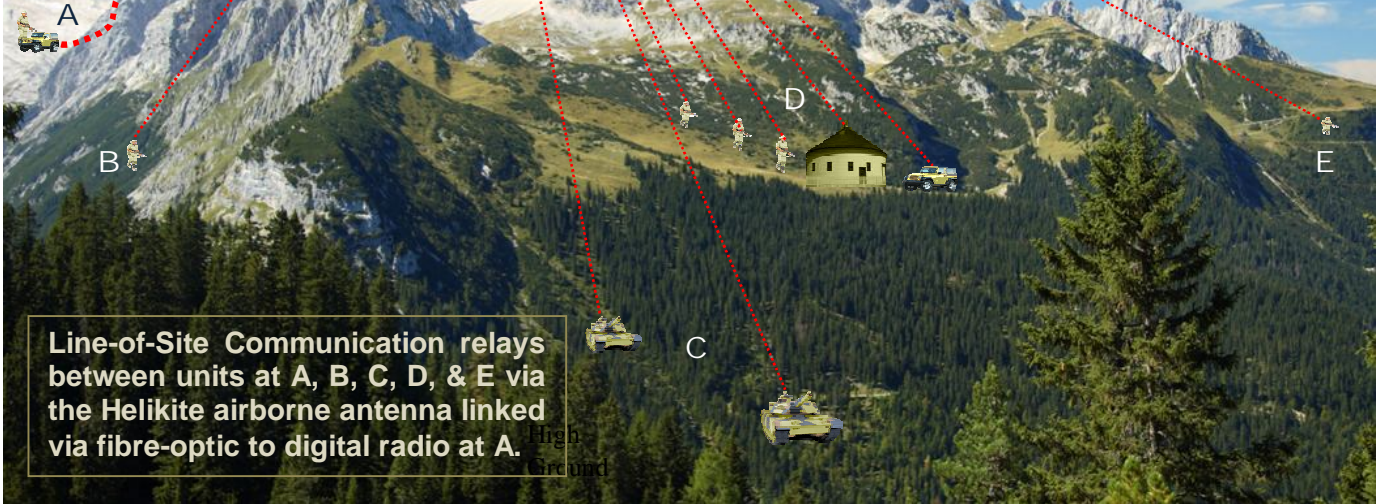


High altitude antenna fed by twin RF-Over-Fibre-Optic cable, lifted on low-visibility, or high-visibility, Helikite flying high above the range of small arms.

HIGH-ALTITUDE HELIKITE RF-OVER-FIBRE DATA RELAY

Winch plus fibre-optic cable leads to ground station.



Airborne component of PPM RF-Over-Fibre radio-relay system.
Weight = 350g (with carbon-fibre backplate)



HELIKITE HIGH-ALTITUDE RF-OVER-FIBRE DATA RELAY

RELIABLE

Helikites are more reliable over long periods of time than other aerostats, blimps, UAV's or manned aircraft.

SURVIVABLE

At operating altitude small, translucent Helikites" are very difficult to target. The flying line is very thin and hard to see. The Helikite winch can be left hidden and unattended for extended periods.

Helikites can operate anywhere on land or sea.

SECURE

No encrypted or sensitive equipment is lifted on the Helikite when using RF-Over-Fibre technology.

Reduced personnel requirement increases security.

SIMPLE AND LOW COST

Helikites are very quick and easy to deploy. Minimal training.

Helikites can fly unattended for weeks.

The cost per square mile of radio coverage is very low compared to other relay systems.

INDEPENDENT

No need to wait for Air Force co-operation, UAV pilot training or satellite availability. Simply release a Helikite for instant radio-relay. No necessity to involve any personnel from other units.

UNLIMITED BANDWIDTH AND FINE RECEPTION

Bandwidth increases organically. Extra Helikites give more bandwidth.

Helikites are electronically silent, so even long-distance or weak signals are very clear.

Line-of-Site allows for low transmission power requirements, thus saving power.

COTS

Both the Helikite™ and PPM ViaLite™ RF-Over-Fibre components are based on COTS equipment.

HELIKITE DATA LINK REQUIREMENTS

12ft long, 11cubic metre Allsopp Helikites Ltd Stealth Helikite

1 x Small Hand Winch plus Spectra line.

4 x 2 ft tall helium bottles weighing 13 kg each.

1 x Occasional use of all-terrain vehicle and one person.

1 x PPM Vialite™ RF-Over-Fibre system plus 4mm diameter twin-fibre cable of the desired length.

HELIKITE DESIGN - ADVANCED HIGH-ALTITUDE, TETHERED AEROSTAT

POWERFUL

Harnessing both the reliable lift of helium and the considerable power of wind, the Helikite has excellent payload performance. Many times the load bearing ability of similar sized blimps.

STABLE

Even the smallest Helikites fly well in high winds. Stability is ensured by the aerodynamic design, the stiff carbon-fibre spar and the relatively high gas pressure.

HIGH ALTITUDE

Helikite fly at high altitude. They get pushed up by both gravity and wind. Tether weight and drag is very low. All Helikites will fly to thousands of feet.

EXTREME ENDURANCE

Helikites designed to fly unattended for extreme lengths of time in both fair and foul weather. Helikites are essentially aerial in habit and with their excellent helium holding ability they have endurance measured in weeks rather than hours.

Theory of Helikite Flight

