Network architecture proposal for the new engineering building

Computer Networks I - June 2024

Jonnathan Sotelo
jsotelor@udistrital.edu.co

Juan David Guevara
judguevarag@udistrital.edu.co

SCHEDULE
MARCH - APRIL

Review of Plans and Architectural Design

1 - 7
MARCH

8 - 14
MARCH

Identification and Distribution of Spaces

Evaluation of Specialized Network Software

15 - 21
MARCH

22 - 8
MARCH-APRIL

Initial Requirements Gathering

Technical Analysis of Requirements

9 - 15
APRIL

SCHEDULE
APRIL - MAY

Requirements Prioritization

16 - 24
APRIL

25 - 7
APRIL - MAY

Continuous Requirements Refinement

Development of the Conceptual Network Model

8 - 14
MAY

15 - 21
MAY

Design of Specific Models for Each Space

Integration of Specific Models into a General Prototype

22 - 9
MAY - JUNE

SCHEDULE
JUNE

Network Model Configuration in the Software

13 - 22 JUNE

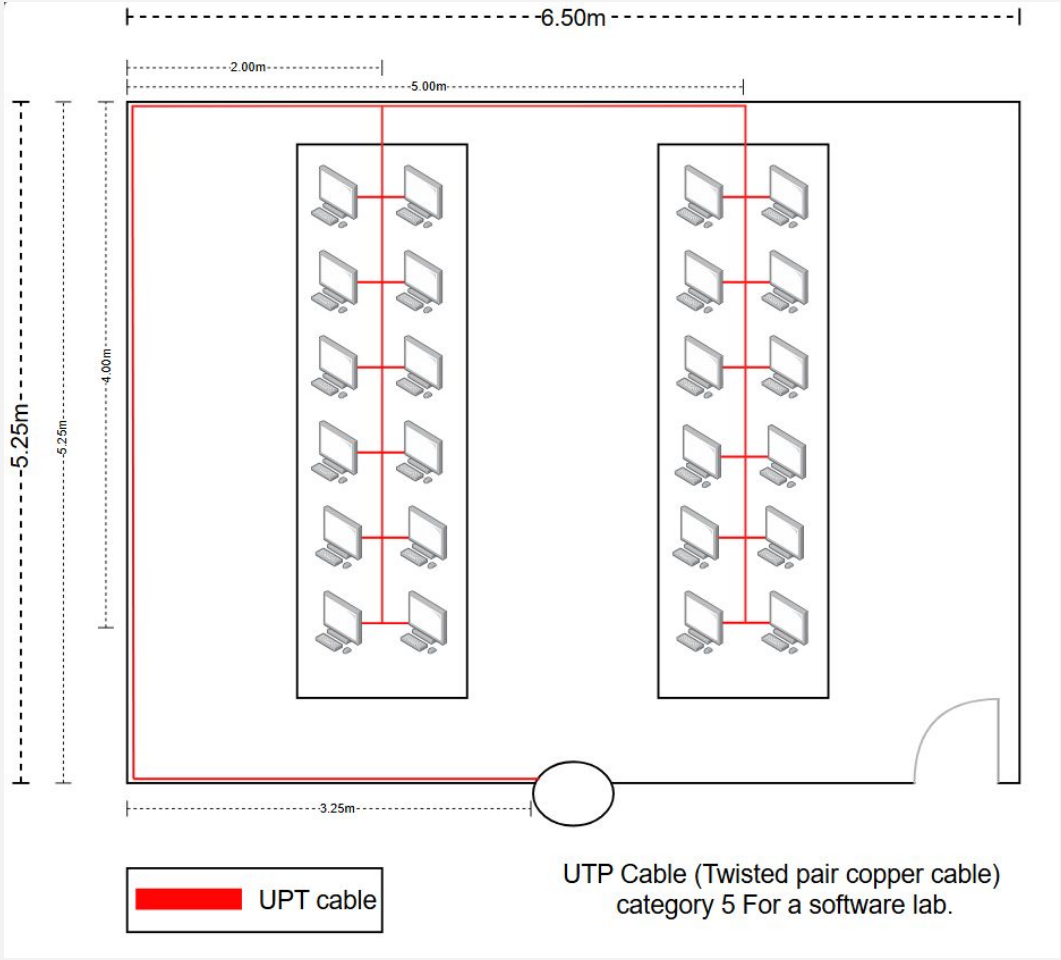
10 - 12 JUNE

Simulation Software Selection

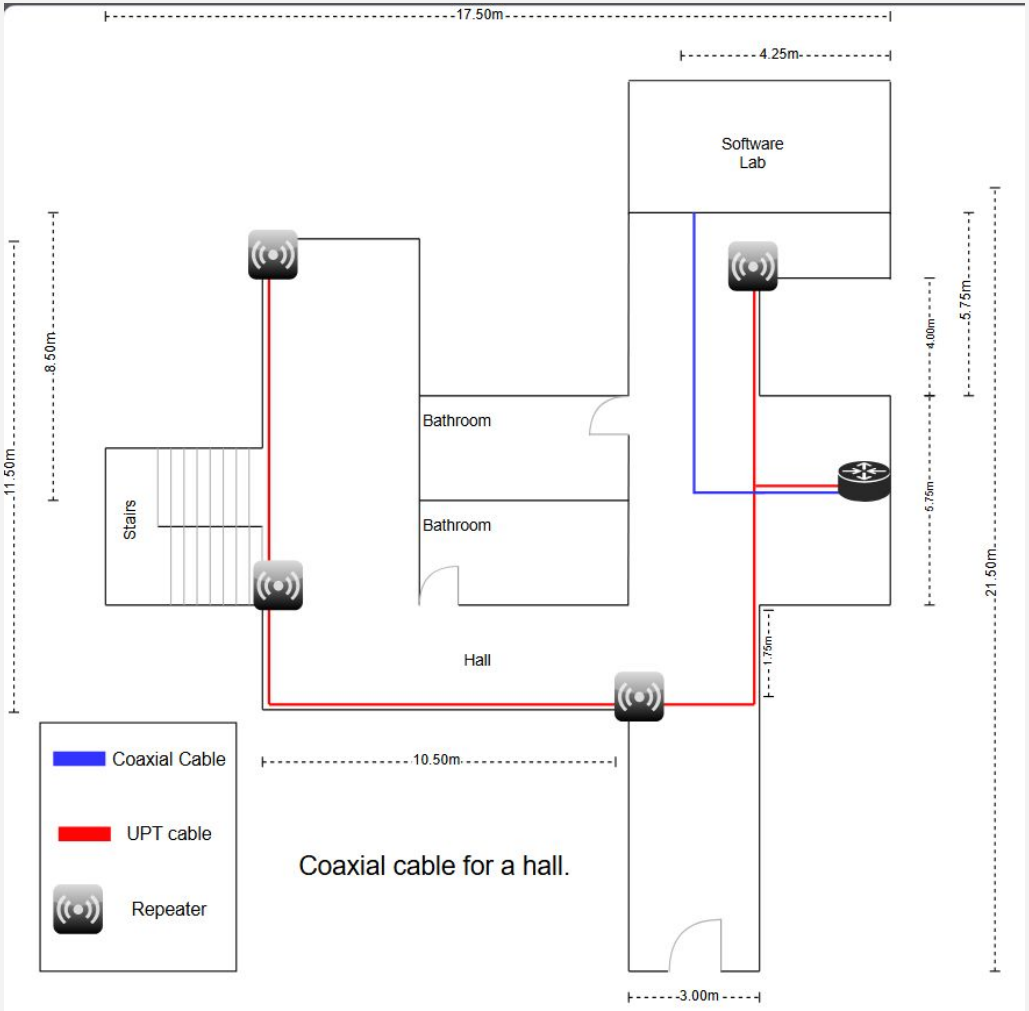
23 - 31 JUNE

Running Simulations

COST ESTIMATION

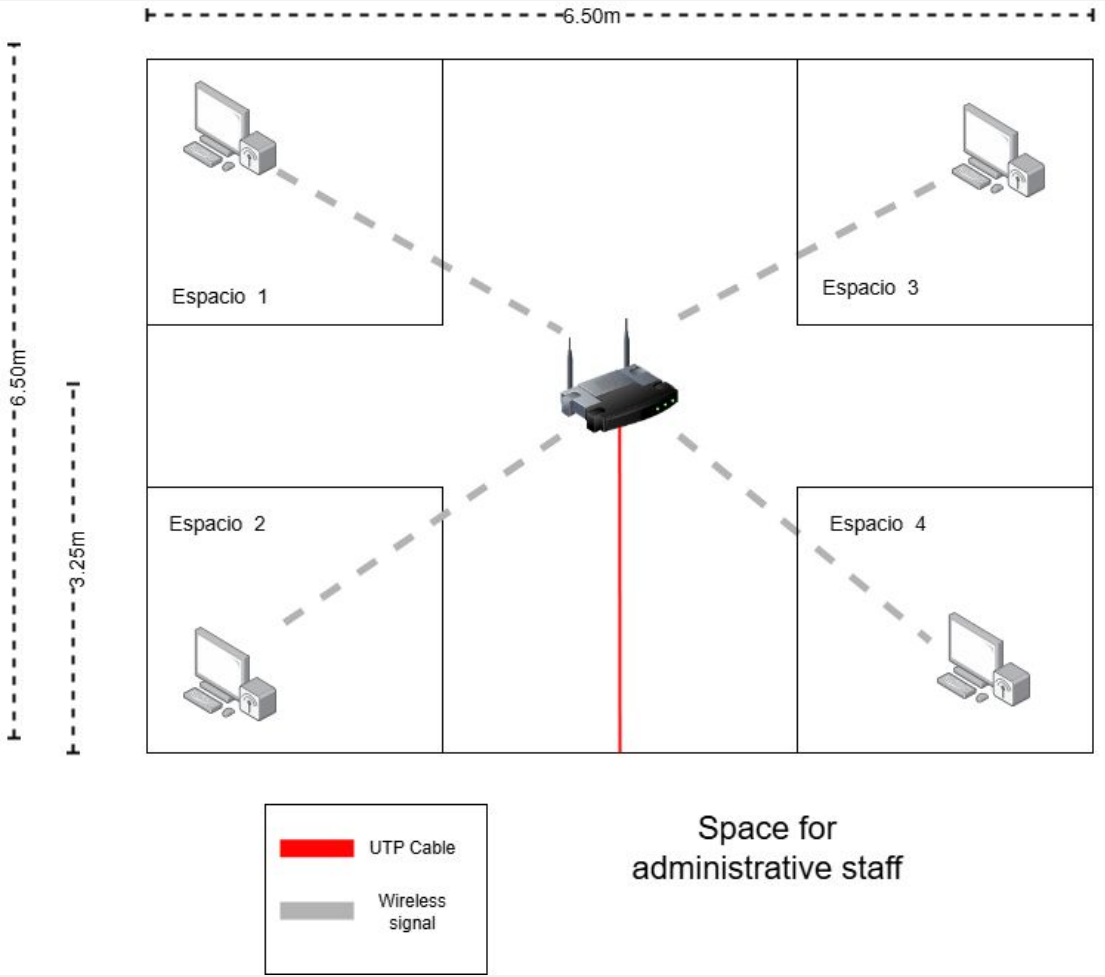


COST ESTIMATION



UNIVERSIDAD DISTRITAL
FRANCISCO JOSÉ DE CALDAS

COST ESTIMATION



EQUIPMENT AND CABLE PRICE

Device	Model	Quantity	Unitary Cost (US$)	Total (US$)	Price in Colombian Pesos
Router	Juniper Networks SRX340	1	$3,256.23	$3,256.23	$13,024,920
Switch	TL-SG3428MP	15	$388.00	$5,820.00	$23,280,000
Repeater	UAP-AC-LITE	68	$130.00	$8,840.00	$35,360,000
Cable Coaxial	Cable Coaxial Rg6 1 Blanco D-90182	195	$2.77	$540.15	$2,160,600
Cable UTP	Cable Utp Cat 7 Ethernet	4785	$2.00	$9,570.00	$38,280,000
Rack patch panel	Rapink	11	$47.40	$521.40	$2,085,600
Wireless router	Cisco-Linksys WRT300N	4	$159.95	$639.80	$2,559,200

ROLES AND AVERAGE SALARY

Role Name	Salary (COP)	Quantity	Contracted Months	Total Salary
Network architect	$8,349,927	1	1	$8,349,927
Network engineer	$5,768,478	1	4	$23,073,912
Network Security Specialist	$3,500,000	2	1	$7,000,000
Network Support Technician	$1,320,232	5	4	$26,404,640
Specialist in telecommunications	$3,491,160	1	2	$6,982,320

The total cost for the new engineering faculty building is:

$205,633,119 COP

UNIVERSIDAD DISTRITAL
FRANCISCO JOSÉ DE CALDAS

THANKS