

ESCort™ Resource Management System

Application: Cable Television

Problem: The most significant part of the cable television “physical plant” is the equipment in the field—including power supplies, amplifiers, nodes, and junction boxes known as MDU (multiple dwelling unit) boxes. Controlling access to these field assets and insuring that the work is done as expected is a challenge. Improper connections or missed maintenance can degrade the performance of the entire system. There is a huge cost in both missed revenues and higher costs due to worker inefficiency.

Situation:

As part of the cable distribution network there are a large number of “multiple dwelling unit” or MDU boxes. These boxes contain a number of “taps” to connect individual apartments or condominiums to the cable system. New hookups and disconnects are handled by service personnel, either employees or subcontractors.

Currently the security on these MDUs is typically a simple cam lock, usually “keyed alike” meaning one key will open any box in a system. There is usually little or no key control so the real security for these boxes is virtually non-existent. Open a box and hook the cable up and you get “free” cable. This is often done by individuals, building superiors, or even rogue employees or subcontractors for a fee. Unsecured MDUs can be accessed by virtually anyone.

These unauthorized hookups result in lower revenues and increased parasitic loads on the system.

ESC ESCort™ Application:

We have developed a **system** including locks, keys and a management device called the ControlVault™. This ControlVault™ automates the issue of keys to service personnel. It also programs these keys for the area and time where the service is working. When the key is returned it downloads all activity into a data base within the ControlVault™.

Locks are built into the MDU boxes which are installed in the field. Each box has an electronic ID based on the electronic lock number. This number is recorded into the ControlVault data base along with its precise location. These can also be assigned routes or territories to provide better control.

When a service person performs a work order, to hook up or disconnect a customer, for example, there will be a record in the ControlVault™ data base that a particular service person used his or her key to open a specific MDU box associated with that work order. If the box was not accessed then the work was not likely done.

Each MDU box's connections are audited when the box is installed. There should be no improper or illegal connections after this installation. Subsequent audits will reveal not only if there are illegal connections but also who had opened the MDU based on the audit trail provided by the key use.

This audit information can also be used to measure and compare worker's productivity. More efficient workers can be rewarded and the others can be identified to train better - with the result that the average productivity can be increased (and costs reduced) greatly. As in many systems, knowing that they are being monitored also serves as an incentive to do better.

The ESCort System, used in an integrated program with audits and management participation can help increase revenues, increase workforce efficiency and improve the performance of the entire cable system.



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Field Trial

In our first field trial we installed a ControlVault™ and new MDU boxes fitted with ESCort™ Locks. ESCort™ keys were controlled and issued by the service manager using the ControlVault™.

We chose an apartment complex with multiple buildings and a 46% cable penetration (percent of apartments that were paying for cable) for our installation test site.

We found the existing MDU boxes were either open or the covers missing altogether. All apartments appeared to be connected at the MDUs. We removed the old MDUs and installed new ones with ESC locks. We also connected only those apartments who had cable contracts, isolating non customers' connections. We then locked up the MDU boxes.

All subsequent service was done by personnel issued ESCort™ keys.

ROI

With the average cable bill it takes roughly 4 months of one new customer per MDU box to cover the cost of the system installation from new revenue. (This ignores cost per subscriber for programming but also ignores increased efficiency of the service personnel available through activity auditing.)

Our test installation produced not just one new subscriber per MDU but several times that number. These new ESCort™ system MDUs pay for themselves in a matter of WEEKS!!!

Besides increase in revenue from converting a non paying "customer" into a paying customer there are several means to increase the return on investment with the ESCort™ System. One is increased efficiency of the workforce by using the data points gathered by the key to measure and increase each worker's output. Another is fewer service calls by increased system integrity.

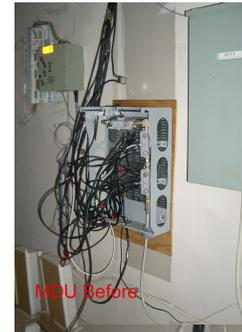
Our system increases the difficulty to steal cable by making the physical connections more secure and reduce the number of persons who can make the connections. Building "supers" and outsiders no longer have keys. Company people know they are being audited and are now much less likely to do hookups "on the side".

A side benefit of the ESCort™ System is increased accountability resulting in better workmanship. Fewer illegal hookups also reduces parasitic load. This should result in fewer service calls and increased quality of service for customers-better signal quality for phone, video and Internet and fewer outages. These are other benefits added to the ROI that will provide tangible returns.

This test installation represents a very small sample of the potential of the ESCort™ system and results described are from an installation at one apartment complex. We believe the results would be typical for a similar installation and that situation to represent 10-20% or more of normal cable MDU situations. ROI may be higher or lower depending on demographics and cable company policies and practices.

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