Re-implementation of automation at Mount Stromlo SLR Station

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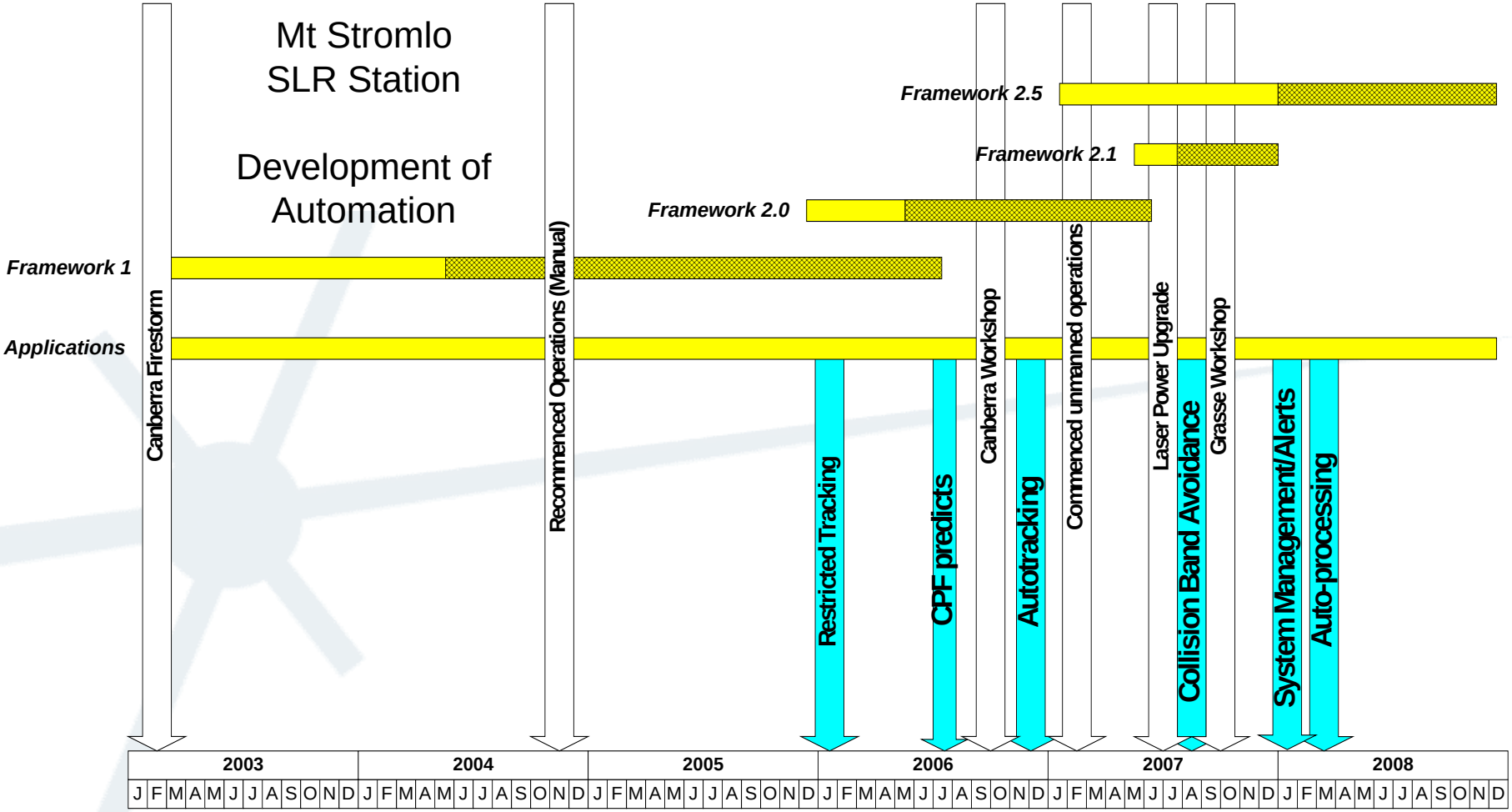
Timeline


Mt Stromlo
SLR Station
Development of
Automation
Framework 1
Applications
Framework 2.0
Framework 2.1
Framework 2.5
Canberra Firestorm
Recommenced Operations (Manual)
Restricted Tracking
CPF predicts
Canberra Workshop
Autotracking
Commenced unmanned operations
Laser Power Upgrade
Collision Band Avoidance
Grasse Workshop
System Management/Alerts
Auto-processing
2003
2004
2005
2006
2007
2008
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

Progress and Issues

- IT and infrastructure
- Software development
- Current Operations
- Plans

IT/Infrastructure

- LAN – distributed processing, redundancy
- Broadband connection to Corporate Network
- Security Issues (SPAM, Malware, Viruses, Access, Policies, Firewalls, Virus Checkers etc.)
- Remote Access – network access, external access via VPN
- Archives/backups

Software Development

- Client Server Architecture
- Distributed servers
- Flexible, configurable and responsive to system changes
- Complex, concurrent processes/multithreading
- Stability and reliability issues
- Remote logging/debugging/upgrading

- Cross-platform - use of Qt to develop GUI applications.

Current Operations

- Auto-tracking installed in Jan 2007.
- Increased unmanned operations during 2007.
- Power upgrade completed in July.
- Data publication issues.
- New release of software –stability improved and includes collision band avoidance.
- Remote monitoring.

Plans

- Complete development of data processing and publication
  - data output as XML files
  - generate NP,FR and CRD reports
- Complete framework development
- Add system management and alerts
- Add auto-processing functionality