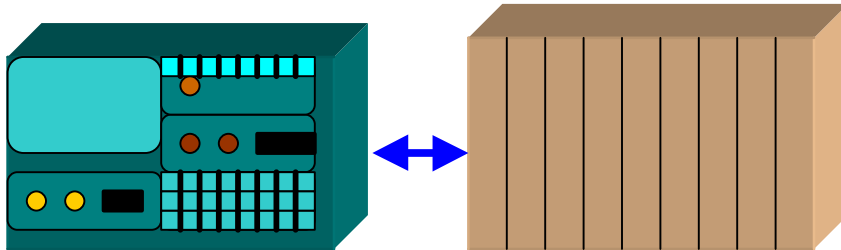# ATM Network Protocol Testing



## Goal
- To speed the deployment of standard conformant and interoperable ATM equipment for use in high speed networks.

## Technical Objectives
- Develop Protocol Implementation Conformance Statements (PICS) and Abstract Test Suites (ATS) for the various ATM protocol specifications, recommendations, and standards.
- Develop Interoperability (IOP) Test suites to test the inter-operation of different manufacturers' equipment.
- Develop software tools for evaluating network routing performance and implementation of test suites.

## Impact
- Use of the PICS allows testers to select tests to develop and execute and allows customers to determine an implementation's capabilities or features.
- Use of the ATSs and IOP and test tools permits test equipment manufacturers and test houses to quickly implement and market conformance and interoperability tests.
- Use of the software tool allows network designers and planners to test potential ATM networks without the high equipment costs.

## Customers and Collaborators

### Customers
- Test Equipment vendors, switch vendors and network operators
- Universities and research institutes
- Standards organizations: ANSI T1, ITU-T, and ATM Forum

### Collaborators
- Test equipment vendors (GN Nettest, Hewlett-Packard, RADCOM, ADTECH)
- Equipment vendors and network operators (Hyundai, Fore, Bell Atlantic, Korea Telecom)
- Testbeds (UNH, MCNC, ATDNet)
- Research institutes (Electronics & Telecommunications Research Institute (ETRI))

## Accomplishments (FY 94 - 99)

- Developed PICS for Service Specific Connection Oriented Protocol (SSCOP) (FY 94)
- Developed two Conformance ATS for ATM Layer (FY 95)
- Developed two PICS for ATM Layer (FY 95)
- Developed ATS for SSCOP (FY 96)
- Developed ATS for ATM Adaptation Layer type 5 (AAL5) (FY 96)
- Developed PICS for AAL type 2 (AAL2) (FY 97)
- Developed PICS for AAL2 SSCS for Trunking (ITU-T I.366.2) (FY 98)
- Developed two PICSs for the Signaling Layer (FY 97-99)
- Developed ATS for Private Network-Network Interface (PNNI) (FY 98)
- Developed Interoperability Tests for PNNI (FY 98)
- Designed and implemented a software tool for evaluating the performance of PNNI routing protocol. (FY 98)
- Developed ATS & tool for Available Bit Rate (ABR) service (FY 99)
- Developing ATS for the ATM Signaling Layer (FY 99)