



Memo

To: Budget Committee
From: Deputy Chief Jarrod Millsaps 
CC: Mayor Ed Mitchell
Date: 2/15/2017
Re: Replacement equipment for the Jail

Please consider the request to increase our budget to replace the existing Touch Control Station & PLC upgrade. We feel the equipment has served its purpose since the facility opened in 1999. In recent past we've had to piece together parts from other machines and purchase used equipment from Ebay just to keep them working temporarily. This is not a new problem and we've asked for this upgrade over the last several budget cycles. We intended to budget for this in our 2017 - 2018 request but feel we can't wait any longer.

I've attached a Memo from Deputy Chief Cantrell, a proposal from unique Security Inc, and a couple of email correspondences from our Technology Director, Keith Hackney, who has been working to fix this problem.

Memorandum

To: Deputy Chief Jarrod Millsaps

**CC: Sheriff James Lee Berrong, Chief Deputy Jeff French,
Keith Hackney**

From: Deputy Chief Chris Cantrell



Date: February 15, 2017

Re: Replacement of Security Electronic Control System

Attached is the proposal to replace the Computer and Touch Systems for the Adult Detention Center. The current touch system is old, outdated, and is crashing frequently. This system controls the unlocking of doors for the entire secure facility. When this system crashes, Adult Corrections personnel are forced to operate the Detention Center with keys. This creates not only time issues but the safety and security of the facility is compromised when this occurs. I am requesting this item be brought before the Budget Committee as soon as possible. I will also attach some correspondence that lists some dates there was a system failure but this obviously will not be the only occurrences of system failure.

Unique Security Inc

Integrated Security Equipment and Controls

January 27, 2017

Mr. Keith Hackney
Blount County Sheriff's Office
940 E. Lamar Alexander Parkway
Maryville, TN 37804

khackney@bcso.com

Phone (865) 273-5150

Fax (865) 273-5315

RE: Blount County Sheriffs Office Jail Touchscreen Control Station & PLC Upgrade Proposal

Below is our proposal and recommendations for the renovation and upgrade of the security electronic control system at the Blount County Detention Center. The five (5) HMI operator stations will be updated to the latest Windows 10 Pro Operating System and the latest version of Wonderware Intouch (Version 11.1) HMI software package, as the stations now are outdated and the software is no longer being supported by Microsoft and Wonderware. There are two (2) HMI operator stations located in Central Control, and two (2) located in the Housing areas C & D, and one (1) in Intake that will be replaced. The existing Graphic Control Panel in the Medical area will be left in place since it is still functioning without trouble, however we can update it to a Touchscreen Station at a later date if it becomes necessary to replace it.

Recommended Hardware:

Wonderware Intouch HMI Software – Latest Version (Version 11.1)

| | |
|------------------------|------------------------------|
| Dell Optiplex Computer | Intel Core i5 3GHz Processor |
| | Windows 10 Professional 64 |
| | 8GB Ram |
| | 500GB HD |
| | DVI Video Display |

| | |
|------------------|--|
| Elo TouchSystems | Elo ET2401LM 24" Intelli-Touch Monitor |
|------------------|--|

Proposed Cost for Touchscreen Station Upgrade for the 5 Stations: \$ 74,214

In addition to the HMI operator stations being upgraded we have recommended that the Programmable Logic Control System (PLC) be upgraded with the current Omron CS series PLC control modules. The existing Omron CV series is outdated and these parts are no longer available from the manufacturer (Omron). What replacement parts you can find on Ebay, or other web based companies are extremely expensive and have no warranty with them. Should the PLC system crash now and require parts to repair it we would attempt to find the spare parts on the market to get it up and running again. However, if these parts are not available we would have to upgrade the existing PLC at that point in order to get the system back up and running.

There are four (4) PLC Control Systems that would need to be upgraded:

1. The main PLC System in Central Control.
2. The Remote PLC System in Intake/Medical Control.
3. The PLC System in Housing Areas C & D Control.
4. The Remote PLC System in Housing Areas C & D Control.

Recommended Hardware:

Omron CS Series PLC Processors
Omron CS Series Ethernet Communications Modules
Omron CS Series Controller Link - Remote Communications Modules
Omron CS Series CS1W-ID261 Input Modules
Omron CS Series CS1W-OD261 Output Modules

Proposed Cost for the PLC Control System Upgrade four (4) locations: \$ 64,665

Should you have any questions or comments please contact myself or Mr. Steve Hart at your convenience.

Respectfully,



Lonnie Mosier
Unique Security Inc.

Chris Cantrell

From: Keith Hackney [khackney@bcso.com]
Sent: Wednesday, February 01, 2017 4:57 PM
To: Chris Cantrell
Subject: Master Ctrl touchscreen

We were without the master ctrl touchscreen from approximately June 28, 2016 until January 10, 2017. I am still checking on the previous outage a few years ago.

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Keith Hackney
Blount County Sheriff's Office
Director of Technology
khackney@bcso.com
(865) 273-5150

Chris Cantrell

From: Keith Hackney [khackney@bcso.com]
Sent: Wednesday, February 01, 2017 5:08 PM
To: Chris Cantrell
Subject: Previous outage

I'm going to guess around October 2008 until March 2009. Reading through old emails, that seems to be the time I was speaking with them about a bad PLC and replacement etc. They sent someone onsite in March 2009 and I think got us fully going again then.

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Keith Hackney
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