

Real-time triangulation method for active combat units



Real-Time Triangulation System for Active Combat Units

The real-time triangulation system consists of:

- A computer with specialized software, hardware, and built-in GSM modem and GPS.
- A long-range radio modem.
- Five to ten drones equipped with built-in GPS, specialized hardware, and software.

Operating Principle:

- The map of the operational area is loaded into the computer.
- Suitable positions for the drones are designated on the map, maintaining a distance of 500 to 3000 meters between them.



- The drones are controlled by specialized software that programs each drone with its designated route to reach its position.
- The drones autonomously reach their designated positions.
- Once in position, the drones transmit their actual coordinates to the computer's radio modem and remain in radio silence mode.
- Upon detecting a shot from an enemy weapon, the specialized hardware on each drone identifies the peak of the altered sound pressure. Each drone then sends to the modem the following data:
 - The peak sound pressure value.
 - The exact time of detection, accurate to microseconds.
 - The ambient temperature at the moment of detection.
- Using the known coordinates of each drone and the information received from them, the computer's specialized software calculates the coordinates of the shot's source.
- The source is marked on the map with its corresponding coordinates.

The accuracy of triangulation increases with the number of drones deployed.

Additional Features:

- Each drone can be equipped with an explosive charge that can be detonated by command from the controlling computer to self-destruct.
- Each drone can act as a radio microphone, listening to surrounding noises and sending alerts if unusual sounds are detected.



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