

## THE 'DARK CONTROL ROOM'

### How remote access and control can reduce costs and improve efficiency.

Virtually all business enterprises today rely heavily on their communications; email, the web, computers and the good old telephone are all vital tools. These have enabled businesses to reduce costs, improve efficiency and customer relationships. So important have they become that businesses demand constant availability. Panic can occur if the email server is down for any length of time. Loss of electronic trading via the web can be very costly in both financial and marketing terms.

Communications equipment is generally becoming less costly and more reliable year on year. Equipment maintainers are seeing growth in the volume and reliability of equipment to be maintained but this is proportionately more than the increase from the service revenue they receive. Consequently they have to use more efficient ways of servicing equipment than having a man-in-van approach.

An enterprise, with a number of remote locations, will want to use central expertise to manage the equipment at these locations, without having to send someone there.

Here then is what it boils down to – users want the benefits of modern communications, available all the time, at a low cost. They want it fixed and administered quickly and at a low price.

The ideal solution is to have a system that permanently monitors remote equipment, raises an alert if something is wrong, tries to automatically reset it if possible and allows access so that engineers can remotely fix the problem. Such a system will need to monitor equipment from multiple vendors and include, voice, data, IP and video equipment, application servers and the local temperature and humidity.

We can get very close to achieving this ideal today using the correct management tools. Enterprises and system maintainers should be able to remotely clear in the region of 80% to 90% of faults and perform virtually 100% of administrative tasks without visiting a site. This represents not only a large cost saving but will also lead to more satisfied users and a reduction in lost revenue.

## The Dark Room

Ideally then our equipment can be located in a closed dark room where an engineering presence is a rare occurrence. In order to achieve this we must be able to monitor and maintain multi vendor equipment that will include:

<u>Voice</u>	<u>Data</u>	<u>Environment</u>
PBXs (IP & Legacy)	Routers	Temperature
UPS	Switches	Humidity
Voice Mail	Application Servers	
Auto Attendant	Web Servers	
Call Recording	Email Servers	

To do this efficiently and effectively a system should perform a number of actions that would normally require a site visit or permanent presence. These will include some or all of the following:-

### Alarm Management

- Capture alarms from serial, Ethernet or contact closures. These will include ASCII data or SNMP traps, security and fire alarms
- Filter alarms for type, severity, frequency, etc
- Attempt to reset fleeting alarm conditions
- Report only 'real' alarms to one or more locations via IP or dial up.

The alarm system should reduce the number of alarms reported to only those of importance. This will reduce engineer workload and allow them to 'see the wood for the trees!'

### Remote Access

The system should provide access that will enable engineers and administration staff to quickly and easily gain access to remote equipment to

- Check its status
- Perform remote maintenance
- Perform remote administration e.g. moves and changes, configuration updates etc.

### Power Management

- Power reset locked up equipment

Power cycling equipment should only be done if you are sure that it is locked up; hard discs can be corrupted, which is why servers have UPS's fitted.

### Data Backup

- Routinely backup equipment configuration or data files
- Check if local backups have been successfully completed
- Upload new configurations or system updates.

### Administrative Tasks

- Perform moves, changes and system updates
- Collect CDR data for billing and performance management

### Monitoring the Environment

- Record temperature and humidity levels
- Raise an alarm if they are out of specification.

## Security

Providing remote access to equipment raises serious security issues. It may be very convenient to have access from your mobile to a power cycling device, but if you can, then so can someone else. How secure is your access?

We can provide usernames and passwords for equipment but then we give them out to engineers together with the connection details. They may well write this down. How secure is that?

The system should not only provide security into the remote location but also manage passwords and connections. With such a system users/engineers can connect to a site by name without knowing any login credentials. Not only does this increase security but it will also reduce the administrative overhead. If the system has an audit trail then you will be able to see who did what and when.

## Return on Investment

In order to successfully implement a Dark Room strategy it will be necessary to provide some capital equipment or outsource some or all of the tasks. The sums of money involved will depend on the amount and complexity of the equipment at each location.

In considering the time it will take to produce a return on investment you will need to take into account a number of factors. These will vary from site to site and organisation to organisation. Some of these are shown below.

- Do you have permanent staff on site? Can these be totally replaced or their numbers reduced? If so do you have the manpower and expertise at your central site to cope?
- How many site visits do you make? If these were reduced by say 80%, how much would that save? The direct cost of a site visit is normally expected to be around £180 on average. This does not include the capital cost of providing transportation (normally cars). Can you reduce your car pool?
- How much would you save in lost revenue if 90% of faults were cleared significantly faster?
- What is the hidden cost in terms of user satisfaction with the service you provide?

## Conclusion

Managing equipment at a remote location can be done efficiently and cost effectively without having to frequently visit sites. It will lead to happier users and a more profitable service and administrative organisation. These are security issues but these can be overcome. The system should be capable of maintaining and managing all remote site equipment. This is possible with current technology.

## About Data Track

Data Track has many years experience in providing systems maintainers, carriers and enterprises with solutions that enable them to reduce the cost and increase the efficiency of monitoring and managing remotely located equipment. If you would like to discuss how Data Track can help you please contact our sales department.

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