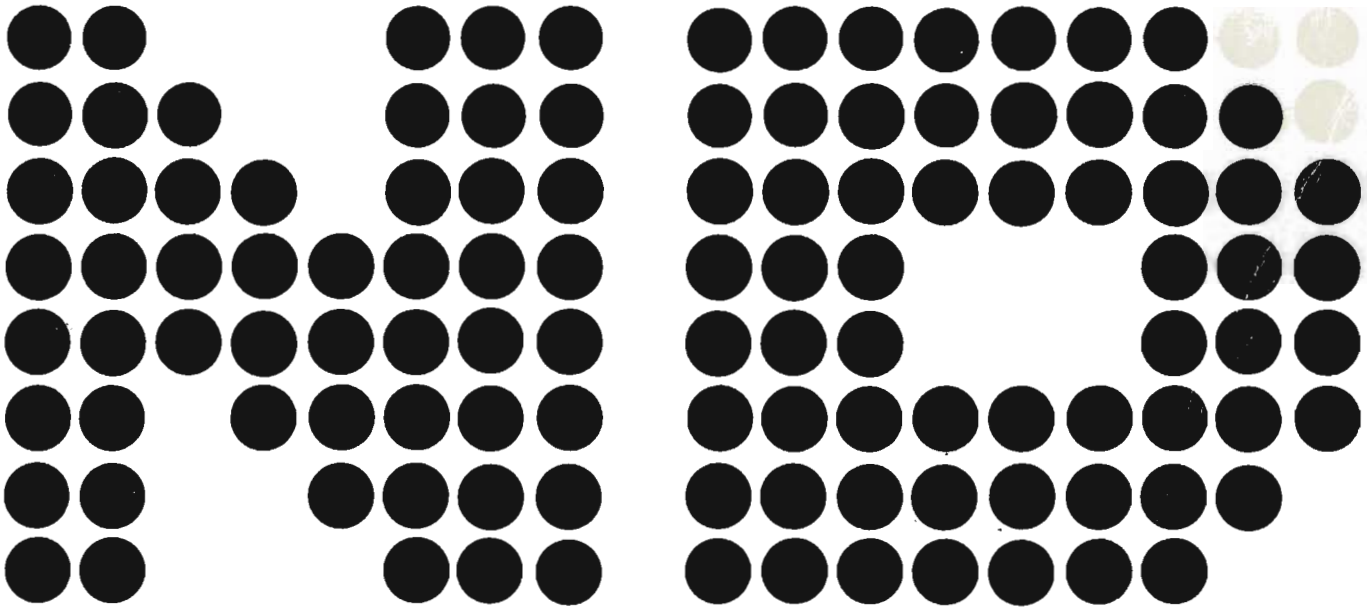
PAKKESYSTEMET
OG
MELDINGSFLYT I TPS

NORSK DATA A.S



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PAKKESYSTEMET
OG
MELDINGSFLYT I TPS

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PAKKESYSTEMET I TPS

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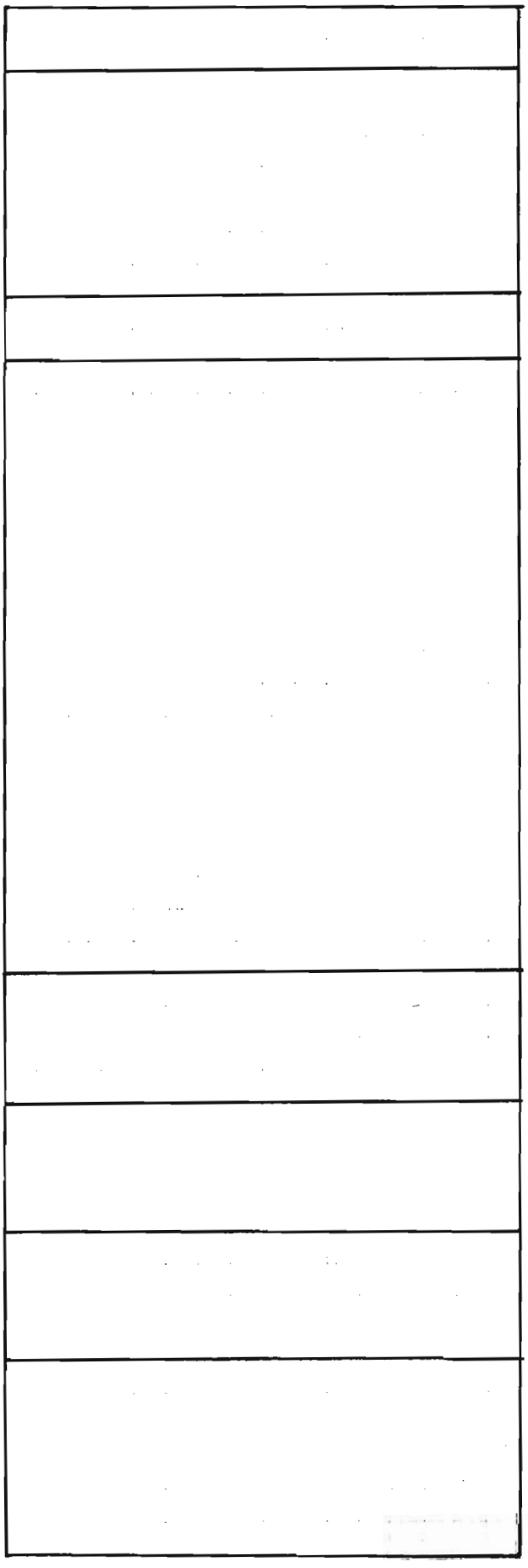
RT-COMMON



POOL HEAD, 6 LOCATIONS

QUEUE HEADS

6 LOCATIONS EACH

TOLOC - AREA

BUFFER POOL

EACH BUFFER: 40 LOCATI

EACH BUFFER HAS A

HEAD OF 4 LOCATIONS

TATAB

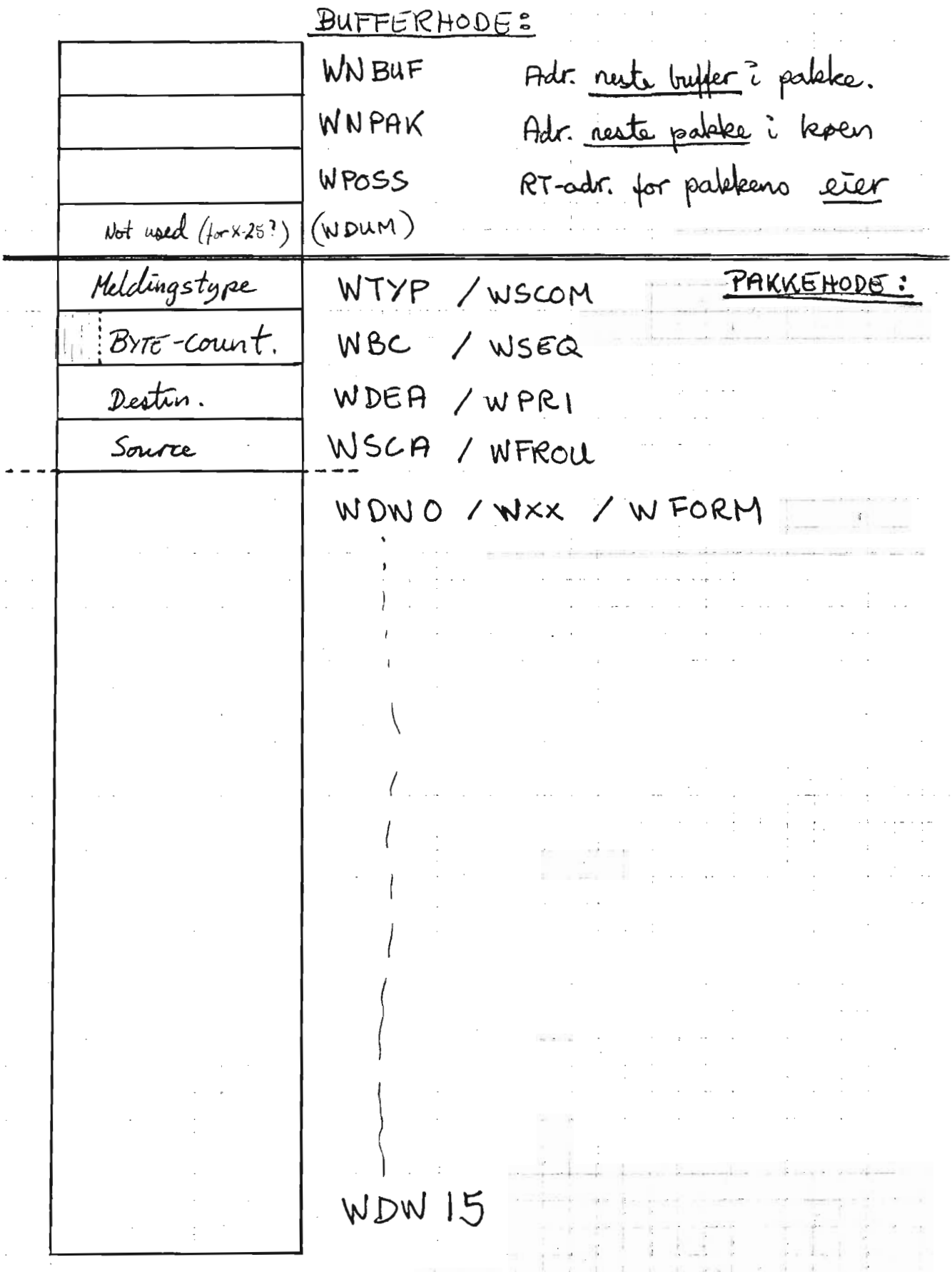
EACH ENTRY: 3 LOC.

TPTAB

USCOMM

SIBAS

PAKKE



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BRUKERENS B-FELT

B-200:	WRTAD	Adr. til RT-beskrivelse
	WMYAD	Logiske prosess nr. / pakke adresse
	WQ	Adr. til kophode
Pointer	PNUM	Ant. pakker i køen
	WFLIM	Min. ant. ledige buffere i pool når allok
	WPACK	Adr. til pakker
	WBUF	Adr. til aktuelt buffer
	WINDX	Aktuelt ord i buffer
	WSOF	Ant. bytes lest til nå
	WTOT	Tot. antall bytes i pakke
	WLREG	Save L-reg. her
	WVAR	Arb. variabel for streng-rutiner
	WVAR2	— " —
	WCNT	— " —
Pointer	PSTR	Adr. lokal streng å kopiere til/fra
Pointer	PBACK	Save lokasjon for returadresse
	WCHAIN	Lokal ventekjede for Modul/unit

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PAKKE - RUTINER:

GETQ	CHECK IF YOU HAVE A PACKET (YES: SKIP RETURN)
RINIT	INITIALIZES USER B-FIELD for READ.
WINIT	INITIALIZES USER B-FIELD for WRITE, AND A BUFFER IS ALLOCATED.
PUTCH	PUT CHARACTER IN BUFFER
GETCH	GET CHARACTER FROM BUFFER
PSTRI	PUT CH.STRING IN BUFFER
GSTRI	GET CHARACTER STRING FROM BUFFER
PUTWD	PUT WORD IN BUFFER

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GETWD GET WORD FROM BUFFER

PUTMD SEND PACKET

PUTF PUT MY BUFFER IN FREELIST

WHEAD WRITE PACKET HEADER

RHEAD READ PACKET HEADER

LOCTX

TOLOC

FATAL

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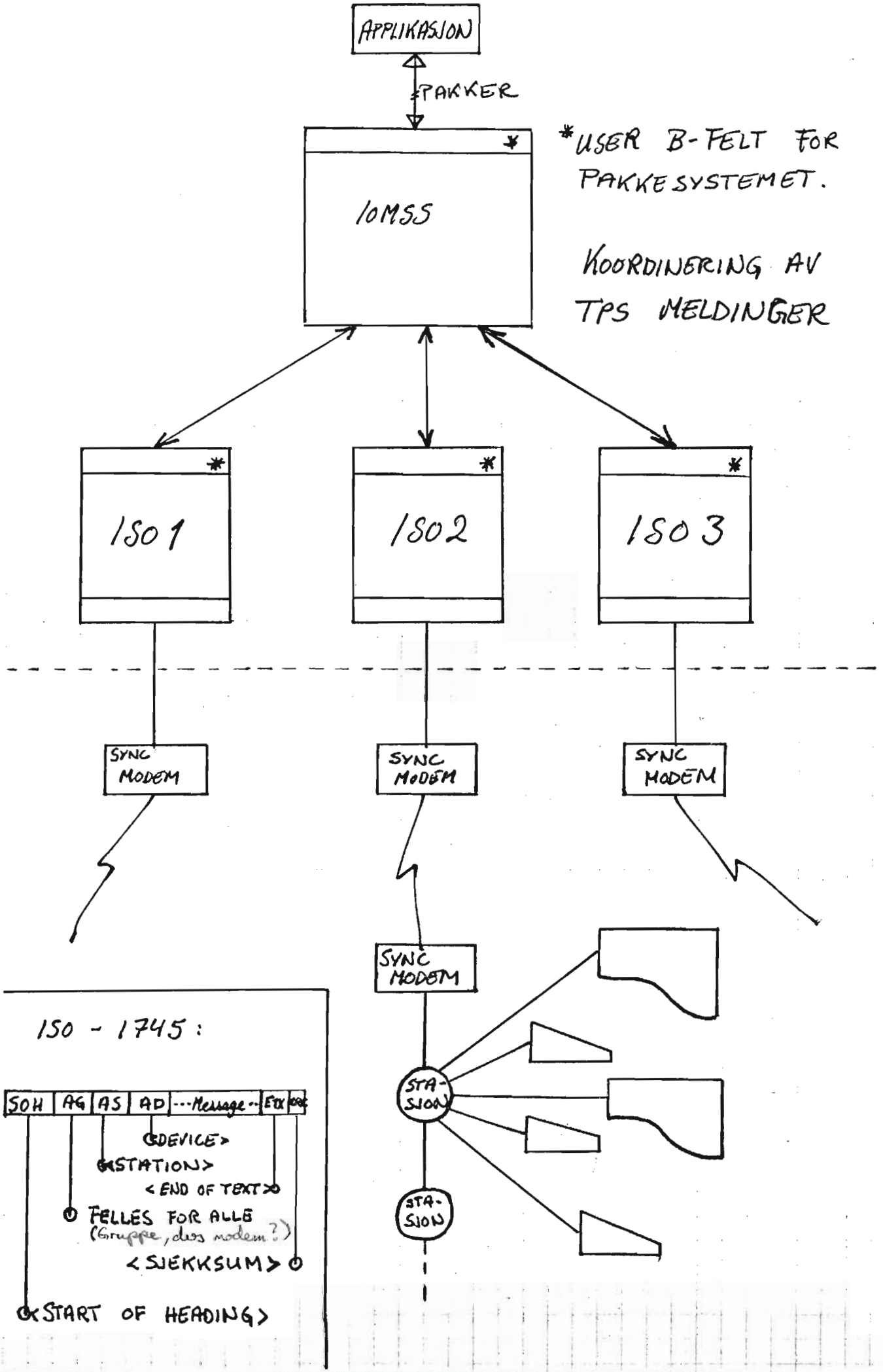

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SPECIFIC PACKET HEAD LAYOUT

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
WTYP/WSCOM	MCL *			MTYPE				Ext. Ad **		CURRENT OFFSET						
WBC/WSEQ	Window Size		Not used		Init. DIR	BYTE COUNT										
WDEA/WPRI	Mess. Prior.		Modul Nr.					SUBADRESSE, UNIT								
WSCA/WFROU	Forced Rout. PRM	Log at PRM	Modul Nr.					SUBADRESSE, UNIT								

**

***
FOR CONTROL-RESPONSE melding betyr dette "SUCCESSFUL".
For data og SREQ meldinger betyr det "MSG complete": ingen flere pakker i MSG om =1.

* BIT 14 I WSCOM ANGIR "RESPONSE PACKET".

EXT. AD = EXTENDED ADDRESS
ANGIS I BIT 9 I WSCOM.

** WSCA/WFROU:
BIT 15: FORCED ROUTING VIA PRM
BIT 14: TO BE LOGGED AT PRM.

I FØLGE DETTE KAN ALTSÅ:

CURRENT OFFSET:
VERE $0-777_8$

MTYPE:
VÆRE $0-17_8$
1 tilsvarer: 2000_8
17_8 tilsvarer: 36000_8

BYTE COUNT VÆRE $0-3777_8$

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MODUL NR VÆRE 0-77$_8$

1 tilsvarer 400$_8$

77$_8$ tilsvarer 37400$_8$

EXTENDED ADDRESS BIT GIR ET TILLEGG PÅ 1000$_8$.

INITIAL ADDRESS BIT GIR ET TILLEGG PÅ 4000$_8$.

BIT 14 OG 15 REPRESENTERES AV ALLE VERDIER OVER 40 000$_8$ OG 100000$_8$ RESPEKTIVE.

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UTDRAG FRA

(NORD-TPS) GLOB-DEF:SYMB

1/3-79

BEREGNET SOM SUPPLEMENT
TIL BESKRIVELSE AV
PAKKESYSTEMET.

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```
%=============================================================================
%
%    1. CPU-SPECIFIC CONFIGURATION PARAMETERS
%
%=============================================================================
%
%    1.1 CPU GLOBAL VALUES:
%
%=============================================================================


SYMBOL SMAXMOD=77   % HIGHEST LOGICAL MODULE NUMBER
SYMBOL SBCMX=3777   % MAX NUMBER OF BYTES IN PACKET
SYMBOL SWCMX=1777   % MAX NO OF WORDS IN PACKET

%=============================================================================
%
%    1.2 CPU LOCAL VALUES:
%
%=============================================================================
@LIB 4CPU0

%    RT-COMMON LAYOUT:

SYMBOL SRTCLLIM=160000          % LOWER LIMIT OF RT-COMMON
SYMBOL SQPOLLIM=160000          % LOWER LIMIT OF QUEUE AND
                                % BUFFER POOL AREA
SYMBOL SQPOHLIM=SQPOLLIM+10000 % HIGH LIMIT OF QUEUE AND
                                % BUFFER POOL AREA
SYMBOL STABLES=SQPOHLIM         % RT-COMMON TABLE-AREA
%    DISPLACEMENTS IN "TABLES" AREA:
SYMBOL SAMAX=STABLES,STATB
SYMBOL STAESIZ=3                % TATAB ENTRY SIZE
SYMBOL SMAPL=212                % MAX NO OF APPLICATIONS
SYMBOL STPWRK=STAESIZ*SMAPL+STABLES % WORK AREA FOR TPS
%    DISPLACEMENTS IN STPWRK-AREA :
SYMBOL SFILNO=STPWRK,SMLONO,SPACLOG,STMAX,STPTB,SWETB=STPTB+100
SYMBOL SRTCHLIM=172000          % UPPER LIMIT OF TPS RT-COMMON
SYMBOL SIBC1=172000             % SIBAS NO 1 CALL-EXCHANGE AREA
SYMBOL SBFSZ=40                 % BUFFER SIZE IN POOL (NO. OF WORDS)
SYMBOL SBMAX=32                 % MAX NUMBER OF BUFFERS IN PACKET

%    SEGMENT VALUES:

SYMBOL SRSEG=277                % SEG. NR. OF TPT/TSR REENTRANT SEGMENT

%    DEVICES:

SYMBOL SLCNO=46                 % LOGICAL DEVICENUMBER OF LOCAL CONSOLE
SYMBOL SDVOP=SLCNO              % DEFAULT (STANDARD) OPCOM DEVICE
SYMBOL SLCSM=1200               % SEMAPHORE FOR RESERVING LOCAL CONSOLE
```

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```
%   PRM & TCM-PARAMETRES:

@DEC
SYMBOL SNTP=15                  % NO OF TPT'S IN TP-POOL OF TCM
SYMBOL SYSTPT=1                 % TPT (1)
SYMBOL STPMIN=SYSTPT+1          % TPT (MIN)
SYMBOL STPMAX=SYSTPT+14         % TPT(MAX)
@OCT
SYMBOL SCPTCM=1                 % NR OF TCMS WITH CHECKPOINT
SYMBOL SBSTR=2000               % BLOCK SIZE ON TCF
SYMBOL SMXL=400                 % BLOCK SIZE ON MLOG
SYMBOL SCLIM=100                % CHECKPOINT WEIGHT LIMIT
SYMBOL STCNO=3                  % NR OF BLOCKS IN TCM CHCKP RECORD
SYMBOL STBNO=6                  % NR OF TCF BLOCKS RESERVED FOR EACH TPT
SYMBOL SABNO=1                  % NR OF BLOCKS RESERVED FOR EACH APPL.
                                % TO SAVE INITIAL WORKING STORAGE AT
                                % LOAD TIME.
SYMBOL STCENTRY=0               % BLOCK NO FOR TC-ENTRY ON TCF-FILE
SYMBOL STWSAVE=1                % FIRST BLOCK NR FOR TRANSACTION
                                % CHECKPOINTS ON TCF.
SYMBOL STWISAVE=STBNO*SNTP+STWSAVE  % FIRST BLOCK FOR INITIAL SAVING OF
                                % INITIAL WORKING STORAGE FOR APPLICATIONS.
SYMBOL SBSYST=SMAPL*SABNO+STWISAVE  % START OF SYNC CHECKPOINT SAVE AREA.
SYMBOL SBSYEN=STBNO*2*SNTP+SBSYST   % END OF SYNC CHECKPOINT SAVE AREA.

%   DEFINITIONS FOR TPT'S:

SYMBOL STFAC=10                 % TIMEOUT FACTOR FOR APPLICATIONS
SYMBOL STOPR=550                % OPERATOR'S TIMEOUT INTERVAL (30 MIN)
SYMBOL SBPRI=30                 % BASIC PRIORITY OF TPS
SYMBOL STPRI=SBPRI+17           % INITIAL PRIORITY OF TPT
                                % (CHANGED AT ACTIVATION).
SYMBOL STPXS=50000              % FIRST LOCATION ON THE TPT(X)-SEGMENT
SYMBOL STPGO=62000              % ENTRY OF THE TPT REENTRANT PART.
SYMBOL SWKSZ=4000               % DEFAULT WORKING STORAGE SIZE
SYMBOL SWKSMAX=7400             % MAX WORKING STORAGE SIZE (COBOL)
SYMBOL SYSWKSIZ=SBSTR*SABNO     % MAX RUNCOB WS SIZE (COBOL)
SYMBOL SWKTPT=STPXS+400         % START OF APPL WORK STORAGE
SYMBOL STSTRT=STPXS+SWKSZ       % START OF STACK ON TPT SEGMENT
SYMBOL STND=STPXS+12000-1       % END OF STACK ON TPT SEGMENT
SYMBOL SPMIN=40                 % LOWEST NO OF BUFFERS WHEN TPT SHOULD
                                % BE GIVEN BUFFERS
@ELIB
```

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```
%=============================================================================
%
%    2. DATA FIELD DESCRIPTORS
%
%    N O T A B E N E  ! ! ! ! ! ! ! ! !
%    ***********************************
%    CHANGES IN POOL HEAD OR PACKET HEAD MAY MAKE UPDATING
%    IN THE BUFFER-POOL MONITOR CALL ROUTINES NECESSARRY.
%
%=============================================================================



%===============
%
%    2.1 POOL HEAD

DISP -1
INTEGER WPVER % VERIFICATION VALUE OF POOL HEAD
SYMBOL SPCOR=125252      % CORRECT VALUE OF WPVER
INTEGER WFREE % ADDRESS OF FIRST FREE BUFFER, =0 IF EMPTY
INTEGER WNFRE % NUMBER OF FREE BUFFERS IN POOL
INTEGER WLLIM % LOWER ADDRESS OF BUFFER POOL
INTEGER WHLIM % HIGHER ADDRESS OF BUFFER POOL
INTEGER WBFSZ % BUFFER SIZE , NO. OF WORDS
PSID


%================
%
%    2.2 QUEUE HEAD

DISP 0
INTEGER WLPAK % ADDRESS OF LAST PACKET IN QUEUE
              % EQUAL TO QUEUE HEAD IF QUEUE EMPTY
INTEGER WFPAK % ADDRESS TO FIRST BUFFER IN QUEUE
              % EQUAL TO QUEUE HEAD IF EMPTY
INTEGER WPNUM % NUMBER OF PACKETS IN QUEUE
INTEGER WPROC % ADDRESS OF OWNER OF QUEUE
INTEGER WQUAD % TIME-OUT-ACTION/QUEUE ADDRESS.
INTEGER WQTIM % TIME-OUT COUNTER.
PSID
```

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```
%=============================================================================
%
%    3. VALUES OF PACKET HEAD ELEMENTS
%
%=============================================================================
%
%    3.1 VALUES OF PACKET TYPES

SYMBOL SRMS=1%S10CT              % INDICATES RESPONSE MSG
SYMBOL STP=S30CT            % INDICATES MSGTYPE OFFSET

% SESSION MESSAGES & RESPONSES (MCL 0 & 1):

SYMBOL SDATA=0              % DATA MSG IN SESSION (MCL,MTYPE=0,0)
SYMBOL SDACK=SDATA+SRMS          % DATA ACKNOWLEDGE IN SESSION (1,0)
SYMBOL SDML=1%STP           % CALL TO DBMS (0,1)
SYMBOL SRDML=SDML+SRMS           % CALL RESPONSE MSG FROM DBMS (1,1)
SYMBOL SASTA=2%STP          % ALTER STATUS MSG (0,2)
SYMBOL SASTR=SASTA+SRMS          % RESPONSE TO SASTA (1,2)
SYMBOL SRSTA=3%STP          % READ STATUS MSG (0,3)
SYMBOL SRSTR=SRSTA+SRMS          % RESPONSE TO SRSTA (1,3)
SYMBOL SREQ=4%STP           % SESSION REQUEST MSG (0,4)
SYMBOL SRES=SREQ+SRMS            % RESPONSE TO SREQ (1,4)
SYMBOL SFIN=5%STP           % SESSION FINISH MSG (0,5)
SYMBOL SFID=SFIN+SRMS            % RESPONSE TO SFIN (1,5)
SYMBOL STEXT=6%STP          % SINGLE TEXT MSG (0,6)
SYMBOL STEXR=STEXT+SRMS          % RESPONSE TO STEXT (1,6)

% COMMAND MESSAGES & RESPONSES (MCL 2 & 3):

SYMBOL SINIT=40%STP              % TPS/MODULE INITIATE (MCL,MTYPE=2,0)
SYMBOL SINID=SINIT+SRMS          % RESPONSE TO SINIT (3,0)
SYMBOL SABEND=41%STP             % TPS/MODULE ABEND (2,1)
SYMBOL SABNDD=SABEND+SRMS            % RESPONSE TO SABEND (3,1)
SYMBOL SCONT=42%STP              % TPS/MODULE CONTINUE (2,2)
SYMBOL SCOND=SCONT+SRMS          % RESPONSE TO SCONT (3,2)
SYMBOL SHALT=43%STP              % TPS/MODULE HALT (2,3)
SYMBOL SHALD=SHALT+SRMS          % RESPONSE TO   SHALT (3,3)
SYMBOL SCHCKP=44%STP             % RUN-TIME CHECKPOINT MSG (2,4)
SYMBOL SCHCF=SCHCKP+SRMS             % RESPONSE TO SCHCKP (3,4)
SYMBOL SROLBK=45%STP             % ROLLBACK COMMAND (2,5)
SYMBOL SROLR=SROLBK+SRMS             % RESPONSE TO SROLBK (3,5)
SYMBOL SRCOVR=46%STP             % RECOVER COMMAND (2,6)
SYMBOL SRCVD=SRCOVR+SRMS             % RESPONSE TO SRCOVR (3,6)
SYMBOL SCLOSE=47%STP             % CLOSE COMMAND (2,7)
SYMBOL SCLOD=SCLOSE+SRMS             % RESPONSE TO SCLOSE (3,7)
SYMBOL SRCLOS=50%STP             % RESET CLOSE COMMAND (3,8)
SYMBOL SRCLD=SRCLOS+SRMS             % RESPONSE TO SRCLOS (3,8)
SYMBOL SMSG=51%STP          % GENERAL CONTROL MSG (2,9)
SYMBOL SRMSG=SMSG+SRMS           % RESPONSE TO SMSG (3,9)
SYMBOL SACTV=52%STP              % ACTIVATE TPT COMMAND (2,10)
SYMBOL STERM=SACTV+SRMS          % APPLICATION TERMINATED (3,10)

SYMBOL SANYMSG=77%STP          % DYMMY FOR ANY MSG
SYMBOL SNOMSG=-1           % DUMMY FOR NO MSG
```

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```
%====================
%
%    3.2 PROCESS ADDRESSES (WDEA & WSCA)

% ADDRESS OF MODULES :
%
SYMBOL SPRM=0*SLHW % PRIMARY ROUTING MODULE (DMOD,DLU=0,0-1)
SYMBOL STIMR=1*SLHW      % GLOBAL TIMER (1,0)
SYMBOL SOPCO=17*SLHW+ 0 % OPCOM MODULE (17,0)
SYMBOL SLOGW=17*SLHW+ 1 % LOG WRITER MODULE (17,1)
SYMBOL SISOS=20*SLHW     % ISO 1745 STANSAAB MODULE (20,0-400)
SYMBOL SREMO=21*SLHW     % REMOTE TPS MODULE (21,0-400)
SYMBOL SIBM3270=22*SLHW % REMOTE ACCESS TO IBM HOST VIA 3270
%    ADDRESS OF INTER-CPU LINES:
SYMBOL SLIN0=4,SLIN1,SLIN2,SLIN3

SYMBOL SMD0=2 % MAIN DISPATCHER OF CPU NO 0 (0,2)
SYMBOL SMD1=1*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 1 (1,2)
SYMBOL SMD2=2*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 2 (2,2)
SYMBOL SMD3=3*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 3 (3,2)
SYMBOL SMD4=4*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 4 (4,2)
SYMBOL SMD5=5*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 5 (5,2)
SYMBOL SMD6=6*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 6 (6,2)
SYMBOL SMD7=7*SLHW+ 2    % MAIN DISPATCHER OF CPU NO 7 (7,2)

SYMBOL SBIM0=3      % BACKGROUND INTERFACE MODULE OF CPU NO 0 (0,3)
SYMBOL SBIM1=1*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 1 (1,3)
SYMBOL SBIM2=2*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 2 (2,3)
SYMBOL SBIM3=3*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 3 (3,3)
SYMBOL SBIM4=4*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 4 (4,3)
SYMBOL SBIM5=5*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 5 (5,3)
SYMBOL SBIM6=6*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 6 (6,3)
SYMBOL SBIM7=7*SLHW+ 3   % BACKGROUND INTERFACE MODULE OF CPU NO 7 (7,3)

SYMBOL STCM0=40*SLHW     % TCM NO 0 (40,0-400)
SYMBOL STCM1=41*SLHW     % TCM NO 1 (41,0-400)
SYMBOL STCM2=42*SLHW     % TCM NO 2 (42,0-400)
SYMBOL STCM3=43*SLHW     % TCM NO 3 (43,0-400)
SYMBOL STCM4=44*SLHW     % TCM NO 4 (44,0-400)
SYMBOL STCM5=45*SLHW     % TCM NO 5 (45,0-400)
SYMBOL STCM6=46*SLHW     % TCM NO 6 (46,0-400)
SYMBOL STCM7=47*SLHW     % TCM NO 7 (47,0-400)

SYMBOL SSIB0=60*SLHW     % DATABASE MODLUE OF CPU NO 0 (0,0-3)
SYMBOL SSIB1=61*SLHW     % DATABASE MODULE OF CPU NO 1 (1,0-3)
SYMBOL SSIB2=62*SLHW     % DATABASE MODULE OF CPU NO 2 (2,0-3)
SYMBOL SSIB3=63*SLHW     % DATABASE MODULE OF CPU NO 3 (3,0-3)
SYMBOL SSIB4=64*SLHW     % DATABASE MODULE OF CPU NO 4 (4,0-3)
SYMBOL SSIB5=65*SLHW     % DATABASE MODULE OF CPU NO 5 (5,0-3)
SYMBOL SSIB6=66*SLHW     % DATABASE MODULE OF CPU NO 6 (6,0-3)
SYMBOL SSIB7=67*SLHW     % DATABASE MODLUE OF CPU NO 7 (7,0-3)

SYMBOL SMD=SMD0,SBIM=SBIM0
SYMBOL SSIB=SSIB0,STCM=STCM0
%
%    LOGICAL UNITS, TCM'S:
%
SYMBOL STIM=STCM+171     % TCM NO X TIMER
%
```

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```
%==================================
%
%    3.3 STANDARD USE OF MSG HEAD, WXX AND DATA WORDS
%
%==================================
%
%    3.3.1 CONTROL MESSAGES (MCL=2)
%
%    FIELDS IN SUB COMMAND WORD, WSCOM:

SYMBOL SEABIT=11    % BIT FOR EXTENDED ADDRESS (MCL 0 & 2)
SYMBOL SCOFMASK=S4QWMASK      % CURRENT OFFSET FIELD FOR E.A.
SYMBOL CCOFMASK=-SCOFMASK-1
SYMBOL SACTMASK=S3QWMASK      % ACTION CODE (IF INCLUDED).
SYMBOL CACTMASK=-SACTMASK-1
SYMBOL SACTSHIFT=-4
SYMBOL CACTSHIFT=4
SYMBOL SATYPMASK=177400 % EXTENDED ADDRESS TYPE
SYMBOL SASIZMASK=377    % EXTENDED ADDRESS SIZE

%    ATYPE/ASIZE WORD CODING

SYMBOL SDVAL=0      % DMOD/DLU IN WDEA VALID
SYMBOL SDDNW=400    % DMOD/DLU IN NEXT WORD
SYMBOL SSALU=1000   % BYTE STRING FOR ABBR. LOOKUP
SYMBOL SNATI=1400   % NATIVE ADDRESS

%    FIELDS IN WSEQ:

SYMBOL SRWBIT=17    % 'RESPONSE WANTED' -INDICATION.

%==================================
%
%    3.3.2 CONTROL MESSAGE RESPONSES (MCL=3)
%
%    IN WSCOM:

SYMBOL SNSBIT=10    % 'NOT SUCCESSFUL'-INDICATION
SYMBOL SCAUMASK=S4QWMASK      % CAUSE FOR 'NOT SUCCESSFUL'
SYMBOL CCAUMASK=-SCAUMASK-1
%    CAUSE= 0, TIMEOUT, NO RESPONSE/ NOT ACTIVE
%           1, FILE INACCESSIBLE
%           2, DBMS INACCESSIBLE
%           3, MSG ERROR DETECTED
%           4, CONFIGURATION ERROR DETECTED
%           5, CHECKPOINT ID ERROR
SYMBOL SCTMOT=400,SCFIL,SCDBMS,SCMERR,SCNFIG,SIDER
```

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```
%================================
%
%    3.3.3 SDATA AND SDACK MESSAGES
%
%    IN WTYP:

SYMBOL SMCOBIT=0 % BIT FOR MORE PACKETS IN MSG IF =1

%    IN WSEQ:

SYMBOL SMORBIT=13  % 'MORE DATA'-INDICATION, PACKET LEVEL
SYMBOL SEQMASK=7*S1QW    % FIELD FOR SEQUENCE NO.
SYMBOL CEQMASK=-SEQMASK-1
SYMBOL SEQSHIFT=-14
SYMBOL CEQSHIFT=14

%====================================
%
%    3.3.4 STEXT, SRSTR MESSAGES
%
%    IN WFORM:
SYMBOL SFORBIT=10  % IF SFORBIT=1, THEN FORMAT INFO IN WXX AND CUROFS=1
%    IN WXX:
%..........FORMATS TO BE ADDED ON DEMAND.
```

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```
%=============================================================================
%
%    6. LAYOUT OF QUEUE & BUFFER-POOL AREA IN RT-COMMON :
%
%=============================================================================


%    NB!! NEW ELEMENTS IN RT-COMMON MUST ALSO BE DEFINED IN:
%    QINIT AND MD ROUTING TABLES.

SYMBOL   APOLH=SQPOLLIM   % POOL HEAD
SYMBOL   CPOOL=APOLH+1    % ADDRESS OF POOL HEAD
SYMBOL   QINI=CPOOL+6     % LOWER LIMIT OF QUEUE HEAD AREA
SYMBOL   QMD=QINI+1 % MD (MESSAGE DISPATCHER)
SYMBOL   CURR1=QMD+6
@LIB 4CPUO
SYMBOL   QPRM=CURR1 % PRM
SYMBOL   QLOGW=QPRM+6     % LOG WRITER
SYMBOL   QOPCO=QLOGW+6    % OPCOM
SYMBOL   QTIMR=QOPCO+6    % GLOBAL TIMER
SYMBOL   QISOS=QTIMR+6    % ISO 1745 STANSAAB
SYMBOL   QREMO=QISOS+6    % REMOTE CPU HANDLER
SYMBOL   QIBM3=QREMO+6    % IBM 3270 HANDLER
SYMBOL   CURR2=QIBM3+6
@ELIB
SYMBOL   QLINO=CURR2      % LINE NO 0 OF ICM
SYMBOL   QLIN1=QLINO+6    % LINE NO 1 OF ICM
SYMBOL   QLIN2=QLIN1+6    % LINE NO 2 OF ICM
SYMBOL   QLIN3=QLIN2+6    % LINE NO 3 OF ICM
SYMBOL   QTIM=QLIN3+6     % LOCAL TIMER
SYMBOL   QBIM=QTIM+6      % BACKGROUND INTERFACE MODULE
SYMBOL   QSIB=QBIM+6      % SIBAS
@ICR;
SYMBOL   QTCM=QSIB+6,QTP1=QTCM+6,QTP2=QTP1+6,QTP3=QTP2+6,
     QTP4=QTP3+6,QTP5=QTP4+6,QTP6=QTP5+6,QTP7=QTP6+6,
     QTP8=QTP7+6,QTP9=QTP8+6,QTP10=QTP9+6,QTP11=QTP10+6,
     QTP12=QTP11+6,QTP13=QTP12+6,QTP14=QTP13+6,QTP15=QTP14+6,
     QTP16=QTP15+6,QTP17=QTP16+6,QTP18=QTP17+6,QTP19=QTP18+6,
     QTP20=QTP19+6,QTP21=QTP20+6,QTP22=QTP21+6,QTP23=QTP22+6,
     QTP24=QTP23+6,QTP25=QTP24+6,QTP26=QTP25+6,QTP27=QTP26+6,
     QTP28=QTP27+6,QTP29=QTP28+6,QTP30=QTP29+6,QTP31=QTP30+6,
     QTP32=QTP31+6,QTP33=QTP32+6,QTP34=QTP33+6,QTP35=QTP34+6,
     QTP36=QTP35+6,QTP37=QTP36+6,QTP38=QTP37+6,QTP39=QTP38+6,
     QTP40=QTP39+6,QTP41=QTP40+6,QTP42=QTP41+6,QTP43=QTP42+6,
     QTP44=QTP43+6,QTP45=QTP44+6,QTP46=QTP45+6,QTP47=QTP46+6,
     QTP48=QTP47+6,QTP49=QTP48+6,QTP50=QTP49+6,QTP51=QTP50+6,
     QTP52=QTP51+6,QTP53=QTP52+6,QTP54=QTP53+6,QTP55=QTP54+6,
     QTP56=QTP55+6,QTP57=QTP56+6,QTP58=QTP57+6,QTP59=QTP58+6,
     QTP60=QTP59+6,QTP61=QTP60+6,QTP62=QTP61+6,QTP63=QTP62+6;
@CR;
SYMBOL   QEND=QTP63+6
SYMBOL   QMDO=QMD
SYMBOL   QTIMO=QTIM
SYMBOL   QBIMO=QBIM
SYMBOL   QSIBO=QSIB
SYMBOL   QTCMO=QTCM
SYMBOL  ATPRM=QEND+4,ATTCM=ATPRM+2,CURR3=ATTCM+17

% REGISTER SAVE AREA FOR USE BY TOLOC ROUTINE (FATAL ERROR)
SYMBOL   GTREG=CURR3,GAREG,GDREG,GXREG,GBREG,GLREG,FTADR=GTREG

%    START OF BUFFER POOL AREA :

SYMBOL APOOL=GLREG+2
```

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MELDINGSFLYT

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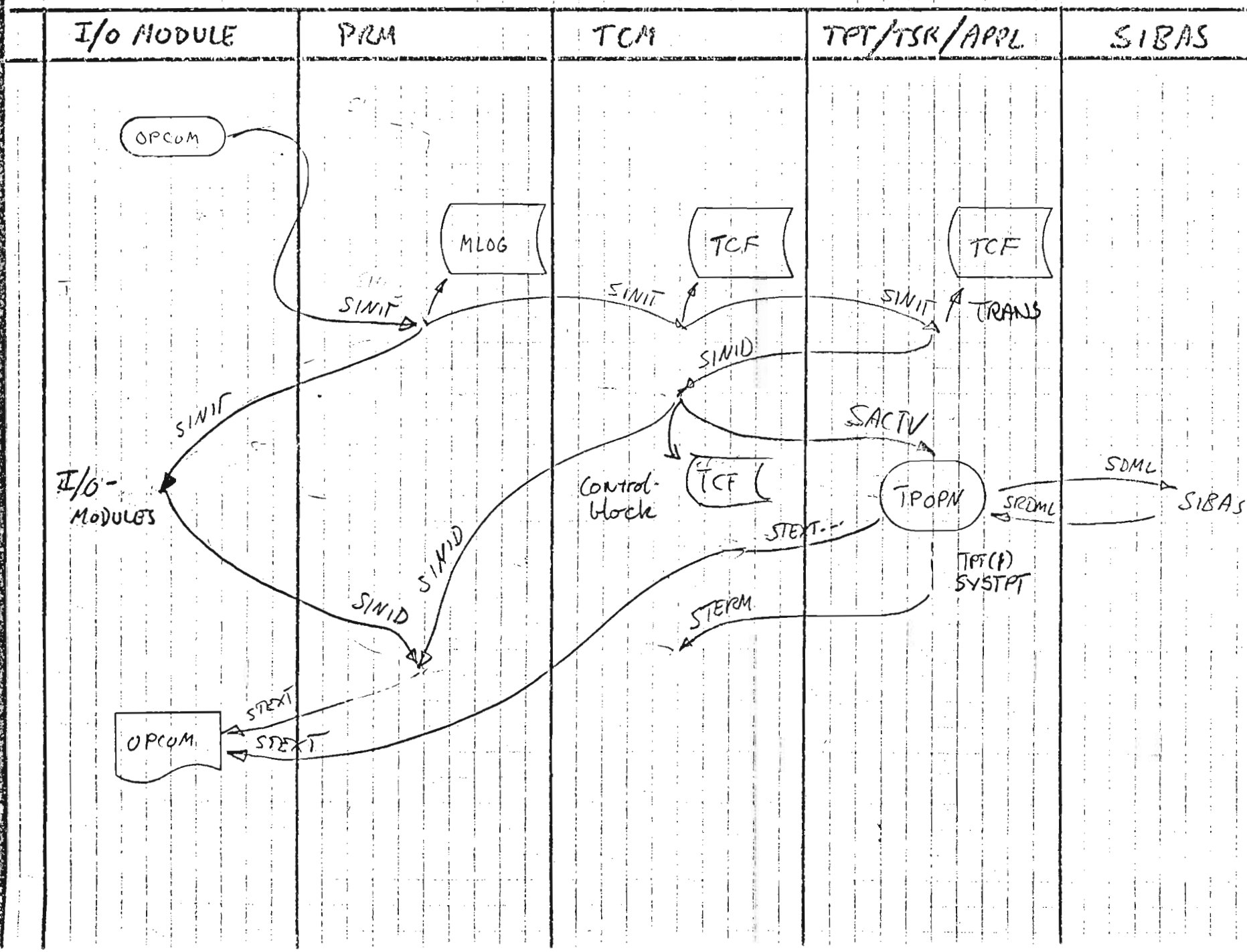
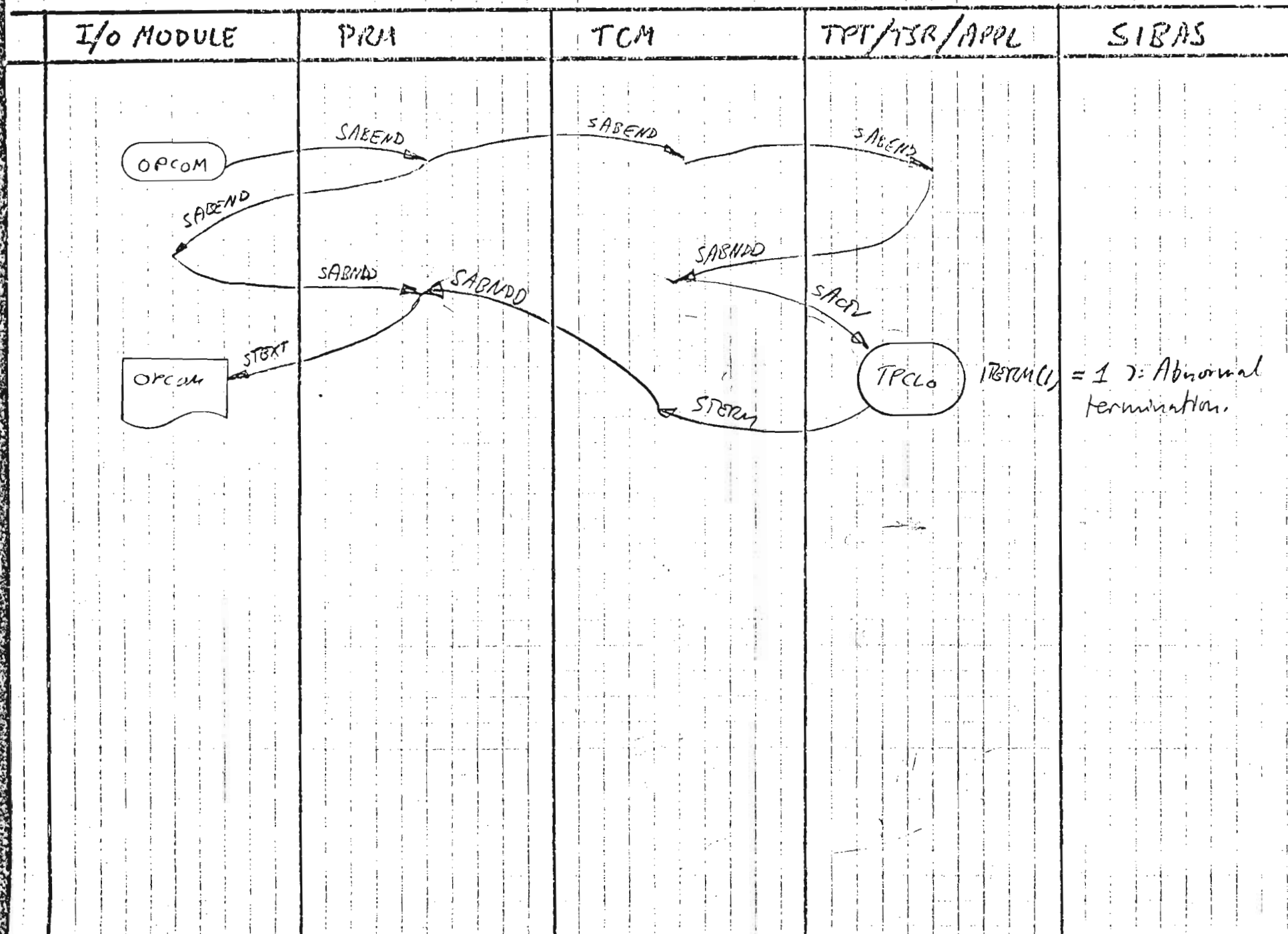
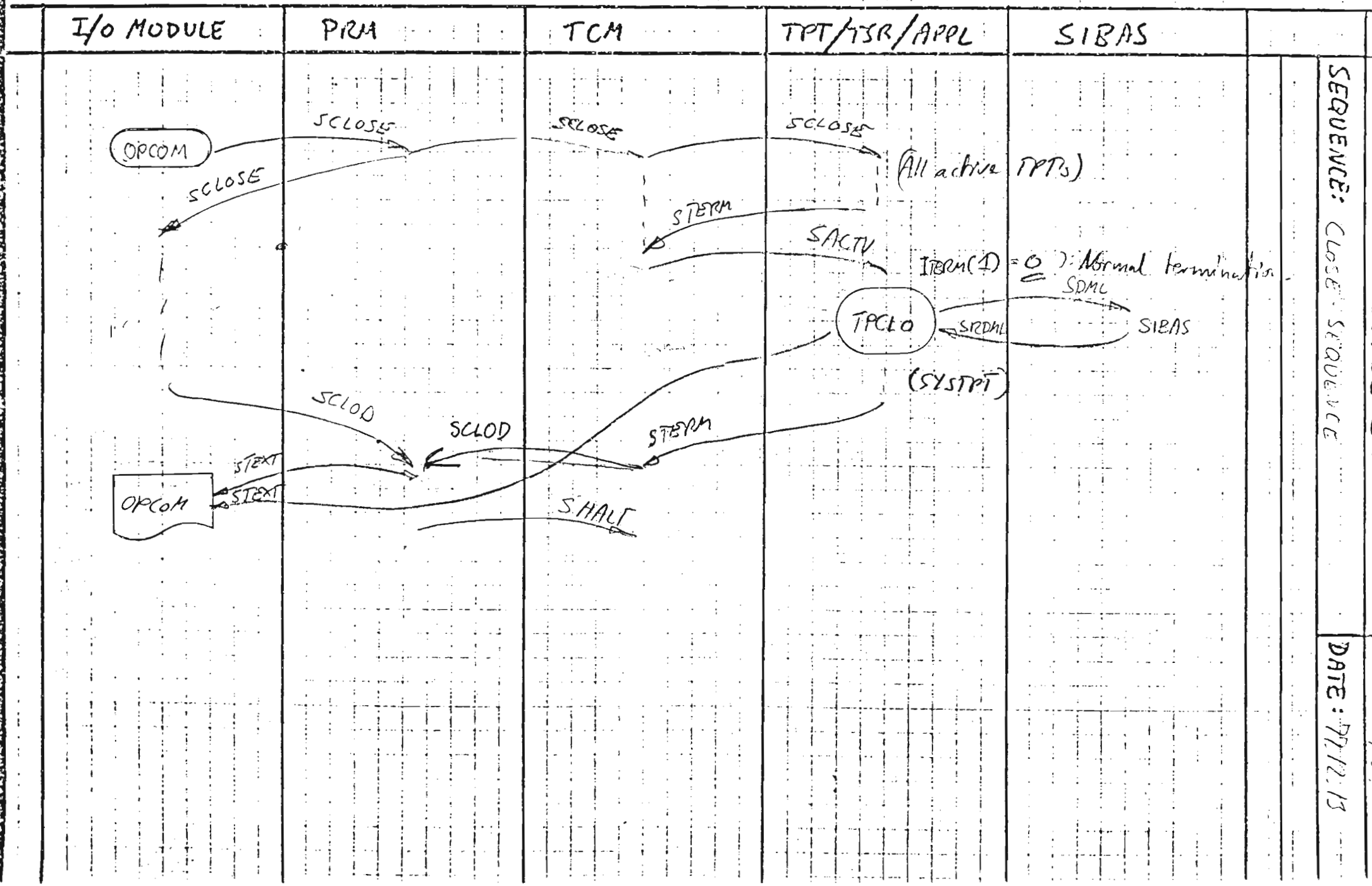

I/O MODULE
PRM
TCM
TPT/TSK/APPL
SIBAS
OPCOM
MLOG
TCF
TCF
SINIT
SINIT
SINIT
TRANS
SINID
SINIT
SACTV
I/O-
MODULES
Control-
block
TCF
TPOPN
SDML
SRDML
SIBAS
STEXT...
TPT(1)
SYSTPT
SINID
SINID
STERM
OPCOM
STEXT
STEXT
SEQUENCE: INIT - SEQUENCE
DATE: 77.12.13
SIGN: TOS


I/O MODULE
PRU
TCM
TPT/TSR/APPL
SIBAS
SABEND
SABEND
SABEND
OPCOM
SABEND
SABNDD
SABNDD
SACV
STEXT
OPCOM
TPCLO
STERM
IRETCN(1) = 1 : Abnormal termination.
SEQUENCE: ABEND SEQUENCE
DATE: 79.12.13


I/O MODULE
PRM
TCM
TPT/TSR/APPL
SIBAS
SEQUENCE: CLOSE SEQUENCE
DATE: 77.12.13
OPCOM
SCLOSE
SCLOSE
SCLOSE
SCLOSE
(All active TPTs)
STERM
SACTV
IRRM(I) = 0 : Normal termination
SDML
TPCLO
SRDML
SIBAS
(SYSTPT)
SCLOD
SCLOD
STERM
STEXT
STEXT
OPCOM
SHALT

SEQUENCE: RESET CLOSE SEQUENCE | DATE: 77.12.13

I/O MODULE	PRM	TCM	TPT/TSR/APPL	SIBAS
			SRCLOS	
		SRCLOS	All active TPTs	
	SRCLOS			
OPCOM				
SRCLOS				
	SRCLD			
		SRCLD		
OPCOM				

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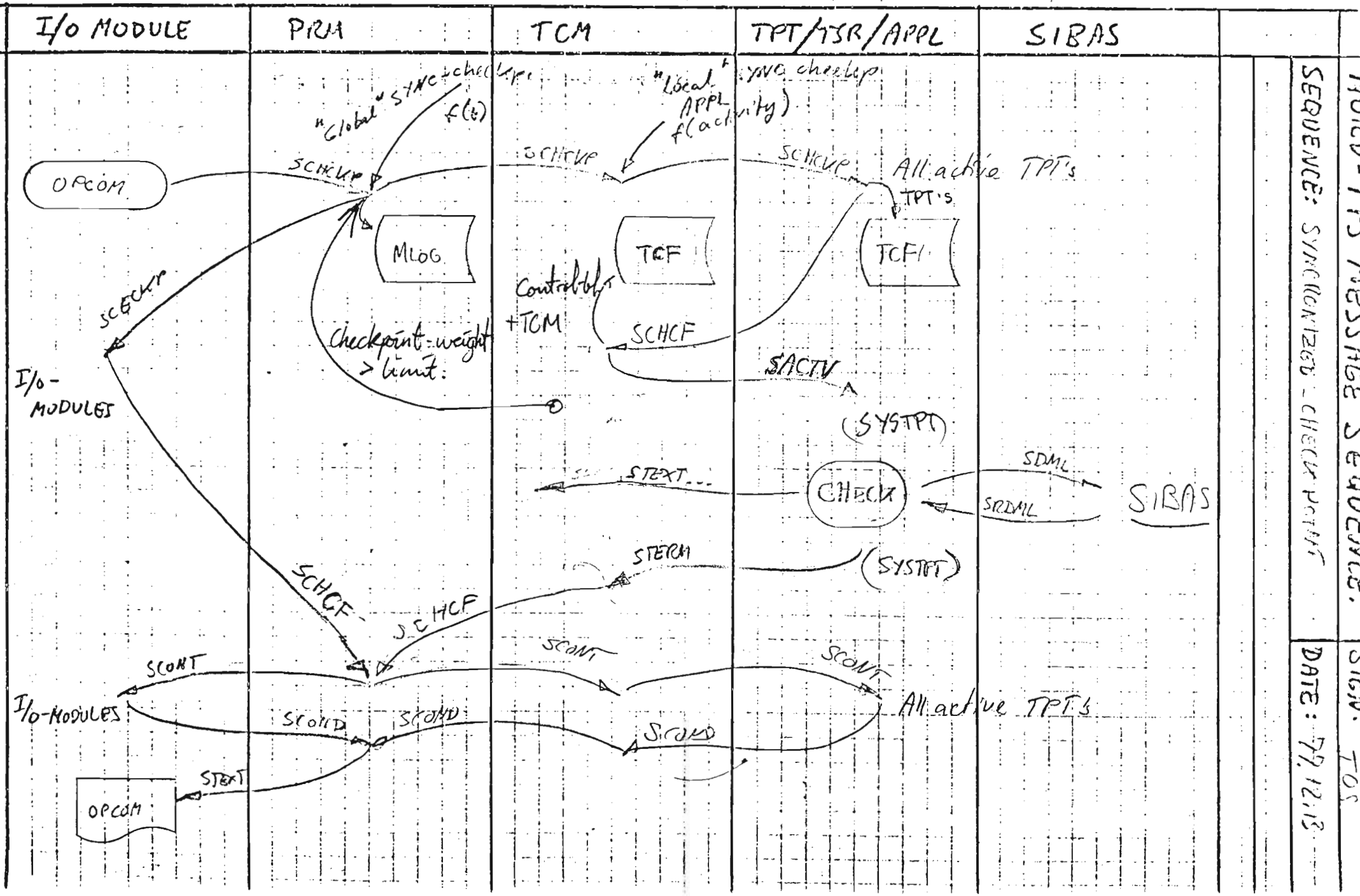
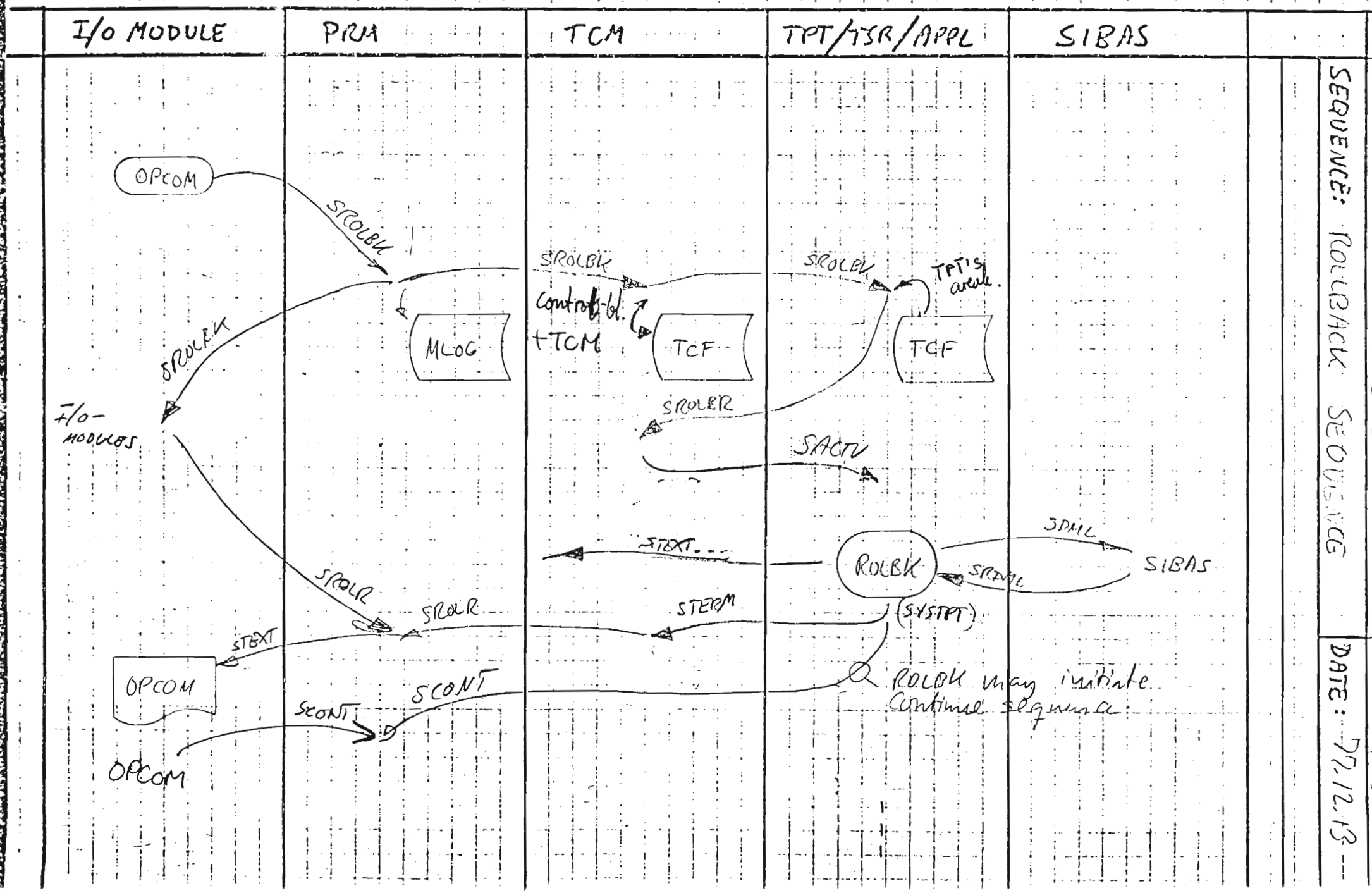

I/O MODULE
PRM
TCM
TPT/TSR/APPL
SIBAS
"Global" SYNC+checkpt
f(t)
"Local" SYNC checkpt
APPL
f(activity)
OPCOM
SCHCKP
SCHCKP
SCHCKP
All active TPT's
TPT's
MLOG
TCF
TCF
Controlbl
+TCM
SCHCF
SCECKP
Checkpoint-weight
> limit.
SACTV
I/O-
MODULES
(SYSTPT)
STEXT...
CHECK
SDML
SRDML
SIBAS
STERM
(SYSTPT)
SCHCF
SCHCF
SCONT
SCONT
SCONT
I/O-MODULES
All active TPT's
SCOND
SCOND
SCOND
STEXT
OPCOM
MUCD-TPS MESSAGE SEQUENCE.
SEQUENCE: SYNCRONIZED - CHECKPOINT
SIGN: TOS
DATE: 77.12.13



SEQUENCE: ROLLBACK SEQUENCE

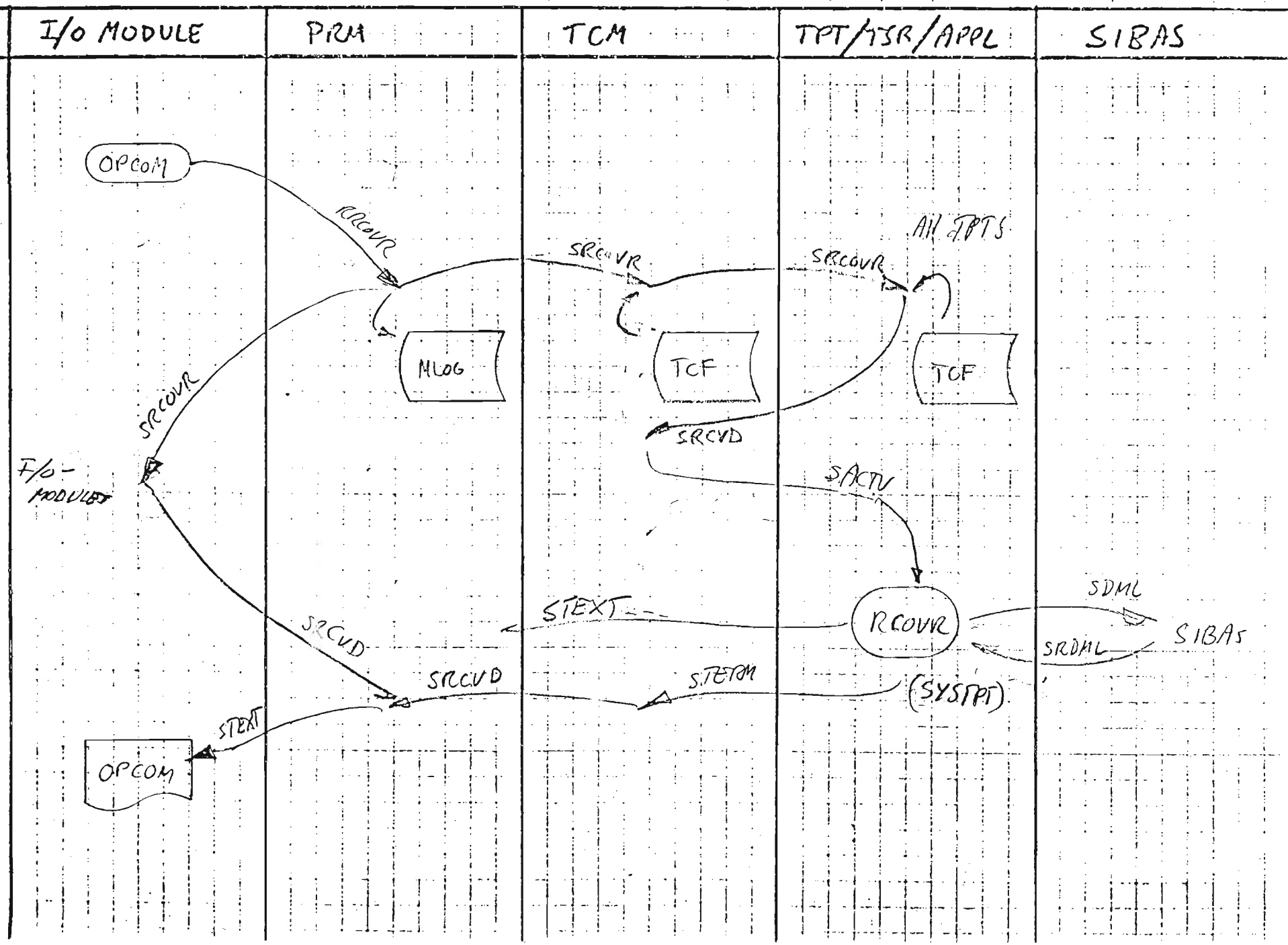
DATE: 77.12.13 --

MURD-TPS MESSAGE SEQUENCE.

SEQUENCE: RECOVER SEQUENCE

SIGN: TOS

DATE: 77.12.13



HOLD ITS MESSAGE SEQUENCE: | SIGN: TOS

SEQUENCE: HALT SEQUENCE | DATE: 77, 12, 13

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HOW TO'S MESSAGE SEQUENCES

SEQUENCE: CONTINUE ATTEMPT ~~HALT~~ | DATE:

ROLLBACK OR RECOVER

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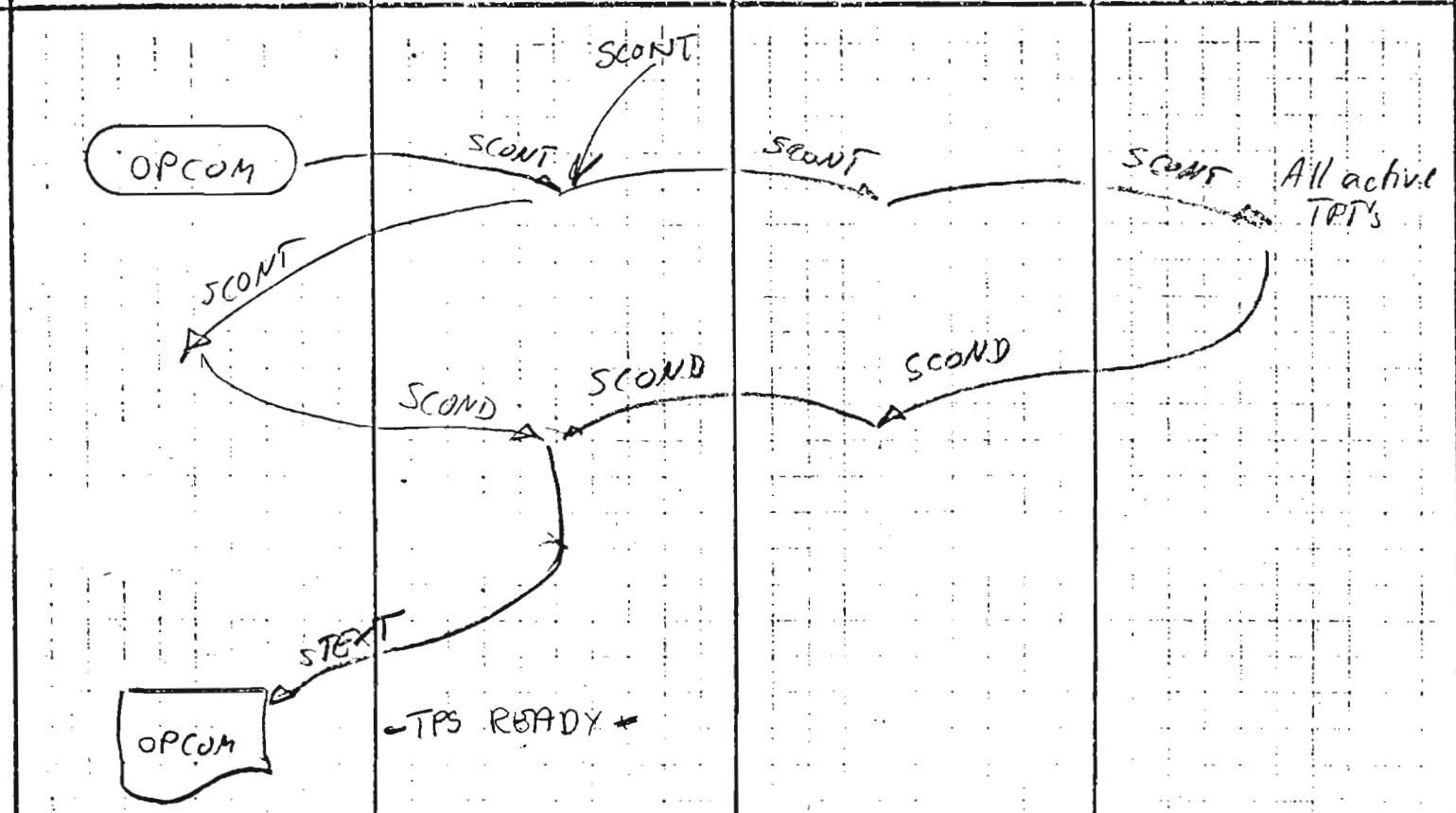

SEQUENCE: CONTINUE AFTER HALT/INIT

DATE: 78.01.27

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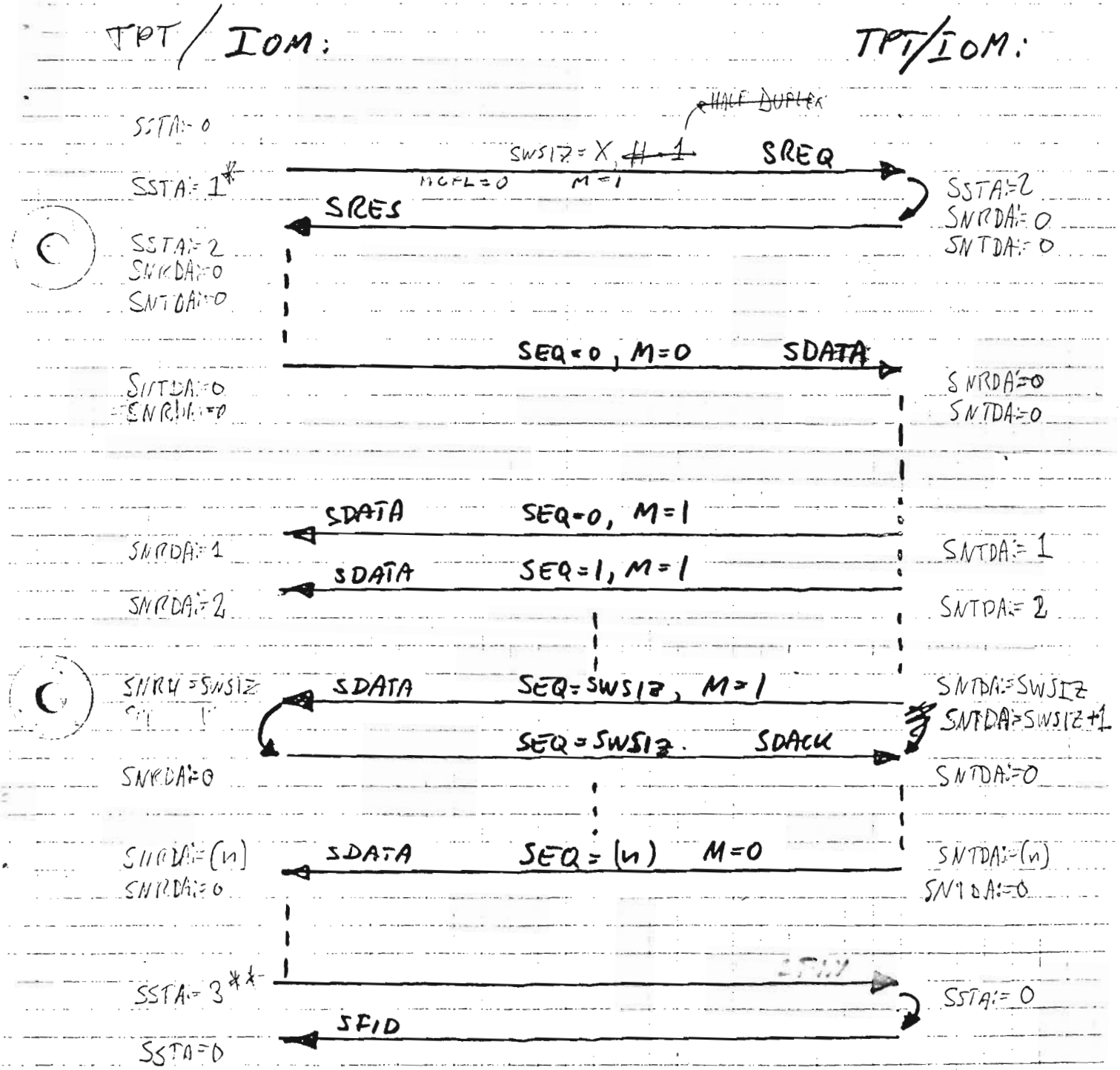
SNRDA : Sequence no of next expected SDATA-msg.

SNTDA : Sequence no of next transmitted SDATA-msg.

SWSIZ : Window Size

SSTA : Session status



& IF "response wanted"-bit = 0, THEN SSTA:=2 at this point

&& IF "response wanted"-bit = 0, THEN SSTA:=0 at this point.

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@ 1.23 WTAPK, WDEA LHEAD, WDEA

WNBUF	BUFFER LINK (=0 if last)
WNTAK	PACKET LINK (=0 if last)
WPOSS	OWNER ID (RT-DESCR. ADDRESS)
WDUM	* FOR USE BY HDLC PROTOCOL *

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(N)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

WTYP	MCL	MTYPE	EA		CUROFS
WBC	RW		BCOUNT (0-2047)		
WDEA	PRI	DMOD	DLU		
WSCA	FR L	SMOD	SLU		
WXX = WDW0	B(0) ATYPE	B(1) ASIZE			
WDW1					
	ATYPE	ASIZE			
	ACTION				

EA = Extended address used if =1
ACTION = subcommand, if needed (as DMSG, ref GLOBDEF)
CUROFS = offset from WDW1 (in words) to current address level
RW = Response wanted if =1
MCP = Message complete bit,): No more packets in msg if =0

ASIZE = SIZE of address field, this level. (bytes)
ATYPE = address type, this level: =0, DMOD/DLU in WDEA is valid
=1, DMOD/DLU in next word (left byte if DMOD, right byte if DLU)
=2, byte string for abbr. look-up.
=3, "Native address (known by receiver)

Address of Module (level 1)

Address of Unit (level 2)

Msg content. (contained in WDW1 and further if EA=0)

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: Control messages

SIGN: TOS DATE: 78.01.24

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NORD TPS MESSAGE LAY-OUT

MESSAGE: Control msg responses

STRETCH: General layout

SIGN: TOS DATE: 78.01.24

WNBUF	BUFFER LINK (=0 if last)	
WNTAK	PACKET LINK (=0 if last)	
WPOSS	OWNER ID (RT-DESCR. ADDRESS)	
WDUM	* FOR USE BY HDLC PROTOCOL *	

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(W)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

WTYP	MCL			MTYPE			EA =0	NS	//////			CAUSE				
WBC						BCOUNT (0-2047)										
WDEA	PRI			DMOD					DLU							
WSCA	FR	L		SMOD					SLU							
WXX = WDW 0	3(0)								3(1)							
WDW 1																
2																
...																

NS = "Not successful" indication
CAUSE = Cause for unsuccessful command,
=0, Timeout - no response
=1, File inaccessible
=2, DBMS inaccessible
=3, MSG error detected.
=4, Configuration error detected.

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WNBUF	BUFFER LINK (=0 if last)			
WNPAK	PACKET LINK (=0 if last)			
WPOSS	OWNER ID (PRT-DESCR. ADDRESS)			
WDUM	* FOR USE BY HDLC PROTOCOL *			
WTYP	MCL	MTYPE	EA=0	MCP ~~PICTURE~~
WBC	SEQ	M	BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU	
WSCA	FR	L	SMOD	SLU
WXX= WDW0	B(0)		B(1)	
WDW1				
WDW2				
: 2	DATA			
:				
:				

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(W)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLV = SOURCE MODULE/UNIT.

~~PF: Picture format no included if =1~~
~~PICTURE: Picture format no.~~
M: More ~~data~~ messages follows if =1
SEQ: Sequence no (modulo 8) of msg.
MCP: Message complete >: no more packets in this message if =0.

NORD TPS MESSAGE LAY-OUT
STRETCH: Control lay-out
MESSAGE: SDATA
SIGN: TOS DATE: 78,01,26

Scanned by Jonny Oddene for Sintran Data © 2010

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(11) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA =0	
WBC	////	SEQ	////	BCOUNT (0-2047)
WDEA	PRI	DMOD		DLU
WSCA	FR	L	SMOD	SLU

SEQ: Sequence no of last reaved SDATA-msg

WXX =	B(0)	B(1)
WDW0		
WDW1		
: 2		

NORD TPS MESSAGE LAY-OUT

MESSAGE: SDACK

STRETCH: General layout

SIGN: TDS DATE: 78.01.26

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WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(n) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA	MCP	ACTION	CUROFS
WBC	RW =1	WSIZ	ID	BCOUNT (0-2047)		
WDEA	PRI	DMOD		DLU		
WSCA	FR	L	SMOD	SLU		

EA: Extended address if = '1'
ACTION: = 0
CUROFS: offset to current address level (in words). WDW1 = 0
WSIZE: Window size of this session.
ID: Initial direction of session. IF = 1, then sender of SREQ will send SDATA soon.
MCP: Message complete: there packer i melding om = 1

WXX = WDW0	B(0) ATYPE	B(1) ASIZE
WDW1		
2		
⋮		
	ATYPE	ASIZE

ATYPE Address type (as for control msg).
ASIZE Address size (in bytes), does not include ATYPE/ASIZE

Address level 1: "MODULE"

Address level 2: "UNIT"

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: SREQ

SIGN: TOS

DATE: 78.01.26

Scanned by Jonny Oleene for Sinclair Data © 2010

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN NXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(n) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNTAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE		EA =0	NS			CAUSE
WBC			BCOUNT (0-2047)					
WDEA	PRI	DMOD		DLU				
WSCA	FR	L	SMOD		SLU			

WXX =	B(0)	B(1)
WDW0		
WDW1		
2		
:		
n		

NS: Not successful if = 1

CAUSE:
0: TPS closed
1: Module closed
2: Unit temporarily not available
3: " permanently " "
4. Parameter error in SREQ-msg

NORD TPS MESSAGE LAY-OUT

MESSAGE: SREQ

STRETCH: General layout

SIGN: TOS DATE: 78.01.26

Scanned by Jonny Oddene for Sintran Data © 2016

WNBUF	BUFFER LINK (=0 if last)		
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		
WTYP	MCL	MTYPE	EA =0	N	CAUSE
WBC	RW	BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU
WSCA	FR	L	SMOD	SLU
WXX = WDW 0	B(0)	B(1)	
WDW 1			
2			

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(n)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

N: Normal session termination, if =0
CAUSE (if abnormal termination)
=0 TPS closed
=1 Module closed
=2 Unit temporarily not available
=3 — " — permanently — " —
=4 erroneous packet detected, this session.

RW: Response wanted to this msg.

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: SFIN

SIGN: TOS

DATE: 78.01.26

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WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN NXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(n) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE					EA=0	/	/	/	/	/	/	/	/	
WBC	/	/	/	BCOUNT (0-2047)												
WDEA	PRI	DMOD						DLU								
WSCA	FR	L	SMOD					SLU								

WXX =	B(0)	B(1)
WDW 0		
WDW 1		
2		
⋮		
1		

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: SFID

SIGN: TDS DATE: 78.01.26

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NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: STEXT

SIGN: TOS DATE: 12.01.86

WNBUF	BUFFER LINK (=0 if last)	
WNTAK	PACKET LINK (=0 if last)	
WPOSS	OWNER ID (RT-DESCR. ADDRESS)	
WDUM	* FOR USE BY HDLC PROTOCOL *	

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(W)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

WTYP	MCL	MTYPE	EA	F	ACTION	CUROFS.
WBC	RW	////	BCOUNT (0-2047)			
WDEA	PRI	DMOD	DLU			
WSCA	FR	L	SMOD	SLU		

F = Forward info in WDW1 if =1: (Only to OPCOM)
EA : Extended address
CUROFS: =1 at arrival, PRM, if F=1.
RW: Response wanted
ACTION: =0, Single text message
=1, Broadcast to all units in module
=2, Broadcast to all active units in module.

WXX = WDW	3(0) TEXT FORMAT	3(1) ID: (See Globdf)
0		
1	ATYPE	ASIZE
2		
:		
	ATYPE	ASIZE
	TEXT	

Address level 1: "Module"

Address level 2: "Unit" (ATYPE = ASIZE = 0 if broadcast, and text starts immediately after ASIZE.)

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WNBUF	BUFFER LINK (=0 if last)		
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		
WTYP	MCL	MTYPE	EA =0 / NS / CAUSE
WBC		BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU
WSCA	FR / L	SMOD	SLU
WXX = WDW 0	B(0)		B(1)
WDW 1			
2			
⋮			

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(n)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

NS: Not successful
CAUSE: (as for SRES)

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: STBXR

SIGN: TOS

DATE: 78.01.26

Scanned by Jimmy Carlsson for Sintran Data © 2010

WNBUF	BUFFER LINK (=0 if last)			
WNTAK	PACKET LINK (=0 if last)			
WPOSS	OWNER ID (RT-DESCR. ADDRESS)			
WDUM	* FOR USE BY HDLC PROTOCOL *			
WTYP	MCL	MTYPE	EA =0	
WBC		BCOUNT (0-2047)		
WDEA	PRI	DMOD	DLU	
WSCA	FR	L	SMOD	SLU
WXX = WDW0	B(0)	FILNO	B(1)	
WDW1	BLOCKAD.			
: 2				

MCL = MSG CLASS
MTYPE = MSG TYPE
C = CONTROL INFO IN WXX (IF C=1)
R = RESPONSE WANTED
PRI = MSG PRIORITY
FR = FORCED ROUTING VIA PRM

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(n)

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

FILE no to write TCF/TSYNC ENTRY on.
Block no on file to write on.

Checkpoint-ID (7 words = SINTRAN time)

NORD TPS MESSAGE LAY-OUT

MESSAGE: SCHCKP

STRETCH: TCM to TPT

SIGN: TOS DATE: 78.01.26

Scanned by Jonny Oddene for Sintran Data © 2018

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(W) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (CRT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA=0 / NS	CAUSE
WBC	RW=1		BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU	
WSCA	FR / L	SMOD	SLU	

WXX =	B(0)	B(1)
WDW0		
WDW1		
2		
...		

NS
CAUSE } as for control msg responses.

NORD TPS MESSAGE LAY-OUT

STRETCH: General layout

MESSAGE: SCHCF

SIGN: TDS DATE: 78.01.26

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WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(11) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNTAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA =0	
WBC	RW =1		BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU	
WSCA	FR	L	SMOD	SLU

WXX = WDW0	B(0) FILNO	B(1)
WDW1	BLOCK AD	
2		
...		

As for SCHCKP

NORD TPS MESSAGE LAY-OUT

MESSAGE: SROLBK

STRETCH: TCM to TPT

SIGN:

DATE:

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(W) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNTAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA=0	NS	////	CAUSE
WBC		BCOUNT (0-2047)				
WDEA	PRI	DMOD	DLU			
WSCA	FR	L	SMOD	SLU		

NS: Not successful if =1

CAUSE: =0 TPT not active at checkpoint.
=1 File inaccessible
=2 DBMS inaccessible
=3 Msg. error detected
=4 Config. error detected.

WXX =	B(0)	B(1)
WDW0		
WDW1		
2		
⋮		

NORD TPS MESSAGE LAY-OUT

STRETCH: TPT to TCM

MESSAGE: SRULR

SIGN: TOS DATE: 78.01.26

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WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(W) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (PRT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	
WBC		BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU
WSCA	FR / L	SMOD	SLU

WXX = WDW0	3(0)	7(1) FILENO
WDW1	BLOCKAD	
2 ...	SYNC-CHECKPOINT-ID (SINTRAN TIME, 7 words)	

To be used if latest transaction checkpoint is older than latest syncronized checkpoint

SRCVD: as for SROLR.

NORD TPS MESSAGE LAY-OUT

STRETCH: TCM to TPT

MESSAGE: S RCOVR

SIGN: TDS DATE: 86.01.26

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WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(4) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (CRT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE		
WBC	RW		BCOUNT (0-2047)	
WDEA	PRI	DMOD	DLU	
WSCA	FR	L	SMOD	SLU
WXX = WDW0	B(0)		B(1)	APPL NO
WDW1				
: 2				
: D				
: I				

RW = 1 if TPT should send SRBS to session partner (SMOD/SLU)

DATAB entry (see CLOUDBF)

NORD TPS MESSAGE LAY-OUT

MESSAGE: SACTV

STRETCH: TCM to TPT

SIGN: TOS DATE: 78.01.26

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TSWAP (sw. appl)

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM	L = MSG TO BE LOGGED AT PRM BCOUNT = BYTE COUNT B(0)-B(1) DMOD/DLU = DESTINATION MODULE/UNIT. SMOD/SLU = SOURCE MODULE/UNIT.
WNPAK	PACKET LINK (=0 if last)		
WPOSS	OWNER ID (RT-DESCR. ADDRESS)		
WDUM	* FOR USE BY HDLC PROTOCOL *		

WTYP	MCL	MTYPE	EA FO	ACTION	CUROFS
WBC		BCOUNT (0-2047)			
WDEA	PRI	DMOD		DLU	
WSCA	FR	L	SMOD		SLU

ACTION: 0: Final termination, TPT should be released
1: TPT restarted from checkpoint.
2: TPT wants to swich application, name (address) in data field, pointed to by CUROFS.

WXX =	B(0)	B(1)
WDW0		
WDW1		
: 2		
:		
:		
8		

TPT statistics. (Lay out to be determined in globdef) supplied at ACTION=0, 1, 2.

ATYPE	ASIZE
ADDRESS OF	APPLICATION

Description (address) of next application to be started at this TPT if ACTION=1

NORD TPS MESSAGE LAY-OUT

STRETCH: TPT to TCM

MESSAGE: STRUN

SIGN: TOS DATE: 78.01.26

WNBUF	BUFFER LINK (=0 if last)	MCL = MSG CLASS MTYPE = MSG TYPE C = CONTROL INFO IN WXX (IF C=1) R = RESPONSE WANTED PRI = MSG PRIORITY FR = FORCED ROUTING VIA PRM
WNTAK	PACKET LINK (=0 if last)	
WPOSS	OWNER ID (RT-DESCR. ADDRESS)	
WDUM	* FOR USE BY HDLC PROTOCOL *	

L = MSG TO BE LOGGED AT PRM
BCOUNT = BYTE COUNT B(0)-B(W).

DMOD/DLU = DESTINATION MODULE/UNIT.
SMOD/SLU = SOURCE MODULE/UNIT.

WTYP	MCL	MTYPE	C/A	(CUROFS=1)
WBC		BCOUNT (0-2047)		
WDEA	PRI	DMOD	DLU	
WSCA	FR L	SMOD	SLU	

WXX = WDW0	S(0) ACTION	S(1) (as in SMSG)
WDW1		
2		
⋮		
B		
I		

out. sub adresse

NORD TPS MESSAGE LAY-OUT

MESSAGE: SASTA

STRETCH: General layout

SIGN: TOS DATE: 78.09.17

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– we make bits for the future

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