Wireless ATM

Raj Jain
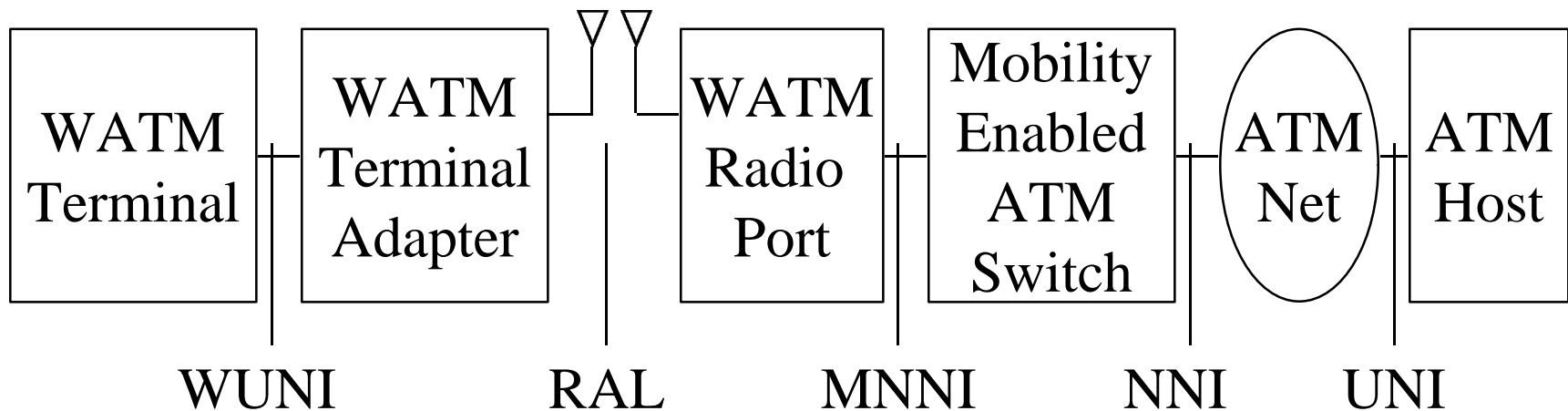
Professor of Computer and Information Science

Raj Jain is now at
Washington University in Saint Louis
Jain@cse.wustl.edu
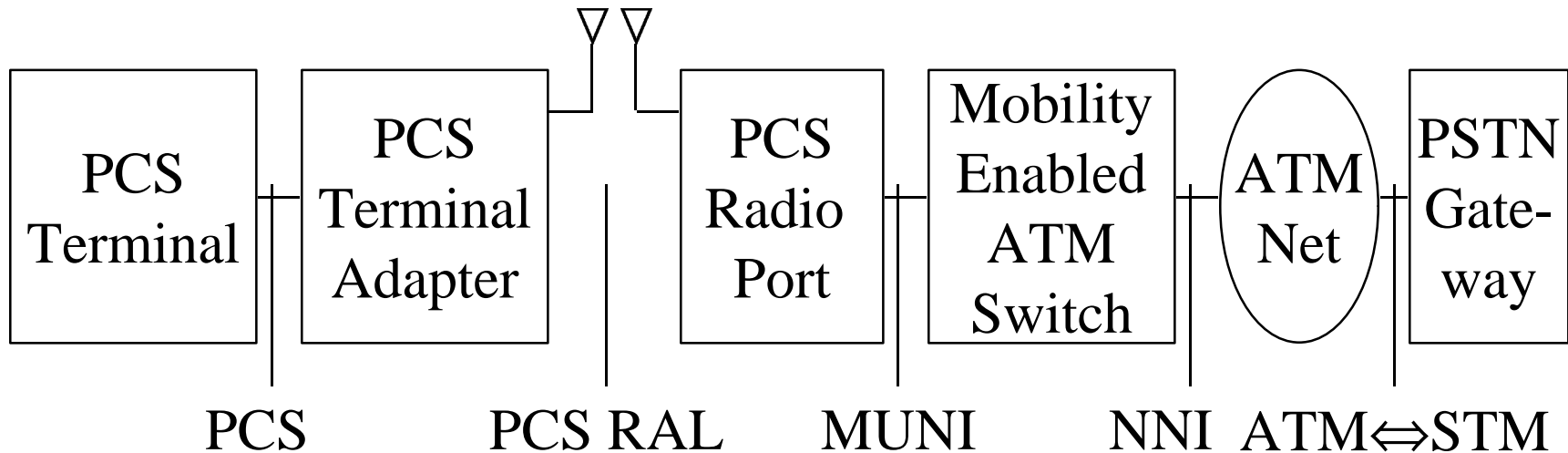http://www.cse.wustl.edu/~jain/

Overview

q Reference Model

q Protocol Architecture

q Proposed scope

Wireless ATM: Reference Model

WATM Terminal	WATM Terminal Adapter	▽▽	WATM Radio Port	Mobility Enabled ATM Switch	ATM Net	ATM Host

WUNI	RAL	MNNI	NNI	UNI

q May also be used with cellular/PCS infrastructure

PCS Terminal	PCS Terminal Adapter	▽▽	PCS Radio Port	Mobility Enabled ATM Switch	ATM Net	PSTN Gate-way

PCS	PCS RAL	MUNI	NNI	ATM⇔STM

WATM Protocol Architecture

User Plane		Control Plane
AAL		Wireless Control
ATM		
Datalink		
Medium Access Control		
Radio Physical Layer		
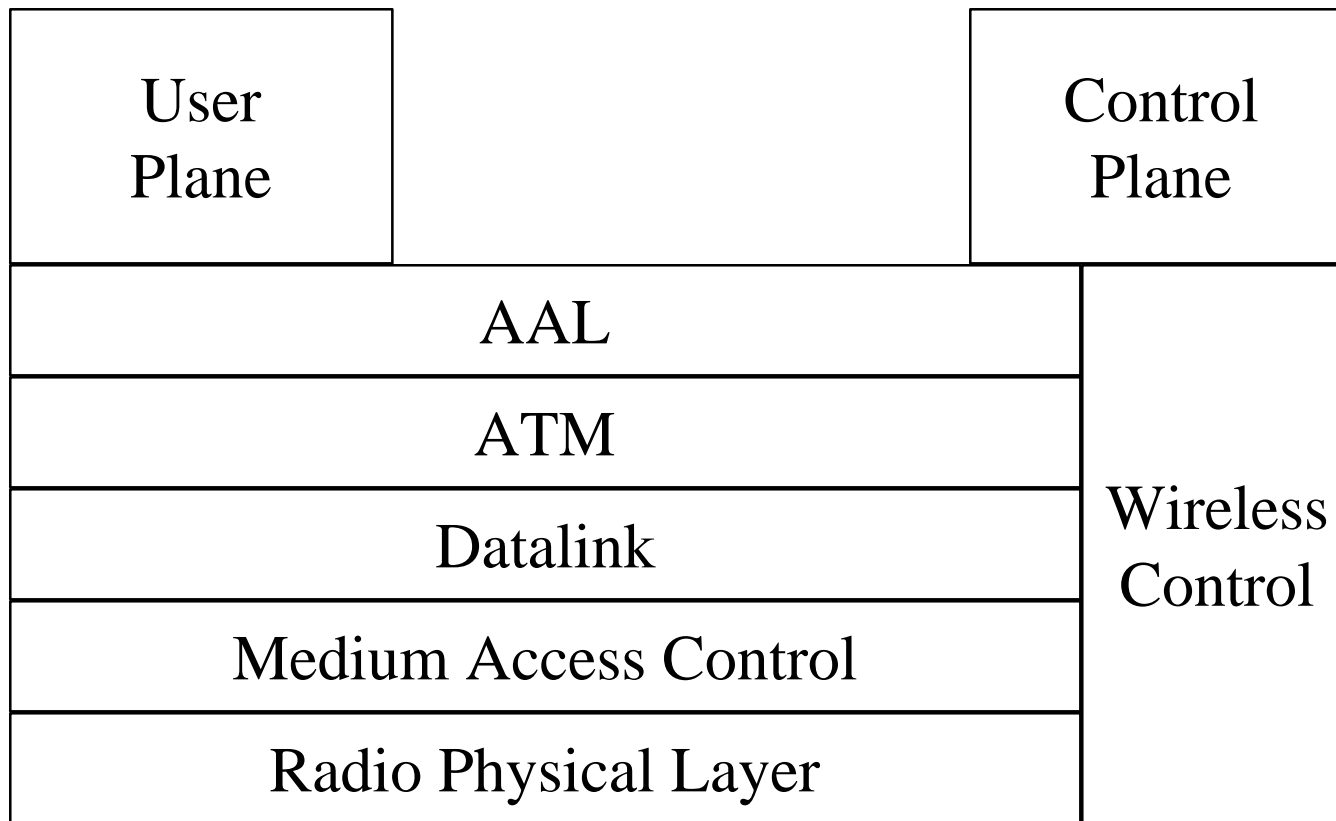
Proposed Work Items

q   Radio access protocols including

    q   Radio physical layer

    q   Medium access control for wireless channel

    q   Datalink control for wireless channel errors

    q   Wireless control protocol for radio resource management

q   Mobile ATM Protocol extensions including:

    q   Handoff control

    q   Location management for mobile connections

    q   Routing considerations for mobile connections

    q   Traffic/QoS control for mobile connections

    q   Wireless Network Management

Status

q   So Far it was a "Birds of a Feather"

q   Working Group will be established in August 1996

References: Wireless ATM

q   L. Dellaverson, "Proposed Charter, Work Plan and Schedule for a Wireless ATM Working Group," ATM Forum/96-0712, June 1996.

q   J. Deane, "WATM PHY requirements," ATM Forum/96-0785, June 1996

q   J. Deane, "WATM MAC requirements," ATM Forum/96-0786, June 1996