

6.2 Conformal Antennas – Titan/OSU



OBJECTIVES:

- Provide flexible, reasonable cost, low-observable apertures for ground vehicles
- Develop low-cost, low visual profile broadband R/T antenna technology
- 30 – 512 MHz with reasonable gain and impedance match
- Provide easy upgrade to higher frequencies
- Terrestrial and satellite
- Produce breadboard prototypes for testing

TECHNICAL APPROACH:

- Apply advanced inductive backplane materials and antenna designs to deliver broadband performance
 - Artificial magnetic conductors for tunable backplane
 - Three-dimensionally textured dielectric backplanes—volumetric design technique
- Two efforts to be performed in this area
 - Increase chances for success
- Take advantage of earlier successes with UHF broadband designs

PAYOFF:

- Reduced visual signature
 - IR & RADAR?
- Co-site interference mitigation
- Easier integration of Joint Tactical Radio System (JTRS)

Tasks	FY03	FY04	FY05	FY06
Titan VHF/UHF Design	△		△	
Titan test, integrate, demo		△		△
OSU Design	△△	△△	△△	
OSU Test/lab demo		△△	△△	△△

PERFORMERS: Titan Corporation; Ohio State University

Transition: vehicle PMs; JTRS; CoNDOR