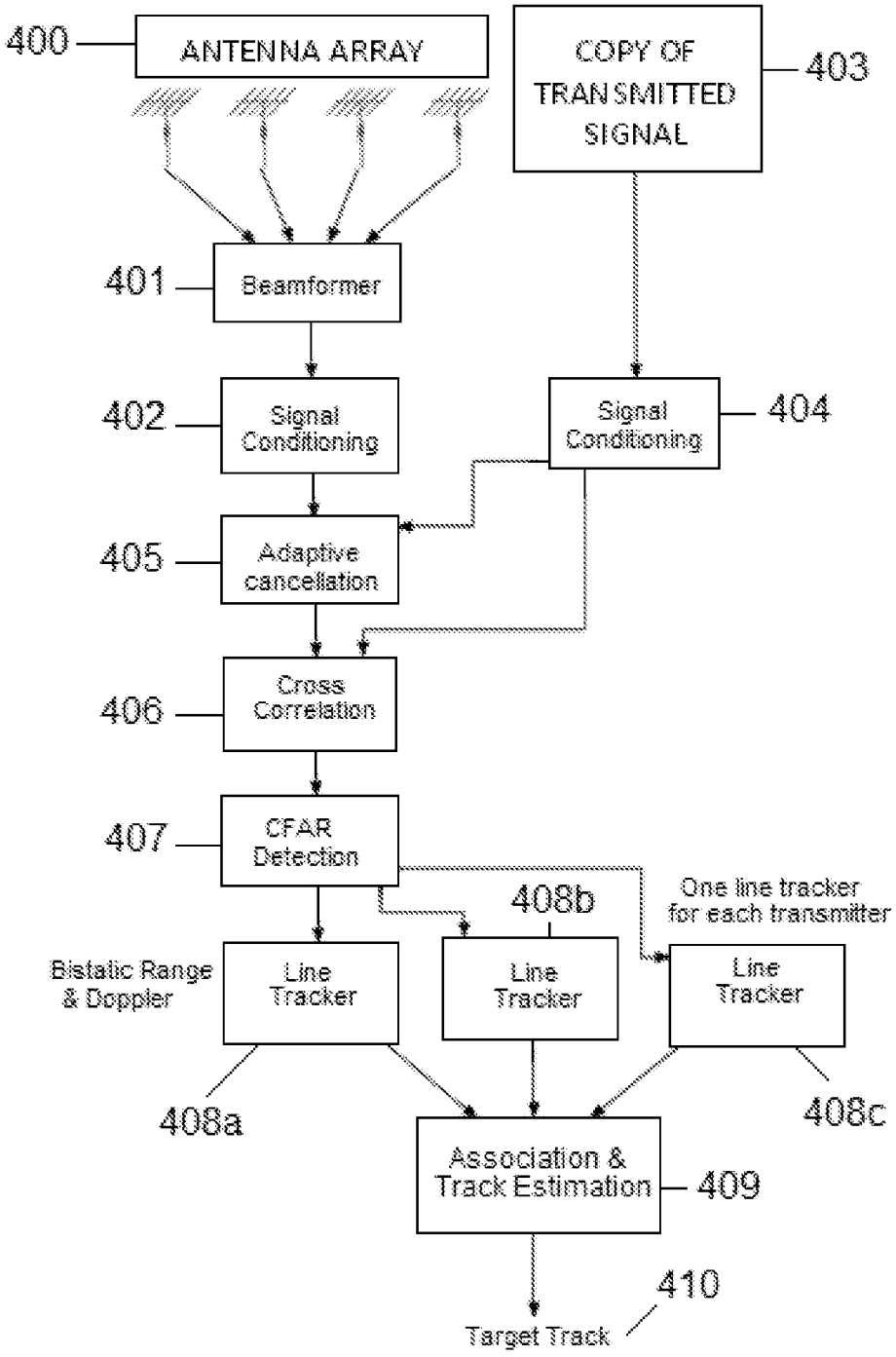

400
ANTENNA ARRAY
COPY OF TRANSMITTED SIGNAL
403
401
Beamformer
402
Signal Conditioning
Signal Conditioning
404
405
Adaptive cancellation
406
Cross Correlation
407
CFAR Detection
408b
One line tracker for each transmitter
Bistatic Range & Doppler
Line Tracker
Line Tracker
Line Tracker
408a
408c
Association & Track Estimation
409
410
Target Track

FIG. 3