

Data Structures (Assembler Language)

This appendix includes the data structures provided by the application program as arguments of Cisco IOS for S/390 transport service functions or generated by the API and referenced by the application program. It defines the API data structures as used by application programs written in assembler language. Read the Cisco IOS for S/390 C/Socket API Programmer's Reference for definitions of the same data structures as used by application programs written in C language. This appendix includes these sections:

- **Generating Dummy Control Sections**

Describes the standard and alternate methods for generating dummy control sections (dssects).

- **Assembler Language Definitions**

Includes the assembler language definition dssect code as used by application programs written in assembler language.

Generating Dummy Control Sections

Most dummy control sections (dsects) listed in this appendix can be generated with the TDSECT macro instruction, described in Assembler Language Macro Instructions.

Data Structure Names

The data structure name of each dsect to be generated must be included in the macro instruction's operand list. For each API data structure listed in this table, a standard and alternate method for generating the dsect is given:

Data Structure	Macro Instruction Required To Generate DSECT				
	Standard Method		Alternate Method		
APCB	[symbol]	APCB MF=DSECT	[symbol]	APIDAPCB	MF=DSECT
APCBXL	[symbol]	APCB MF=DSECT	[symbol]	APIDAPCB	MF=DSECT
TEM	[symbol]	TDSECT TEM	TEM	APIDTEM	MF=DSECT
TIB	[symbol]	TDSECT TIB	TIB	APIDTIB	MF=DSECT
TPA	[symbol]	TDSECT TPA	TPA	APIDTPA	MF=DSECT
TPL	[symbol]	TDSECT TPL	TPL	APIDTPL	MF=DSECT
TPO	[symbol]	TDSECT TPO	TPO	APIDTPO	MF=DSECT
TSW	[symbol]	TDSECT TSW	TSW	APIDTSW	MF=DSECT
TUB	[symbol]	TDSECT TUB	TUB	APIDTUB	MF=DSECT
TXL	[symbol]	TDSECT TXL	TXL	APIDTXL	MF=DSECT
TXP	[symbol]	TDSECT TXP	TXP	APIDTXP	MF=DSECT

Assembler Language Definitions

This section includes this assembler language definition dsect code:

- Application Program Control Block (APCB)
- APCB exit list
- Transport Endpoint Error Message (TEM)
- Transport Service Information Block (TIB)
- Transport Protocol Address (TPA)
- Transport Service Parameter List (TPL)
- Transport Protocol Options (TPO)
- Transport Endpoint State Word (TSW)
- Transport Endpoint User Block (TUB)
- Transport Endpoint Exit List (TXL)
- Transport Endpoint Exit Parameters (TXP)

APCB – Application Program Control Block

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
 *THE APPLICATION PROGRAM CONTROL BLOCK (APCB). THE APCB
 *CONTAINS INFORMATION ASSOCIATED WITH THE APPLICATION
 *PROGRAM AND IS USED TO MAINTAIN A SESSION WITH THE API
 *SUBSYSTEM. THE ADDRESS OF THE APCB IS INCLUDED IN THE
 *OPERAND FIELD OF AN AOPEN OR ACLOSE MACRO INSTRUCTION.

APCB	DSECT		APPLICATION PROGRAM CONTROL BLOCK
APCBTAG	DS	CL4	CONTROL BLOCK ID
APCBSL	DS	F	CONTROL BLOCK LENGTH
APCBAM	DS	X	ACCESS METHOD AND VERSION
APCBAMSK	EQU	B'11110000'	ACCESS METHOD ID
APCBATLI	EQU	1	TRANSPORT LAYER INTERFACE
APCBAMAX	EQU	APCBATLI	MAXIMUM ACCESS METHOD ID
APCBAVER	EQU	B'00001111'	ACCESS METHOD VERSION
APCBFLAG	DS	X	FLAG BYTE
APCBFSTP	EQU	B'10000000'	APPLID IS STEPNAME FROM TIOT
APCBF31B	EQU	B'01000000'	AMODE=31
APCBFANY	EQU	B'00100000'	RMODE=ANY
APCBFOPN	EQU	B'00010000'	APCB IS OPEN
APCBFERR	EQU	B'00001000'	PERMANENT ERROR FLAG
APCBFTRM	EQU	B'00000100'	TASK TERMINATION IN PROGRESS
APCBFECEB	EQU	B'00000010'	ECB EVENT NOTIFY BLOCK
APCBFB SY	EQU	B'00000001'	OPEN/CLOSE IN PROGRESS
APCBOPTC	DS	X	OPTION CODE
APCBOTRC	EQU	B'10000000'	OPTCD=NOTRACE TRACE
APCBOGTF	EQU	B'01000000'	OPTCD=NOGTF GTF
APCBABRT	EQU	B'00100000'	OPTCD=ABORT
APCBAUTH	EQU	B'00010000'	OPTCD=AUTHEXIT
*	EQU	B'00001000'	RESERVED
*	EQU	B'00000100'	RESERVED
*	EQU	B'00000010'	RESERVED
*	EQU	B'00000001'	RESERVED
	DS	X	RESERVED
APBCENVR	DS	X	LANGUAGE ENVIRONMENT CODE
APCBASM	EQU	0	ASSEMBLER LANGUAGE
APCBIBMC	EQU	1	IBM C
APCBSASC	EQU	2	SAS C
APCBPLI	EQU	3	PLI
APCBCOBL	EQU	4	COBOL
APCBFORT	EQU	5	FORTRAN
APCBEMAX	EQU	APCBFORT	MAXIMUM ENVIRONMENT CODE
APCBERRC	DS	X	ERROR CODE
APCBECFG	EQU	1	SUBSYSTEM NOT CONFIGURED
APCBEACT	EQU	2	SUBSYSTEM NOT ACTIVE
APCBERDY	EQU	3	SUBSYSTEM NOT INITIALIZED
APCBESTP	EQU	4	SUBSYSTEM IS STOPPING
APCBEDRA	EQU	5	SUBSYSTEM IS DRAINING
APCBEVCK	EQU	6	APCB VALIDITY CHECK ERROR
APCBELER	EQU	7	INTERNAL LOGIC ERROR
APCBEPRB	EQU	8	NOT ISSUED FROM PRB

APCBEOPN	EQU	9	APCB ALREADY OPENED
APCBECLS	EQU	10	APCB ALREADY CLOSED
APCBESY	EQU	11	APCB IS BUSY WITH AOPEN/ACLOSE
APCBEPER	EQU	12	APCB HAS PERMANENT ERROR
APCBECVT	EQU	13	ACCESS METHOD CVT NOT AVAILABLE
APCBEMEM	EQU	14	INSUFFICIENT MEMORY AVAILABLE
APCBENV	EQU	15	CANNOT INITIAL./TERMIN. ENVIR.
APCBEBEG	EQU	16	CANNOT ESTABLISH API SESSION
APCBEVER	EQU	17	INVALID ACCESS METHOD VERSION
APCBEOPT	EQU	18	INVALID/UNSUPPORTED OPTION
APCBEDUP	EQU	19	DUPLICATE SESSION FOR THIS AM
APCBEAMD	EQU	20	AMODE INCONSISTENT WITH AOPEN
APCBETRV	EQU	21	AMTV VALIDITY CHECK ERROR
APCBEEND	EQU	22	CANNOT RELEASE API SESSION
APCBDGNC	DS	XL2	DIAGNOSTIC CODE
APCBAMCB	DS	A	ACCESS METHOD CONTROL BLOCK
APCBAMCV	DS	A	ACCESS METHOD COMMUNICATION VECTOR
APCBAMTV	DS	A	ACCESS METHOD UAS TRANSFER VECTOR
APCBAMID	DS	CL4	ACCESS METHOD SUBSYSTEM ID
	DS	F	RESERVED
APCBEXLS	DS	A	APPLIC.-LEVEL EXIT LIST ADDRESS
APCBACTX	DS	F	APPLIC.-LEVEL CONTEXT VARIABLE
APCBECTX	DS	F	ENVIRO.-LEVEL CONTEXT VARIABLE
APCBAPPL	DS	CL8	APPLICATION ID
APCBPSWD	DS	CL8	APPLICATION PASSWORD
APCBLEN	EQU	*-APCB	LENGTH OF APCB

APCBXL – APCB Exit List

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*THE FOLLOWING DSECT DEFINES THE AM-INDEPENDENT STRUCTURE
*OF AN APCB EXIT LIST. IT IS NECESSARY TO DEFINE THIS
*STRUCTURE AT THIS LEVEL SO AOPEN CAN VALIDITY CHECK THE
*EXIT LIST.
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APCBXL	DSECT		COMMON EXIT LIST FORMAT
APCBXLEN	DS	F	TOTAL LENGTH OF EXIT LIST
APCBXLST	DS	0A	LIST OF EXIT ROUTINE ENTRY POINTS

TEM – Transport Endpoint Error Message

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
 *AN ERROR MESSAGE RETURNED BY THE TERROR MACRO INSTRUCTION.
 *THE INFORMATION RETURNED IS FORMATTED AS A MULTI-LINE WTO
 *PARAMETER LIST (WTO MF=L), AND CAN BE SUPPLIED DIRECTLY
 *TO A WTO MF=E MACRO INSTRUCTION. THE APPLICATION PROGRAM
 *MAY USE THIS DSECT TO MANIPULATE CERTAIN FIELDS WITHIN THE
 *PARAMETER LIST.

TEM	DSECT		TRANSPORT ENDPOINT ERROR MESSAGE
TEMTAG	DS	CL4	CONTROL BLOCK IDENTIFIER
TEMSL	DS	F	SUBPOOL AND LENGTH
TEMWTO	DS	0F	WTO PARAMETER LIST
TEMSGLEN	DS	AL2	MESSAGE LENGTH + 4 (FIRST LINE)
TEMMCSF1	DS	X	MCS FLAG BYTE #1
TEMMCSF2	DS	X	MCS FLAG BYTE #2
TEMSGTXT	DS	CL34	MESSAGE TEXT (FIRST LINE)
	ORG	TEMSGTXT	
TEMSGID	DS	CL8	MESSAGE ID
TEMSGBDY	DS	CL26	MESSAGE BODY
	ORG		
TEMDESC	DS	BL.16	DESCRIPTOR CODES
TEMROUT	DS	BL.16	ROUTING CODES
TEMSGTYP	DS	XL2	MLWTO LINE TYPE (FIRST LINE)
TEMAREA	DS	X	MLWTO AREA ID
TEMNLINE	DS	AL1	MLWTO NUMBER OF LINES
TEMMLEN	DS	AL2	MLWTO LINE LENGTH + 4
TEMMLTYP	DS	XL2	MLWTO LINE TYPE
TEMLTXT	DS	(*-*)C	MLWTO LINE TEXT
TEMLEN	EQU	*-TEM	MINIMUM LENGTH OF MULTI-LINE TEM

TIB – Transport Service Information Block

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
 *TRANSPORT INFORMATION RETURNED BY THE TINFO (OPTCD=PRIMARY)
 *TRANSPORT SERVICE FUNCTION. THE FORMAT OF THIS INFORMATION
 *IS STANDARD FOR ALL TRANSPORT PROVIDERS, AND IS INTENDED TO
 *CONVEY THE BASIC CHARACTERISTICS OF THE UNDERLYING PROTOCOL
 *AND SERVICE.

TIB	DSECT		TRANSPORT SERVICE INFORMATION BLOCK
TIBTSDOM	DS	X	TRANSPORT SERVICE DOMAIN
TIBDINET	EQU	2	DARPA INTERNET
TIBDACP	EQU	4	ACP ONLY API
TIBTSTYP	DS	X	TRANSPORT SERVICE TYPE
TIBTCOTS	EQU	1	CONNECTION-MODE SERVICE
TIBTCLTS	EQU	2	CONNECTIONLESS-MODE SERVICE
TIBTRAW	EQU	3	RAW MODE SERVICE
TIBTSCHR	DS	X	TRANSPORT SERVICE CHARACTERISTICS
*	EQU	B'10000000'	RESERVED
*	EQU	B'01000000'	RESERVED
*	EQU	B'00100000'	RESERVED
TIBCTSDU	EQU	B'00010000'	TSDU BOUNDARIES PRESERVED
TIBCXPDT	EQU	B'00001000'	EXPEDITED DATA SUPPORTED
TIBCOPTN	EQU	B'00000100'	USER-SETTABLE OPTS SUPPORTED
TIBCCOND	EQU	B'00000010'	CONNECT USER DATA SUPPORTED
TIBCDISD	EQU	B'00000001'	DISCONNECT USER DATA SUPPORTED
TIBTSOPT	DS	X	TRANSPORT SERVICE OPTIONS
TIBOASSO	EQU	B'10000000'	CLTS ASSOCIATIONS SUPPORTED
TIBOSCND	EQU	B'01000000'	SECONDARY INFO. AVAILABLE
TIBOSTAT	EQU	B'00100000'	STATISTICAL INFO. AVAILABLE
TIBORLSE	EQU	B'00010000'	COTS ORDERLY RELEASE SUPPORTED
*	EQU	B'00001000'	RESERVED
*	EQU	B'00000100'	RESERVED
*	EQU	B'00000010'	RESERVED
*	EQU	B'00000001'	RESERVED
TIBSYSID	DS	CL4	TRANSPORT PROVIDER'S SUBSYS. NAME
TIBSVCID	DS	CL8	TRANSPORT PROVIDER'S SERVICE NAME
TIBPROTO	DS	F	TRANSPORT PROTOCOL NUMBER
TIBQLSTN	DS	F	MAXIMUM SIZE OF LISTEN QUEUE
TIBQSEND	DS	F	MAXIMUM SIZE OF SEND QUEUE
TIBQRCV	DS	F	MAXIMUM SIZE OF RECEIVE QUEUE
TIBLTSND	DS	F	MAXIMUM SIZE OF TSEND/TSENDTO DATA
TIBLTRCV	DS	F	MAXIMUM SIZE OF TREC/TRECVFR DATA
TIBLSEND	DS	F	MAXIMUM SIZE OF SEND BUFFER
TIBLRCV	DS	F	MAXIMUM SIZE OF RECEIVE BUFFER
TIBLADDR	DS	F	MAXIMUM SIZE OF PROTOCOL ADDRESS
TIBLOPTN	DS	F	MAXIMUM SIZE OF PROTOCOL OPTIONS
TIBLTSDU	DS	F	MAXIMUM SIZE OF TRANSP. DATA UNIT
TIBLXPDT	DS	F	MAXIMUM SIZE OF EXPED. DATA UNIT
TIBLCONN	DS	F	MAXIMUM SIZE OF CONNECT DATA
TIBLDISC	DS	F	MAXIMUM SIZE OF DISCONNECT DATA
TIBLINFO	DS	F	MAXIMUM SIZE OF INFORMATION UNIT
TIBLEN	EQU	*-TIB	LENGTH OF TIB

TPA – Transport Protocol Address

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT
*OF A TRANSPORT PROTOCOL ADDRESS IN THE INTERNET DOMAIN.
*THIS INFORMATION IS TRANSPORT PROVIDER-DEPENDENT AND
*IS NOT INTERPRETED BY API
*
*THE GENERAL FORMAT OF A TRANSPORT PROTOCOL ADDRESS IS:
*
*<DOMAIN><T-ADDR><N-ADDR>
*
*WHERE:
*
*DOMAIN = COMMUNICATION DOMAIN (SEE TOPEN)
*T-ADDR = TRANSPORT LAYER ADDRESS OF ENDPOINT
*N-ADDR = NETWORK LAYER ADDRESS OF TRANSPORT PROVIDER

TPA	DSECT		TRANSPORT PROTOCOL ADDRESS
TPAINET	DS	XL8	DOMAIN=INET TPA
	ORG	TPAINET	
TPAINETD	DS	XL2	INTERNET DOMAIN
TPAINETT	DS	XL2	TCP PORT NUMBER
TPAINETN	DS	XL4	IP HOST ADDRESS
	ORG		
LTPAINET	EQU	*-TPAINET	LENGTH OF INET TPA

TPL – Transport Service Parameter List

*THE FOLLOWING DSECT DEFINES THE STRUCTURE OF THE TRANSPORT
 *SERVICE PARAMETER LIST (TPL) FOR ALL TRANSPORT SERVICE
 *FUNCTIONS. THE TPL BEGINS WITH A COMMON SECTION (I.E., THE
 *PARAMETER LIST PREFIX) WHICH IS PRESENT FOR ALL FUNCTIONS.

TPL	DSECT		TRANSPORT SERVICE PARAMETER LIST
TPLIDENT	DS	X	CONTROL BLOCK ID
TPLIDSTD	EQU	234	STANDARD (LONG) FORMAT ID
TPLIDSHT	EQU	235	SHORT FORMAT ID
TPLIDEXT	EQU	236	EXTENDED FORMAT ID
TPLFNCCD	DSX		FUNCTION CODE
TFORG1	EQU	0	ORIGIN FOR STANDARD FUNCTIONS
TFACCEPT	EQU	1	ACCEPT CONNECTION REQUEST
TFADDR	EQU	2	ENABLE CONNECTIONS
TFBIND	EQU	3	BIND PROTOCOL ADDRESS
TFCLEAR	EQU	4	ACKNOWLEDGE DISCONNECT
TFCLOSE	EQU	5	CLOSE ENDPOINT
TFCONFRM	EQU	6	CONFIRM CONNECTION REQUEST
TFCONNCT	EQU	7	INITIATE CONNECTION REQUEST
TFDISCON	EQU	8	INITIATE DISCONNECT
TFINFO	EQU	9	GET TRANSPORT INFORMATION
TFLISTEN	EQU	10	LISTEN FOR CONNECTION REQUESTS
TFOPEN	EQU	11	OPEN ENDPOINT
TFOPTION	EQU	12	NEGOTIATE OPTIONS
TFRECV	EQU	13	RECEIVE FROM CONNECTION
TFRECVERR	EQU	14	RECEIVE DATAGRAM ERROR
TFRECVFR	EQU	15	RECEIVE DATAGRAM
TFREJECT	EQU	16	REJECT CONNECTION REQUEST
TFRELACK	EQU	17	ACKNOWLEDGE CONNECTION RELEASE
TFRELESE	EQU	18	INITIATE CONNECTION RELEASE
TFRETRCT	EQU	19	RETRACT PENDING LISTEN
TFSEND	EQU	20	SEND TO CONNECTION
TFSENDTO	EQU	21	SEND DATAGRAM
TFUNBIND	EQU	22	UNBIND PROTOCOL ADDRESS
TFUSER	EQU	23	ASSOCIATE USER ID
TFMAX1	EQU	TFUSER	MAXIMUM FUNCTION ID
TFORG2	EQU	127	ORIGIN FOR CONTROL FUNCTIONS
TFERRORV	EQU	128	FORMAT ERROR MESSAGE VERBATIM
TFCHECK	EQU	129	CHECK TPL FOR COMPLETION
TFERROR	EQU	130	FORMAT ERROR MESSAGE
TFSTATE	EQU	131	GET ENDPOINT STATE
TFMAX2	EQU	TFSTATE	MAXIMUM FUNCTION ID
TPLACTIV	DS	X	SEMAPHORE (TPL ACTIVE)
TPLFLAGS	DS	X	FLAG BYTE
TPLFCMPL	EQU	B'10000000'	TPL COMPLETED
TPLFCERR	EQU	B'01000000'	COMPLETED WITH ERROR
TPLFXECB	EQU	B'00100000'	TPLECBXR IS EXTERNAL ECB
TPLFEXIT	EQU	B'00010000'	TPLECBXR IS EXIT ROUTINE
TPLF31B	EQU	B'00001000'	REQUEST ISSUED WITH AMODE=31
TPLFACPT	EQU	B'00000100'	ACCEPTING CONNECT INDICATION
*	EQU	B'00000010'	RESERVED
*	EQU	B'00000001'	RESERVED
TPLEP	DS	F	ENDPOINT
		ORG*-4	
TPLEPID	DS	OF	ENDPOINT ID

TPLTCEP	DS	0A	TCEP ADDRESS
		ORG*+4	
TPLECBXR	DS	A	IECB/XECB/EXIT
		ORG*-4	
TPLECB	DS	0F	ECB PARAMETER
TPLIECB	DS	0F	INTERNAL ECB
TPLXECB	DS	0A	EXTERNAL ECB ADDRESS
TPLEXIT	DS	0A	EXIT ROUTINE ADDRESS
		ORG*+4	
TPLOPTCD	DS	F	OPTION CODES
	ORG	TPLOPTCD	
TPLOPCD1	DS	X	OPTION CODE #1
TOASYNC	EQU	B'10000000'	OPTCD=SYNC ASYNC
TOSHORT	EQU	B'01000000'	OPTCD=LONG SHORT
TOTRUNC	EQU	B'00100000'	OPTCD=NOTRUNC TRUNC
TONEGOT	EQU	B'00010000'	OPTCD=NONEGOT NEGOT
TOMBUF	EQU	B'00001000'	OPTCD=NOMBUF MBUF
TONOBLOK	EQU	B'00000100'	OPTCD=BLOCK NOBLOCK
TOEXTEND	EQU	B'00000010'	OPTCD=EXTEND
*	EQU	B'00000001'	RESERVED
TPLOPCD2	DS	X	OPTION CODE #2
TOMORE	EQU	B'10000000'	OPTCD=NOMORE MORE
TOEXPDTE	EQU	B'01000000'	OPTCD=NORMAL EXPEDITE
TONOTEOM	EQU	B'00100000'	OPTCD=EOM NOTEOM
TOABORT	EQU	B'00010000'	OPTCD=CLEAR ABORT
TOINDIR	EQU	B'00001000'	OPTCD=DIRECT INDIR
*	EQU	B'00000100'	RESERVED
TOFULL	EQU	B'00000010'	OPTCD=NOFULL FULL
TOTIME	EQU	B'00000001'	OPTCD=NOTIME TIME
TPLOPCD3	DS	X	OPTION CODE #3
TOACEE	EQU	B'10000000'	OPTCD=TUB ACEE
TOCIPHER	EQU	B'01000000'	OPTCD=PLAIN CIPHER
TOOLD	EQU	B'00100000'	OPTCD=NEW OLD
TOASSIGN	EQU	B'00010000'	OPTCD=USE ASSIGN
TOREMOTE	EQU	B'00001000'	OPTCD=LOCAL REMOTE
TOPASS	EQU	B'00000100'	OPTCD=DELETE PASS
*	EQU	B'00000010'	RESERVED
*	EQU	B'00000001'	RESERVED
TPLOPCD4	DS	X	OPTION CODE #4
TOINFO	EQU	B'11000000'	TINFO OPTION CODES
TOPRIMRY	EQU	0	OPTCD=PRIMARY
TOSCNDRY	EQU	1	OPTCD=SECNDRY
TOSTATS	EQU	2	OPTCD=STATS
TOOPTION	EQU	B'00110000'	TOPTION OPTION CODES
TODECLAR	EQU	0	OPTCD=DECLARE
TOVERIFY	EQU	1	OPTCD=VERIFY
TOQUERY	EQU	2	OPTCD=QUERY
TODFAULT	EQU	3	OPTCD=DEFAULT
TOAPI	EQU	B'00001000'	OPTCD=TP API
*	EQU	B'00000100'	RESERVED
*	EQU	B'00000010'	RESERVED
*	EQU	B'00000001'	RESERVED

TPLRTNCD	DS	F	COMPOSITE RETURN CODE
	ORG	TPLRTNCD	
TPLACTCD	DS	X	RECOVERY ACTION CODE
TAOKAY	EQU	0	SUCCESSFUL COMPLETION
TAEXCPTN	EQU	4	EXCEPTIONAL CONDITION
TAINTEG	EQU	8	CONNECTION/DATA INTEG. ERROR
TAENVIRO	EQU	12	ENVIRONMENTAL CONDITION
TAFORMAT	EQU	16	FORMAT OR SPECIF. ERRORS
TAPROCED	EQU	20	SEQUENCE AND PROCED. ERRORS
TATPLERR	EQU	24	LOGIC ERRORS W/NO TPL RTNCD
TAUSER	EQU	28	USER-DEFINED ACTION CODES
TPLERRCD	DS	X	SPECIFIC ERROR CODE
TCOKAY	EQU	B'00000000'	00: NO CONDITIONALS
TCVERIFY	EQU	B'10000000'	00: OPTIONS DID NOT VERIFY
TCNEGOT	EQU	B'01000000'	00: OPTIONS NEGOTIATED
TCTRUNC	EQU	B'00100000'	00: BUFFER TRUNCATED
TCSTOP	EQU	B'00001000'	00: SUBSYSTEM STOPPING
TCTIME	EQU	B'00000100'	00: TIMEOUT EXPIRED
TENONEGO	EQU	6	04: NO NEGOTIATION ALLOWED
TENOBLOK	EQU	9	04: NO BLOCKING ALLOWED
TENOLSTN	EQU	10	04: NO LISTEN PENDING
TEPROTO	EQU	1	08: PROTOCOL ERROR
TEOVRFLO	EQU	2	08: BUFFER OVERFLOW
TEDISCON	EQU	3	08: DISCONNECT RECEIVED
TERELESE	EQU	4	08: ORDERLY RELEASE RCVD.
TEOVLAY	EQU	5	08: CONTROL BLOCK OVERLAID
TEFLOW	EQU	9	08: TEMPORARY FLOW CONTROL
TERETRCT	EQU	10	08: LISTEN RETRACTED
TEPURGED	EQU	11	08: PURGED BY TCLOSE
TESYSERR	EQU	1	12: SYSTEM ERROR
TESUBSYS	EQU	2	12: SUBSYSTEM ERROR
TENOTCNF	EQU	3	12: SUBSYS NOT INSTALLED
TENOTACT	EQU	4	12: SUBSYS NOT ACTIVE
TENOTRDY	EQU	5	12: SUBSYS NOT INITIALIZED
TEDRAIN	EQU	6	12: SUBSYS DRAINED BY OPER.
TESTOP	EQU	7	12: SUBSYS STOPPED BY OPER.
TETERM	EQU	8	12: SUBSYS ABNORMALLY TERM.
TEUNSUPO	EQU	9	12: UNSUPPORTED OPT./FACIL.
TEUNSUPF	EQU	10	12: UNSUPPORTED FUNC./SVC.
TEUNAVBL	EQU	11	12: UNAVAILABLE SVC./FACIL.
TEUNAUTH	EQU	12	12: USER UNAUTHORIZED
TERSOURC	EQU	13	12: INSUFFICIENT RESOURCES
TEINUSE	EQU	14	12: PROTOCOL ADDRESS IS ALREADY ENABLED
TEUSRXIT	EQU	15	12: FAILED BY USER EXIT
TEBDOPCD	EQU	1	16: INVLD OPTION CODE
TEBDEPID	EQU	2	16: INVLD ENDPOINT ID
TEBDXECB	EQU	3	16: INVLD ECB/EXIT ADDR.
TEBDDOM	EQU	4	16: INVLD COMM. DOMAIN
TEBDPROT	EQU	5	16: INVLD TRANSPRT PROTO.
TEBDTYPE	EQU	6	16: INVLD TRANSPRT SVC TYPE
TEBDXLST	EQU	7	16: INVLD EXIT LIST
TEBDUSER	EQU	8	16: INVLD USER PARM
TEBDACEE	EQU	9	16: INVLD ACCESSOR ELEMENT
TEBDSQNO	EQU	10	16: INVLD SEQUENCE NUMBER
TEBDQLEN	EQU	11	16: INVLD QUEUE LENGTH
TEBDTCB	EQU	12	16: INVLD TCB ADDRESS
TEBDASCB	EQU	13	16: INVLD ASCB ADDRESS
TEBDADDR	EQU	14	16: INVLD PROTOCOL ADDRESS

TEBDOPTN	EQU	15	16: INVLD OPTIONS
TEBDDATA	EQU	16	16: INVLD DATA BUFFER
TEBDTSID	EQU	18	16: INVLD TRANSPORT SVC. ID
TESTATE	EQU	1	20: INVLD STATE FOR FUNC.
TEINEXIT	EQU	2	20: INVLD FUNC. WITHIN EXIT
TEINACTV	EQU	3	20: CHECK ISSUED TO INACT. TPL
TEINCMPL	EQU	4	20: ENDPOINT HAS INCOMPL. FNC
TEINDICA	EQU	5	20: PENDING CONNECT INDICA.
TEBUFOVR	EQU	6	20: SEND/RCV. BUFFER OVERRUN
TEREQOVR	EQU	7	20: SEND/RCV. RQST. OVERRUN
TENOCONN	EQU	8	20: NO CONNECT INDICATION
TENODISC	EQU	9	20: NO DISCONNECT INDICA.
TEOUTSEQ	EQU	10	20: REQUEST OUT OF SEQUENCE
TENOERR	EQU	11	20: NO ERROR INDICATION
TEAMODE	EQU	13	20: AMODE CONFLICTS W/ APCB
TEOWNER	EQU	14	20: NOT OPENED BY THIS TASK
TELISTEN	EQU	15	20: LISTEN QUEUE FULL
TEACCEPT	EQU	16	20: ACCEPTING TO ENDPOINT
TEB4EXIT	EQU	1	24:TPL CHECKED BEFORE EXIT
TEACTIVE	EQU	2	24:TPL IS STILL ACTIVE
TPLDGNCD	DS	H	DIAGNOSTIC AND SENSE CODES
TPLMIN	EQU	*-TPL	MINIMUM TPL LENGTH
TLRELACK	EQU	*-TPL	LENGTH OF SHORT TPL: TRELACK
TLRELESE	EQU	*-TPL	LENGTH OF SHORT TPL: TRELEASE
TLRETRCT	EQU	*-TPL	LENGTH OF SHORT TPL: TRETRACT
TLUNBIND	EQU	*-TPL	LENGTH OF SHORT TPL: TUNBIND
TPLPARM	DS	XL(4*3)	FIXED-LENGTH FUNCTION PARAMETERS
	ORG	TPLPARM	
TPLPARM1	DS	F	PARAMETER #1
	ORG	*-4	
TPLQLSTN	DS	0F	LISTEN QUEUE LENGTH
TPLSEQNO	DS	0F	SEQUENCE NUMBER
TPLTCB	DS	0A	TCB ADDRESS
TPLMBUFO	DS	0A	OPTCD=MBUF MBUF OFFSET
	ORG	*+4	
TPLPARM2	DS	F	PARAMETER #2
	ORG	*-4	
TPLNEWEP	DS	0F	NEW ENDPOINT
TPLASCB	DS	0A	ASCB ADDRESS
TPLCOUNT	DS	0F	RESIDUAL BYTE COUNT
	ORG	*+4	
TPLPARM3	DS	F	PARAMETER #3
	ORG	*-4	
TPLUSER	DS	0A	TUB OR ACEE ADDRESS
TPLDISCD	DS	0F	DISCONNECT REASON CODE
TPLDGERR	DS	0F	DATAGRAM ERROR CODE
TPLSTATE	DS	0F	OLD ENDPOINT STATE
TPLXCNT	DS	0F	XDATA RESIDUAL COUNT
	ORG	*+4	
TLACCEPT	EQU	*-TPL	LENGTH OF SHORT TPL: TACCEPT
TLCLEAR	EQU	*-TPL	LENGTH OF SHORT TPL: TCLEAR
TLCLOSE	EQU	*-TPL	LENGTH OF SHORT TPL: TCLOSE
TLDISCON	EQU	*-TPL	LENGTH OF SHORT TPL: TDISCON
TLREJECT	EQU	*-TPL	LENGTH OF SHORT TPL: TREJECT
TLUSER	EQU	*-TPL	LENGTH OF SHORT TPL: TUSER
TPLVAPAR	DS	XL(8*3)	VARIABLE-LENGTH FUNCTION PARMS
	ORG	TPLVAPAR	

```

TPLADDR    DS    XL(4*2)      PROTOCOL ADDRESS PARAMETER
            ORG    TPLADDR

TPLADBUF    DS    A           PARAMETER ADDRESS
TPLADLEN    DS    F           PARAMETER LENGTH

TLADDR      EQU    *-TPL      LENGTH OF SHORT TPL: TADDR
TLBIND      EQU    *-TPL      LENGTH OF SHORT TPL: TBIND
TLCONFRM    EQU    *-TPL      LENGTH OF SHORT TPL: TCONFIRM
TLCONNCT    EQU    *-TPL      LENGTH OF SHORT TPL: TCONNECT
TLLISTEN    EQU    *-TPL      LENGTH OF SHORT TPL: TLISTEN
TLRECVER    EQU    *-TPL      LENGTH OF SHORT TPL: TRECVERR

TPLDATA     DS    XL(4*2)      USER DATA PARAMETER
            ORG    TPLDATA

TPLDABUF    DS    A           PARAMETER ADDRESS
TPLDALEN    DS    F           PARAMETER LENGTH

TLINFO      EQU    *-TPL      LENGTH OF SHORT TPL: TINFO
TLRECV      EQU    *-TPL      LENGTH OF SHORT TPL: TRECVR
TLRECVFR    EQU    *-TPL      LENGTH OF SHORT TPL: TRECVRFR
TSEND       EQU    *-TPL      LENGTH OF SHORT TPL: TSEND
TSENDTO     EQU    *-TPL      LENGTH OF SHORT TPL: TSENDTO

TPLOPTN     DS    XL(4*2)      OPTIONS PARAMETER
            ORG    TPLOPTN

TPLOPBUF    DS    A           PARAMETER ADDRESS
TPLOPLEN    DS    F           PARAMETER LENGTH

TLOPTION    EQU    *-TPL      LENGTH OF SHORT TPL: TOPTION

            ORG    TPLEN

            EQU    *-TPL      STANDARD (LONG) TPL LENGTH

*THE TPL FORMAT FOR TOPEN DIFFERS FROM THAT USED BY THE
*OTHER TRANSPORT SERVICE FUNCTIONS. IN PARTICULAR, FUNCTION
*ARGUMENTS UNIQUE TO TOPEN OVERLAY THE VARIABLE-LENGTH
*PARAMETER SECTION AS DEFINED BELOW.

            ORG    TPLVAPAR

TPLDOM       DS    X           COMMUNICATION DOMAIN

TDINETO     EQU    1           DARPA INTERNET PRE 3.1
TDINET      EQU    2           DARPA INTERNET
TDACP       EQU    4           ACP TASK GROUP DOMAIN
TDMAX       EQU    TDACP       MAXIMUM VALUE FOR DOMAIN

TPLOFLAG    DS    X           OPEN FLAGS/ENVIRONMENT

TPLOFPRO    EQU    B'10000000'  PROTOCOL NUMBER SPECIFIED
TPLOFORD    EQU    B'01000000'  COTS ORDERLY RELEASE REQUIRED
TPLOFASO    EQU    B'00100000'  CLTS ASSOCIATIONS REQUIRED
TPLOFECB    EQU    B'00010000'  EVENT LIST SPECIFIED
TPLOFSOC    EQU    B'00001000'  MODE=SOCKETS
*           EQU    B'00000100'  RESERVED
*           EQU    B'00000010'  RESERVED
*           EQU    B'00000001'  RESERVED

TPLSERVC    DS    H           TRANSPORT SERVICE REQUESTED
            ORG    *-2

TPLTYPE     DS    0H          TRANSPORT SERVICE TYPE

TTCOTS      EQU    1           CONNECTION-MODE SERVICE

```

TTCLTS	EQU	2	CONNECTIONLESS-MODE SVC.
TTRAW	EQU	3	RAW-MODE SERVICE
TTMAX	EQU	TTRAW	MAX. VALUE FOR SERVICE TYPE

TPLPROTO	DS	0H	TRANSPORT PROTOCOL NUMBER
	ORG	*+2	
TPLAPCB	DS	A	APCB ADDRESS FOR API SESSION
TPLSVCID	DS	CL8	PROVIDER'S SERVICE NAME
TPLXLST	DS	A	ADDRESS OF EXIT LIST
TPLUCNTX	DS	F	ONE WORD OF USER CONTEXT

TLOPEN	EQU	*-TPL	LENGTH OF SHORT TPL: TOPEN
--------	-----	-------	----------------------------

	ORG		
TPLMAX	EQU	*-TPL	MAXIMUM TPL LENGTH

*GENERAL RETURN CODES (RETURNED IN R15) ARE USED TO INDICATE
 *SUCCESSFUL OR UNSUCCESSFUL COMPLETION OF A FUNCTION IN
 *SYNCHRONOUS MODE, AND ACCEPTANCE OR NON-ACCEPTANCE OF A
 *FUNCTION IN ASYNCHRONOUS MODE.

TROKAY	EQU	0	SUCCESSFUL COMPLETION/ACCEPTED
TRFAILED	EQU	4	UNSUCCESS. COMPLETION/NOT ACPT.
TRFATLFC	EQU	8	INVALID FUNCTION CODE
TRFATLPL	EQU	12	FATAL TPL ERROR
TRFATLAM	EQU	16	FATAL ACCESS METHOD ERROR
TRFATLAP	EQU	20	APCB IS CLOSED
TRUSER	EQU	24	FIRST USER RETURN CODE

*

*THE DISCONNECT REASON CODE RETURNED INTPLDISCD
 *AND DATAGRAM ERROR CODE RETURNED IN TPLDGERR ARE
 *PROVIDER-DEPENDENT.

*

*

*THE FOLLOWING DISCONNECT REASON CODES MAY BE
 *RETURNED BY THE API FOR INTERNET DOMAIN
 *(DOMAIN=INET)

*

TDTRANTO	EQU	1	TRANSMISSION TIMEOUT
TDHOSTUN	EQU	2	HOST UNREACHABLE
TDPORTUN	EQU	3	PORT UNREACHABLE
TDRABORT	EQU	4	REMOTE ABORT
TDLNIDWN	EQU	5	LOCAL NETWORK I/F DOWN
TDPROTUN	EQU	6	PROTOCOL UNREACHABLE
TDACPRR	EQU	7	ACP CONNECTION ERROR
TDAPIRR	EQU	8	API CONNECTION ERROR
TDNETUN	EQU	9	NET UNREACHABLE
TDNOFRAG	EQU	10	FRAGMENTATION NEEDED/DF
TDSRFAIL	EQU	11	SOURCE ROUTE FAILED

*

*TPL EXTENSION

*

TPLPRM1X	DS	F	TPLPARM1 - ALET OR EXTENSION
TPLPRM2X	DS	F	TPLPARM2 - ALET OR EXTENSION
TPLPRM3X	DS	F	TPLPARM3 - ALET OR EXTENSION
	ORG	TPLPARM3X	
TPLUSALT	DS	F	USER - ALET
	ORG	,	
TPLADALT	DS	F	ADBUF - ALET
TPLDAALT	DS	F	DAFUF - ALET
TPLOPALT	DS	F	OPBUF - ALET
TPLXDIAG	DS	F	EXTENDED DIAGNOSTIC CODE
TPLXLEN	EQU	*	LENGTH OF EXTENDED TPL

TPO – Transport Protocol Options

```
AM=TLI TRANSPORT PROTOCOL OPTIONS (TPO)
*****
*-- TPO --
*
*AM=TLI TRANSPORT PROTOCOL OPTIONS
*****
*THE FOLLOWING DSECT DEFINES THE STRUCTURE FOR SPECIFYING
*OPTIONS ASSOCIATED WITH A TRANSPORT SERVICE FUNCTION.
*GENERALLY SUCH OPTIONS WILL BE INDICATED WITH THE OPLEN
*AND OPBUF OPERANDS OF A TRANSPORT SERVICE MACRO INSTRUCTION.
*
*MORE THAN ONE OPTION MAY BE SPECIFIED IN A SINGLE MACRO
*INSTRUCTION WHERE EACH OPTION IS FORMATTED IN ACCORDANCE
*WITH THE FOLLOWING DSECT. OPBUF POINTS TO THE FIRST OPTION
*IN THE LIST, AND OPLEN IS THE TOTAL LENGTH OF THE OPTION
*LIST.

TPO          DSECT          TRANSPORT PROTOCOL OPTIONS
TPOPTLEN    DS      H          LENGTH OF THIS OPTION
TPOPTION    DS      H          OPTION NAME (I.E., NUMBER)
*
*      API-SPECIFIC OPTIONS
*
TPOAQSND    EQU      0          MAXIMUM NUMBER OF SENDS
TPOAQRCV    EQU      1          MAXIMUM NUMBER OF RECEIVES
TPOALSND    EQU      2          LENGTH OF SEND BUFFER
TPOALRCV    EQU      3          LENGTH OF RECEIVE BUFFER
TPOAMAX     EQU      TPOALRLN   MAXIMUM OPTION NUMBER
*
*      ACP-PROVIDER-SPECIFIC OPTIONS
*
TPOPRWND    EQU      1          TCP RECEIVE WINDOW
TPOPKTIM    EQU      2          KEEPALIVE TIME
TPOPKEEP    EQU      3          KEEPALIVE OPTIONS
TPOPDNAG    EQU      4          DEFEAT NAGLE ALGORITHM
TPOPRWND    EQU      1          TCP RECEIVE WINDOW
TPOPKTIM    EQU      2          KEEPALIVE TIME
TPOPKEEP    EQU      3          KEEPALIVE OPTIONS
TPOPDNAG    EQU      4          DEFEAT NAGLE ALGORITHM
TPOPRTIM    EQU      5          FULL RECEIVE TIMEOUT
TPOIPOPT    EQU      6          IP OPTIONS
TPOSIOAR    EQU      7          SOCKET ADD ROUTE
TPOSIODR    EQU      8          SOCKET DELETE ROUTE
TPOSIFCF    EQU      9          SOCKET INTERFACE CONFIG
TPOSIFLG    EQU     10          SOCKET INTERFACE FLAGS
TPOSIFMT    EQU     11          SOCKET INTERFACE MTU
TPOSIFME    EQU     12          SOCKET INTERFACE METRIC
TPOSIFNM    EQU     13          SOCKET IFC NETWORK MASK
TPOSIFBA    EQU     14          SOCKET BROADCAST ADDR
TPOSIFAD    EQU     15          SOCKET IFC ADDRESS
TPOSIFEN    EQU     16          SOCKET IFC ENET ADDRESS
TPOSIFNO    EQU     17          NUMBER OF INTERFACES
TPOSIFDS    EQU     18          DESTINATION ADDRESS
TPOIPTTL    EQU     19          IP TIME TO LIVE
TPOIPTOS    EQU     20          IP TYPE OF SERVICE
TPOTPMSS    EQU     21          TCP MAXIMUM SEGMENT SIZE
TPOIPDNR    EQU     22          IP DO NOT ROUTE
TPOIPBRO    EQU     23          IP BROADCAST
TPOUDSUM    EQU     24          UDP CHECKSUMS
TPOTQSND    EQU     25          MAXIMUM NUMBER OF SENDS
TPOTQRCV    EQU     26          MAXIMUM NUMBER OF RECEIVES
TPOTLSND    EQU     27          LENGTH OF SEND BUFFER
```

TPOTLRCV	EQU	28	LENGTH OF RECEIVE BUFFER
TPOREUSE	EQU	29	REUSE ADDRESS
TPOIMIF	EQU	30	SAW_IP_MULTICAST_IF (UNSUPPORTED)
TPOIMTTL	EQU	31	SAW_IP_MULTICAST_TTL (UNSUPPORTED)
TPOIMLOO	EQU	32	SAW_IP_MULTICAST_LOOP (UNSUPPORTED)
TPOIADDM	EQU	33	SAW_IP_ADD_MEMBERSHIP (UNSUPPORTED)
TPOIDRPM	EQU	34	SAW_IP_DROP_MEMBERSHIP (UNSUPPORTED)
TPOUDATA	EQU	35	User Data
TPOACCON	EQU	36	SO_ACCEPTCONN option
TPORCVLW	EQU	37	SO_RCVLOWAT option
TPOSNDLW	EQU	38	SO_SNDLOWAT option
TPOIPHDR	EQU	39	IP_HDRINCL option
TPOFIONR	EQU	40	FIONREAD option
TPOTMAX	EQU	TPOFIONR	MAXIMUM OPTION NUMBER
TPOVALUE	DS	(*-*)X	OPTION VALUE

TSW – Transport Endpoint State Word

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT
 *OF THE STATE WORD RETURNED BY THE TSTATE FUNCTION. THE
 *STATE WORD CONTAINS STATUS FLAGS REPRESENTING PENDING
 *ACTIVITY ON THE ENDPOINT, AND A HALFWORD STATE VALUE
 *WHICH REPRESENTS THE STATE OF THE ENDPOINT AT THE MOST
 *RECENT SUCCESSFUL COMPLETION OF A TRANSPORT SERVICE
 *FUNCTION.

TSW	DSECT	TRANSPORT ENDPOINT STATE WORD
TSWSTATF	DC X'00'	STATUS FLAGS
TSWFCHNG	EQU B'10000000'	STATE IS CHANGING
TSWFACPT	EQU B'01000000'	ACCEPTING TO THIS ENDPOINT
TSWOPNO	EQU B'00100000'	OPENING OLD TO THIS EP
*	EQU B'00010000'	RESERVED
*	EQU B'00001000'	RESERVED
*	EQU B'00000100'	RESERVED
*	EQU B'00000010'	RESERVED
*	EQU B'00000001'	RESERVED
TSWPENDF	DC X'00'	PENDING FUNCTION INDICATORS
TSWPFCLS	EQU B'10000000'	TCLOSE DELETE
TSWPFDIS	EQU B'01000000'	TDISCONN, TCLEAR, TRETRACT
TSWPFREL	EQU B'00100000'	TRELEASE
TSWPFACK	EQU B'00010000'	TRELACK
TSWPFCON	EQU B'00001000'	CONNECTION ESTABLISHMENT FNC
TSWPFCLCL	EQU B'00000100'	LOCAL ENDPOINT MANAGEMENT FNC
TSWPFPPAS	EQU B'00000010'	TCLOSE PASS
TSWPFOPN	EQU B'00000001'	TOPEN
TSWPFRCV	EQU B'00000000'	TRECV
TSWPFSSND	EQU B'00000000'	TSEND
TSWPFDDGM	EQU B'00000000'	TRECVFR, TSENDTO, TRECVERR
TSWSTATE	DC H'0'	CURRENT ENDPOINT STATE
TSCLOSED	EQU 0	CLOSED (NON-EXISTENT)
TSOPENED	EQU 1	OPENED (NOT BOUND)
TSDSABLD	EQU 2	DISABLED (BOUND, QLSTN EQ 0)
TSENABLD	EQU 3	ENABLED (BOUND, QLSTN GT 0)
TSINCONN	EQU 4	CONNECT INDICATION PENDING
TSOUCONN	EQU 5	CONNECT IN PROGRESS
TSCONNCT	EQU 6	CONNECTED (OR ASSOCIATED)
TSINRLSE	EQU 7	RELEASE INDICATION PENDING
TSOURLSE	EQU 8	RELEASE IN PROGRESS
TSMAX	EQU TSOURLSE	MAXIMUM STATE VALUE
TSWLEN	EQU *-TSW	LENGTH OF TSW

TUB – Transport Endpoint User Block

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
*USER ID PARAMETERS REQUIRED FOR ASSOCIATING A USER WITH
*AN ENDPOINT. THIS STRUCTURE SHOULD BE PROVIDED AS AN
*ARGUMENT TO TOPEN AND TUSER WHEN AN ACCESSOR ENVIRONMENT
*ELEMENT (ACEE) IS NOT AVAILABLE OR APPROPRIATE.

TUB	DSECT		TRANSPORT ENDPOINT USER BLOCK
TUBUID	DS	XL9	USER ID
	ORG	TUBUID	
TUBUIDL	DS	X	USER ID LENGTH
TUBUIDC	DS	CL8	USER ID CHARACTER STRING
	ORG		
TUBGRP	DS	XL9	GROUP NAME
	ORG	TUBGRP	
TUBGRPL	DS	X	GROUP NAME LENGTH
TUBGRPC	DS	CL8	GROUP NAME CHARACTER STRING
	ORG		
TUBPWD	DS	XL9	PASSWORD
	ORG	TUBPWD	
TUBPWDL	DS	X	PASSWORD LENGTH
TUBPWDC	DS	CL8	PASSWORD CHARACTER STRING
	ORG		
TUBLEN	EQU	*-TUB	LENGTH OF TUB

TXL – Transport Endpoint Exit List

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
 *THE EXIT LIST PROVIDED BY THE APPLICATION PROGRAM AS AN
 *ARGUMENT OF THE TOPEN AND AOPEN MACRO INSTRUCTIONS. EACH
 *ENTRY IS THE ADDRESS OF AN EXIT ROUTINE WHICH IS TO RECEIVE
 *CONTROL WHEN A PARTICULAR EVENT OCCURS. IF THE VALUE OF
 *AN ENTRY IS ZERO, THE CORRESPONDING EXIT ROUTINE IS NOT
 *DEFINED. THE EXIT LIST CAN BE GENERATED BY A TEXTLST MACRO
 *INSTRUCTION.

TXL	DSECT		TRANSPORT ENDPOINT EXIT LIST
TXLLENXL	DS	F	LENGTH OF EXIT LIST
TXLEXITS	DS	0A	LIST OF EXIT ROUTINES
TXLPROTO	DS	10A	PROTOCOL EVENT EXITS
	ORG	TXLPROTO	
TXLCONN	DS	A	CONNECT INDICATION
TXLCONF	DS	A	CONFIRM INDICATION
TXLDATA	DS	A	NORMAL DATA INDICATION
TXLXDATA	DS	A	EXPEDITED DATA INDICATION
TXLDGERR	DS	A	DATAGRAM ERROR INDICATION
TXLDISC	DS	A	DISCONNECT INDICATION
TXLRELSE	DS	A	RELEASE INDICATION
TXLSWIND	DS	A	WINDOW OPEN INDICATION
	DS	2A	RESERVED
	ORG		
TXLTPEND	DS	A	PROVIDER END EXIT
	DS	2A	RESERVED
	DS	H	RESERVED
TXLFECB	DS	H	EVENT is ECB Flags
TXLFECI	EQU	X'8000'	Connect Ind. event is ECB
TXLFECF	EQU	X'4000'	Confirm event is ECB
TXLFEDA	EQU	X'2000'	Data Ind. event is ECB
TXLFEXD	EQU	X'1000'	Expedited data event is ECB
TXLFEDE	EQU	X'0800'	Datagram error event is ECB
TXLFEDI	EQU	X'0400'	Disconnect event is ECB
TXLFERL	EQU	X'0200'	Release Ind. event is ECB
TXLFESW	EQU	X'0100'	Send window opened is ECB
TXLFETP	EQU	X'0080'	TPEND event is an ECB
TXLLENT0	EQU	*-TXL	LENGTH OF TOPEN EXIT LIST

*THE FOLLOWING EXITS CAN ONLY BE SPECIFIED IN AN AOPEN
 *EXIT LIST.

TXLERROR	DS	2A	SYNCHRONOUS ERROR EXITS
	ORG	TXLERROR	
TXLSYNAD	DS	A	PHYSICAL ERRORS
TXLLERAD	DS	A	LOGICAL ERRORS
	ORG		
TXLAPEND	DS	A	API SUBSYSTEM END EXIT
	DS	2A	RESERVED
TXLLENA0	EQU	*-TXL	LENGTH OF AOPEN EXIT LIST
TXLLEN	EQU	*-TXL	MAXIMUM LENGTH OF TXL

TXP – Transport Endpoint Exit Parameters

*THE FOLLOWING DSECT DEFINES THE STRUCTURE AND CONTENT OF
 *THE PARAMETER LIST WHOSE ADDRESS IS PASSED IN R1 TO THE
 *TPEND AND ALL PROTOCOL EVENT EXIT ROUTINES. A TPL ADDRESS
 *IS PASSED IN R1 TO THE SYNAD, LERAD, AND TPL COMPLETION
 *EXIT ROUTINES.

TXP	DSECT		TRANSPORT ENDPOINT EXIT PARAMETERS
TXPTYPE	DS	H	EXIT TYPE
TXPTPROT	EQU	1	PROTOCOL EVENT EXIT
TXPTCMPL	EQU	2	ENDPOINT COMPLETION EXIT
TXPTPEND	EQU	3	PROVIDER END EXIT
TXPTSYNC	EQU	4	SYNCHRONOUS ERROR EXIT
TXPAPEND	EQU	5	SUBSYSTEM END EXIT
	DS	H	RESERVED
TXPEP	DS	F	ENDPOINT
	ORG	*-4	
TXPEPID	DS	0F	ENDPOINT ID
TXPTCEP	DS	0A	TCEP ADDRESS
TXPAPCB	DS	0A	APCB ADDRESS FOR APEND
	ORG	*+4	
TXPEXIT	DS	A	EXIT ROUTINE ENTRY POINT
TXPPARM	DS	F	EXIT PARAMETER
	ORG	*-4	
TXPEVENT	DS	0F	PROTOCOL EVENT CODE
TXPECONN	EQU	0	CONNECT INDICATION
TXPECONF	EQU	4	CONFIRM INDICATION
TXPEDATA	EQU	8	NORMAL DATA INDICATION
TXPEXPDT	EQU	12	EXPEDITED DATA INDICATION
TXPERROR	EQU	16	DATAGRAM ERROR INDICATION
TXPEDISC	EQU	20	DISCONNECT INDICATION
TXPERLSE	EQU	24	ORDERLY RELEASE INDICATION
TXPESWND	EQU	28	SEND WINDOW OPEN
TXPREASN	DS	0F	TPEND REASON CODE
TXPRDRAN	EQU	0	OPERATOR DRAINED SUBSYSTEM
TXPRSTOP	EQU	4	OPERATOR STOPPED SUBSYSTEM
TXPRTERM	EQU	8	SUBSYS. ABNORM. TERMINATED
TXPTPL	DS	0A	COMPLETION TPL ADDRESS
	ORG	*+4	
TXPACNTX	DS	F	APPLICATION-LEVEL CONTEXT
TXPUCNTX	DS	F	USER-LEVEL (ENDPOINT) CONTEXT
TXPECNTX	DS	F	ENVIRONMENT-LEVEL CONTEXT
TXPLEN	EQU	*-TXP	LENGTH OF TXP
TXPPARM2	DS	F	SECOND PARAMETER WORD
TXPCOUNT	EQU	TXPPARM2, 4	DATA/SEND WINDOW COUNT

