TACAN
Tactical Air Navigation

By Phil Dalton
TACAN (TACTICAL AIR NAVIGATION System)

- Accurate within one degree
- Provides continuous range and bearing
- 100 aircraft can receive range at one time
- No limit of aircraft receiving bearing information
- Signal sent to ground station
- Signal sent back to airplane
- TACAN equipment required (pricey!)
- TACAN measures distance in slant range
- Slant range = straight-line-of-sight

- Directly over the station DME measures height above ground
TACAN SLANT RANGE
TACAN DISPLAY
The Difference

Fig. 3.14. Plan of Tacan beacon aerial system.
TACAN RADIAL

315° (Radial)
FROM

135° (Reciprocal)
TO
Bearing FROM Station
Bearing TO Station

Station

Course

TO

Airplane
Summary

- TACAN provide Range and Radial/Bearing
- Using Send/Receive Timing for Range
- TACAN is accurate within one degree
Make sure you know what TACAN or VOR/DME you have tuned

Boom!

THE END
Works Cited

- DME diagram commons.wikimedia.org/wiki/File:DME_overfly.png
- main slide picture  http://www.radarpages.co.uk/mob/nav aids/tacan/tacan1.htm
- Tacan picture rightwing.sakura.ne.jp/.../tacan/tacan.html
- VOR display  http://en.wikipedia.org/wiki/VHF_omnidirectional_range
- VOR radials picture  http://www.rvs.uni-bielefeld.de/publications/Incidents/DOCS/Research/Rvs/Misc/Additional/Reports/navigation.html