

ATM Application Programming Interface (API)

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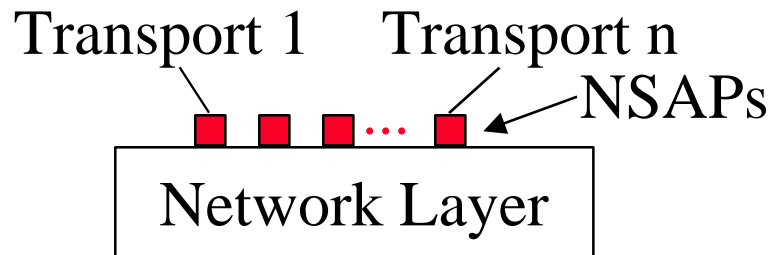


- q What is an API?
- q What is a SAP?
- q API Group activities

What is an API?

- q API = Set of interfaces to access the functionality of lower level services
- q Typically implemented as a function library
- q Example: `WSAAccept()` = Accept incoming connection (in Winsock2)
- q Existing APIs: Sockets, XTI (X/Open transport interface), Winsock, Netbios

Service Access Point (SAP)

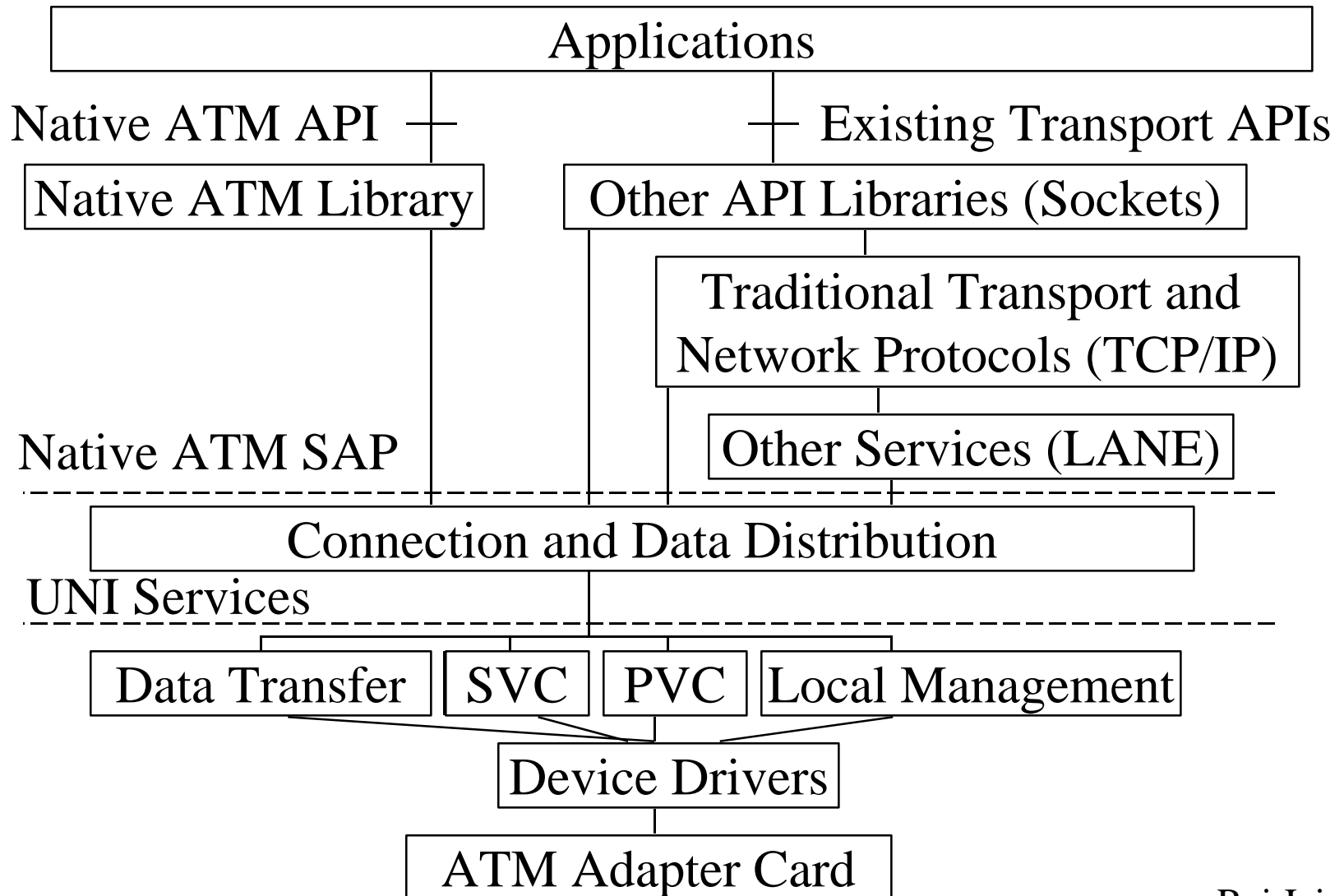


- q SAP is used to distinguish clients of a layer
- q Many clients can use a service
- q Each client must have its own SAP
- q On an outgoing call, destination SAP specifies the ATM address of the remote device + target software in the device

SAP Address

- q SAP is expressed as a vector.
{ATM Address, ATM selector, BLLI_id2, BLLI_id3, BHLI_id}
- q BLLI_id2 identifies layer 2 protocol
 - q BLLI = Broadband low layer information
- q BLLI_id3 identifies layer 3 protocol
- q BHLI_id identifies application layer protocol
- q Each SAP vector element (SVE) consists of a tag, length, and value field
- q A tag can be "Present", "Absent", or "Any"
- q Several rules for coding and interpretation of SVEs.

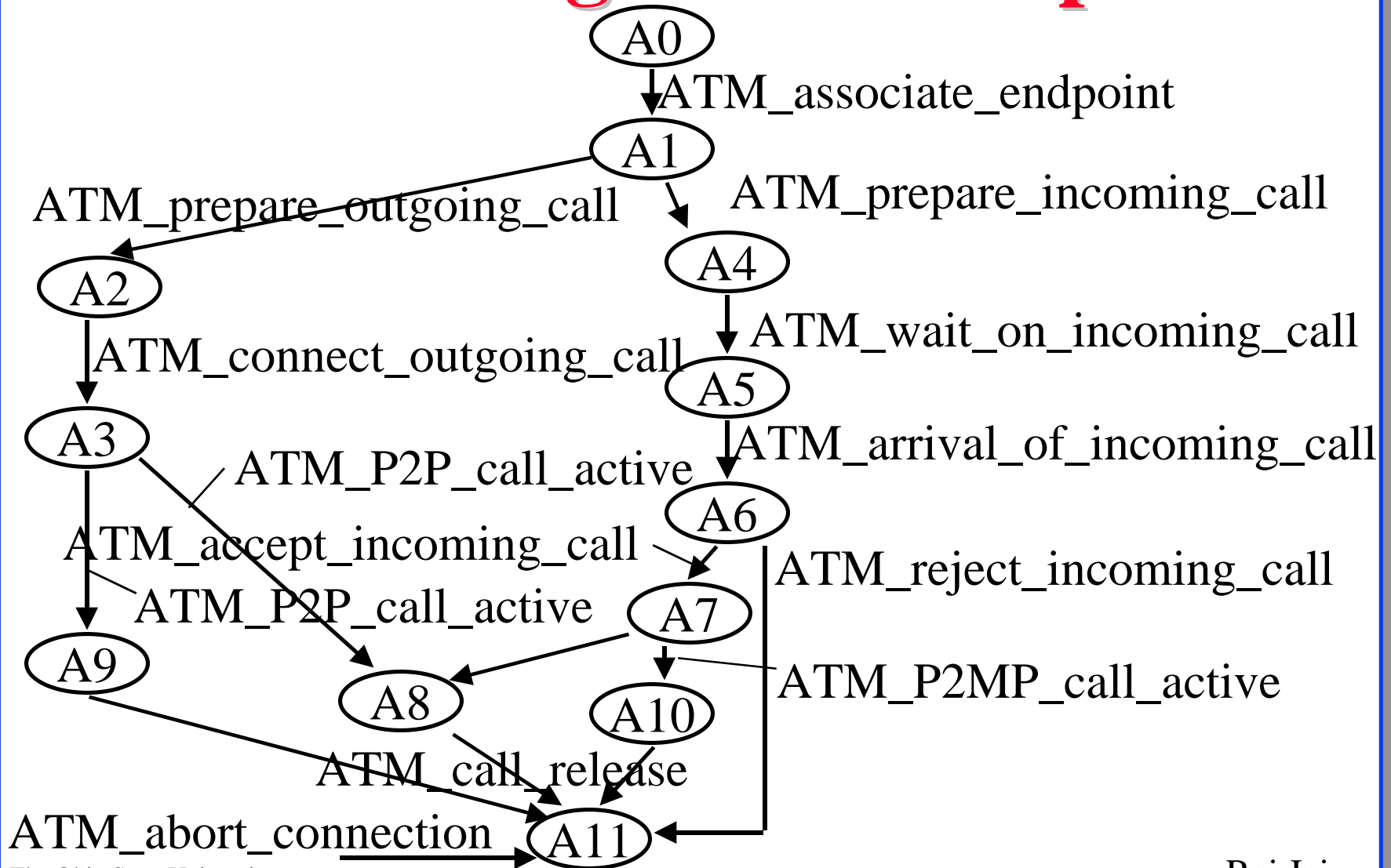
Native Services Reference Model



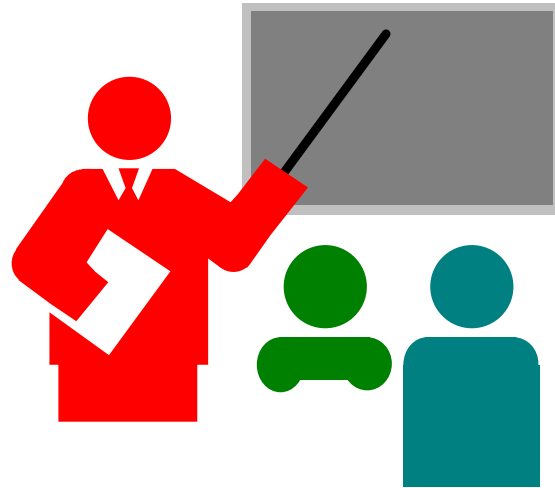
API Group Activities

- q Specification of Reference API
- q Semantic description includes sequence of events
 - q Semantic = meaning = independent of any programming language
 - q Provides proper abstraction of relevant ATM procedures and parameters
- q Help other organizations to include native ATM applications \Rightarrow Winsock

State Diagram: Example



Summary



- q ATM API allows applications to exploit ATM.
- q Services include data transfer, VC setup/release, traffic management, and network management.
- q Currently specifying a SAP.

References: ATM API

- q "Native ATM Services: Semantic Descriptions," Version 1.0, February 1996, available as <ftp://ftp.atmforum.com/pub/approved-specs/af-saa-0048.000.ps>
- q "Mapping of the ATM Forum SAA/API Semantic Description to the Winsock2 API," ATM Forum/96-00191R1, April 1996.