

MacTCP

Developing Applications
Using TCP/IP Networks



John Veizades

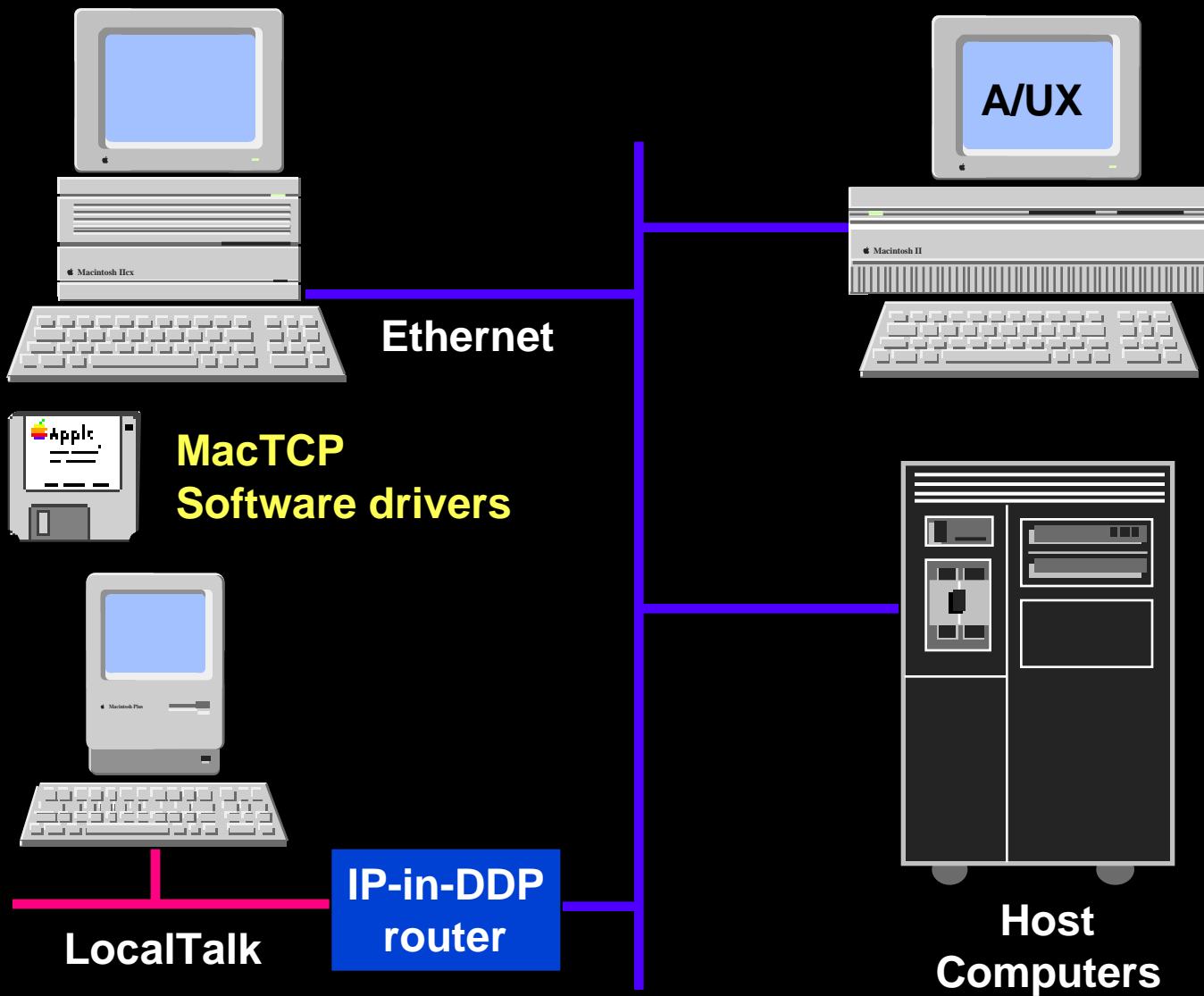
Sr. Engineer
Network Systems Engineering

This Overview is About ...

- What is MacTCP ...
- Programming with MacTCP

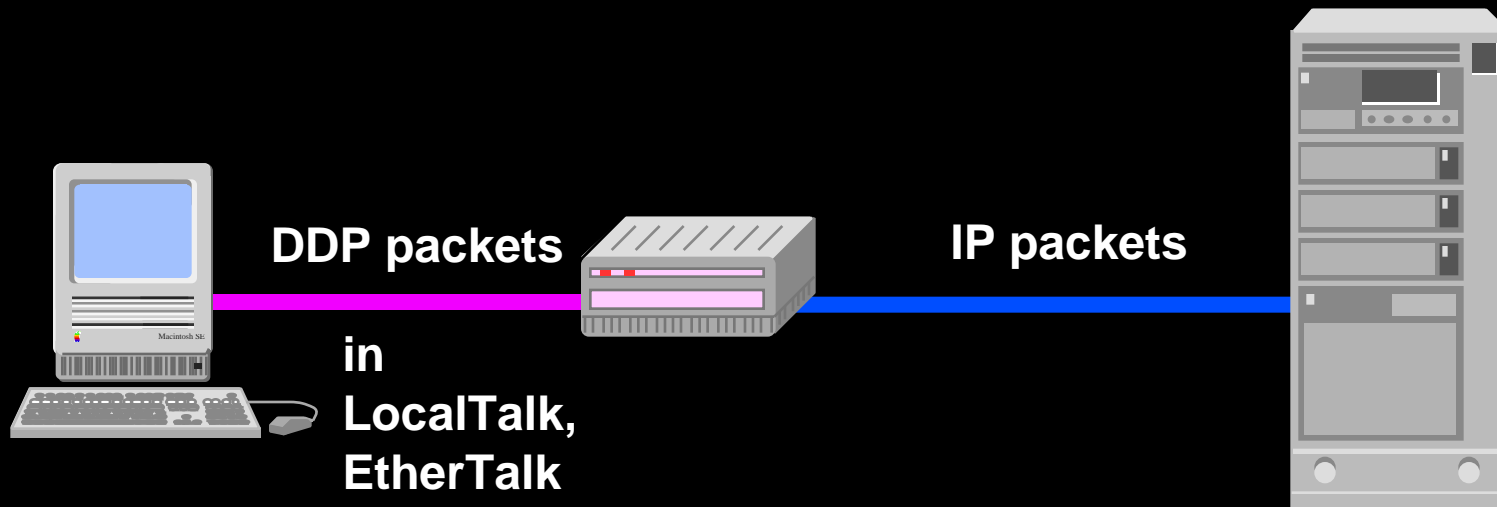
What is MacTCP?

- **TCP/IP drivers** for the Macintosh OS
- **Fully integrated** with AppleTalk:
access BOTH services simultaneously
- **Fully compliant** with relevant RFC's
and Mil-STDs
- **Fast:** 3 megabits per second (Ethernet,
Macintosh II)



“IP-in-AppleTalk” Routers

- Shiva FastPath 4
- Cayman GatorBox



Configuring MacTCP: Addressing and Administration

Obtain Address:

Manually

Server

Dynamically

Node Range:

From:

To:


Routing Information:

Gateway Address:

IP Address:

Class: Address: 90.180.0.59

Subnet Mask: 255.255.252.0



	Net	Subnet	Node	
Bits:	8	14	10	
Net:	<input type="text" value="90"/>			<input type="checkbox"/> Lock
Subnet:		<input type="text" value="11520"/>		<input type="checkbox"/> Lock
Node:			<input type="text" value="59"/>	<input type="checkbox"/> Lock

Domain Name Server Information:

Domain	IP Address	Default	
<input type="text" value="apple.com"/>	<input type="text" value="90.1.0.00"/>	<input checked="" type="radio"/>	<input type="button" value="↑"/>
<input type="text"/>	<input type="text"/>	<input type="radio"/>	<input type="button" value="↓"/>

Configuring MacTCP: Addressing and Administration

Obtain Address:

Manually

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Routing Information:

Gateway Address:

IP Address:

Class: Address:

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Net	Subnet	Node
Bits: 8	14	10
Net: <input type="text" value="90"/>	<input type="text" value="11520"/>	<input type="text" value="59"/>
<input type="checkbox"/> Lock	<input type="checkbox"/> Lock	<input type="checkbox"/> Lock

Domain Name Server Information:

Domain	IP Address	Default
<input type="text" value="apple.com"/>	<input type="text" value="90.1.0.00"/>	<input checked="" type="radio"/>
<input type="text"/>	<input type="text"/>	<input type="radio"/>

OK Cancel

Configuring MacTCP: Addressing and Administration

The image shows a MacTCP configuration dialog box with several sections. Two sections are circled in red: 'Obtain Address' and 'IP Address'.

Obtain Address:

- Manually
- Server
- Dynamically

Node Range:

From:
To:

Routing Information:

Gateway Address:

IP Address:

Class: Address: 90.180.0.59
Subnet Mask: 255.255.252.0

Net | Subnet | Node
Bits: 8 | 14 | 10

Net: Lock
Subnet: Lock
Node: Lock

Domain Name Server Information:

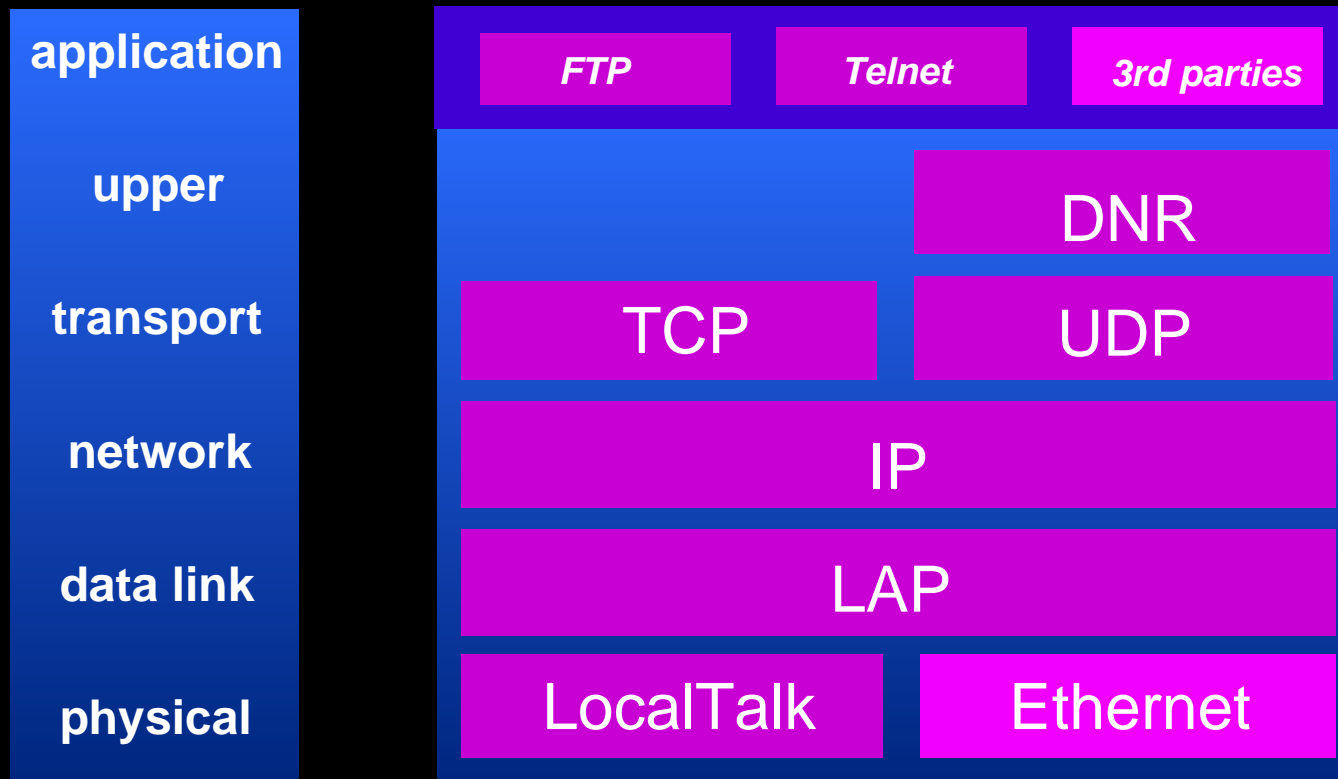
Domain	IP Address	Default
apple.com	90.1.0.00	<input checked="" type="radio"/>
		<input type="radio"/>

OK Cancel

Programming Information

- **Implementation of MacTCP**
- Programming interfaces and routines
- Programming with MacTCP

MacTCP 1.0 Protocol Stack



Programming Interfaces: TCP, UDP, DNR

- User Datagram Protocol
- Transmission Control Protocol
- Domain Name Resolver

A Sampling of Routines: TCP, UDP, DNR

- **UDP Routines:** UDPCreate, UDPRead, UDPWrite, UDPRelease, etc.
- **TCP Routines:** TCPCreate, TCPActiveOpen, TCPSend, TCPNoCopyRcv, TCPStatus, etc.
- **DNR Routines:** OpenResolver, StrToAddr, AddrToStr, EnumCache, AddrToName, etc.

Programming with MacTCP

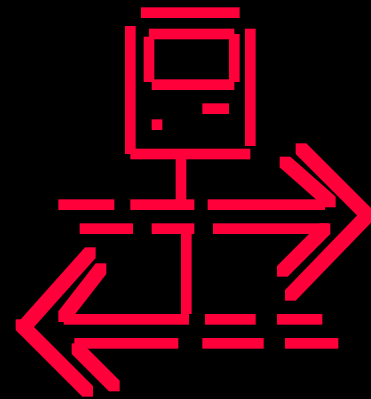
- C parameter-block definitions
- MPW C Library for the DNR

Link Level Interfaces

- Ethernet
- LocalTalk
- Others

Future Directions

- Ongoing MacTCP work
- Internet Engineering Task Force
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MacTCP