Computing Introduction

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EVLA System PDR

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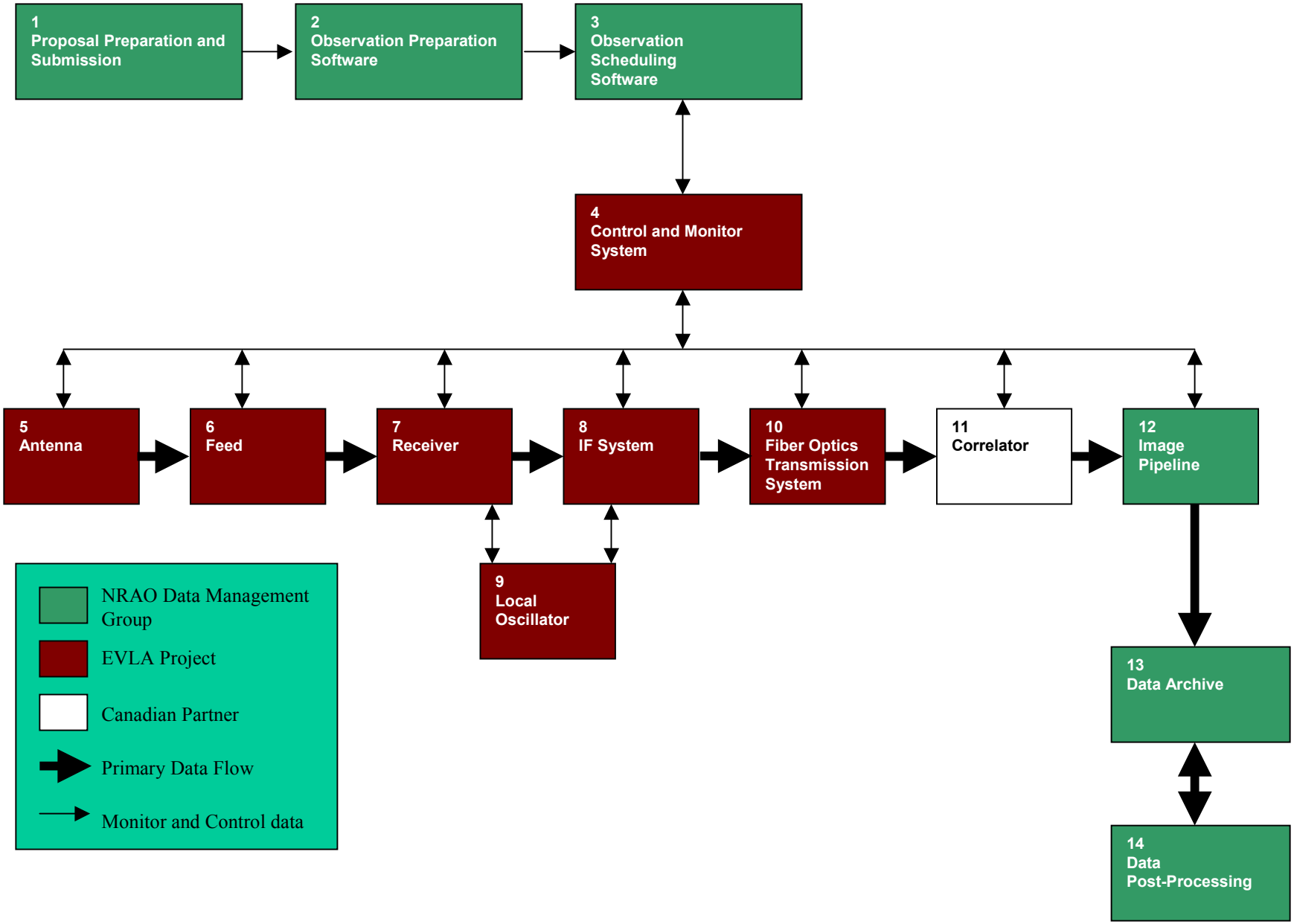
EVLA data flow



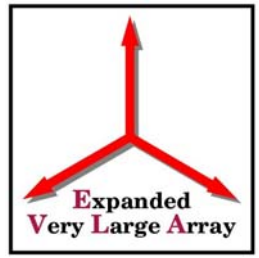
Computing Components

- End-to-end (e2e)
  - Proposal handling
  - Observation preparation
  - Observation scheduling
- M&C
  - Observation execution and monitoring
- End-to-end (e2e)
  - Image pipeline
  - Data archive
  - Data processing

Development Philosophies

- Spiral, iterative development
  - Schedule allows for re-evaluation at the end of each cycle
- EVLA will not be deployed with 10 year old computer hardware
  - Budget allows for computer upgrades during construction
- Design for a distributed architecture
  - Individual components must be replaceable/upgradeable

Some Concerns



- Clear delineation of deliverables
  - e2e ►M&C ►e2e
  - M&C ►Widar ►M&C and e2e
- "Stitching" of correlated data
  - Combining Widar LTA outputs
  - Merge with meta-data
- Duplication of effort
- Adoption of hardware platforms and software tools
  - GUI development
- MIB upgrades and MIB software portability

Progress

- Mostly still at the stage of gathering requirement specifications
  - e2e
    - Project book
  - M&C
    - Scientific, operational, and technical requirement documents
- Most technology decisions are still in the future
  - Gigabit Ethernet between M&C and antennas
  - Gigabit Ethernet at the correlator back-end
  - No decision yet on
    - Platforms
    - Compilers
    - Software development tools
    - GUIs
    - Third party software (e.g., from ALMA, GBT, DRAMA, etc.)
    - etc.