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

- Reference Model
- Protocol Architecture
- Proposed scope
Wireless ATM: Reference Model

- May also be used with cellular/PCS infrastructure

WATM Terminal

WATM Terminal Adapter

WATM Radio Port

Mobility Enabled ATM Switch

ATM Net

ATM Host

WUNI

RAL

MNNI

NNI

UNI

PCS Terminal

PCS Terminal Adapter

PCS Radio Port

Mobility Enabled ATM Switch

ATM Net

PSTN Gateway

PCS

PCS RAL

MUNI

NNI

ATM⇔STM

The Ohio State University

Raj Jain
WATM Protocol Architecture

User Plane
- AAL
- ATM
- Datalink
- Medium Access Control
- Radio Physical Layer

Control Plane
- Wireless Control
Proposed Work Items

- Radio access protocols including
  - Radio physical layer
  - Medium access control for wireless channel
  - Datalink control for wireless channel errors
  - Wireless control protocol for radio resource management

- Mobile ATM Protocol extensions including:
  - Handoff control
  - Location management for mobile connections
  - Routing considerations for mobile connections
  - Traffic/QoS control for mobile connections
  - Wireless Network Management
Status

- So Far it was a "Birds of a Feather"
- Working Group will be established in August 1996
References: Wireless ATM

- J. Deane, "WATM PHY requirements," ATM Forum/96-0785, June 1996
- J. Deane, "WATM MAC requirements," ATM Forum/96-0786, June 1996