

**MHLS Directors Association
Meeting of Wednesday, September 7, 2016**

AGENDA ATTACHMENT

Action Item #2: Proposal for a NEW Aerohive Router for each MHLS Member Library

- **Background:** Unassigned Funds = \$62,560 (70% of the General Support Aid Increase of \$89,371). System Services Advisory Committee and MHLS staff recommend to the MHLS Board how best to allocate these funds.
- **Issue:** New Aerohive routers are proposed for each MHLS member libraries (see attached proposal). Regionally bandwidth is increasing and wireless routers are most generally the greatest bottleneck to online capacity after the library's bandwidth.
- **Recommendation:** Proposal is recommended by the System Services Advisory Committee and the MHLS Finance Committee.
- **Status:** Discussed at 5/5/16 & 7/12/16 System Services Advisory Committee; Action Item at 9/7/16 DA meeting.



Proposal for a NEW Aerohive Router for each MHLS Member Library

Revised August 2016

A. Implementation Schedule

1. 22 Libraries per Year for Three Years
 - a. 2016 Phase One – 22 Libraries with Time Warner ISP Services (\$675 per router = \$14,850)
 - b. 2017 Phase Two – 22 Libraries prioritized by reported bandwidth (\$700 per router = \$16,200)
 - c. 2018 Phase Three – 22 Libraries prioritized by reported bandwidth (\$700 per router = \$16,200)
2. Why implement Phase One based on Time Warner/Charter merger?
 - a. Due to the Time Warner/Charter merger, many libraries currently using Time Warner as their ISP are receiving upgraded bandwidth to 50mbps or higher.
 - b. With this upgrade, older wireless devices are likely to become the next bottleneck to improved internet service.
 - c. These libraries are being prioritized for router upgrades.
3. Why implement Phases Two & Three based on bandwidth?
 - a. Higher bandwidth libraries will receive greater benefit from improved wireless routers since wireless routers are most generally the greatest bottleneck to online capacity after the library's bandwidth.
4. May I change which phase my library receives the router?
 - a. Libraries may request to receive a router in a later phase as availability and budgets allow.

B. Aerohive Wireless devices provide a number of benefits to owning libraries:

1. Library Wireless Access Policy - Captive Portal allows member libraries to REQUIRE patrons to approve the library's wireless access policy before being given access to the wireless network.
2. Remote Router Management - Devices will be configured and reconfigured if requested, and maintained by MHLS staff remotely using centralized cloud management.
3. Easy Replacement - Since policies are backed up externally from the router, if a wireless access point goes down, a new one can be shipped and plugged in. It can then have the same policies as the previous router pushed down – no additional support is required to configure the device. As part of the expected deal, replacement would be guaranteed for 5 years.
4. Multiple Networks – Any single router can host multiple networks each with separate policies. For example, a public network with a captive portal that is only available 9am – 5pm, and a separate staff network without a captive portal, available 24/7.
5. Improved Reporting – Improved statistics gathering is built into the devices. MHLS staff can provide you with your monthly wireless session account – statistic which are required in the library's annual report.
6. Improved Throughput/Bandwidth – Generally, internet service provided by the local ISP has been the largest bottleneck for internet usage in member libraries. However, for libraries increasing bandwidth, new routers support new networking standards that offer higher speeds and less interference.



C. Mandatory 5 Year Replacement

1. Router Replacement - After five years the licensing on the router expires. At this point they will cease to work and must be replaced.

D. Timeline

1. Confirmation to Proceed
 - a. System Services Advisory Committee Consideration - July 12
 - b. Directors Association Consideration - Sept. 7
 - c. MHLS Board Consideration - Sept. 14

E. Libraries Currently Operating Aerohive Routers

1. Newer Model
 - a. For libraries that already own Aerohive devices, the devices purchased by this program would be a newer model and have a full five year lifespan.
 - b. Libraries could use the new router to replace models coming up for expiration or to provide additional coverage throughout the library. MHLS staff will work with member library directors to assess is how to deploy the new router.

DRAFT - Schedule for MHLS to Purchase and Install 1 New Aerohive Router at 66 Member Libraries

Public Libraries in Ulster County	Vendor Quoted Bandwidth	Current Bandwidth	3 Year Service Cost per Month: Time Warner (Blue), Lighttower (Yellow)	5 Year Service Cost per Month: Time Warner (Blue), Lighttower (Yellow)	Potential E-Rate Reimbursement Rate Percentage	3 Year: Cost per Month of Service After E-Rate Reimbursement	5 Year: Cost per Month of Service After E-Rate Reimbursement	Current Vendor	Current Library Cost per Month	Recommendation
-----------------------------------	-------------------------	-------------------	--	--	--	--	--	----------------	--------------------------------	----------------

2016 - Time Warner/Charter Merger Locations

Marlboro Free Library	50	60	\$750	\$610	50	\$375	\$305	Time Warner		Purchase with E-rate
Mountain Top Library	50	50	\$240	\$240	80	\$48	\$48	Time Warner	\$200	No Recommendation
West Hurley Public Library	50	50	\$240	\$240	60	\$96	\$96	Time Warner		Consider with or without E-Rate
Red Hook Public Library	50	35	\$240	\$240	50	\$120	\$120	Time Warner Cable (Business)	\$200	Consider with or without E-Rate
Tivoli Free Library	25	35	\$180	\$180	60	\$72	\$72	Time Warner Cable (Business)	\$189	Consider with or without E-Rate
Starr Library	50	30	\$240	\$240	50	\$120	\$120	Time Warner Cable (Free)	\$0	Consider with or without E-Rate
Stone Ridge Library	50	30	\$240	\$240	70	\$72	\$72	Time Warner Cable (Business)	\$200	Consider with or without E-Rate
Hunter Public Library	25	20	\$180	\$180	80	\$36	\$36	Time Warner Cable (Free)	No Charge	Consider with or without E-Rate
Stanford Free Library	25	20	\$2,313	\$2,239	70	\$694	\$672	Time Warner Cable (Free)	\$0	Consider with E-Rate
Town of Ulster Public Library	50	20	\$240	\$240	80	\$48	\$48	Time Warner Cable (Business)	\$174	Consider with or without E-Rate
Hurley Library	25	15	\$180	\$180	80	\$36	\$36	Time Warner Cable (Free)	\$0	Consider with or without E-Rate
East Fishkill Public Library District	50	15	\$750	\$610	50	\$375	\$305	Time Warner Cable (Business)	\$70	Consider with E-Rate
Town of Esopus Library	50	15	\$240	\$240	80	\$48	\$48	Time Warner		Consider with or without E-Rate
Kinderhook Memorial Library	50	10	\$240	\$240	60	\$96	\$96	Time Warner	\$149	Consider with or without E-Rate
Sarah Hull Hallock Free Library	35	10	\$1,175	\$935	50	\$588	\$468	Time Warner Cable (Free)	\$0	Consider with E-Rate
Rosendale Library	35	10	\$1,100	\$875	60	\$440	\$350	Time Warner Cable (Free)	\$0	Consider with E-Rate
NorthEast-Millerton Library	50	10	No Bid	No Bid	80			Time Warner Cable (Free)	\$0	No Recommendation
Kingston Library	50	10	\$240	\$240	80	\$48	\$48	Time Warner Cable	\$174	Consider with or without E-Rate
Valatie Free Library	25	10	\$180	\$180	60	\$72	\$72	Time Warner Cable	\$99	Consider with or without E-Rate
Elting Memorial Library	50	10	\$240	\$240	50	\$120	\$120	Time Warner	\$64	Consider with or without E-Rate
Woodstock Public Library District	25	10	\$180	\$180	70	\$54	\$54	Time Warner	\$247	Consider with or without E-Rate
Pleasant Valley Library	50	8	\$240	\$240	50	\$120	\$120	Time Warner Cable (Free)	\$ -	Consider with or without E-Rate

2017 - Highest Currently Reported Speeds

Morton Memorial Library and Community House	25	7.5	\$180	\$180	50	\$90	\$90	Time Warner Cable (Business)	\$ -	Consider with or without E-Rate
Phoenicia Library	50	7	\$240	\$240	70	\$72	\$72	Time Warner Cable (Free)	\$ -	Consider with or without E-Rate
Kent Public Library	50	5	\$875	\$725	50	\$438	\$363	Time Warner Cable (Business)	\$ 40	Consider with E-Rate
Plattekill Public Library	35	60	\$750	\$610	70	\$225	\$183	Optimum	\$ 100	Consider with E-Rate
Beekman Library	50	60	\$2,027	\$2,027	50	\$1,014	\$1,014	Comcast	\$ 15	Consider with E-Rate
Dover Plains Library	50	60	\$750	\$610	70	\$225	\$183	Cablevision	\$ 150	Consider with E-Rate
Heermance Memorial Library	50	50	No Bid	No Bid	70	N/A	N/A	State Telephone	No Charge	No Recommendation
Hudson Area Association Library	50	50	\$875	\$725	85	\$131	\$109	Mid-Hudson Cable	\$ 335	Consider with E-Rate
Millbrook Free Library	50	35	\$750	\$610	60	\$300	\$244	Optimum		Consider with E-Rate
Alice Curtis Desmond & Hamilton Fish Library	50	30	\$750	\$610	80	\$150	\$122	Optimum Online (Business)	\$ 85	Consider with E-Rate
Amenia Free Library	35	30	\$750	\$610	80	\$150	\$122	Optimum	\$ 106	Consider with E-Rate
Adriance Memorial Library - Poughkeepsie Public Library District	50	30	\$750	\$610	85	\$113	\$92	Lighttower Fiberoptics	\$ 2,778	Consider with E-Rate
Hyde Park Free Library	50	30	\$750	\$610	60	\$300	\$244	Comcast	\$ 220	Consider with E-Rate
Morton Memorial Library	35	30	No Bid	No Bid	70			Optimum	\$ -	No Recommendation
Howland Public Library	50	25	\$750	\$610	60	\$300	\$244	Optimum Business	\$ 60	Consider with E-Rate
Blodgett Memorial Library	50	25	\$910	\$770	60	\$364	\$308	Optimum	No Charge	Consider with E-Rate
Pine Plains Free Library	35	25	\$750	\$610	70	\$225	\$183	Optimum	No Charge	Consider with E-Rate
Olive Free Library Association	25	23	\$180	\$180	70	\$54	\$54	Comcast	\$ 237	Consider with or without E-Rate
Brewster Public Library	50	22	\$750	\$610	50	\$375	\$305	Comcast Business	\$ 210	Consider with E-Rate
Mahopac Public Library	50	20	\$2,917	\$2,739	40	\$1,750	\$1,643	Optimum Online (Home)	\$ 199	Consider with E-Rate
Clinton Community Library	50	20	No Bid	No Bid	50			Optimum Business (Free)	\$ -	No Recommendation
Highland Public Library	50	20	\$750	\$610	60	\$300	\$244	Optimum Business	\$ -	Consider with E-Rate

2018 - Highest Currently Reported Speeds

Saugerties Public Library	50	20	\$240	\$240	60	\$96	\$96	Optimum Business	\$ -	Consider with or without E-Rate
Staatsburg Library	35	20	\$1,495	\$1,200	70	\$449	\$360	Optimum Business	\$ -	Consider with E-Rate
Grinnell Public Library District	50	20	No Bid	\$850	50		\$425	Optimum Business	\$ -	Consider with E-Rate
Claverack Free Library	35	20	\$3,460	\$2,975	85	\$519	\$446	Mid-Hudson Cable	\$ 46	Consider with E-Rate
D.R. Everts Library	35	20	\$1,100	\$610	70	\$330	\$183	Mid-Hudson Cable	\$ 102	Consider with E-Rate
Germantown Library	50	20	\$2,313	\$2,313	70	\$694	\$694	gTel	\$ 20	Consider with E-Rate
Reed Memorial Library	50	18	\$750	\$750	60	\$300	\$300	Verizon FIOS	\$ 75	Consider with E-Rate
Cairo Public Library	50	15	\$2,027	\$2,027	80	\$405	\$405	Mid-Hudson Cable	\$ 168	Consider with E-Rate
Catskill Public Library	50	15	TBD	\$950	70	TBD	\$285	Mid-Hudson Cable	\$ 213	Consider with E-Rate
Greenville Public Library	50	15	No Bid	No Bid	60	N/A	N/A	Mid-Hudson Cable	\$ 100	No Recommendation
Pawling Free Library	50	15	\$750	\$610	50	\$375	\$305	Comcast	\$ 64	Consider with E-Rate
Livingston Free Library	15	10	No Bid	No Bid	85	N/A	N/A	Optimum Business	No Charge	No Recommendation
Windham Public Library	35	10	No Bid	No Bid	70	N/A	N/A	Mid-Hudson Cable	\$ 89	No Recommendation
Philmont Public Library	35	10	No Bid	No Bid	80	N/A	N/A	Mid-Hudson Cable	\$ 35	No Recommendation
Chatham Public Library	50	10	\$2,027	\$2,027	70	\$608	\$608	Fairpoint Communications	\$ 107	Consider with E-Rate
North Chatham Free Library	25	10	\$180	\$180	60	\$72	\$72	Fairpoint Communications	\$ 60	Consider with or without E-Rate
Roeliff Jansen Community Library	50	10	No Bid	No Bid	80	N/A	N/A	Fairpoint Communications	\$ 110	No Recommendation
Putnam Valley Free Library	35	10	\$875	\$725	40	\$525	\$435	Optimum Online	\$ 50	Consider with E-Rate
LaGrange Association Library	50	7	\$240	\$240	50	\$120	\$120	Optimum Business	\$ -	Consider with or without E-Rate
Patterson Library	50	6	\$750	\$610	50	\$375	\$305	Comcast	\$ 91	Consider with E-Rate
New Lebanon Library	25	5	\$180	\$180	70	\$54	\$54	Fairpoint Communications	\$ 50	Consider with or without E-Rate
Julia L. Butterfield Memorial Library	50	2	\$1,375	\$1,100	50	\$688	\$550	Optimum		Consider with E-Rate