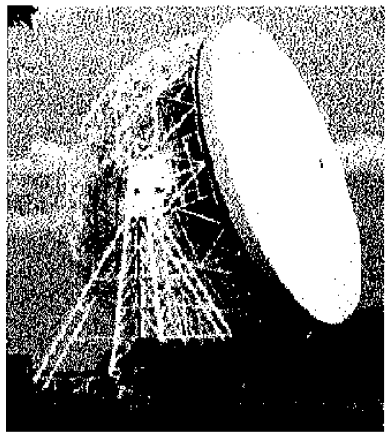
Thaya Thanabalasingham
Sujee Sivasubramanium
Niroshan Rajadurai
Metal Detector
Station



UNOS

Server – Star Gate

Remote Machine

Current Setup - Break Down

- Three different parts of project:
  - UNOS
    - located in tower, real time O/S
  - Server
    - located on roof, Linux (DELL Server)
  - Remote Machine
    - located any where on the world, any O/S

Current Setup - UNOS

- Simulation/real-time control of the dish
- reliable & efficient control system
- communicate with server (unstable)
- dos style user interface and control

Current Setup - Server

- O/S = Linux 1.x (oldest version)
- no web server (i.e. no internet access possible to PC)
- communicate with UNOS PC (unstable)
- remote login only (i.e. telnet)

Current Setup - Remote Machine

- ??
- nothing done at this stage
- can only telnet into server
- no feedback of antenna status

Who's Doing What At This Stage?

- Thaya - tracking algorithms
- Niroshan - setting up server & homepage
- Sujee - Netscape G.U.I.

Future Setup -UNOS

- Tracking satellites
- communicate with server (stable)
- presentation of antenna control user interface more graphical and mouse driven (i.e. Win95 style)

Future Setup - Server

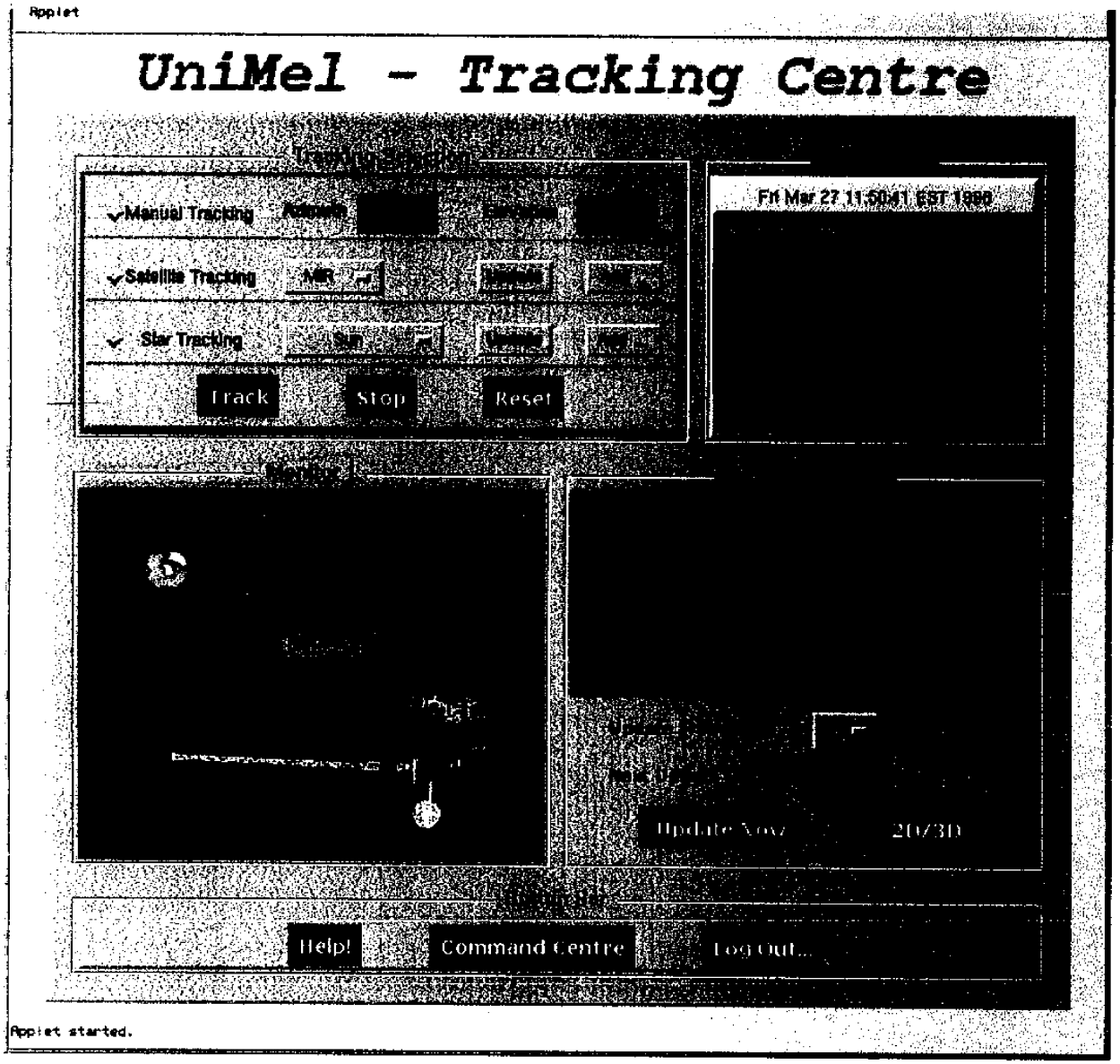
- Communicating with UNOS PC (stable)
- setup home page - can currently be found at 'http://www.ecr.mu.oz.au/~ncr/'
- reliable & efficient server
- communicating with internet
- user accounts

Future Setups - Remote Machine

- Setup user interface for antenna (graphical)
- communicate with server
- stability of web page
- protection/authorization

Future Setups - The Internet

- God Help Us!!!!


Applet
UniMel - Tracking Centre
Manual Tracking
Satellite Tracking
Star Tracking
Track
Stop
Reset
Fri Mar 27 11:50:41 EST 1998
Update View
20/30
Help!
Command Centre
Log Out...
Applet started.

Questions?

- Name for the server?
- Criticisms of G.U.I.
- General Questions from group.

Radio Telescope Project

IBC 5

New direction to be taken....

RT - Linux as opposed to UNOS

Reasons of UNOS being scrapped

UNOS - Why it failed...

- Poorly written code,
- Buggy,
- Lack of Documentation
- Inherent bugs.

Project Goals

- **Satellite dish should be controllable via the internet**
- **RT-Linux should be used as the controller for the dish**
- **Full documentation**

Status So Far

- Hardware is upto date, and 95% stable
- Absolute encoders have been implemented, including software
- Server is up and running, with Internet control panel
- Device drivers for all serial cards have been written in Linux/RT-Linux.
- Stable communication upto the PLC has been achieved

What NeedsTo Be Done?

- **RT-Linux conversion of all source code**
- **Stable communication between Aishwarya & PLC, DAC & Encoders.**

How Are We Going To Do This?

- **Aishwarya needs to be moved from the roof to the tower**
- **Temperory access to the 'root' password for Stargate - to setup everything**
- **Source code from UNOS can be extracted and reimplemented in RT-Linux - WITH CAUTION!!!!**

Technical Details

- **What are our I/O devices?**
- **What do we have documentation for?**
- **What can be scrapped and upgraded?**

The Master Plan

- **Who wants what part?**
- **When can this be done by?**
- **Time Line...**

Device	Device Drivers		Where will it be used?	What functions will it need to perform values it will return?	Dependencies	Who will write it?	When will it be done?	Technical Information		
	Unos	RT - Linux/ Linux						Port Address	IRQ	/dev/???
PC-14	✓		Azsh	ENCODERS	Seq					
PC-72/14	✓		Azsh	DAC						
Isa Com RS-422	✓	✓	"	Comm						
Std Plc RS-422	✓		"	PLC						