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Provisional TCP Development Plan

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The chart below shows the five versions of TCP for TENEX and TOPS20 which are being maintained at present. 2.5.-1 and 2.5.0 are used for packet radio demonstrations. All except 2.5.-1 support both secure and non-secure operation on machines equipped with a (hardware) interface for a BCR, although the selection of secure or non-secure operation is done manually.

TCP Ver.	Language	Monitor				Old prot.	Site	Tested?	Comments
		K A	K L	S M	K L				
	B C P L	M A C R 0	T E N E X	T 2 0 2	T 2 0 3 A	(ARQ,etc)			
2.5.-1	X		X			Yes	ISIC	Yes	Old faithful
2.5.0		X	X X			No	SRI-KA OFFICE	Yes	Current handcode
2.5.1		X	X X			No	BBNC BBND	Yes	Some bug fixes
2.5.2		X	X X X ?			No	DEC	In Prog.	Mods. for Rel 3. Fixes attempted for all bugs.
4.0.-1		X	X X X X			Not. Appl.	-	No	Derived from 2.5.2 sources.

TCP 4.0.-1 is the current, unfinished version 4 TCP.

Versions before 2.5.2 are frozen except for emergency repairs. Although there is a TCP on BBND, it is severely limited due to the lack of monitor address space. This situation was recently aggravated by assembling the BBND monitor for 150 jobs and increasing the number of available terminals. Although the number of jobs could be reduced, the system would not be able to support itself. Thus, with the 101B monitor the amount of address space available is dictated by economic policy, rather than technical considerations.

The Release 3A monitor is being installed on the BBNA systems by Computer Center personnel. The advantage of this release is that a full 256K address space will be available for TCP buffers. TCP 2.5.2 is designed to run under Release 3 and following monitors. Although it has not actually been run on a model B processor running Release 3, a good deal of testing has been done on a 2020 ("SM" or Small Machine). The 2020 is not a full model B processor but it may be thought of as a Model B which is always running in section 0 with all extended references being forced into section 0. Thus, once TCP 2.5.2 is running solidly on the 2020, little effort will be required to install it on a real KL machine.

The 2.5.2 sources have (attempted) fixes for all reported bugs. Some of these fixes required fairly wide-spread changes. Current activity is directed at thorough testing of these changes. The work is being done on a 2020 located at DEC-Marlboro. The level of effort is limited by the availability of the machine which is six hours per week.

In parallel with the testing of version 2.5.2, John Borchek is being familiarized with the TCP code. John recently left the System 20 development group at DEC to join BBN. Although John is a very competent programmer, several months should be allowed for him to become familiar with the insides of the TCP code. Considering ARPA's short-term needs, John's newness, and the lack of machine resources, it is not likely that his assistance will produce any immediate change in the rate of progress.

The following table is a reasonable but optimistic schedule. It is assumed that a test machine will be delivered, installed, and accepted by the date indicated, and that this machine will be available when needed for TCP work. Also, it is assumed that the overlap of version 4 development with 2.5.2 checkout is possible. Further, no explicit allowance has been made for meeting attendance and report preparation.

The dates shown in the table are not to be taken as commitments. Rather, they are current estimates. Updates to this schedule will be issued as necessary.

Date	Event	Comment
5 Oct 78	"Bad" medium simulator avail. Ver. 4 Gateways operational	Not critical path items, but they permit work on Version 4 at other sites as well BBN TCP and BCR work.
15 Nov 78	4.0.-1 code done	Stop Ver 4 til 2040 ready.
	Ver 4 TCP11 done	BCR people, CCA, etc. can start Ver 4. This is an SRI responsibility.
1 Dec 78	2.5.2 solid on 2020 at DEC	Estimate one week = 40 hours = 7 weeks at 6 hours per week.
	New machine at BBN	Small 2040. Use to finish up 2.5.2 and to test on a real Model B processor and start debugging of 4.0.-1. Date not agreed to by DEC.
11 Dec 78	TCP mtg at ARPA	Possible demo of 2.5.2 on new 2040.
	TCPFTP done.	By Tomlinson. As of mid-September it was starting to work and provoking TCP bugs.
15 Dec 78	TCP 2.5.2 on BBND	Four evenings at 2 per week.
1 Jan 79	TCP 2.5.2 replaces 2.5.1 on BBNC	Four evenings at 2 per week. Minor changes to TENEX sources needed.
15 Jan 79	2.5.2 at SRI-KA	Allows 2 week burn-in at BBN. Requires SRI assistance and schedule agreement.
	4.0.0 done	Start tests with SRI (PR) and Div-6 (BCR)
	Release 3A on BBND	BBN Comp. Center responsibility. Rough estimate.
1 Feb 79	2.5.2 at ISix	Allows 2 week burn-in at SRI. Requires ISI assistance and schedule agreement.
	4.0.1 with auto secure/non-sec.	Matching TTLSRV and TTLUSR ready also.
1 Mar 79	4.0.2 design done	TCP TELNET in monitor
1 Apr 79	4.0.2 operational	Assume BCRs are ready. Distribute 4.0.2