Network Control as a Distributed Object Application

ACTS Project ReTINA (AC048)
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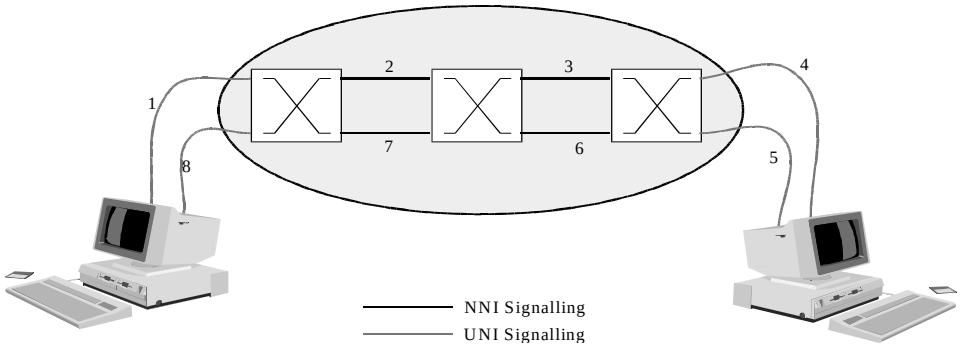
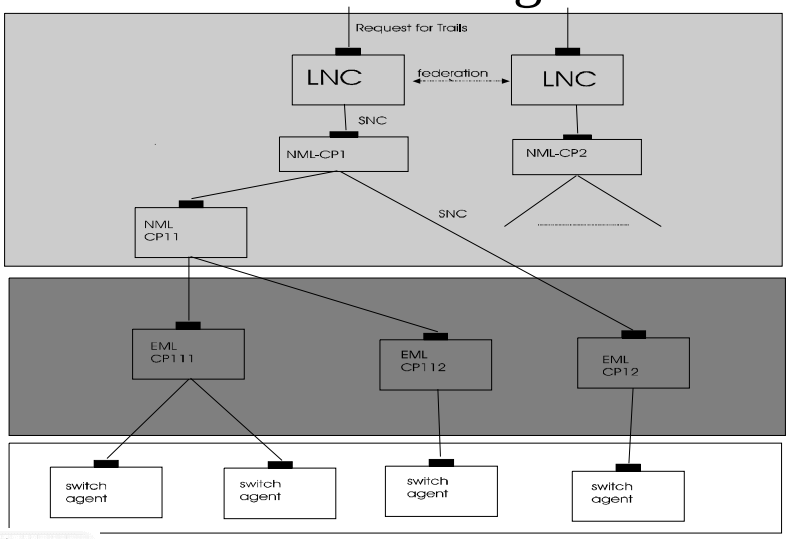
Traditional Signalling



Hierarchical Routing in TINA



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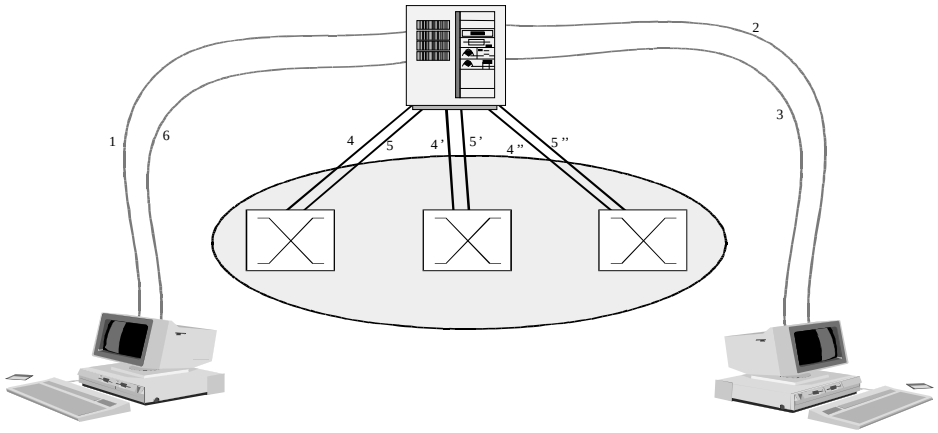
Open Switching



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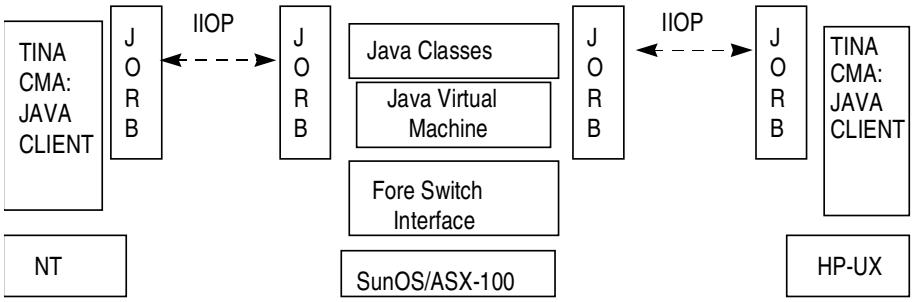
Software Components



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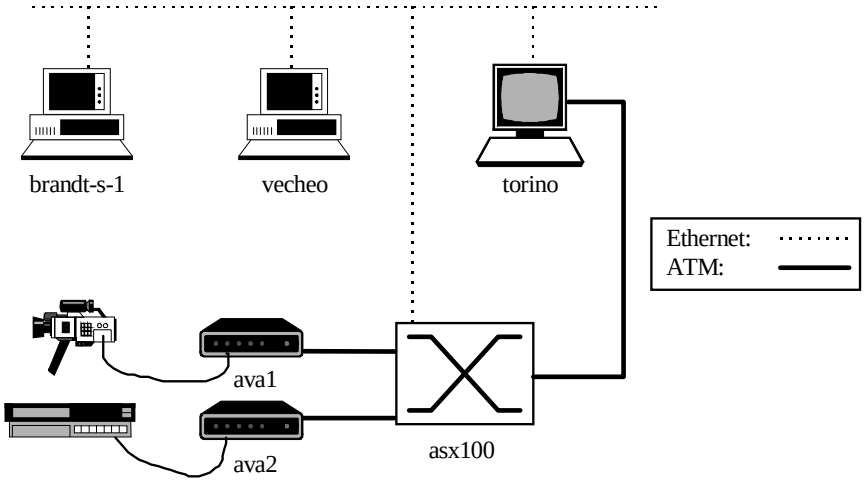
Physical Set-up



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Several Configurations Tested

- Open Switch Interface vs SNMP
- Different Java implementations
- C vs Java in I/O bound applications
- Corba vs raw sockets
- Different deployments of Computational Objects.

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Performance Figures

	Network Interface	Client	Server	RPC/sec
1	JORB	torino/JDK 1.01	asx100/JDK 1.01	14
2	Socket	torino/JDK 1.01	asx100/JDK 1.01	106
3	JORB	torino/JDK 1.01	brandt-s-1/JDK 1.02	107
4	Socket	torino/JDK 1.01	brandt-s-1/JDK 1.02	597
5	JORB	brandt-s-1/Symantec	asx100/JDK 1.01	16
6	Socket	brandt-s-1/Symantec	asx100/JDK 1.01	121
7	JORB	brandt-s-1/Symantec	vecheo/Symantec	401
8	Socket	brandt-s-1/Symantec	vecheo/Symantec	1330
9	JORB	brandt-s-1/Symantec	brandt-s-1/Symantec	418
10	Socket	brandt-s-1/Symantec	brandt-s-1/Symantec	1818
11	JORB	brandt-s-1/JDK 1.02	brandt-s-1/JDK 1.02	159
12	Socket	brandt-s-1/JDK 1.02	brandt-s-1/JDK 1.02	998
13	JORB	brandt-s-1/Symantec	asx100/Kaffe	10
14	Socket	brandt-s-1/Symantec	asx100/Kaffe	105
15	OrbixWeb2.0	brandt-s-1/Symantec	brandt-s-1/Symantec	600

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Future Directions

- Bigger Networks: QoS-based routing (HP and Lancaster University Collaboration)
- Practical application of the QoS-based Connection Management Services: support for Broadband Virtual Private Networks

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