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|  | Fat Cat Consulting |

Memo

To: Catherine Stokes, Special Projects Manager, Cyberdyne Systems

From: William Matheson, CCIE, Fat Cat Consulting

CC: Inda Wallsorcelin, Facilities Manager, Cyberdyne Systems

Date: 10/2/2011

Re: Estimated costs for networking the new facility [Proj. Code LAB3NETW1100SECTION703C]

# Methodology

Depending on whether the cables are run through entirely the walls or run over rooms in the ceilings (they are plenum rated, so they can be run through above-ceiling spaces, and this would shorten the cable runs – the distances used in this study are for in-wall runs), we would need, at the most, 1,425 feet of cable. It is recommended that two 1,000-foot reels be purchased. Minimum cable lengths for each run are somewhat longer than the run lengths, as 5 additional metres of patch lead are required at each end, which amounts to approximately 32 feet, 10 inches per run.

A revised plan of the ground floor is attached. Note that individual cables are required for each data jack – in the diagram, they are combined for neatness. Examples: The single-jack outlet on the foyer-facing wall of the reception office requires its own cable, one keystone jack, and one single-outlet wall plate. The dual-jack outlet in the President’s office requires two cables, two keystone jacks, and one dual-outlet wall plate.

A breakdown of estimated costs is attached along with a list of the required cable runs.

# Cable Runs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Run Length (ft)** | **Runs** | **Minimum Cable Length (ft)** | **Number of Runs** | **Totals (ft)** |
| 15 | Wall between Wiring Closet and Admin Assistants' Office | 47.81 | 2 | 95.62 |
| 35 | Wall between Reception Office and Admin Assistants' Office | 67.81 | 5 | 339.04 |
| 50 | Reception Office, Foyer-facing wall | 82.81 | 1 | 82.81 |
| 55 | Production Manager's Office | 87.81 | 2 | 175.62 |
| 140 | Vice President's Office | 172.81 | 2 | 345.62 |
| 160 | President's Office | 192.81 | 2 | 385.62 |
|  |  |  | **Total Runs: 14** | **1424.32** |

# Cost Estimates

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Item Type** | **Vendor Name** | **Model/Part #** | **Price** | **Vendor Name** | **Model/Part #** | **Price** |
| Open Frame Equipment Rack | American Power Conversion | AR201 | $129.99 | Video Mount Products | ER-72 | $246.95 |
| Cat5e 110-Type 24-Port Patch Panel | MonoPrice.com | 7255 | $17.93 | TigerDirect.ca | CablesToGo C184-03859 | $71.99 |
| (2x) Plenum-Rated Cat-5e Bulk Patch Cable, 1000ft Reel | CablingPlus.com | 5E04UPBL1 | $410.66 | BroadbandUtopia | Coleman Cable Inc. 2003548 | $611.00 |
| (2x) 1-outlet Keystone Wall Plate | MonoPrice.com | 6725 | $0.76 | American Tech Supply | CP-216B-1-WHT | $1.20 |
| (6x) 2-outlet Keystone Wall Plate | MonoPrice.com | 6727 | $2.28 | American Tech Supply | CP-216B-2-WHT | $3.60 |
| (14x) Cat-5e Keystone Jack | MonoPrice.com | 5376 | $14.98 | American Tech Supply | CP-3013A/B-C5E-WHT | $35.00 |
|  |  | **Lower Total** | **$576.60** |  | **Higher Total** | **$969.74** |

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# Vendor Websites

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| American Power Conversion | <http://www.apc.com> |
| American Tech Supply | <http://www.americantechsupply.com> |
| BroadbandUtopia | <http://www.broadbandutopia.com> |
| CablingPlus.com | <http://www.cablingplus.com> |
| MonoPrice.com | <http://www.monoprice.com> |
| TigerDirect.ca | <http://www.tigerdirect.ca> |
| Video Mount Products | <http://www.videomount.com> |

# Revised Floor Plan