Antelope Valley College Health and Sciences Bldg Wired and Wireless Systems

Phil Crompton & Anthony Tima

Vantage Technology Consulting Group

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Agenda

- Introductions
- Overview of Wired and Wireless Systems
- Recommendations
- Questions

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- Offices in Los Angeles and Boston
- Capabilities
  - Strategic Planning
  - System Design
  - Infrastructure Design
  - Implementation Management
- Diverse Staff with wide range of experience
- Independent and Vendor Neutral

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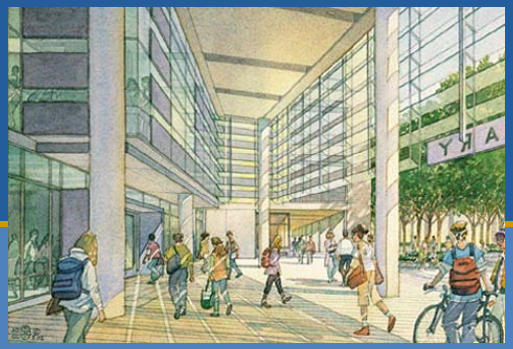
Academic Projects

- Classrooms
- Labs & Research
- Academic Libraries
- Administration
- Student Services



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Selected Academic Clients

- Antelope Valley Community College
- Los Angeles Community College District
- CSU Fullerton and CSU Channel Islands
- UC Los Angeles, UC Santa Cruz, UC Berkeley and UC Santa Barbara
- Mount San Antonio College
- Santa Monica Community College
- Long Beach City College
- Houston Community College
- Sinclair Community College
- Georgia Tech
- Duke University
- Harvard University
- University of Pennsylvania
- University of New Mexico

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Health and Sciences Building

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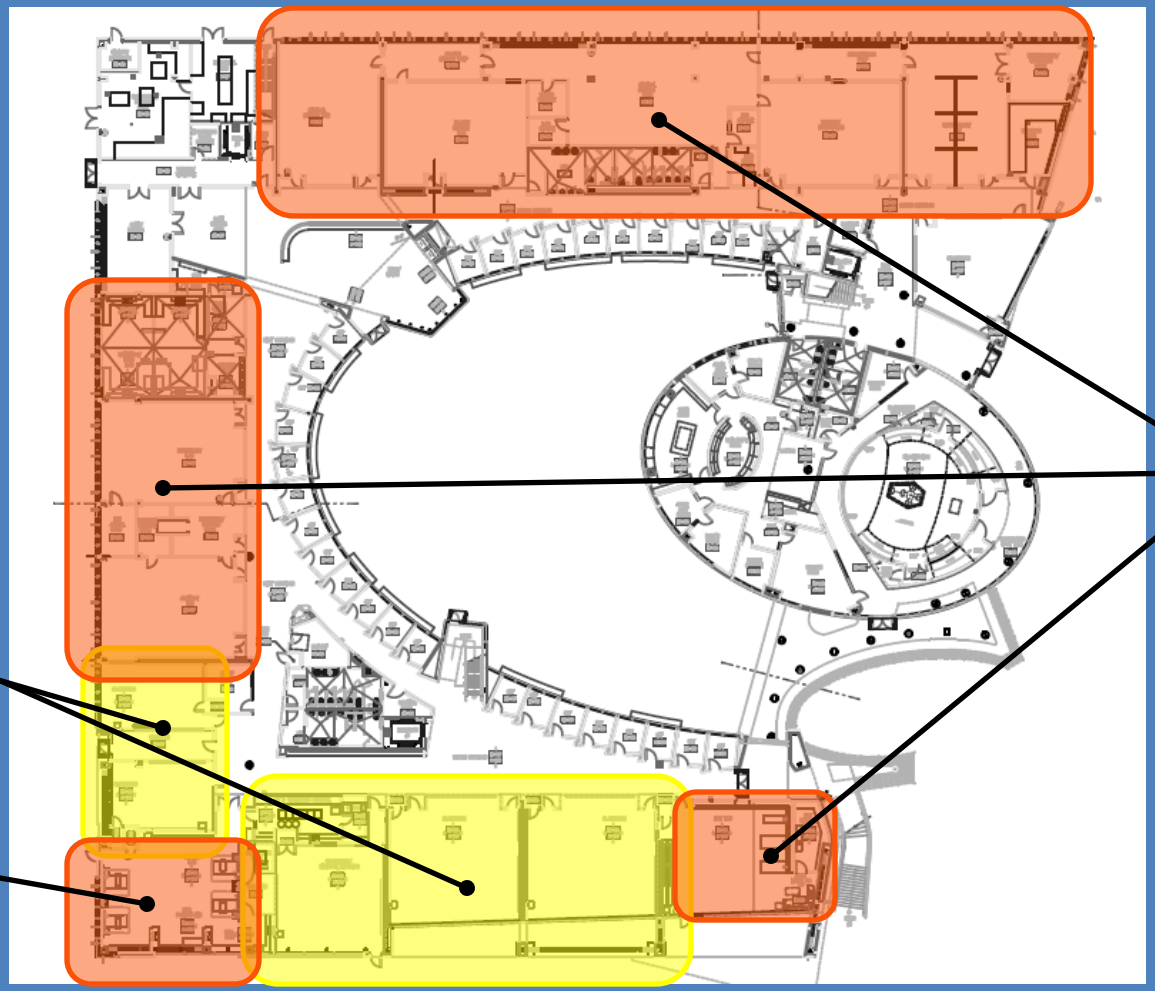
Premise

Consider implications of eliminating wired connections in Labs and Classrooms and using wireless technology to provide network connectivity for students.

First Floor



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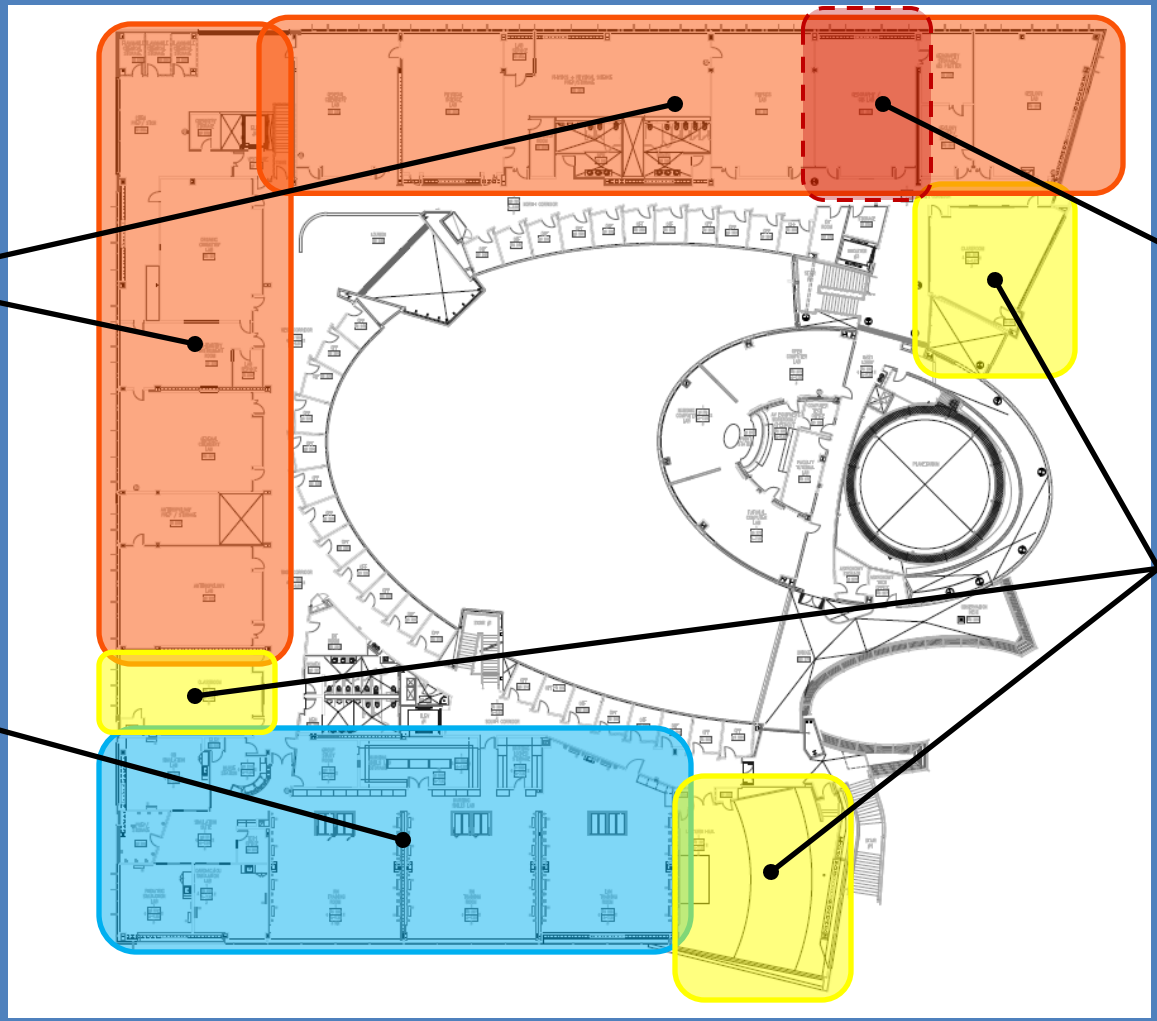
Second Floor



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Considerations

- Performance
- Support
- Cost
  - Capital Cost
  - Operating Cost
- Expectations
  - Emerging standard for Higher Education
  - Students and Staff expect wireless connectivity

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Overview of Wired vs Wireless

Wired Performance

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Wireless Performance

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Wired Flexibility

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Wireless Flexibility

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Wired Reliability & Security

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Wireless Reliability & Security

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Wired Costs

Wired Costs	Unit	Cost	Total
Cabling	952	$295	$280,840
Network Electronics	571	$250	$142,750
Total Capital Cost			**$423,590**
Administrative Support	23	$50	$1,150
Total Operational Cost			**$1,150**

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Wireless Costs

Wireless Costs	Unit	Cost	Total
Access Points	40	$1,000	$40,000
Cabling	80	$295	$23,600
Network Electronics	40	$250	$10,000
Initial Setup			
Total Capital Cost			**$79,600**
Administrative Support	6	$50	$300
User Support / Helpdesk	600	$50	$30,000
Total Operation Cost			**$30,300**

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Wired vs Wireless Summary

	Wired	Wireless
Performance	High	Can be limited
Flexibility	Low	High
Reliability	Very High	Can be limited
Capital Cost	Higher	Lower
Operating Cost	Lower	Higher
IT Staffing	Current	Higher

Wired works well for…

- Fixed locations that will never move
- Large files that must be accessed quickly (CAD/BIM files, etc)
- Defined levels of Security and Reliability
- High quality video streaming in classroom environments
- Large numbers of simultaneous users

Wireless works well for…

- Flexible systems that move around
- Relatively small files and applications, such as Email, Internet Access, Word / Excel, etc
- Locations where Security and Reliability are not so important
- YouTube-quality video streaming
- Asynchronous usage

Recommendations

Implement Wireless as Primary Connection Method

- Reduce capital cost of project by eliminating most wired student connections in Classrooms, Labs and other appropriate spaces
- Provide wired connections in strategic locations throughout building for:
  - Increased bandwidth applications (CAD/BIM, Simulation & Modeling, high-quality video, etc)
  - Fallback in case of wireless outage

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Augment IT Staff to support Wireless Systems

- Add dedicated staffing to IT Dept to support increased operational workload
  - Wireless networks require additional manpower to set-up, maintain and support users
  - Currently zero staff available for this function

Summary of Recommendations

1. Reduce wired connections to lower capital costs
2. Increase wireless network coverage to provide required connectivity & performance
3. Create operational support structure for wireless systems

Questions

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