

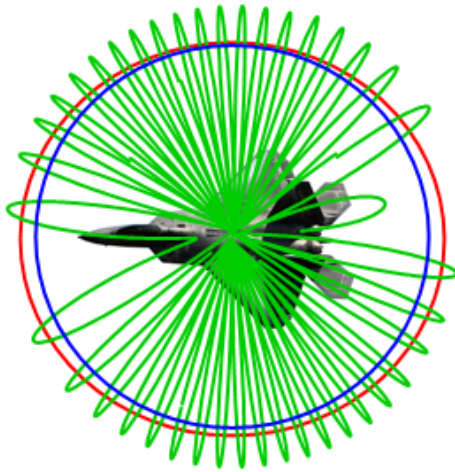
Reinventing
Telemetry™

QUASONIX

Adopted by the
Range Commander's
Council, IRIG 106-15,
Appendix S

SPACE TIME CODING (STC) SYSTEM

UPPER ■ LOWER ■ COMPOSITE ■

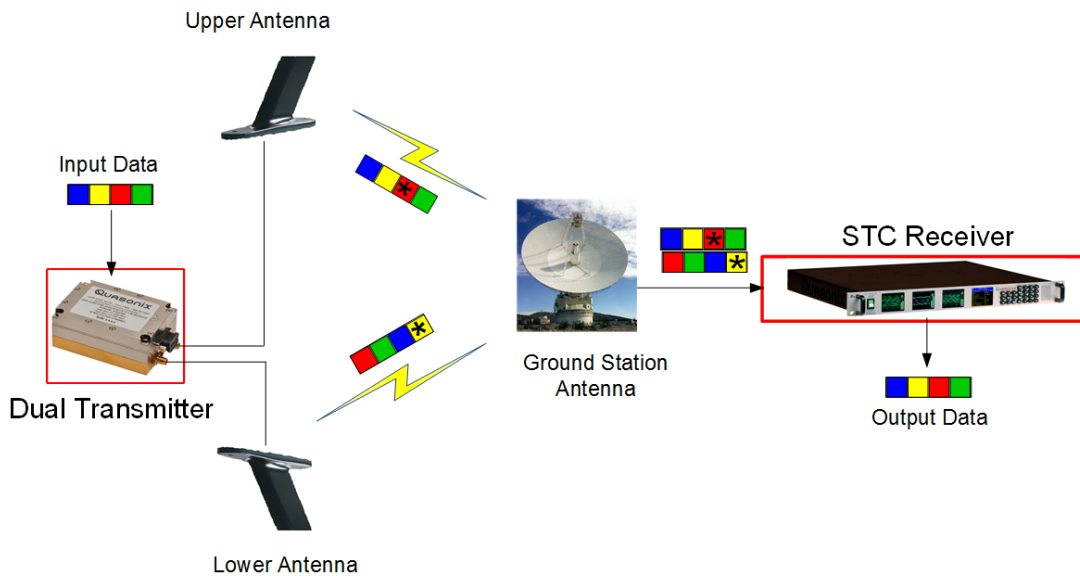


Without Space-Time Coding



With Space-Time Coding

Radiation Pattern with Dual Antennas



**Complete Telemetry System using a Quasonix Space Time Coded Transmitter and Receiver
With only 4% bandwidth expansion!**

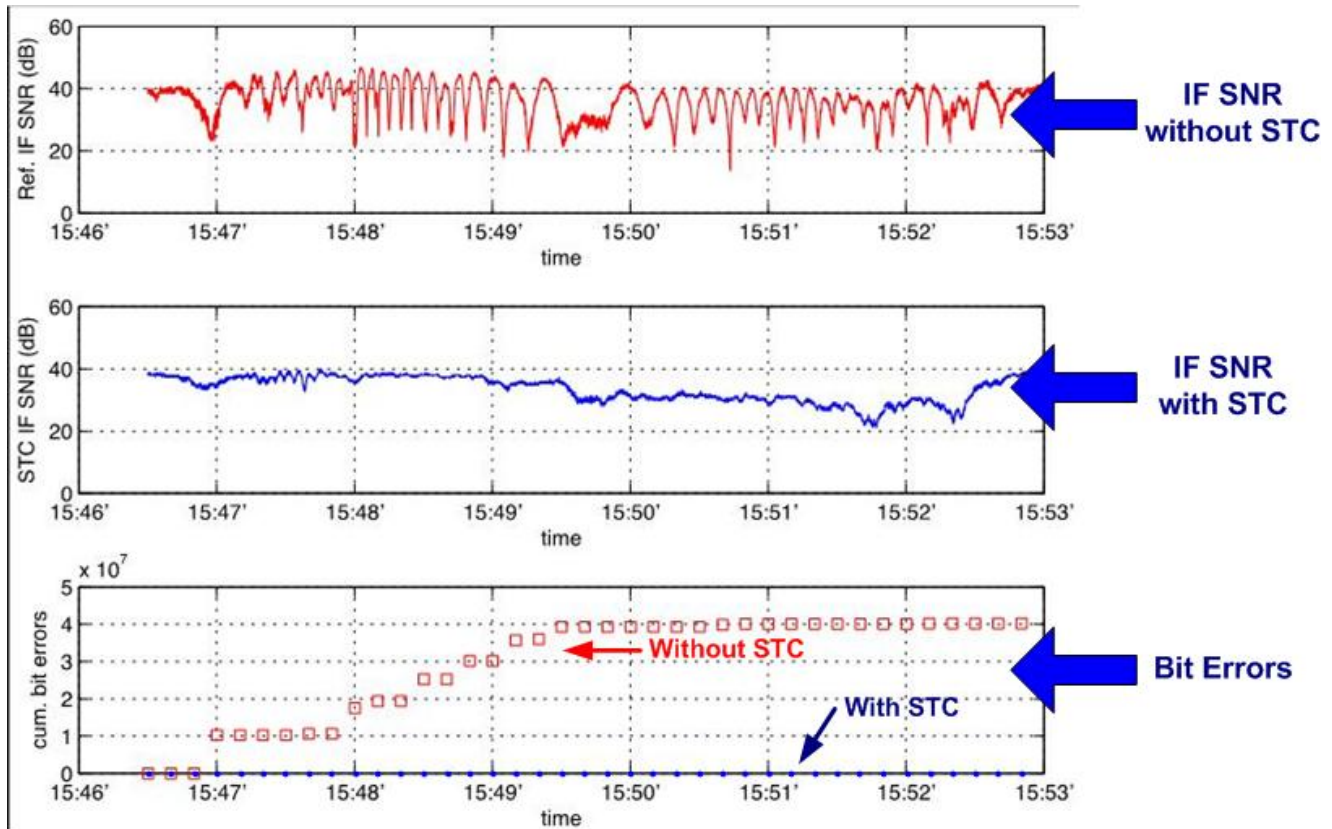
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SPACE TIME CODING (STC) SOLUTION

Illustrations and flight test data used with permission of the authors—originally published in “Space-Time Coding for Aeronautical Telemetry: Part II” - Experimental Results by Michael Rice, Brigham Young University, and Kip Temple, Air Force Flight Test Center, Edwards AFB, California, USA, in *Proceedings of the International Telemetry Conference, Las Vegas, NV, October, 2011*.



Problem: “Two-antenna interference”

- Upper and lower antennas are required to provide LOS path during aircraft maneuvers
- Signals can cancel each other, creating antenna pattern nulls

Solution: Space Time Coding (STC)

Advantages of the Quasonix Space Time Coding Solution:

- *Eliminates link outages caused by the “two-antenna problem”*
 - Improves behavior of received signal power
 - Improves overall link availability
- *Two transmit/One receive configuration*
 - Compatible with standard telemetry applications and installations
- *STC signal spectrum is the same as SOQPSK, with minimal bandwidth expansion (4%)*
- *Available as a software upgrade to Quasonix RDMS™ Telemetry Receivers.*
Note: Quasonix dual transmitter required.