



# TopSat

Testing different ideas for SBS in ISTAR

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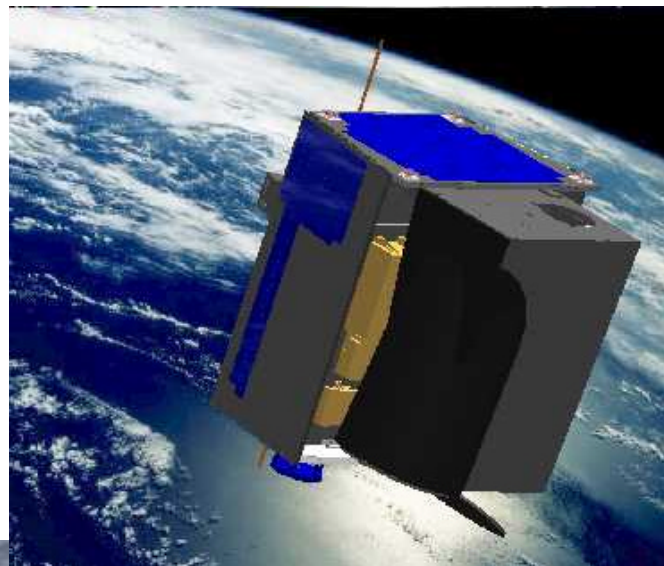
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# Introduction

- TopSat programme started Oct 2000 under joint funding from BNSC and UK MoD
- Partnership of QinetiQ, SSTL, RAL and Infoterra
- Provide 2.5m resolution imagery direct to local users
- Enable user control and scheduling
- Launch planned for late 2003



# Specification

- Mission
  - 2.5m target resolution, panchromatic baseline + 3 band colour at 5m
  - 15% system MTF, 50:1 SNR
  - 15km FoV
  - 1 year mission life
  - Near real time operations for in-theatre demonstration



# Why?

- For the MoD
  - To understand and test different architectures for the command, control and dissemination of space based surveillance information in a tactical environment.
  - To determine the capability of low cost surveillance systems and equipment.
    - Flexible operations
    - Higher timeliness through constellations
- For QinetiQ
  - Drive down costs associated with space missions to increase number and diversity of missions

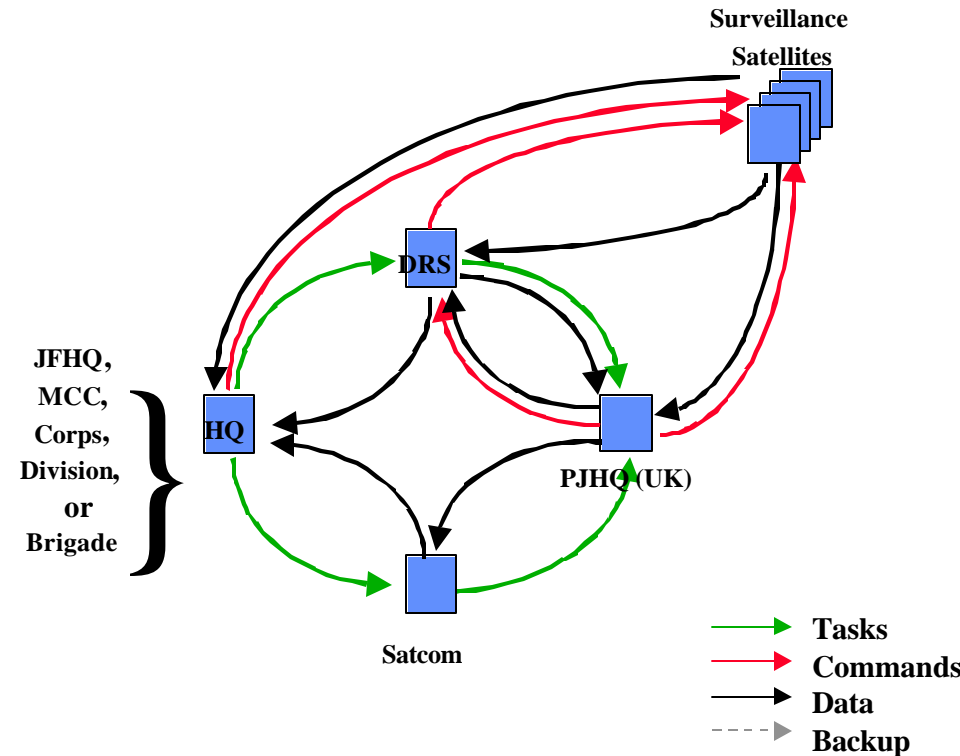
# TopSat in ISTAR

- Tests of different mechanisms and strategies for information dissemination
- Utility of contextual information and direct access
- Practical implications of local use of space-based surveillance (SBS) to support higher level studies
- Trials already in progress
  - Close involvement of end users

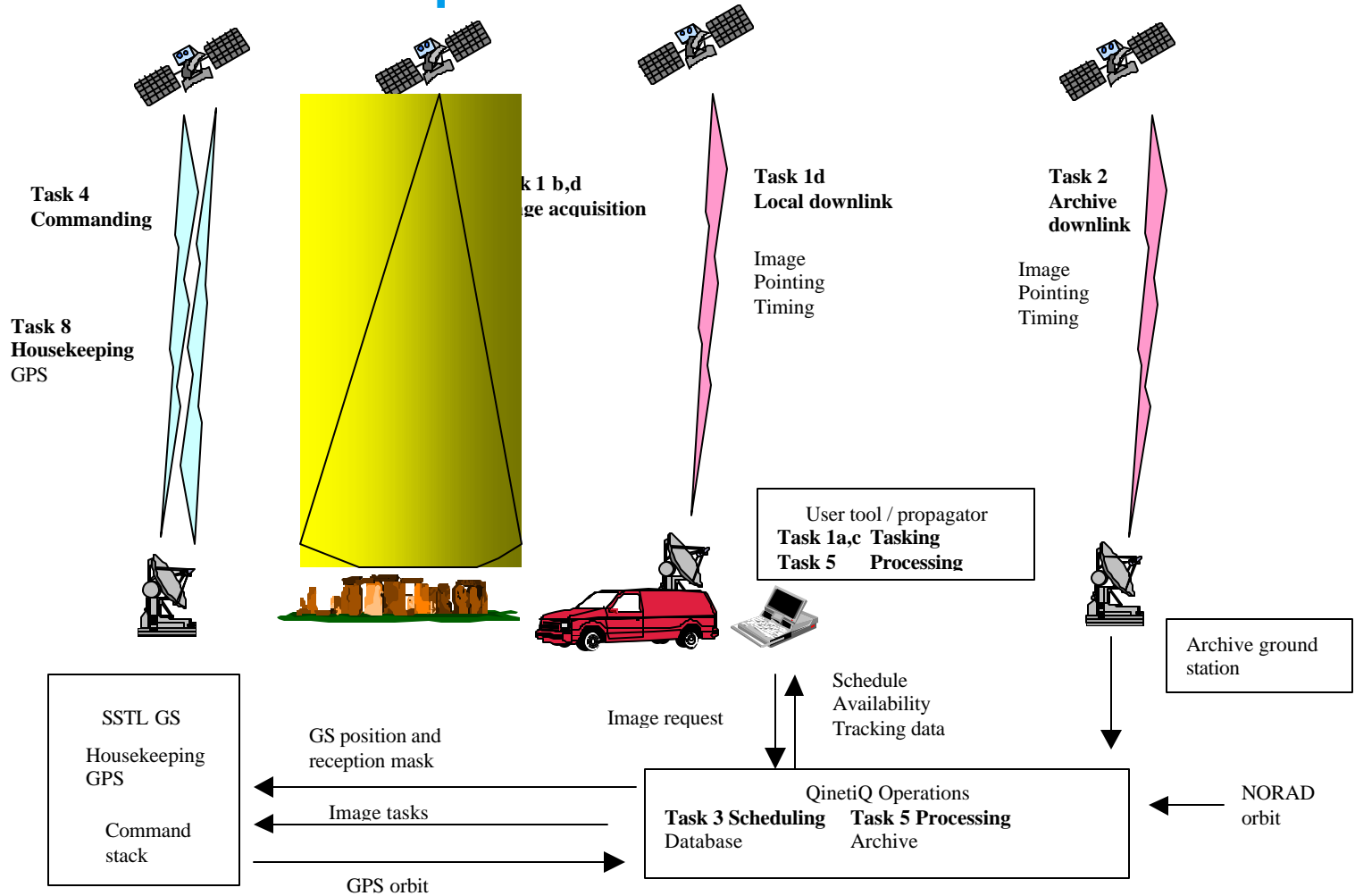


# Operations and trials

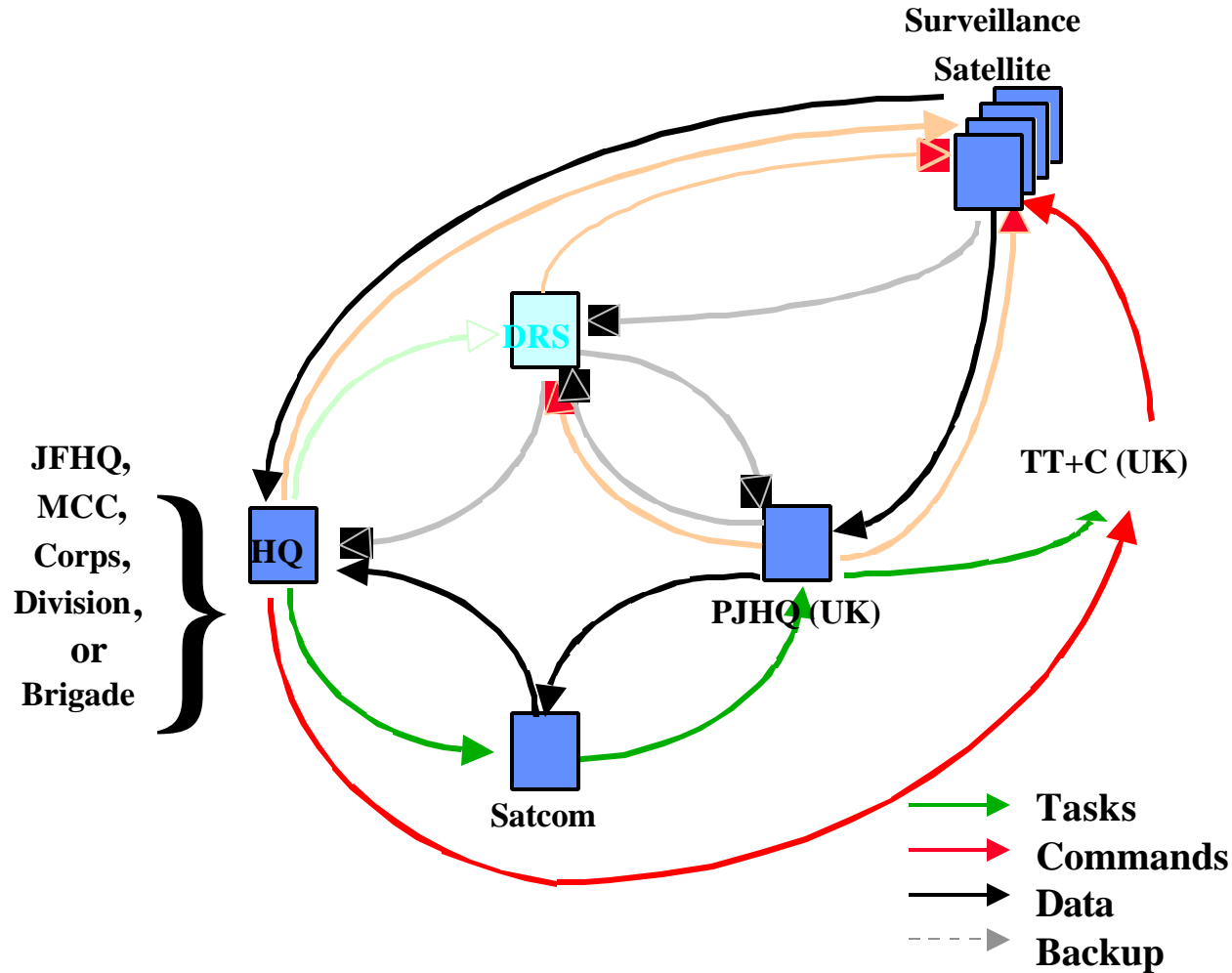
- Technical parameters
- Operational trials
  - Based on UK conops for SBS
  - Combination of link simulation and physical implementation to try multiple paths



# Operation of TopSat



# How does this fit?



# Conclusion and an offer

- TopSat is in build and should be available for MoD sponsored operations and trials in 2004
- Mobile ground station and access to CSI assets is already available and open to extension
- Close involvement of operational units is critical to maximising the benefit of the demonstrator to UK MoD.
- Groups with novel ideas that support UK MoD objectives are welcomed for consideration in the TopSat experiment plan.