

# Case Study # 2

## Wide Area Network

# Client Background

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- Statewide offices (11)
- Newer technology phone system
- Mostly Cat 5e or better cable
- Mostly power over Ethernet switches
- Frame and ATM wide area network
- Voice quality issues

# What the Client Wanted

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- How to fix lingering voice quality issues

# Approach

- Step by step process
  1. Established project team
  2. Developed planning assumptions
  3. Assessed wide area network (WAN)
  4. Prepared budgets
  5. Choose a strategy

# Voice Quality Causes

- Existing telephone system
  - Telephone interoperability
- Wide area network
- Local area network
- Cable

# Possible Choices

- Conduct a network assessment by third party
- Upgrade wide area network
- Strategic plan for replacement

# Possible Choices

- Start with wide area network
  - Upgrade to Multi Protocol Label Switching (MPLS) network



# Vendors Reviewed

- AT&T – ASP
- AT&T
- AT&T - ACC
- New Edge
- Qwest
- Voxitas
- Global Crossings

# Vendor Pricing

- Monthly recurring charges
- ASP host site – 6 Mb for MPLS
- ASP host site – 3 Mb for Internet
- All other sites 1.5 Mb

# Vendor Pricing Notes

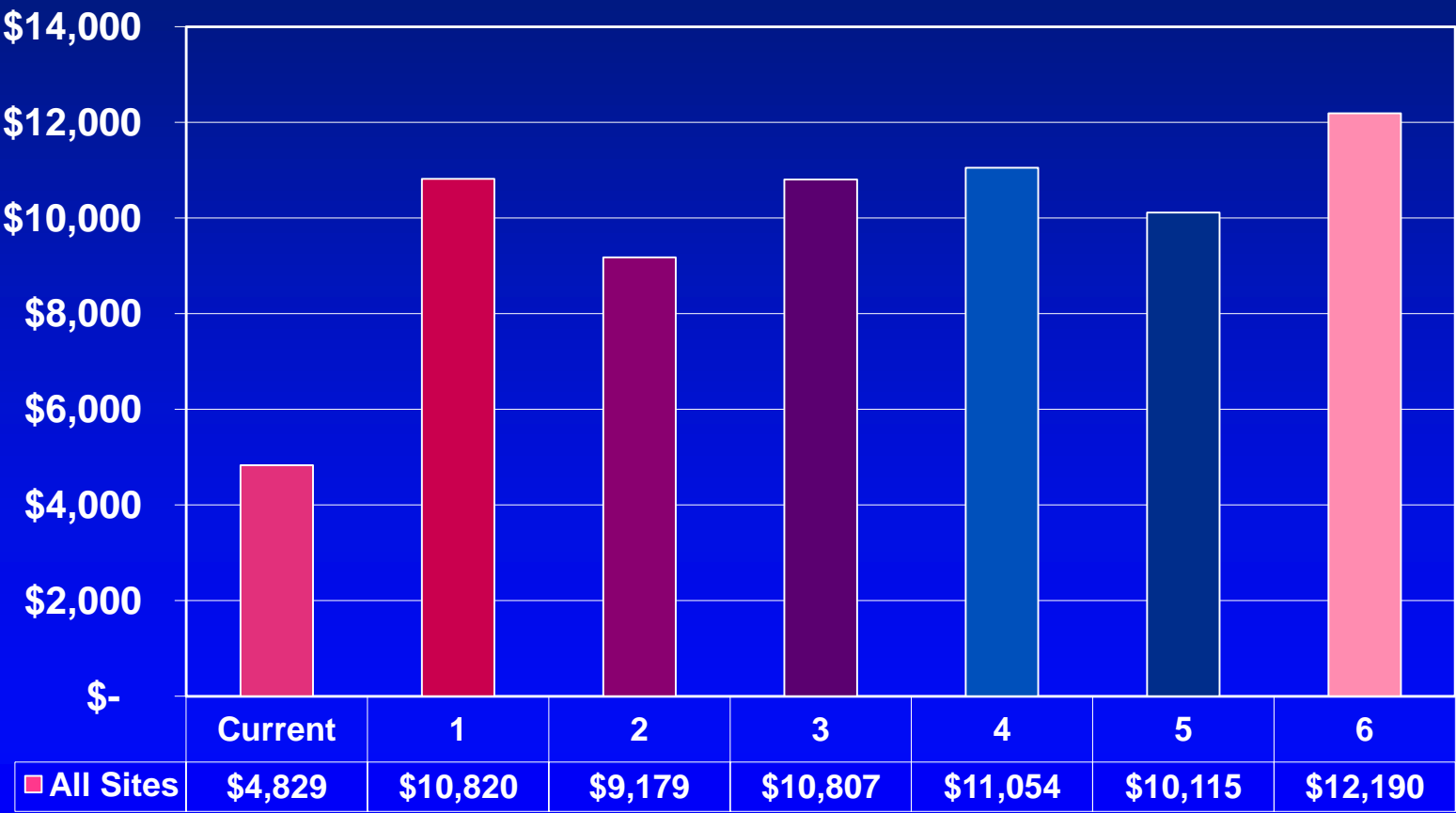
## ● Included

- Installation – 3 - year term except for # 6
- Managed routers
- \$800 per month for internet access charge by ASP

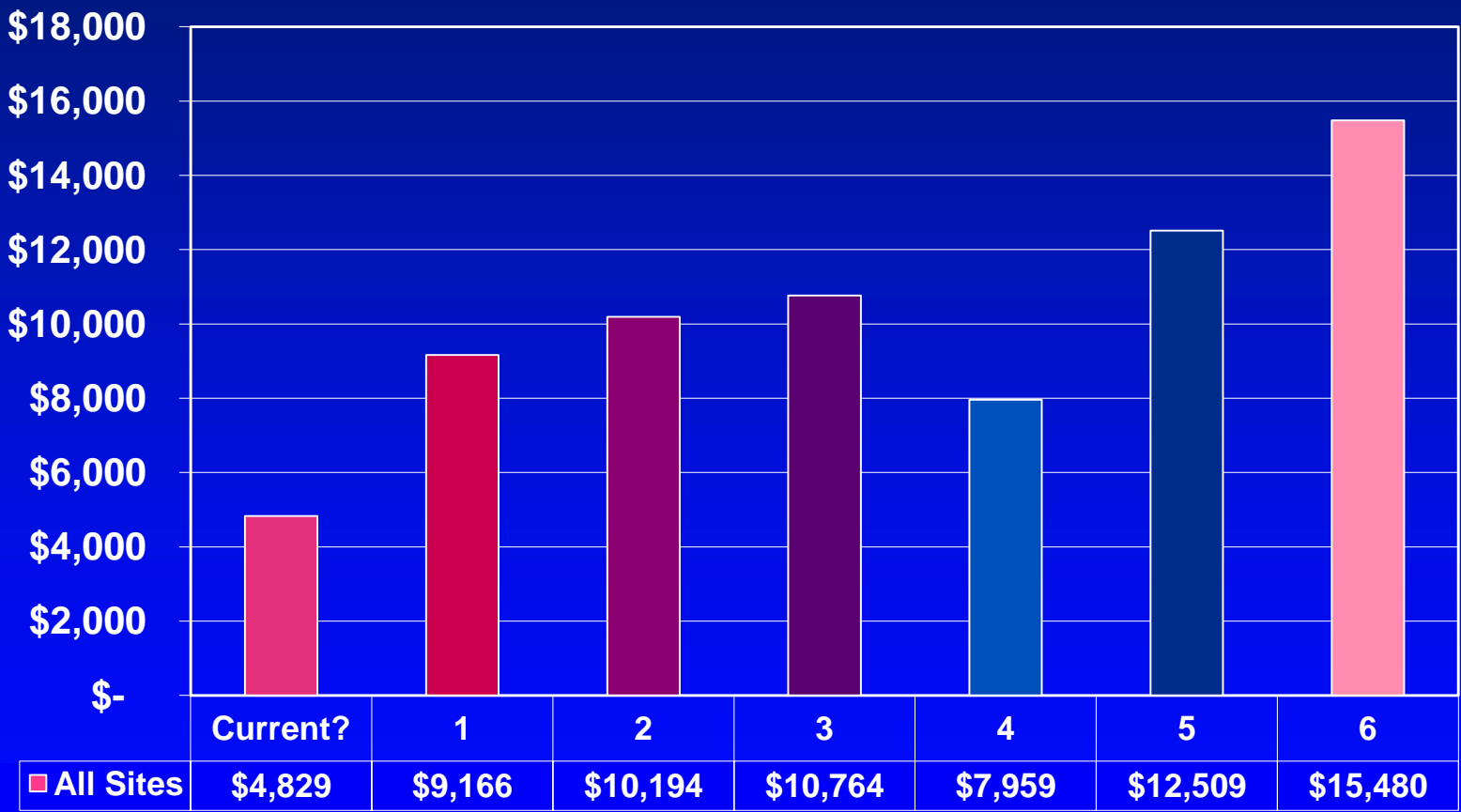
## ● Not included

- Reprogramming charges
- Survivability options
- Taxes

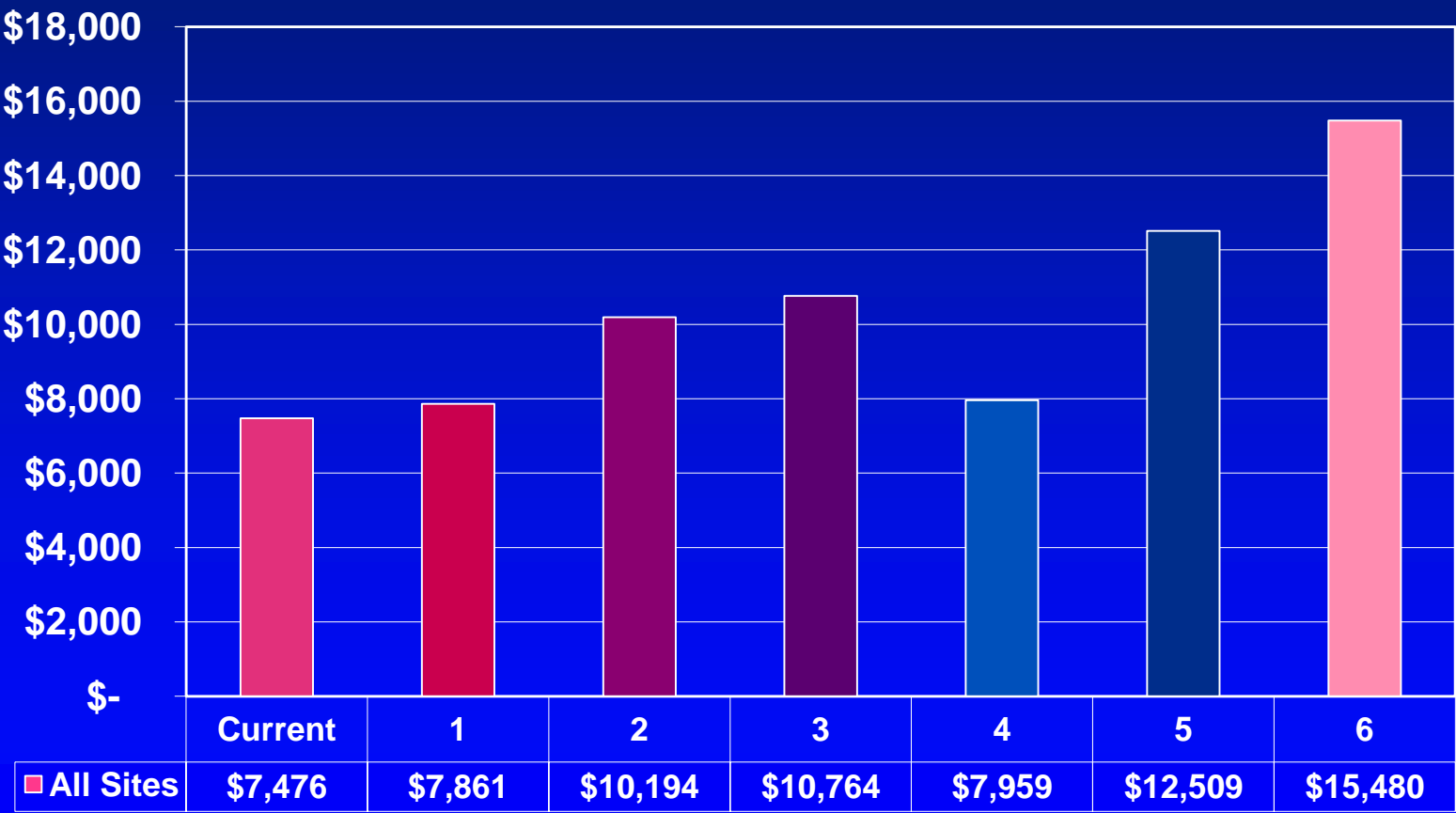
# MPLS Monthly Recurring Charge Round 1



# MPLS Monthly Recurring Charge Round 2



# MPLS Monthly Recurring Charge Round 3



# Recommendations

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## Internet Access

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- Go with incumbent
  - 3 MB Internet Access
  - \$800 per month



# Recommendations

## MPLS Network

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- First choice – Go with # 4
- Second choice - Go with # 1

# Recommendations

## Side Note

- Pricing went down from \$10,820 to \$7,861 a savings of \$2,959 per month from Round 1
- Total savings over the life of the contract from incumbent's original quote

**\$106,524**

# PRI Recommendations

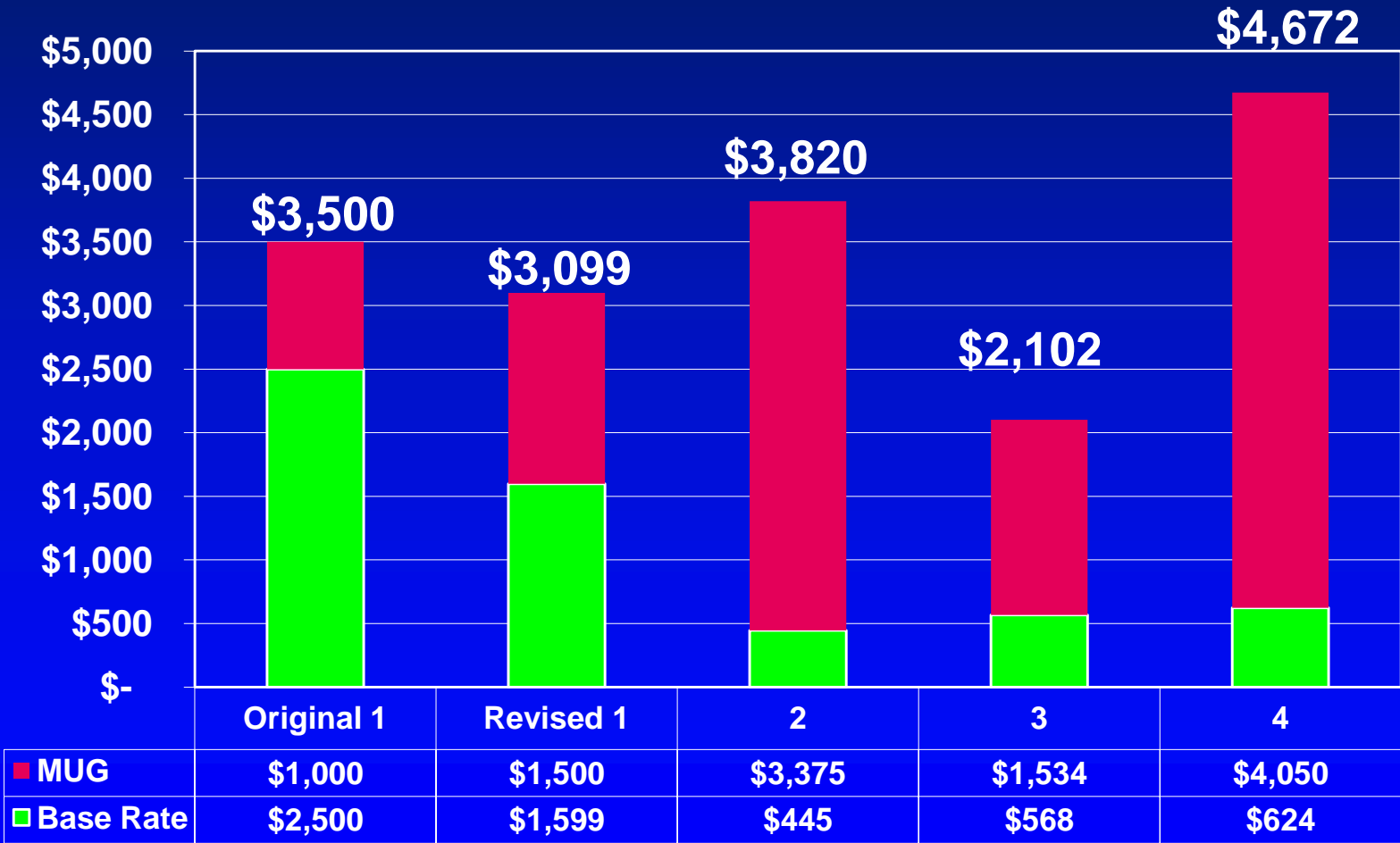
# Vendors Reviewed PRI

- Dynalink
- ITC
- Access One
- Airespring

# Vendor Pricing Notes

- #1 rates were based upon a fixed contract for monthly usage guarantee (MUG) of 50,000 (expired) or 75,000 minutes per month
- Others on per minute basis

# PRI Comparisons



# Recommendations

- First choice – # 3
  - No minimum per month usage commitment
- Second choice – # Revised 1
  - \$997 per month minimum more

# Recommendations

## Side Note

- Original # 1's pricing for PRI with 50,000 minutes per month = \$3,500
- # 3's pricing for PRI with 75,000 minutes per month = \$2,102
  - Monthly savings of \$1,398 per month
- Total savings over the life of the contract

**\$50,328**



# Conclusions

- Network connectivity is growing faster than telecom due to wireless and special purpose networks
- Funding to refresh telephone systems, local area and wide area networks is a common problem

# Conclusions

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- Voice over IP transition is complex
- Network and network security will continue to grow and be refreshed to stay current
- There are choices in the market for you to compare

# Discussion

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