

NRAO End to End (e2e) Operations Division

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The Organization



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- After a three-year period of focusing software resources on meeting the objectives of individual telescope projects, the NRAO End to End Operations Division was formalized on **April 3, 2006**.
 - Currently consists of N. Radziwill (management) and Ed Fomalont (science)
 - Key stakeholders include NM Operations, EVLA Development, ALMA Development, GBT Operations, NAASC/NA ARC
 - Many staff already involved in relevant planning, design and/or prototype development; leveraging this immediately



Mission



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- To **broaden access** to NRAO facilities, enabling all astronomers to focus on the science rather than the instrumental details
 - To **increase science impact and throughput** via improved quality of data and efficient delivery of science products
 - To help NRAO better **optimize its investments** in software, services and resources (e.g. through reuse of ideas, models, systems and information stores)

Provide a sharp focus on the community... deliver what's needed by users internal and external to NRAO, at the appropriate times



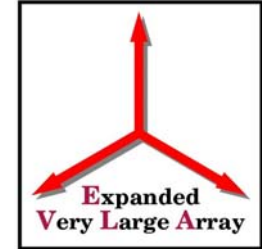
What's Changed?



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- Strong executive sponsorship
 - Stakeholders involved from the beginning
 - Recognition that EVLA effort must be supplemented
 - Committing to several smaller intermediate deliverables
 - Managing tightly coupled feedback from scientists and lead users into computing and software development
 - Setting realistic goals, compatible with affordable resources in development and maintenance stages, aligned with operations
 - Simplifying ideas, clarifying objectives/task definitions, communicating across sites more effectively
 - Answering the critical question for many computing staff at NRAO: *how do I fit in with overall NRAO development?*
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Common Terminology



- **Classifications of work:**
 - **Monitor & Control** – Real-time systems that command the telescopes, instruments and data acquisition and monitor their status
 - **Data Post-Processing** – Systems that generate science products from the raw data (calibrated data, reference images)
 - **Scientific Support Systems** – Systems and processes that facilitate the users' access to the telescopes and the science products (proposal system, observation preparation, pipelines, archives)
- e2e Operations Division provides a concerted focus on supporting the **users** of our facilities and their access to data:
 - Research based on proposing new observations
 - Research based on archived data



Tactical Plan Q2 2006



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- **Make incremental progress in technical areas while developing strategic plan:**
 - VLA/VLBA Pipeline Vitalization & Data Center Gap Analysis; can we start populating archive with images now?
 - Proposal Tool/Data Model Summit
 - Shared Source Catalog Repository
 - Achieve readiness for extended user testing with CASA
 - Science Capabilities Blueprint
 - **Develop strategic plan:**
 - Organizational plan (org chart, staffing, roles, responsibilities)
 - Normalize development plans for all sites/projects
 - Develop unified terminology, management metrics
 - Survey employees' collaboration habits
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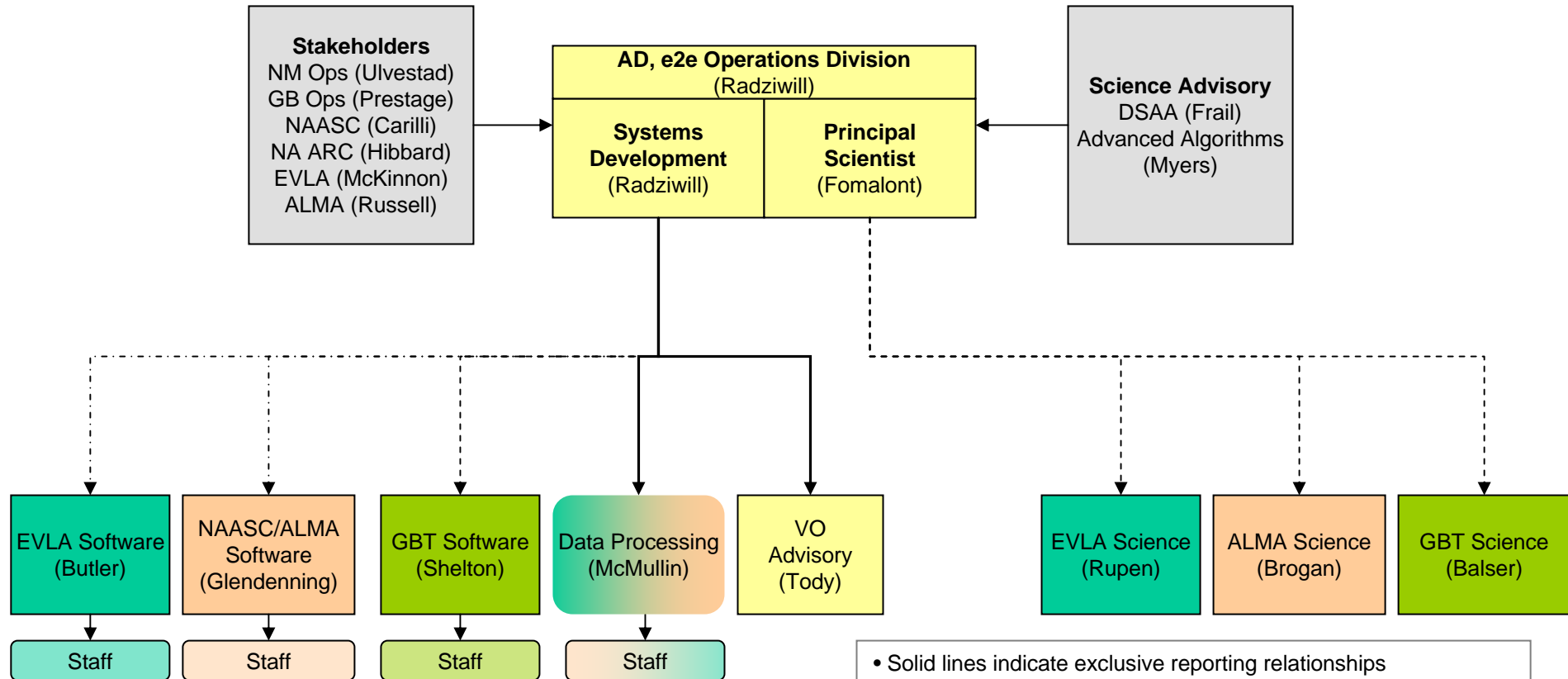
2006 Strategic Goals



- Develop and manage to Strategic Plan. Elements will include:
 - Complete description of the new division, its roles and responsibilities with respect to EVLA computing, and
 - Detailed project plan for supplementing EVLA computing to ensure that immediate needs (Milestones A and B) are being met – while not losing sight of the bigger picture (Milestones D and E: Full Science Observing)
- Ensure timely completion of key functionality and release to users of CASA data post-processing software
- Complete Data Integration Plan (roadmap for information repositories needed for e2e)
- Define Common Operational Model (VLBA, EVLA, ALMA, GBT)
- External annual reviews established

NRAO e2e Operations

under development



- Solid lines indicate exclusive reporting relationships
- Dotted lines indicate shared reporting relationships with line managers in operations groups
- Day to day management from line managers; strategic steering from NRAO e2e Operations
- Funding from NRAO e2e Operations in yellow, from EVLA/NM Ops in Blue, from ALMA in peach, from GBT in Green