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Disc Media's Last Hoorah

A Summary, Budget, Floor Plan & Rack Design

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INFO 300

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Executive Summary

Disc Media's Last Hoorah

To: Michael Elliot, Professor, VCU School of Business

From: Nidhi Yadav, Jason Rogers, Ibrahima Barry, Students, VCU School of Business

Date: July 14th, 2021

Subject: Summary of Network Development for New Office and Warehouse

Overview

Disc Media's Last Hoorah is a newly re-monikered for-profit rival to The Music Historical Society (MHS) that just had an offer authorized to recover bulk inventory and accounts from the MHS in order to keep these commodities available for interested buyers. They're getting ready to shift their inventory to a new fulfillment facility in River City, where they'll fulfill MHS and other organizations' on-line, mail, and phone orders. DMLH is doubling the size of its warehouse to accommodate the additional inventory. We have been tasked with designing and implementing a network for both the new office and warehouse. The new warehouse is a 100' wide section that is 72' deep in a large warehouse building. The rear opening is 16' deep and has a sheltered loading dock that runs along the rear of the 500' building. It is part of a block of 15 warehouses.

Problems

There are three ground circuits in the warehouse space, and one is not working. A dozen low-powered personal computers, and one high-end, will need to be purchased for desks and benches. We will need to purchase further equipment to support 6 racks of equipment that include a rack that accommodates 300TB of storage, a virtual server host rack that can support 500 virtual servers, a power rack, a network rack, an Internet/firewall rack, and an access layer rack.

Solutions & Final Thoughts

We reached an agreement with Electric, who promised to repair the ground circuit, construct a natural gas generator, and establish an ATS near the power and DMARC sheds on the shipping dock. They'll install a new ground stake at the shipping dock face, a new meter, and a new main panel, as well as connect all of our electrical outlets to it. We will purchase all necessary equipment to ensure a safe and reliable network. The total up-front costs will be \$417,571. DMLH expects a decade or more of good sales in LP and tape, along with CDs and DVDs. They also expect more walk-in trade since they'll be in a better neighborhood and have more access to MHS members. To support this growth, we will maintain this network, ensuring incremental back-ups and full back-ups on weekends. We will dump the transaction logs to the LTO tape every night and work with NPONet to ensure consistent firewall protection. Estimated annual costs will be \$498,202 for year 1, \$523,112 for year 2, and \$549,268 for year 3.

DMLH Budget Plan

Supplier

Up-Front Cost

NPONet-Installation Fee & Conversion	\$55,000
Eclectic Electric-Generator/Installation, Ground Stake, AC Unit, Circuits	\$22,450
Generac-Backup Generator	\$9,299
VOCAD/GigaPath-1 Gb Internet First Month	\$1,450
Cavalier-VOIP First Month	\$775
Three Bubbas Inna Net-Wiring	\$595
PCI Compliance Audit	\$24,000
Sierra Wireless-Airlink LX60 LTE Router	\$399
Tripp Lite-15 1500W UPSs, 6 42U Racks, PC UPSs, Batteries	\$27,970.31
HPE-33 DL380 Xeon Gold Rack Servers, 15 Tape Drives	\$236,351.52
Cisco-15 SF300 10/100/1Gig Switches	\$5,475
Zebras-6 Barcode Scanners, Printers	\$4,228.10
Lexmark-Laser Printer	\$734.95
Newcastle Systems-Powered Laptop Cart	\$1,207
Epson-2 Inkjet, EcoTank printer, cartridges	\$2,186.24
QuarkXPress, Adobe, Photoshop	\$1,255.88
Xerox-Workcentre Printer, Paper, Fax	\$8,349.11
Dell-11 Intel i3 8 Gb Ram Desktops, Notebook, Numeric Keypad, 11 27" HD Monitors, mice & keyboards, Headset	\$9,602.76
MSI-2 30" Ultra Hi Def Monitors	\$979.18
Titan Computers-Dual Socket Workstation	\$5,262.85

Total Up-Front Costs

\$417,571

Monthly Costs

Annual Costs

NPONet Annual Fee/Hot Site	\$470	\$9,240
Generator Maintenance	\$92.99	\$1,115.88
Hardware Maintenance	\$3,040.02	\$36,480.23
Utilities, electric, AC, gas,	\$1,917.85	\$23,014.00
Office Supplies, Maintenance	\$1,366.00	\$16,392.00
Internet/VOIP	\$2,225	\$26,700
Employee Payroll	\$32,105.00	\$385,260.00

Total Year 1

\$41,217

\$498,202

Total Year 2

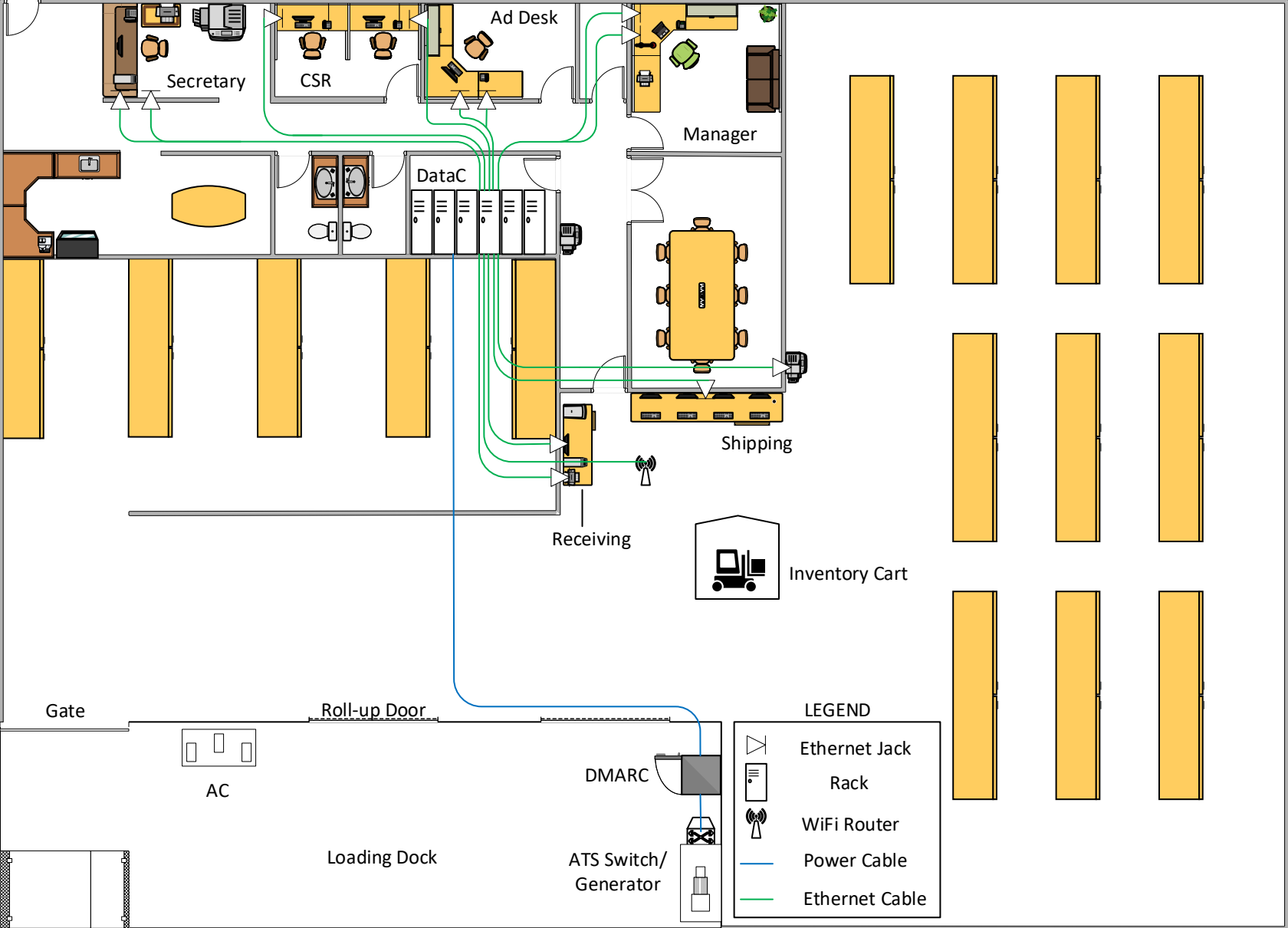
\$43,593

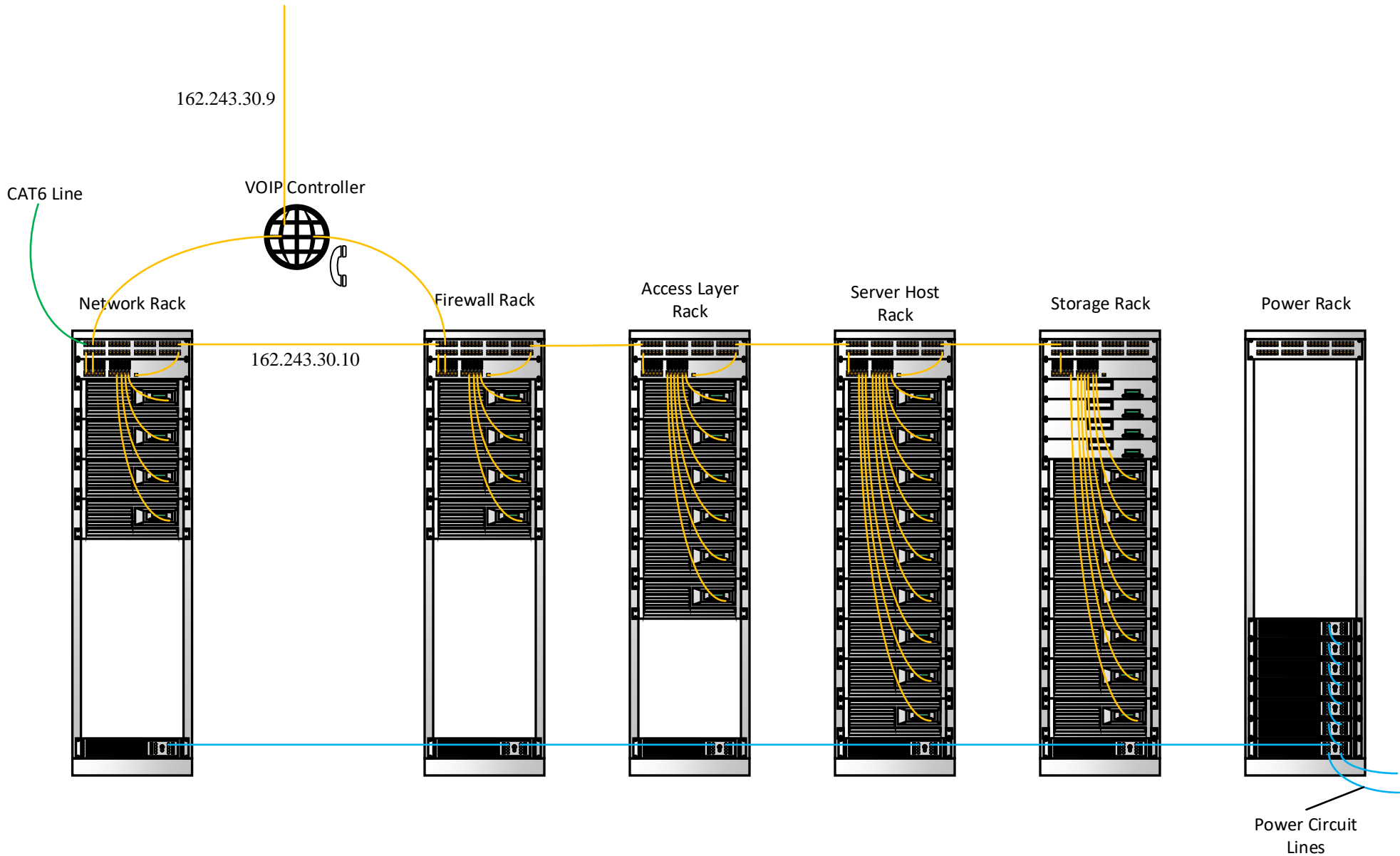
\$523,112






Total Year 3

\$45,772

\$549,268





-  Patch Panel
-  Switch
-  Server
-  Tape Drive
-  UPS