

*“Test Like You Fly”
Philosophy Applied to
Ground Segment Testing*

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Background

- TLYF Evolution
- TLYF for Space Segment, Intersegment
- Need to widen application of TLYF principles to Ground Segment

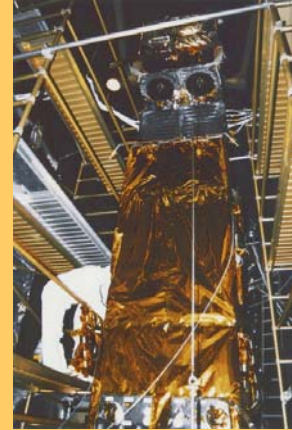
Test Like You Fly Assessment Process

FLIGHT



CONOPS
Opcon
Flight Reqs / Constraints
Flight Rules, Procedures

TEST



Photos Courtesy NASA

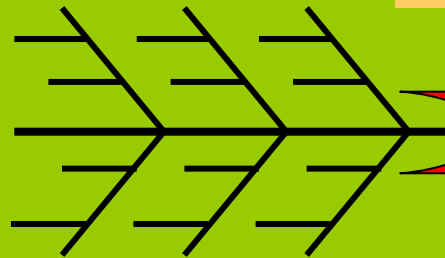
Test Plans
Test Procedures
Test Configuration

CAN / WILL

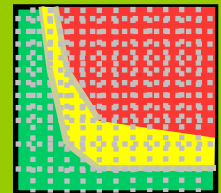


CAN'T / WON'T

Do the Fishbone / Fault Tree

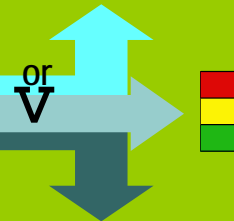


Failure conditions

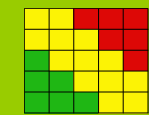


	Environments	Configuration	Timeline	Time	Concurrency	Initial Conditions	Transactions
Ascent	CAN	CAN'T	CAN	CAN	SHOULD	CAN	CAN
Separation	CAN	SHOULD	CAN	CAN	CAN	CAN	CAN
Auto Init	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Deploy	SHOULD	CAN	CAN	CAN	CAN	CAN	CAN
Find Sun	CAN'T	CAN	CAN	CAN	CAN	CAN	CAN
First Contact	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Upload Cmd	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Dnink HB TLM	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Initialize PL1	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Dnink WB TLM	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Initialize PL2	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Dnink WB TLM	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Normal Mode	CAN	CAN	CAN	SHOULD	CAN	CAN	CAN

Exceptions



TLYF Assessment & Risk Analysis (Program, Independent)



Working Group Topics

- 1) What aspects of the TLYF process apply to Ground Segment testing?
- 2) Commonality of Ground Segment development with Space Segment command & control test equipment development