

standard calibration operations, such as linearity tests).
– interface to VLT Archive.

Acknowledgments

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- Norbert Fiebig, consultant, who implemented the LCU part of the CCD software for the prototype version.
- all members of the VLT Software Group, for their collaboration in assisting us in their area of competence.
- all members of the newly formed Optical Detector Team, for their valuable contribution in terms of comments to the prototype version.

For more information or questions on the VLT CCD Control Software, please contact, preferably by e-mail, A. Longinotti (alongino@eso.org). Additional information can also be found in the anonymous ftp area of the VLT Software Group, which is accessible via WWW (Eso Home page → VLTProject → VLT Software and Documentation → doc → ccd*)

Restructuring La Silla

D. HOFSTADT, ESO

During the past months the La Silla staff which is closely involved with the telescope activities has been asked to reflect on ways to re-organise the Observatory operations.

La Silla has a long tradition of extensive and user-friendly support and enjoys a large record of praise from its visitors.

If it works, why change it?

There are essentially three main factors which call for a change:

1. The VLT operation era is nearing. We have still an opportunity to try out different and more ambitious operation modes at La Silla and let the VLT benefit from the experience.
2. The budgetary pressure has become stronger and stronger. Cost control has been emphatically requested by our Governing Bodies. Cost efficient priorities have to be worked out and implemented.
3. The number of facilities and services, under ESO's direct supervision at La Silla, has decreased.
This calls for a re-assignment of the staffing resources at the Observatory.

It is tempting to breakdown the La Silla operations into Telescope Teams. Undoubtedly, great benefit is to be obtained if the teams and their telescope merge into a common identification.

This has been achieved at SEST since it was brought into operations. Also at the NTT, D. Baade and his colleagues managed to build-up a team well integrated and identified with its telescope.

The Change

It was decided to create two additional teams for the support of the remaining telescopes:

- one for the 3.6m/CAT

- one for the 2.2m/1.54m/1.52m.

The Schmidt, the 1m, the 50 cm Danish and the Bochum telescope already have separate operational arrangements.

For the time being the Dutch and 50cm ESO telescopes would receive technical support from the 2.2 m/1.5 m team.

J. Melnick took on the task of crystallising and elaborating a plan for the restructuring, which he called the "Team Theme".

Much input was provided by the scientific and technical staff at La Silla.

The Team Theme was developed in a number of working groups. All of them focused on the self managed team concept organised around a functional process.

Integrated by astronomers, night assistants, operation and electronic staff, the telescope teams are to be self-reliant for the daily support. This includes scientific support, instrumentation setup and control, data management and the first aid technical assistance.

In general the welfare of a particular facility will be exclusively in the hands of a team.

The teams will also handle their internal administration for tasks and personnel scheduling, planning, reporting and training. They will ensure the operational interface with their visitors.

The teams are also to be linked with Garching for extended technical support and commitments.

In view of the large range of work and the limited manpower it was not feasible to provide for complete technical autonomy in each team.

Six technical sections are maintained and regrouped as support teams in the areas of software, general electronics, mechanics, optics, IR detectors and optical detectors.

They will provide the specialised skills, maintain units which are common

to all the telescopes (e.g. CCD cameras) and execute long term upgrade projects.

Both the telescope and support teams have similar structures.

The intent is to have each team with extensive freedom of self-management. Each team has a manager assisted by a deputy. Their role is to plan and manage the resources, schedule operational and technical tasks, monitor and report the performance of the team. The managers, however, are an integral part of the support and not limited to supervisory functions. They report to the Observatory management composed of a Director and his deputy.

The Observatory management is essentially responsible for the application of the scientific objectives.

It defines the goals and objectives, harmonizes the structures, policies and operational procedures for the teams and ensures a smooth interface and integration with the other divisions, both in Europe and in Chile.

In parallel with the merging of the Astronomy and TRS Departments into a common project, the Maintenance and Construction Department has undergone changes.

Here the objective was extensively focused on cost efficiency. As the host country Chile has considerably developed during the last few years, many services, which ESO operated internally, became available at much lower costs. Maintenance for the buildings, roads and power lines, has been outsourced. The plan is to keep a limited in-house support for emergencies and the maintenance of electro-mechanical equipment, which is highly diversified.

Will it work?

The re-engineering experts would propose a strength-weakness-opportunity-threat analysis.

- *Strength* – The new scheme will focus the involvement of the team members on smaller targets and allow for the development of skills and knowledge in a more limited field of action. Improvement of performance is expected. There will be better visibility for each team member on the complete field of action inside the team. A better complementation and multi-disciplinary task approach can be developed.

The scheme allows for better identification with the team objectives and pro-

motes team spirit.

- *Weakness* – Full support coverage around the year is difficult to achieve in view of the limited manpower.

- *Opportunity* – There will be an opportunity to integrate and extend the complete operations chain at a telescope within a dedicated working unit. For the team members there will be an excellent opportunity to demonstrate a competitive and high performance style of operations.

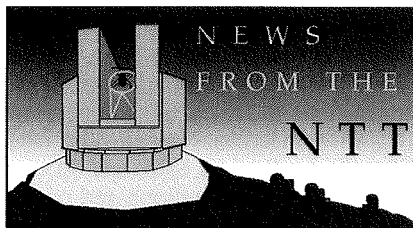
- *Threat* – The task division between

the teams will limit the possibility of inter-team back-up once the know-how for the operations in neighbouring teams fades.

A broad consensus emerged on the “Team Theme” among the staff and the management. End of August during his visit to Chile the Director General reviewed the proposal and gave his go-ahead.

October 1st we started.

We will now demonstrate that we were right.



JASON SPYROMILIO

The NTT upgrade project has the following goals:

1. *Establish a robust operating procedure for the telescope to minimize down time and maximize the scientific output.*
2. *Test the VLT control system in real operations prior to installation on UT1.*
3. *Test the VLT operations scheme and the data flow from proposal preparation to final product.*

The project is a joint effort of all divisions within ESO both in Chile and in Garching. At the core of the project is the NTT team which is doing much of the development and almost the totality of operations.

The NTT upgrade project is not only providing ESO the means to test the VLT concepts but also the community a first taste at what working with the VLT will be like. Both ESO and the community should exploit this unique opportunity to make possible a VLT that is scientifically productive as soon as possible.

The NTT upgrade project with great sadness bids farewell to Dietrich Baade. Dietrich was NTT team leader and upgrade scientist from the inception of the project. Dietrich has been instrumental in developing the team spirit within the NTT and the operating procedures which have resulted in the NTT having amongst the lowest down time statistics of any 4-m class telescope. Dietrich has through his dedication, hard work and inspiring personality united the two parts of the ESO organization (La Silla and Garching) into working as a single team and has got the project well under way. Thank you Dietrich.

The author is the new team leader and upgrade scientist. Given the change

in leadership for the project it is appropriate to take stock of where we are and how far we have to go. As mentioned above the NTT is on solid ground regarding day to day (night to night) operations. So the first goal of the project has indeed already been achieved. In addition over the last year a number of VLT standard components have been tested on the NTT with great success. Part of the second goal of the project, to test the VLT control software, has already been achieved with a large amount of feedback from the NTT project to the VLT.

The Big Bang

In July 1996 the NTT will be taken out of operation to install a completely new control system. The new system is in fact almost identical to that to be used on Unit Telescope 1 of the VLT. In addition new control software is being written according to VLT standards for EMMI and SUSI. The installation and testing of these systems is a large effort involving not only modifications to the telescope control but also the building, the rotators and the guide probes. In addition the autoguider will also be equipped with VLT standard Technical CCDs. All electronic

local controllers will be modified to allow the use of the more advanced software developed for the VLT. In addition many maintenance operations are scheduled for the big bang period including the long overdue recoating of the mirrors. The NTT team plans to come out of the big bang period with what essentially will be unit telescope 5 of the VLT.

Progress with Big Bang preparations

Each subsystem of TCS is being tested on the NTT independently. The existing electronics is modified and then the subsystem is run through a commissioning phase to check its operability. Following the tests the system is returned to its current stable configuration. The NTT team has successfully tested the building, M2/M3, autoguider and adapter control subsystems. The rotator control system will be tested in November and in December we expect a full test of the telescope. This December test is scheduled ahead of the Milano test of the same software for the VLT in order to provide the best feedback. The EMMI control software will undergo its first test in February.