GBPPR 'Zine

"Politics in France is heading to the right and I don't want rightwing politicians back in second, or even first place because we showed burning cars on television..."

– Jean–Claude Dassier, November 10, 2005, Director General of French news service TCI.

Remember – there is **no bias** in the main–stream media!

Table of Contents

Continued from Issue #19

Note 1: Bit 32 exists in 1A *ESS* switch only.

Note 2: The left half DN index list does not exist
in the 1A *ESS* switch.

LEGEND:

DN-ESN HEAD TABLE WORDS

WORD -1   WRDN – LENGTH OF HEAD TABLE (FIXED AT 5).

WORD 0   – ADDRESS OF OFFICE CODE SUBTRANSLATOR WORD 0 IF BUILT
FOR NPD = 0.

WORDS 1,2, & 3 – WORDS 1, 2, & 3 ARE BUILT AS NEEDED FOR NPDs 1, 2, &
3. OTHERWISE, ALL ZEROS ARE ENTERED FOR UNASSIGNED NPDs.

DN-ESN SUBTRANSLATOR (OFFICE CODE)

WORD N   ESN – EMERGENCY SERVICE NUMBER (WHEN TYPE A IS USED,
(TYPE A)   BIT 22 = 1)

WORD N   – CONTAINS THE NUMBER GROUP LIST ADDRESS WHEN FURTHER
(TYPE B)   TRANSLATIONS ARE NECESSARY TO OBTAIN THE ESN.

WORD N   – BUILT AS ALL ZEROS FOR UNASSIGNED OFFICE CODES
(TYPE C)

DN NUMBER GROUP LIST

WORD N   ESN – EMERGENCY SERVICE NUMBER (WHEN TYPE A IS USED,
(TYPE A)   BIT 22 = 1)

WORD N   – CONTAINS THE TN INDEX LIST ADDRESS WHEN FURTHER
(TYPE B)   TRANSLATIONS ARE NECESSARY TO OBTAIN THE ESN.

DN INDEX LIST

WORDS 0 TO 7   – THESE WORDS MAY CONTAIN UP TO EIGHT ESNs
ASSOCIATED WITH A PARTICULAR NUMBER GROUP.
WORD 0 SHOULD CONTAIN THE PRIMARY ESN, WHICH
IS THAT ESN USED FOR THE MAJORITY OF THE
CUSTOMER ASSIGNED TNs IN THAT NUMBER GROUP.
BIT 22 = 1 WHEN AN ESN IS ASSIGNED IN WORDS
0 TO 7. WHEN AN ESN IS NOT ASSIGNED IN A
PARTICULAR WORD, BIT 22 = 0 IN THAT WORD.

WORDS 8 TO 150 – AN ABBREVIATED ESN (AESN) IS ASSIGNED FOR
(RIGHT HALF)   EVERY TN IN THE THOUSANDS GROUP. THESE
OR   3-DIGIT AESNs CORRESPOND TO THE ESNs ASSIGNED
8 TO 257   IN WORDS 0 THROUGH 7. UNASSIGNED TNs SHOULD
(LEFT HALF)   CONTAIN THE AESN CORRESPONDING TO THE PRIMARY
ESN CONTAINED IN WORD 0. THE TN INDEX LIST IS
INDEXED USING THE FIFTH, SIXTH, AND SEVENTH
DIGITS OF THE ANI IDENTIFIED CALLING TN.

Figure 15—DN-ESN Translator (Sheet 3 of 3)

AT&T 231-090-288

MASTER HEAD TABLE ANNEX   DN-ESN HEAD TABLE

```
              ADDRESS OF      23  22                      10  9                0
  +53         E911 DN-ESN   -1 │ 0 │                          │   WRDN = 5       │
              TRANSLATOR
              
            INDEX           0  │ 0 │      ADDRESS OF OFFICE CODE SUBTRANSLATOR    │
             NPD            
                            1  │ 0 │             0 IF UNASSIGNED                  │
                            
                            2  │ 0 │                                             │
                            
                            3  │ 0 │                                             │
```

DN-ESN SUBTRANSLATOR (OFFICE CODE)

```
                          23  22                       9  8                  0
                    000   │ 0 │  │                       │  •                  │
         INDEX
      100 X D1 +
      10 X D2 + D3   N (TYPE B)  │ 0 │ 0 │    ADDRESS OF NUMBER GROUP LIST        │
      WORD N (TYPE B)
      
      WORD N (TYPE A)    │ 0 │ 1 │ 0──────────────── 0 │      ESN               │
      
      WORD N (TYPE C)    │ 0 │              0 IF UNASSIGNED                      │
      
              +999       │ 0 │                                                  │
```

DN NUMBER GROUP LIST

```
                          23  22                       9  8                  0
                     0    │ 0 │                          │                      │
         INDEX
          D4
      WORD N (TYPE B)     │ 0 │ 0 │      ADDRESS OF DN INDEX LIST                │
      
      WORD N (TYPE A)     │ 0 │ 1 │ 0──────────────── 0 │      ESN    │    TO SHEET 2
      
              +9          │ 0 │                                                  │
```
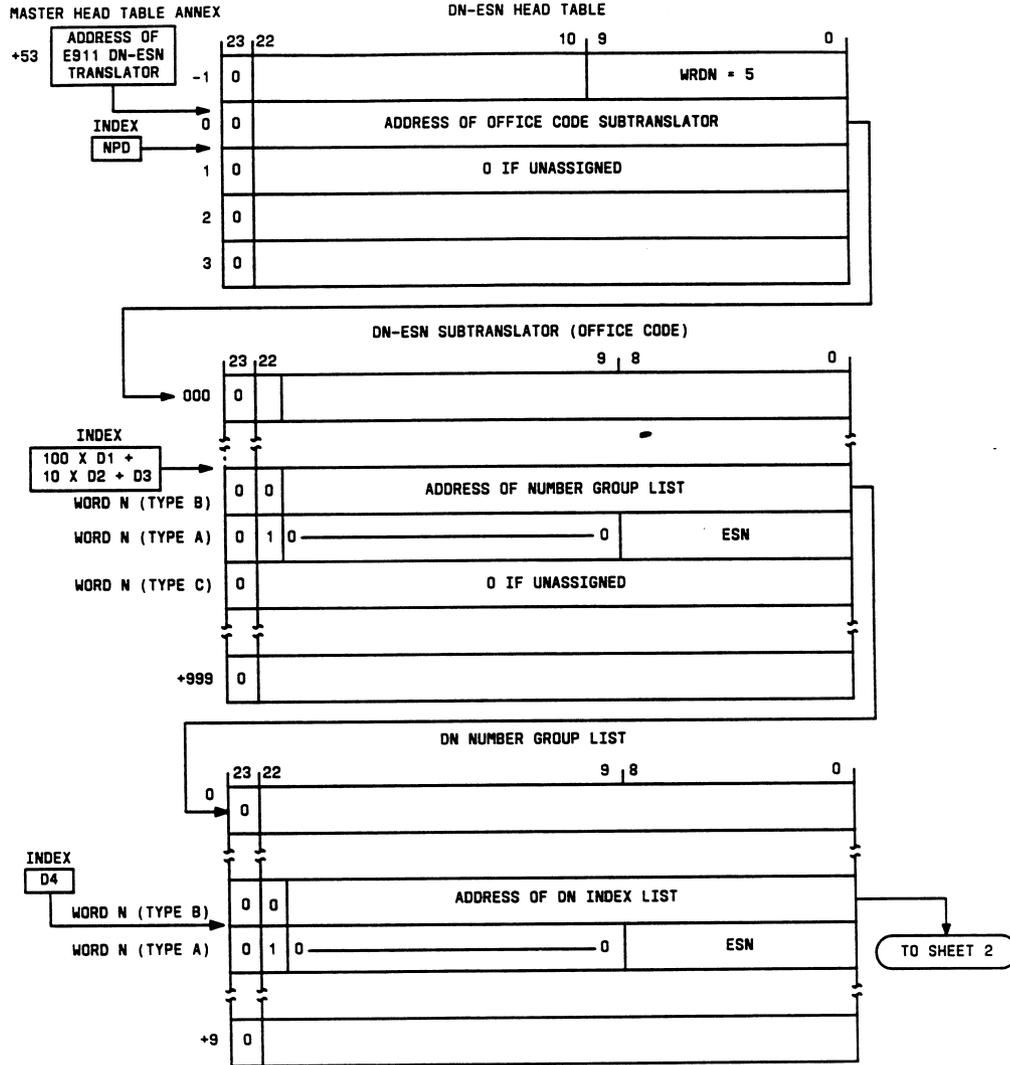
Figure 16—1A ESS Switch DN-ESN Translator for 1AE6 and Later Generic Programs (Sheet 1 of 2)
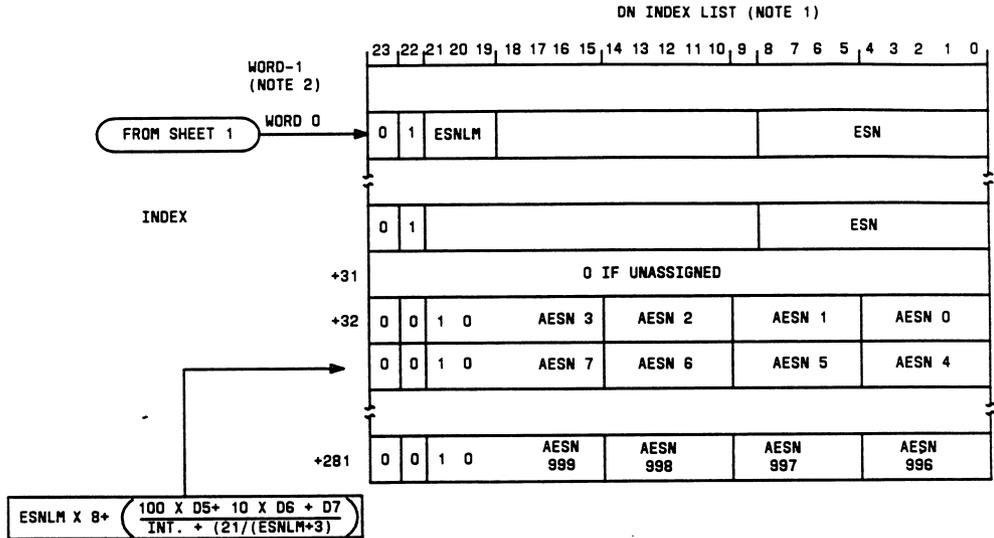
DN INDEX LIST (NOTE 1)

NOTES:
1. The DN index list shown is for a number group containing up to 32 ESNs. The size of the DN index list varies according to the number of ESNs per number group.
2. A −1 word contains the length of the DN index list for ESN limits greater than eight.

Figure 16—1A ESS Switch DN-ESN Translator for 1AE6 and Later Generic Programs (Sheet 2 of 2)

AT&T 231-090-288

MASTER HEAD TABLE ANNEX

Figure 17—ESN Translator (Sheet 1 of 2)

NOTE: BIT 23 EXISTS IN 1A *ESS* SWITCH ONLY.
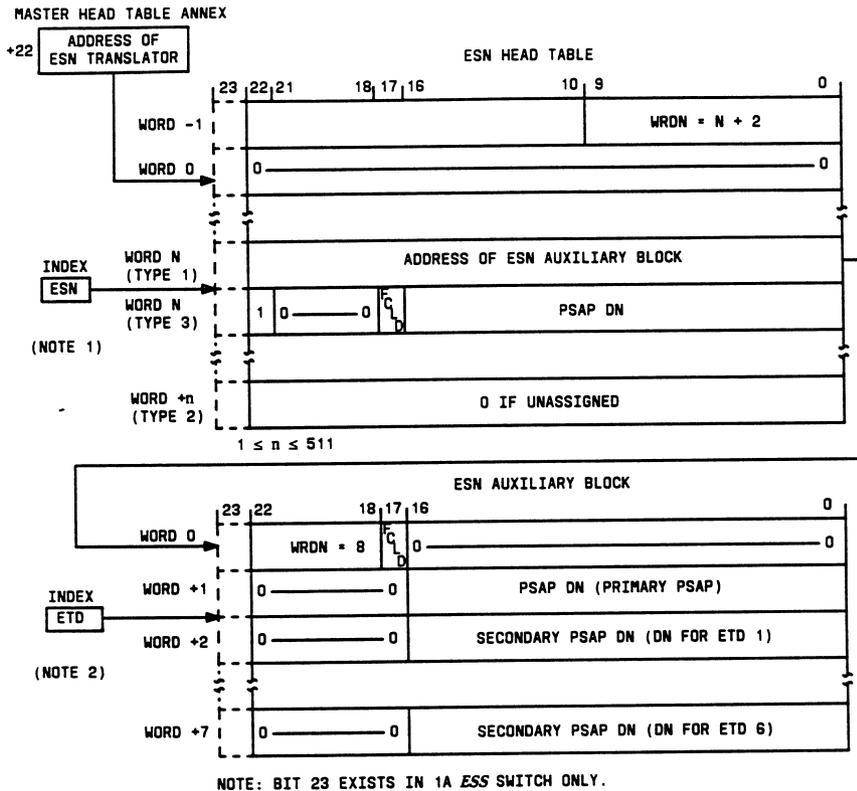
NOTES:
1. The type 3 word is built when selective transfer does not apply.

2. For those words (2 through 7) that do not define an ETD value, the corresponding word should contain all zero entries.

LEGEND:

ESN HEAD TABLE WORDS

WORD -1   WRDN - NUMBER OF WORDS IN THE HEAD TABLE. THE VALUE OF N SHOULD BE EQUAL TO OR LESS THAN 511.
WORD 0   - ALWAYS BUILT AS ALL ZEROS.
WORD N   - ADDRESS OF AN AUXILIARY BLOCK FOR THE ESN WHEN SELECTIVE TRANSFER
(TYPE 1)   IS PROVIDED.
WORD N   - TYPE 2 WORD IS BUILT FOR ALL UNASSIGNED ESN NUMBERS THAT ARE LESS
(TYPE 2)   THAN THE HIGHEST ASSIGNED ESN NUMBER.

5

```
WORD N      FCLD - FLASH CALLING LINE DISPLAY (FCLD = 1 IF THE PSAP IS ARRANGED
(TYPE 3)           FOR FCLD; OTHERWISE, FCLD = 0.)
(NOTE 1)     DN - DIRECTORY NUMBER OF PSAP.

                        ESN AUXILIARY BLOCK WORDS

WORD 0     WRDN - THE NUMBER OF WORDS IN THE AUXILIARY BLOCK IS ALWAYS EIGHT.
           FCLD - FLASH CALLING LINE DISPLAY.
WORD 1       DN - DIRECTORY NUMBER OF PRIMARY PSAP.
WORDS 2-7    DN - DIRECTORY NUMBERS CORRESPONDING TO EMERGENCY TRANSFER DIGITS
                  (ETD) 1 THROUGH 6 AS ASSIGNED FOR SELECTIVE TRANSFER SERVICES
                  TO ONE OR MORE SECONDARY PSAPs. (NOTE 2).
```

Figure 17—ESN Translator (Sheet 2 of 2)

AT&T 231-090-288

(NOTE 1)

NOTES:
1. BIT 23 EXISTS IN 1A *ESS* SWITCH ONLY.
2. WORDS 3 AND 4 ARE BUILT AS A PAIR (WORD 4 = ALL ZEROS)
   WHEN BUSY SENSE IS USED.

WORD 0   WRDN = WORD NUMBER (2, 3, OR 5)

        RI = ROUTE INDEX ASSIGNED FOR AN E911 OUTGOING PSAP TRUNK GROUP

     PIND = PROGRAM INDEX EQUALS 3 FOR 911 SERVICE

WORD 1   RING = RINGING CODE ASSIGNED FOR A 911 TRUNK GROUP

     CFBL = CALL FORWARD BUSY LINE (EQUALS 1 IF CFBL OPTION IS PROVIDED)

       SL = SPECIAL LINE

     TMAJ = TERMINATING MAJOR CLASS EQUALS 28 FOR RINGING PSAP OR 3 FOR
             NONRINGING PSAP

WORD 2   (OPTIONAL WORD BUILT WHEN CFBL IS SPECIFIED IN WORD 1)

    CFILB = CALL FORWARD INHIBIT LINE BUSY

  CFBL-DN = CALL FORWARD BUSY LINE DIRECTORY NUMBER

WORD 3   BS = BUSY SENSE (EQUALS 1 IF REVERSE MAKE BUSY IS SPECIFIED)
(NOTE 2)   MAKE-BUSY MSN OPTIONS MAY BE USED FOR NIGHT SERVICE AND/OR
           TRAFFIC BUSY FORWARDING.

   FRAME = MASTER SCANNER FRAME

     ROW = MASTER SCANNER ROW

  COLUMN = MASTER SCANNER COLUMN

    DMAJ = DISPLACED MAJOR CLASS. IF WORD 3 IS BUILT, TMAJ DATA FROM WORD 1
           IS PLACED IN THIS FIELD AND THE TMAJ ITEM IN WORD 1 IS SET TO 2

Figure 18—911 DN Auxiliary Block Data for E911 PSAP

7

```
        | 23 | 22 | 21 | 20 | 19 | 18      16 | 15          10 | 9                    0 |
WORD 0  |    TYPE    |         NXTRID         |              TGN                        |

WORD 1  | #  | XMTYP  | DEL NO  |              PREFIX DIGITS                            |
```
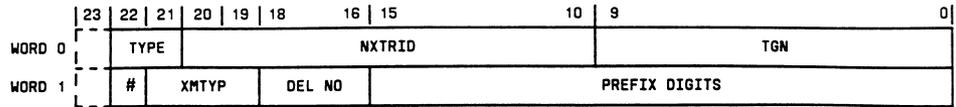
NOTE: BIT 23 EXISTS IN 1A *ESS* SWITCH ONLY.

= TROK

WORD 0   TYPE — TYPE = 10 FOR E911
          NXTRID — NEXT ROUTE INDEX = STOP FOR E911
          TGN — TRUNK GROUP NUMBER

WORD 1   TROK — TRANSFER OKAY = 1 FOR E911
          XMTYP — TRANSMITTER TYPE = 000 (MANUAL SEIZURE)
                  FOR PSAP WITHOUT CALLING LINE DISPLAY.
                  XMTYP = 001 (MULTIFREQUENCY) FOR PSAP
                  WITH CALLING LINE DISPLAY
          DEL NO — DIGITS DELETED = 000 FOR E911
   PREFIX DIGITS — NOT USED (=0) FOR E911

Figure 19—RI Expansion Data for E911 Service

```
        | 23 | 22      20 | 19 | 18 | 17 | 16      13 | 12 | 11 | 10      8 | 7        2 | 1 | 0 |
WORD 1  |              | MB |                          |     OP       |            | TU |
        |              | DO |                          |              |            |    |

WORD 4  |              |    |  #  |        | FT |                  CPI                    |
```
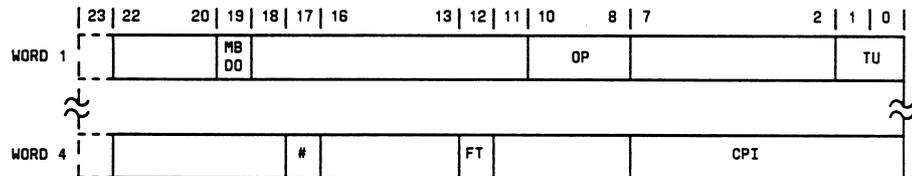
NOTE:
    BIT 23 EXISTS IN 1A *ESS* SWITCH ONLY.

ITEM OGT-ESB

WORD 1 TU = TRUNK USAGE
       OP = OUTPULSING
       MBDO = MAKE-BUSY DISTANT OFFICE

WORD 4 CPI = CIRCUIT PROGRAM INDEX
       FT = FLASH TIMING
       OGT-ESB = OUTGOING TRUNK TO EMERGENCY
   SERVICE BUREAU (OGT TO PSAP)

Figure 20—TCC Expansion Data for Dedicated E911 Outgoing Trunks to PSAPs

AT&T 231-090-288

```
|36          23 | 22                    0 |
 ┌──────────────┬─────────────────────────┐
 │    NE911     │          E911           │
 └──────────────┴─────────────────────────┘
```
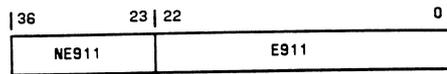
A. 1 *ESS* SWITCH I4E911 DATA (PROGRAM STORE)

```
|23|22    14 |13              0 |
┌─┬──────────────────────────────┐
│ │     E911                     │
├ ┼──────────────────────────────┤
│ │            │     NE911        │
└─┴──────────────────────────────┘
```
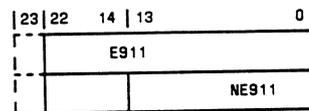
NOTE: BIT 23 IN CALL MEMORY EXISTS
       IN 1A *ESS* SWITCH ONLY.

B. 1A *ESS* SWITCH I4E911 DATA (UNDUPLICATED CALL STORE)

ITEM   DESCRIPTION
NE911 = NUMBER OF 9-WORD E911 CALL REGISTERS

E911 = CALL STORE ADDRESS OF E911 CALL
        REGISTER MEMORY BLOCK

Figure 21—Parameter Word 14E911

	23	22	21	20	17	16	15	14	13	12	11	9	8	7	4	3	1	0
WORD 0	0	Y4P MAD		Y4RI = 21			Y4 TOA	Y4 LI		Y4PMFI			Y4 TO		Y4PT			Y4 QI
WORD 1	0	Y4QUE																
WORD 2	0	Y4 MR	Y4 RW	Y4 CI	Y4LINK													
WORD 3	0	Y4SCAN																
WORD 4	0	Y4PMAO																
WORD 5	0	Y4PMA1																
WORD 6	0	Y4 TS		E9 TGN		E9DN												
WORD 7	0	E9 CH OKE	E9A REG	E9ESN					E9 DS1				E9 DS2			E9 DS3		
WORD 8	0			E9DS8		E9DS4			E9DS5			E9DS6			E9DS7			

NOTE: BIT 23 IN CALL MEMORY EXISTS IN 1A *ESS* SWITCH ONLY.

WORD DESCRIPTIONS FOR THE E911 REGISTER

WORD 0 (STATE WORD)
Y4PMAD – PATH MEMORY ANNEX DISPLACED (EQUALS
            ONE IF PATH MEMORY IS DISPLACED)
Y4RI   – REGISTER IDENTIFIER (INDEX FOR TABLE
            CONTAINING PROGRAM TAG TABLE WORD)
Y4TOA – TIME OUT ACTIVITY (USED BY PIDENT SARG)
Y4LI   – LINK INDICATOR
Y4PMFI – PATH MEMORY FORMAT INDICATOR
Y4TO   – TIME OUT INDICATOR (USED BY PIDENT SARG)
Y4PT   – PROGRAM TAG
Y4QI   – QUEUE INDICATOR

WORD 1 (QUEUE WORD)
Y4QUE – LINK TO NEXT REGISTER WHEN QUEUING

WORD 2 (LINK WORD)
Y4MR   – MASTER REGISTER INDICATOR
Y4RW   – REQUEST WAITING
Y4CI   – CONDITIONAL INHIBIT BIT
Y4LINK – LINK WORD (CONTAINS ADDRESS OF REGISTER
            LINKED TO RIGHT IF Y4LI = 1)

WORD 3 (SCAN WORD)
Y4SCAN – SCAN WORD

WORD 4 (PATH MEMORY ANNEX ZERO WORD)
Y4PMAO – PATH MEMORY ANNEX ZERO

WORD 5 (PATH MEMORY ANNEX ONE WORD)
Y4PAM1 – PATH MEMORY ANNEX ONE

WORD 6
Y4TS   – TRUNK STATE BIT
E9TGN – TGN BEING MONITORED FOR PROBLEMS
E9DN   – THE DIRECTORY NUMBER ASSOCIATED WITH THIS
            PSAP

WORD 7
E9CHOKE – LOCAL CHOKE IS ACTIVE ON THIS CALL
E9AREG – THERE IS ANOTHER E911 REG. ON THE CALL
E9ESN – THE EMERGENCY SERVICE NUMBER ASSOCIATED
            WITH THIS CALL

E9DS1 – ⎫
E9DS2 – ⎬ DIGIT SLOTS ONE, TWO, AND THREE FOR
E9DS3 – ⎭ ANI INFORMATION TO BE SENT TO THE PSAP

WORD 8
E9DS8 – ⎫
E9DS4 – ⎪
E9DS5 – ⎬ DIGIT SLOTS FOUR THROUGH EIGHT FOR
E9DS6 – ⎪ ANI INFORMATION TO BE SENT TO THE PSAP
E9DS7 – ⎭

Figure 22—E911 Call Register

AT&T 231-090-288

```
|36        23| 22              0 |
 ┌──────────┬──────────────────┐
 │          │    CSADR + 2     │
 └──────────┴──────────────────┘
```
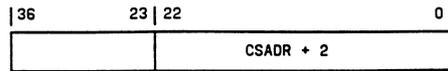
A. 1 *ESS* SWITCH E9TFCT DATA (PROGRAM STORE)
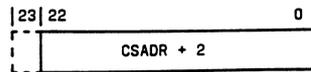
```
|23| 22                0 |
┌─┐─────────────────────┐
│ │      CSADR + 2       │
└─┘─────────────────────┘
```
NOTE: BIT 23 IN CALL MEMORY EXISTS IN
      1A *ESS* SWITCH ONLY.

B. 1A *ESS* SWITCH E9TFCT DATA (UNDUPLICATED CALL STORE)

ITEM CSADR + 2 IS THE CALL STORE ADDRESS OF THE
THIRD WORD OF A 24-WORD CALL STORE TABLE FOR E911
TRAFFIC AND ERROR COUNTS.

Figure 23—Parameter Word E9TFCT

11

PARAMETER E9TFCT

CALL STORE ADDRESS

WORD		23 22 21 20 19	17 16	12 11 10 9 8 7 6 5 4 3 2 1 0	
-2	0			H PD A D T PR	CONTROL WORDS
-1	0	TH TE E		TGN	
0	0	PRG		ITS	
+1	0	PRG		ITS	
2	0	TDA		OGC	
3	0	TDA		OGC	
4	0	DGC		ANC	
5	0	DGC		ANC	
6	0	ANO		ANI	
7	0	ANO		ANI	
8	0	PDS		ANT	
9	0	PDS		ANT	
10	0	HDW		ANF	
11	0	HDW		ANF	NOTE 2
12	0	SPARE		ANM	
13	0	SPARE		ANM	
14	0	SPARE		DFT	
15	0	SPARE		DFT	
16	0	SPARE		OPF	
17	0	SPARE		OPF	
18	0	SPARE		SPARE	
19	0	SPARE		SPARE	
20	0	SPARE		SPARE	
WORD +21	0	SPARE		SPARE	

ERROR COUNTS   TRAFFIC COUNTS

SEE NOTES AND LEGEND ON NEXT PAGE.
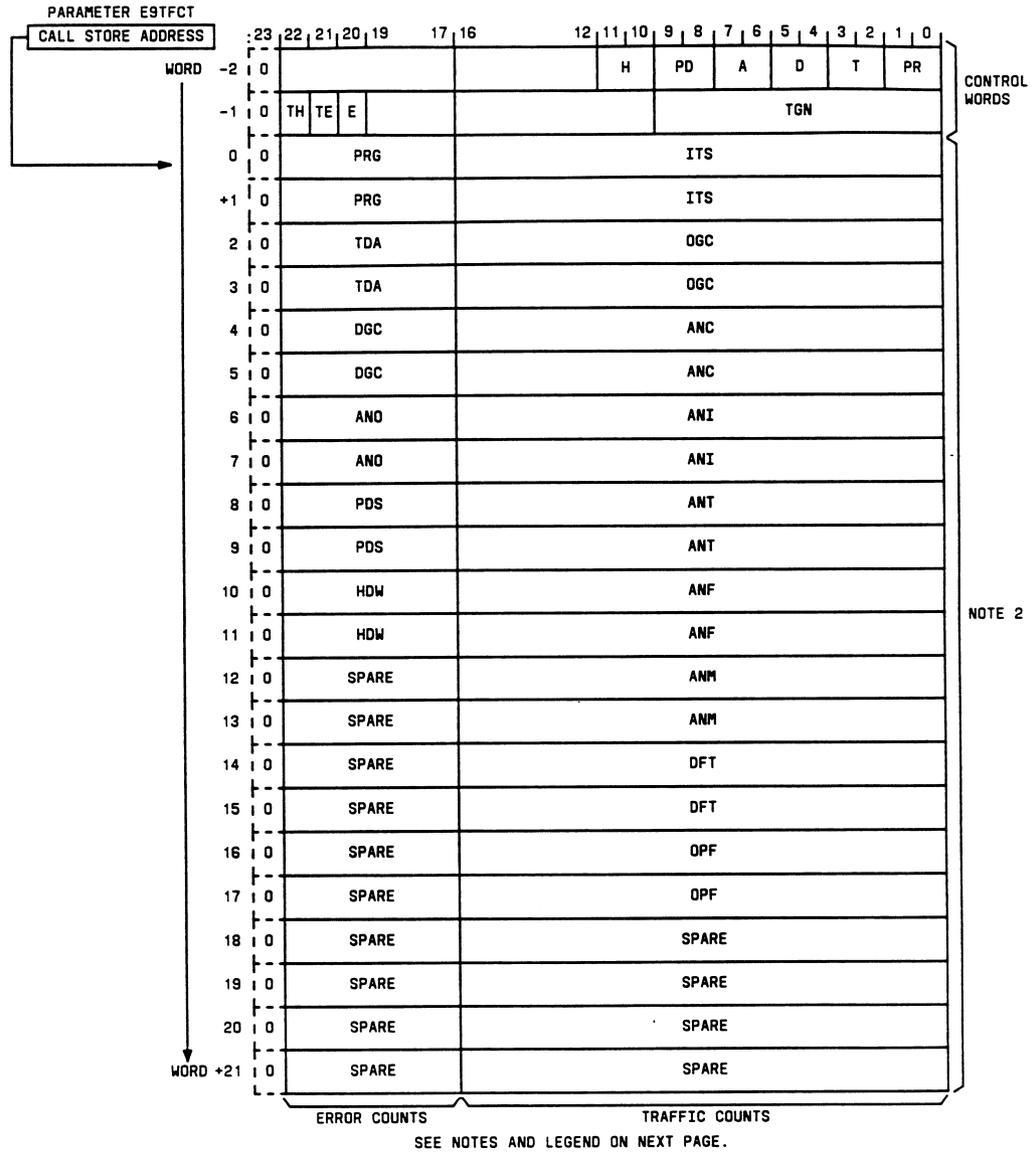
Figure 24—E911 Traffic and Error Call Store Data Block (Sheet 1 of 2)

AT&T 231-090-288

NOTES:
1. Bit 23 in call memory exists in 1A *ESS* switch only.
2. Error and traffic counts - Odd numbered words are counts for TGN being monitored.
   Even-numbered words are total office counts minus counts for TGN being monitored.
   Thus, odd- plus even-word counts equal the total office counts.

LEGEND:
WORD -2 – THIS WORD DETERMINES WHAT ACTIONS TO TAKE IF AN E911 ERROR OCCURS.
    PR – PROGRAM ERROR (ITEM PRG)
     T – TRANSLATION ERROR (ITEM TDA)
     D – DIGIT COLLECTION ERROR (ITEM DGC)
     A – ANI OUTPULSING ERROR (ITEM ANO)
    PD – PERIPHERAL DATA STORAGE PROCESSOR ERROR (ITEM PDS)
     H – HARDWARE ERROR (ITEM HDW)

       ACTION TAKEN IF VALUE EQUALS:
        0 = DON'T PRINT AN ENO1 OUTPUT MESSAGE IF AN ERROR OCCURS.
        1 = PRINT AN ENO1 OUTPUT MESSAGE IF AN ERROR OCCURS AND DUMP ONE CALL REGISTER.
        2 = PRINT AN ENO1 OUTPUT MESSAGE IF AN ERROR OCCURS AND DUMP UP TO TWO CALL REGISTERS.
        3 = PRINT AN ENO1 OUTPUT MESSAGE, BUT DON'T DUMP ANY REGISTERS.

WORD -1
    TH – ITEM TGN-HERE MEANS THAT A PARTICULAR E911 TRUNK GROUP IS BEING MONITORED.
    TE – ITEM TGN-ENO1 MEANS THAT IF TH=1 AND TE=1, THE ENO1 OUTPUT MESSAGE SHOULD BE PRINTED
       IF AN ERROR OCCURS ON THE TRUNK GROUP BEING MONITORED.
     E – ITEM ENO3-HRLY, IF EQUAL TO ONE, INDICATES THAT ENO3 OUTPUT MESSAGE SHOULD BE PRINTED
       HOURLY. IF EQUAL TO ZERO, THEN ENO3 OUTPUT MESSAGE SHOULD BE PRINTED DAILY.
    TGN – TRUNK GROUP NUMBER BEING MONITORED WHEN ITEM TH EQUALS ONE.

WORDS 0 THROUGH 17 – THESE WORDS STORE THE ERROR AND TRAFFIC COUNTS FOR OUTPUT MESSAGES ENO1,
                 ENO2, AND ENO3.

ERROR COUNT ITEMS
PRG – PROGRAM ERROR COUNT
TDA – TRANSLATION ERROR COUNT
DGC – DIGIT COLLECTION ERROR COUNT
ANO – ANI OUTPULSING ERROR COUNT
PDS – PERIPHERAL DATA STORAGE PROCESSOR ERROR COUNT
HDW – HARDWARE ERROR COUNT

TRAFFIC COUNT ITEMS
ITS – DEDICATED E911 INCOMING TRUNK SEIZURES
OGC – NUMBER OF ORIGINATING E911 CALLS
ANC – VALID DIGIT RECEIVED
ANI – ANI INFORMATION DIGIT INDICATES ANI FAILURE
ANT – ANI TIME-OUT OCCURRED WHILE COLLECTING ANI
ANF – ANI DID NOT AGREE WITH ANI FORMAT
ANM – ANI INFORMATION DIGIT INDICATES MULTIPARTY OR QZ BILLING.
DFT – NUMBER OF E911 CALLS ROUTED TO DEFAULT ESBS DUE TO SYSTEM PROBLEMS.
OPF – NUMBER OF FAILURES TO OUTPULSE ANI TO ESBS.

Figure 24—E911 Traffic and Error Call Store Data Block (Sheet 2 of 2)

Page 84

```
                    36|35        27|26    21|20  18|17                    0
PARAMETER    ┌─────────┬──────────┬─────┬───┬──────────────────────────┐   PROGRAM
P2PPMSG      │  PPMB   │ BLKSZ ≥7 │     │   │          CSADR           │   STORE
             └─────────┴──────────┴─────┴───┴──────────────────────────┘
             PPMB = SET CARD GIVING THE NUMBER OF MESSAGE BLOCKS
```

```
                         HEADTABLES
          22                                  0
        ┌────────────────────────────────────┐
Y4PIBH  │ ADDRESS OF FIRST IDLE BLOCK         │
        │ IN LINK LIST                        │
        ├────────────────────────────────────┤
        │ ADDRESS OF LAST IDLE BLOCK          │      FIXED
        │ IN LINK LIST                        │      CALL
Y4PILH  ├────────────────────────────────────┤      STORE
        │ ADDRESS OF FIRST BLOCK IN           │
        │ DEFERRABLE MESSAGE LIST             │
        ├────────────────────────────────────┤
        │ ADDRESS OF LAST BLOCK IN            │
        │ DEFERRABLE MESSAGE LIST             │
        └────────────────────────────────────┘
```

```
                         MESSAGE BLOCKS
        22 21 20  16 15        9 8 7 6 5 4      0
        ┌─┬─┬─┬─────────────────────────────────┐
WORD 0  │A│B│C│          LINKAGE                 │
        ├─┼─┼─┼────────────────┬────────┬────────┤
     1  │D│E│F│                │NO.LINKED│ OFFSET │
        │ │ │ │                │ BLOCKS  │        │
        ├─┴─┴─┼────────────────┼─────────┴────────┤
     2  │OPCODE│ NO. OF WORDS  │     DATA (6-0)   │
        │(22-16)│  (15-7)      │                  │
        ├───────┴──────────────┴──────────────────┤
     3  │                DATA                      │      VARIABLE
        ├──────────────────────────────────────────┤     CALL
     4  │                DATA                      │      STORE
        ├──────────────────────────────────────────┤
     5  │                DATA                      │
        ├──────────────────────────────────────────┤
WORD 6  │                DATA                      │
        └──────────────────────────────────────────┘
```
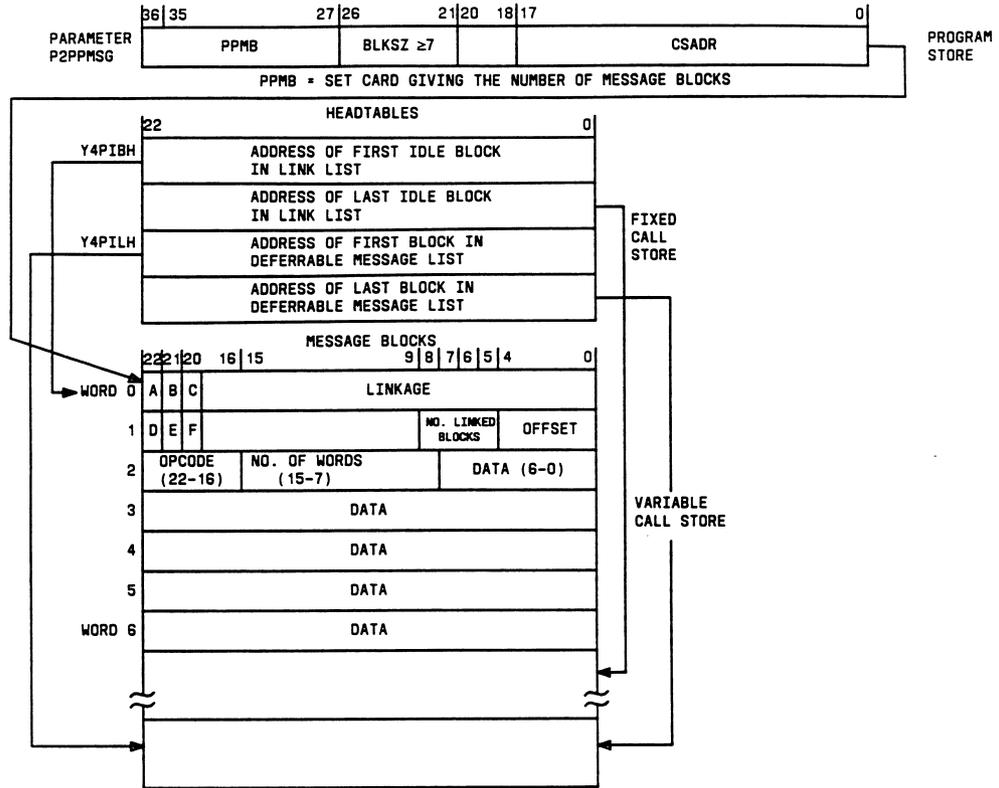
```
WORD 0
    A = BLOCK IN USE (=1). BUSY BIT
    B = FIRST BLOCK IN MESSAGE (=1)
    C = TIME-OUT BIT (SET TO 1 BY AUDIT)
    LINKAGE = ADDRESS OF NEXT BLOCK WHEN ON IDLE OR DEFERRABLE LINKED LISTS OR WHEN PART
              OF A MULTIBLOCK MESSAGE.
WORD 1
    D = POLARITY BIT. USED ON DEFERRED MESSAGE LIST TO DETERMINE IF MESSAGE WAS THERE AT
        ENTRY TIME OR JUST PUT ON LIST FOR NEXT CLASS 'E' ENTRY.
    E = LONG (TIME) MESSAGE BIT.
    F = BLOCK RETURNED BIT IS USED BY THE PDSP WHEN A CONFIRMATION MESSAGE IS SENT TO IT.
    BITS 5-7 = NUMBER OF ADDITIONAL LINKED BLOCKS ON THIS MESSAGE.
    BITS 0-4 = OFFSET OF LAST WORD USED IN THIS BLOCK.
WORD 2
    THIS IS THE FIRST DATA WORD OF MESSAGE. IT CONTAINS THE MESSAGE HEADING CONSISTING OF
    OPCODE (BITS 16-22) AND NUMBER OF WORDS (BITS 7-15) IN MESSAGE.
```

Figure 25—Parameter Word P2PPMSG and Associated Call Store Message Blocks

AT&T 231-090-288
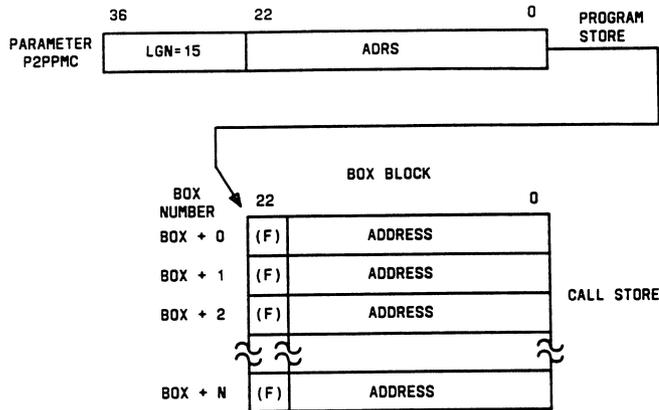
LEGEND:
ADDRESS = ADDRESS OF LOCATION IN DEFERRABLE LINKED LIST CONTAINING PARTIALLY
ANSWERED REQUEST MESSAGE AWAITING CONFIRMATION.

ADRS = ADDRESS IN CALL STORE OF BOX BLOCK.

(F) = FLAG INDICATING IDLE MESSAGE BLOCK REQUESTED BUT NONAVAILABLE OR AN URGENT
OUTGOING MESSAGE AWAITING CONFIRMATION.

LGN = NUMBER OF WORDS IN BOX BLOCK.

Figure 26—Peripheral Processor Message Block Control Parameter P2PPMC and Associated
Pointers

```
PROGRAM STORE    | 36                23 | 22                          0 |
PARAMETER        |        PPRB          |          CSADR               |
P2PPRB           |_____|_____|

        PPRB = NUMBER OF PERIPHERAL PROCESSOR REQUEST BLOCKS
               (ITEM PPRB = 10) FOR E911.

        CSADR = CALL STORE ADDRESS OF PPRB MEMORY BLOCK
               (PPRB BLOCK SIZE = 4*PPRB+2)

CALL STORE   | 22 | 21        18 | 17 | 16 | 15          9 | 8          0 |
PPRB BLOCK   |____|_____|____|____|_____|_____|
             |              CURRENT BLOCK DATA (TREDN SCRATCH)           |
             | *  |              | T  |        SEQUENCE NUMBER           |
             |                          CRA                             |
PPRB 0       |                          RA                              |
             |         | NPD  |          |        DEFAULT ESN           |

             | *  |              | T  |                                 |
             |                          CRA                             |
PPRB 9       |                          RA                              |
             |         | NPD  |          |        DEFAULT ESN           |
```
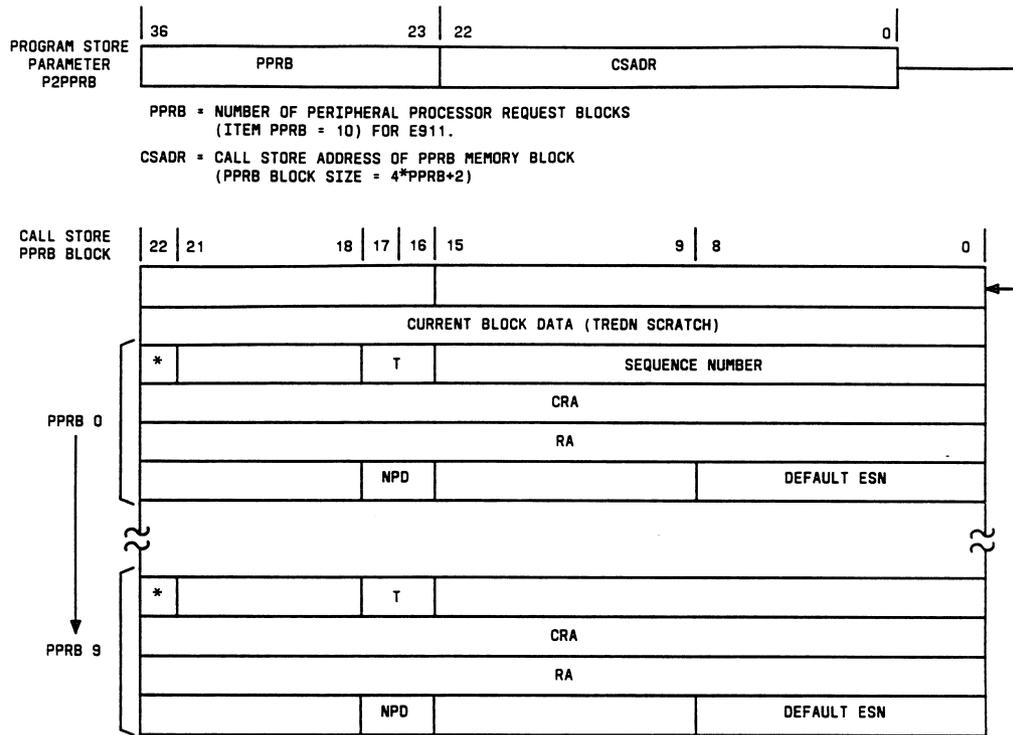
Figure 27—Parameter Word P2PPRB and Call Store PPRB Memory Block

AT&T 231-090-288

1 *ESS* SWITCH REQUEST DATA FOR PDSP DATA

22	18	17	16	15	12	11	9	8	7	4	3	0
SUBTYPE = 1				SEQUENCE NUMBER								
						D1		D2			D3	
			D4			D5		D6			D7	
	NPD							WORD COUNT = 4				

NPD = NUMBER PLAN DIGIT

D1 THROUGH D7 = TELEPHONE NUMBER OF STATION (ANI IDENTIFICATION)
                DIALING 911

A. ESN DATA REQUEST FORMAT (MESSAGE TYPE 4, SUBTYPE 1)

PDSP REPLY DATA FOR 1 *ESS* SWITCH REQUEST

22	17	16	15	9	8	7	6	0
TYPE = 4			WORD COUNT = 3				SUBTYPE = 1	
			SEQUENCE NUMBER					
		*				ESN		

* DATA FOUND BIT: IF DATA FOUND EQUALS 1 (SET)
                  IF DATA NOT FOUND EQUALS 0 (RESET)

B. ESN DATA REPLY FORMAT (MESSAGE TYPE 4, SUBTYPE 1)

22	18	17	16	15	9	8	0
SUBTYPE = 2						ESN (START)	
		*				ESN (END)	
						WORD COUNT = 3	

* STATUS: 01 = UNASSIGNED
          10 = ASSIGNED
          00 = NEW ADDITION ⎫ RECENT CHANGE
          11 = NEW REMOVAL ⎭ TYPE STATUS

NOTE - AN ERROR CONDITION EXISTS WHEN:
       ESN (START) = ESN (END) = 0
       OR
       STATUS (*) = 11

C. ESN VERIFICATION REQUEST FORMAT (MESSAGE TYPE 4, SUBTYPE 2)

Figure 28—Message [B]uffer Data Request and Reply Formats (Sheet 1 of 2)

Page 88

```
22              16 15        9 8 7 6              0
+---------------+-----------------+----------------+
|   TYPE = 4    |  WORD COUNT = 3 |  SUBTYPE = 2   |
+---------------+-----------------+----------------+
|               |                 |  ESN (START)   |
+---------------+-----------------+----------------+
|                                 |  ESN (END)     |
+---------------+-----------------+----------------+
```

D. ESN VERIFICATION REPLY FORMAT
   (MESSAGE TYPE 4, SUBTYPE 2)

Figure 28—Message [B]uffer Data Request and Reply Formats (Sheet 2 of 2)

TABLE A					
E911 EMERGENCY SERVICE ZONE DATA					
E911 SERVICE AREA	ESZ (EMERGENCY SERVICE ZONE)	PUBLIC SERVICE AGENCIES	PRIMARY PSAP	SECONDARY PSAP	ESN (EMERGENCY SERVICE NUMBER)
Town "A"	ESZ 1	Police "A" Fire "X"	Police "A"	Fire "X"	ESN No. 1
	ESZ 2	Police "A" Fire "Y"		Fire "Y"	ESN No. 2
Town "B"	ESZ 3	Police "B" Fire "Y"	Police "B"	Fire "Y"	ESN No. 3
	ESZ 4	Police "B" Fire "Z"		Fire "Z"	ESN No. 4

AT&T 231-090-288

TABLE B		
COMPARISON OF E911 DATA BASE SYSTEMS		
PDSP	**1A ESS SWITCH**	**1 ESS SWITCH**
Initialize SRD Base From 9-Track RC Input	Initialize SRD With Special TDA Assembly or RC	Initialize SRD With Special TDA Assembly or RC
Compare SRD in PDSP With Data Management System	Not Provided	Not Provided
Up to 511 Different ESNs Per 1000s Group	Up to 511 Different ESNs per 1000s Group *	Up to 8 Different ESNs Per 1000s Group
No Cardwriting	No Cardwriting	Cardwriting
Allows Unassigned Line Status; Prints Calls From Unassigned Lines	No Unassigned Line Status	No Unassigned Line Status
Model 40 TTY Verify	Model 40 TTY Verify	Model 35 TTY Verify
Data Base Backup on Tape Data Cartridge	Data Base Backup on Disc and Tape	No Backup for Data Base
Data Base Audit to Insure No TNs Are Assigned Invalid ESNs	Not Provided	Not Provided
Enhanced Data Base Memory Allocation Tools	Data Base Management Using RC:SUBTRAN and RC:PSWD	Data Base Management Using RC:SUBTRAN and RC:PSWD
Zero Words PS Used for Data Base	Data Base in Unduplicated CS	Data Base in Duplicated PS
Additional Verify and Statistical Data Message	No Additional Verify or Statistical Capabilities	No Additional Verify or Statistical Capabilities
* A maximum of 8 ESNs can be assigned in a 1A *ESS* switch using the 1AE5 generic program.		

TABLE C						
DEDICATED E911 INCOMING TRUNK CIRCUIT COST DATA						
SD NUMBER	TRUNK ORDER CODE	SIGNALING	SCAN POINTS PER CIRCUIT	SD POINTS PER CIRCUIT	CIRCUITS PER UNIT	TLN APPEARANCES PER CIRCUIT
SD-1A192	013	MF	2	3	2	1
SD-1A311	045	DP	2	4	2	1
SD-1A312	046	MF	3	4	1	1
SD-1A163	016	DP	3	5	1	1
SD-1A236	021	MF	3	5	1	1
SD-1A237	048	DP	3	5	1	1
SD-1A252	007	MF	4	4	1	1
SD-1A166-05	161	MF	2	3	2	1

TABLE D						
DEDICATED E911 OUTGOING TRUNK CIRCUIT COST DATA						
SD NUMBER	TRUNK ORDER CODE	SUPERVISORY SIGNALING	SCAN POINTS PER CIRCUIT	SD POINTS PER CIRCUIT	CIRCUITS PER UNIT	TLN APPEARANCES PER CIRCUIT
SD-1A165	002	Loop	2	3	2	1
SD-1A163*	016	E&M	3	5	1	1
SD-1A237*	048	E&M	3	5	1	1
* SD-1A163 and SD-1A237 trunk circuits are used for long haul trunks to distant PSAPs. These long haul E&M type trunks require an E&M to loop converter prior to the connection to the PSAP.						

AT&T 231-090-288

	TERMINATING ENTITY		
ORIGINATING ENTITY	**E911 PSAP WITH ANI DISPLAY**	**E911 PSAP WITHOUT ANI DISPLAY**	**B911 PSAP**
Non-SXS Trunk (Seizure + Digits + ANI)	6766 7417	6450 7120	7078 7228
Non-SXS Trunk (Seizure + ANI)	6282 6932	5986 6636	6594 6744
SXS Trunk (Seizure + Digits + ANI)	6456 6982	5972 6498	6768 6918
SXS Trunk (Seizure + ANI)	6153 6950	5669 6655	6464 6615
Line	5547 7262	5251 6966	5709 5446

TABLE E

E911 REAL TIME CYCLE COUNTS (NOTES)

Notes:

1. The cycle counts listed are for a 1 ESS switch E911 tandem office providing selective routing. The top cycle count number is for the originating entity on-hook first. The bottom number is for the PSAP on-hook first.

2. Real time cycle required for a 1A ESS switch are approximately double those given for a 1 ESS switch.

3. Real time cycle count modifiers are as follows:

A. Routing based on ESCO (trunk group)	— Subtract 240 cycles
B. Routing based on office code	— Subtract 200 cycles
C. Routing based on number group	— Subtract 150 cycles
D. If 1 ESS switch uses PDSP	— Subtract 150 cycles
E. If night service/alternate routing is required	— Add 350 cycles

4. Transfers require additional cycles as follows:

A. Nonselective transfer (PSAP without ANI display)	— 15,100 cycles
B. Nonselective transfer (PSAP with ANI display)	— 15,400 cycles
C. Selective transfer (PSAP without ANI display)	— 14,673 cycles
D. Selective transfer (PSAP with ANI display)	— 14,973 cycles

TABLE F				
DEDICATED E911 INCOMING TRUNK CIRCUITS				
SD NUMBER	TYPE PULSE	CPI	TPI	SPI
SD-1A163	DP	016	2,3	
SD-1A192	MF/DP	013		12
SD-1A236	MF	021	26,25	
SD-1A237	DP	048	2,3	
SD-1A311	DP/Loop	045	2,3	
SD-1A312	MF	046		4,0
SD-1A166-05	MF	161		4

TABLE G						
DN INDEX LIST SIZES FOR 1A ESS SWITCH WITH 1AE6 AND LATER GENERIC PROGRAMS						
ESN LIMIT	ESNLM VALUE	BITS PER AESN	AESNS PER WORD	AESN BLOCK SIZE	FULL ESN BLOCK SIZE	TOTAL DN INDEX LIST SIZE (NOTE)
8	0	3	7	143	8	151
16	1	4	5	200	16	217
32	2	5	4	250	32	283
64	3	6	3	334	64	399
128	4	7	3	334	128	463
256	5	8	2	500	256	757
511	6	9	2	500	512	1013

Note: The total DN index list size includes the minus one word for all DN index lists except the DN indexlist with an ESN limit of eight, which does not use the minus one word.

AT&T 231-090-288

TABLE H				
TEST CALL DATA ASSOCIATION FOR ANI ONLY TRUNKS				
LOCAL OFFICE		**E911 TANDEM OFFICE**		
TEST TYPE	**ASSIGNED TEST TN**	**ASSIGNED ESN**	**TN FOR ESN**	**TERMINATION FOR ASSIGNED ESN TN**
Permanent Busy	777-1XXX	ESN A	TN A	Permanent Busy Signal
Nonsynchronous	777-2XXX	ESN B	TN B	Nonsynchronous Test Facility
Milliwatt	777-3XXX	ESN C	TN C	Milliwatt Source

TABLE I	
RC MESSAGES FOR E911 SERVICE	
TASK	**RC MESSAGE**
Add New TG Without Members	RC:TG
Equip TNN(s)	RC:TNN
Assign Equipped TNNs To Active TG	RG:TGMEM
Build TCC Expansion Table	RC:PSWD
Enter Chart Column Data	RC:CCOL
Add RI Expansion Data	RC:RI
Add Rate And Route Pattern Data	RC:RATPAT
Add RRP In 3-Digit Translator	RC:DIGTRN
Add DN Entry In DN Head Table	RC:DNHT
Build 911 DN Auxiliary Block	RC:LINE
Build ESCO Translator Data	RC:ESCO
Build DN-to-ESN Translator Data	RC:TNESN
Build ESN Translator Data	RC:ESN

TABLE J	
USOC CODES FOR E911 SERVICE OFFERINGS	
USOC	**E911 SERVICE OFFERINGS**
E8X	ANI*
E8R	Selective Routing*
E8T	Combined ANI and Selective Routing*
E8V	Combined ANI and ALI*
E8Z	Combined ANI, ALI, and Selective Routing*
E8K	Each additional E911 exchange line terminating at PSAP (optional)
*	USOC Codes E8X, E8R, E8T, E8V, and E8Z are per 1000 main stations in the area served.

TABLE K	
USOC CODES FOR E911 PSAP TERMINAL EQUIPMENT	
USOC	**PSAP TERMINAL EQUIPMENT**
E9S	ANI Master Controller
E9E	ANI Auxiliary Controller
E9Y	Additional Trunk Equipment
E9U	ANI Display and Transfer Unit
E9P	Commercial Power Conversion Unit
E8L	ALI Master Controller
E8N	ALI Auxiliary Controller
E8P	ALI Display Unit
E8Q	Interior Wiring

AT&T 231-090-288

TABLE L							
SERVICE COMPONENTS PER SERVICE OFFERING							
USOC	SERVICE OFFERING	SERVICE COMPONENT CODES (NOTE)					
		A	B	C	D	E	F
E8X	ANI	X	X	X			
E8R	SR*	X	X	X	X	X	
E8T	ANI/SR	X	X	X	X	X	
E8V	ANI/ALI	X	X	X		X	X
E8Z	ANI/ALI/SR	X	X	X	X	X	X
E8K	Additional E911 Exchange Line			X			

Note: The Service Component Codes are as follows:

    A — End Office Trunk
        End Office ANI
        Facilities between End Office and E911
        Control Office

    B — E911 Incoming Trunk
        Control Office Common Equipment

    C — E911 Tandem Office Outgoing Trunk
        Alternate Routing
        Night Service
        Nonselective Transfer
        E911 Tandem Office to PSAP facilities
        and loop

    D — Selective Routing equipment based
        upon type of E911 Tandem Office,
        1 ESS switch, 1A ESS switch, or 1 ESS
        switch with PDSP (Peripheral Data
        Storage Processor).

    E — Data Management System

    F — ALI equipment at Telephone Company
        locations. (This includes any necessary
        nodes.)

* SR — Selective Routing

Nortel DMS–100 Memory System Overview

Introduction

This article presents a brief description of the memory devices used in the DMS–100 family of switches. The information provided applies to the DMS–100 NT40 central processor and the DMS SuperNode.

Memory Description

Memory, in this document, is a device used to store information in a form that enables the information to be easily and rapidly accessed when needed. In the DMS–100 family, the memory device most often used is the *memory circuit pack* or *memory card* where the information is encoded and stored electronically. This electronic storage is in the form of bits of information. A *bit* is a binary digit of 0 or 1. Bits are grouped together to form larger units called *bytes* or *words*. Each word represents a unit of information. Words may vary in length with bits forming 8–, 16–, and 32–bit words or larger. In the SuperNode system, the memory is organized into 40–bit words: 32 data bits, 7 error–correcting code bits, and 1 parity bit. Refer to the following *Figure 1*, which illustrates a 8–bit and a 16–bit word.
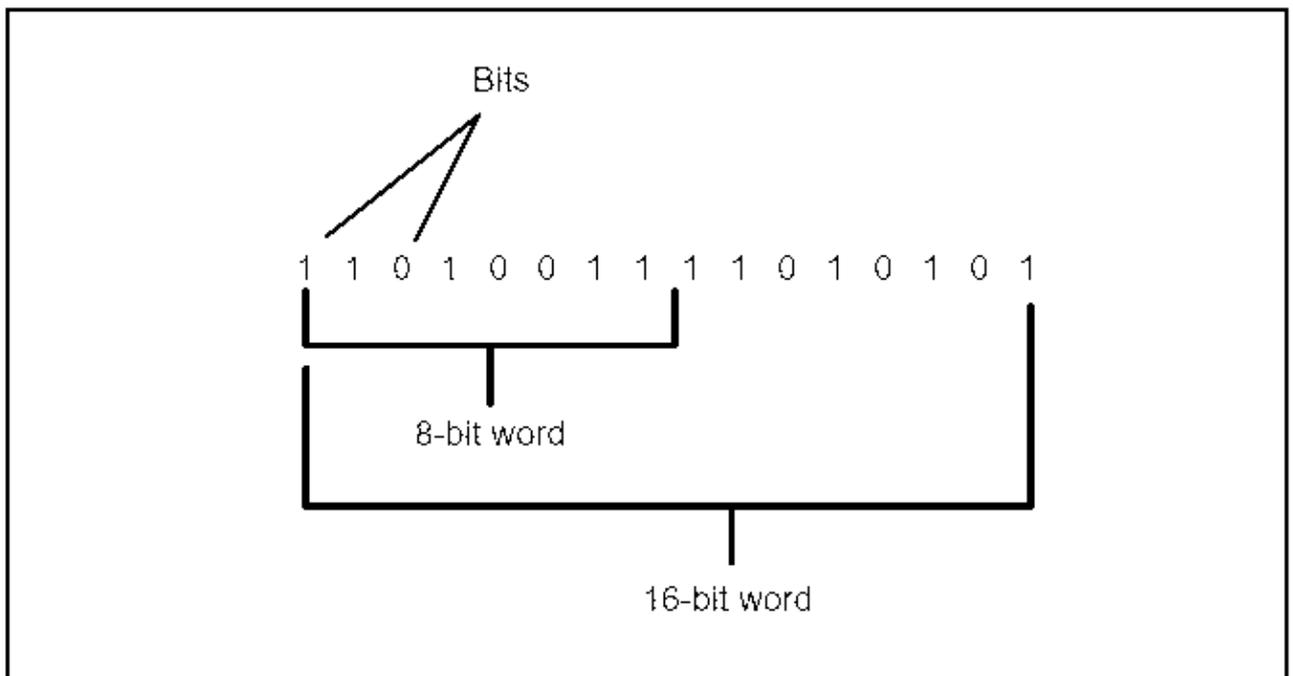
Figure 1 – Example of Bits and Words

Memory is measured in terms of the number of words or bytes that the device can store. Cards currently vary in size from 64k (k=1,024) words of memory to 1 M–word (1 million words) for data store and program store in the NT40 and 6–MBytes to 24–MBytes in the DMS SuperNode configuration. These sizes will probably change as the storage device technology evolves. The conversion of k–words to M–words to Mbytes is accomplished by dividing the k–words by the number 1,024 to get M–words and then multiplying the M–words by 2 to get Mbytes.

The bits, bytes, and words stored in memory make up the instructions, addresses, and other necessary data to operate the switch. The DMS−100 Central Processing Unit (CPU) controls and coordinates the operation of the peripheral modules, refer to *Figure 2*. Multitasking in real time is based upon processes that use messages to communicate with one another. These messages can be exchanged by the processes within the CPU, or they can be exchanged by the CPU processes and those in the peripheral modules.

In addition to the software necessary to provide the basic call processing decision functions, extensive software for the administration and maintenance of the DMS−100 hardware and connecting facilities is included. There are several thousand software modules consisting of several million lines of program code. To manage the design and production of reliable software on this scale, the system must have programming in a high−level language. The language used in the CPU is Procedure Oriented Type Enforcing Language (PROTEL), a high−level language developed by Bell−Northern Research (BNR).
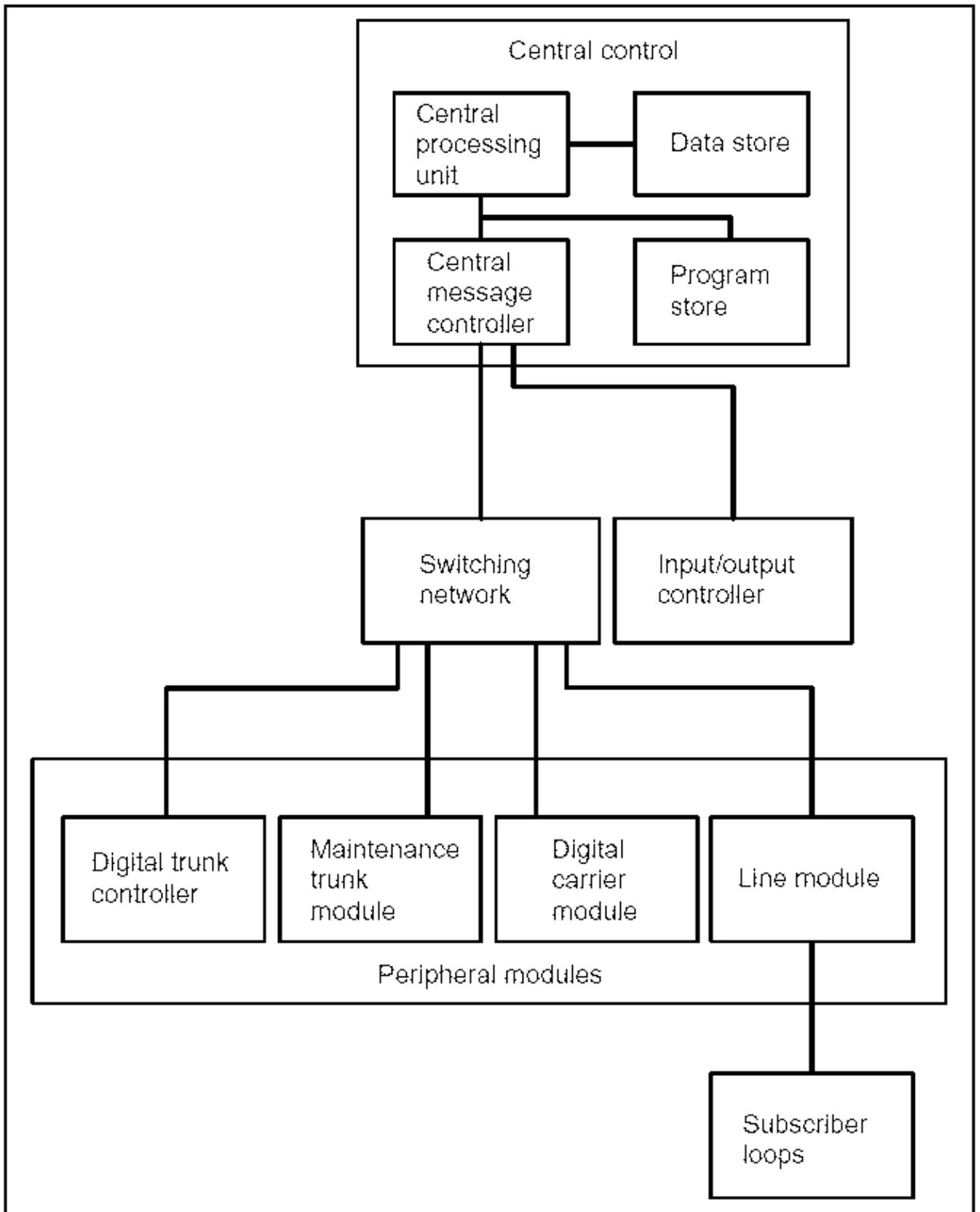
Figure 2 – Functional View of a First Generation DMS–100

The NT40 Central Control Complex (CCC) is a totally duplicated group of four modules which act together to evaluate incoming messages, formulate proper responses, and issue instructions to the subsidiary units, see *Figure 3*.

The four modules are:

- Central Message Controller (CMC)
- Central Processor Unit (CPU)
- Data Store (DS)
- Program Store (PS)
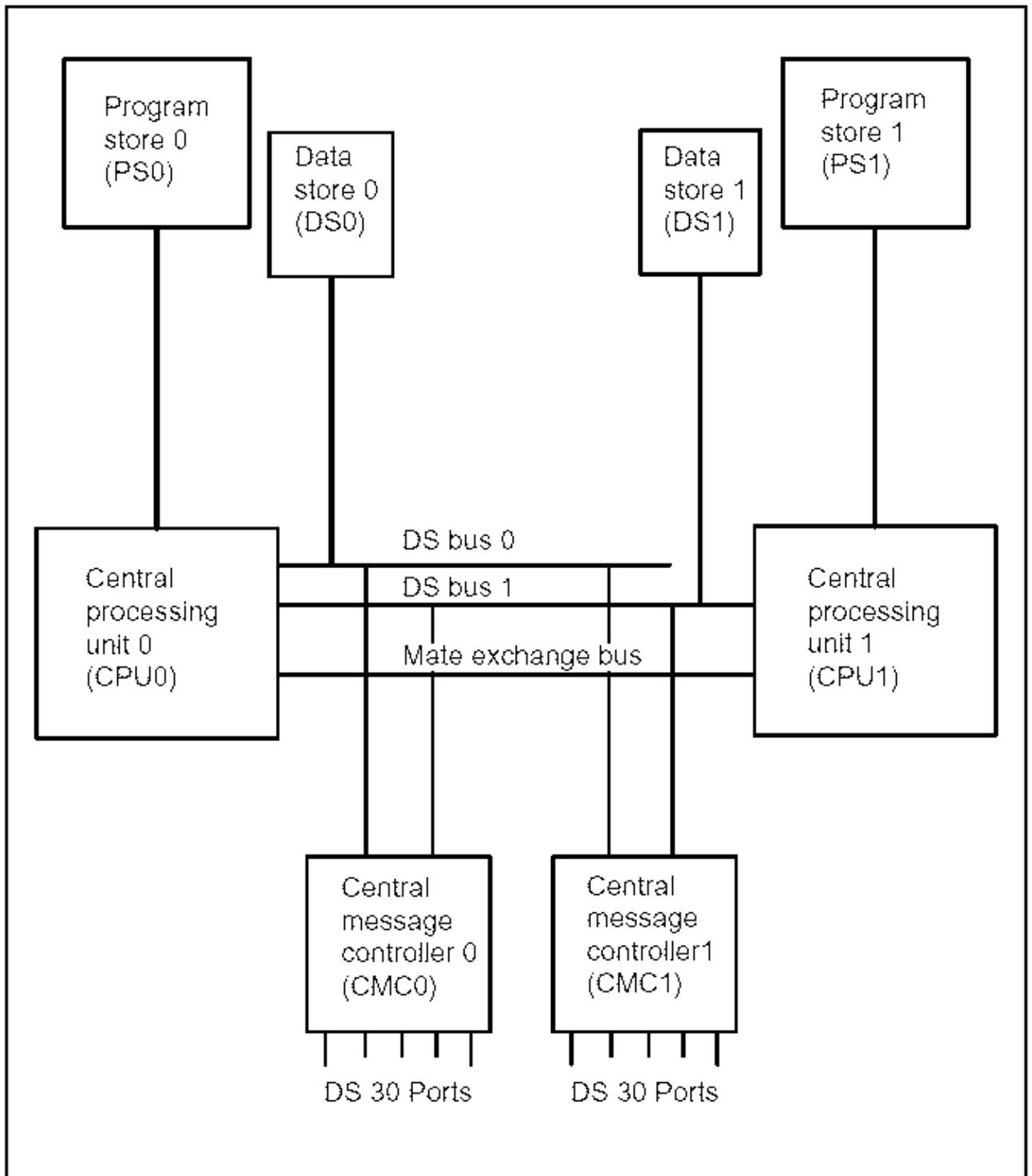
Figure 3 – Duplicated Central Control Complex

Duplication of the four CCC components offers hardware fault protection, and the ability to carry out office extensions and software updates without disrupting service.

The central processing unit, with associated program store and data store, is duplicated. Under normal circumstances, the two units operate in synchronism. Both are simultaneously executing the same instruction with the same data. Each has access to certain information in the mate CPU; therefore, fault detection for example, matching for loss of synchronism, can be carried out. In addition, this access provides interprocessor communication for system–maintenance software.

The CMC is duplicated, and the two components operate in load–sharing mode. That is, messages are routed alternately through the two CMC units.

CPU Memory Description

Memory within the CPU is divided into two distinct elements, each of which is independently addressable. These two elements are referred to as *program store* and *data store*.

Data store is divided into the following three regions:

- The first region is a Random Access Memory (RAM) area known as CPU RAM. This region contains various registers (for example, base registers), and other memory locations reserved for special purposes. The CPU RAM is located on the CPU card, and, due to the type of memory device, it is faster to access than the other two regions.

- The second (and largest) region is available for data. This region is known as data store.

- The third region contains the Input/Output (I/O) and maintenance registers, which perform the following operations:

  ♦ Sending control information to the peripheral modules.
  ♦ Storing control information for the CC.

These three regions are physically located in different parts of the DMS–100 but are on the same data bus and are accessed in the same manner. An address space distinguishes each of the three parts. The CPU RAM is located on the CPU card; data store is located on separate cards; and the I/O and maintenance registers are located in the CMC and in the CPU. The three regions of the data store are illustrated in *Figure 4*.
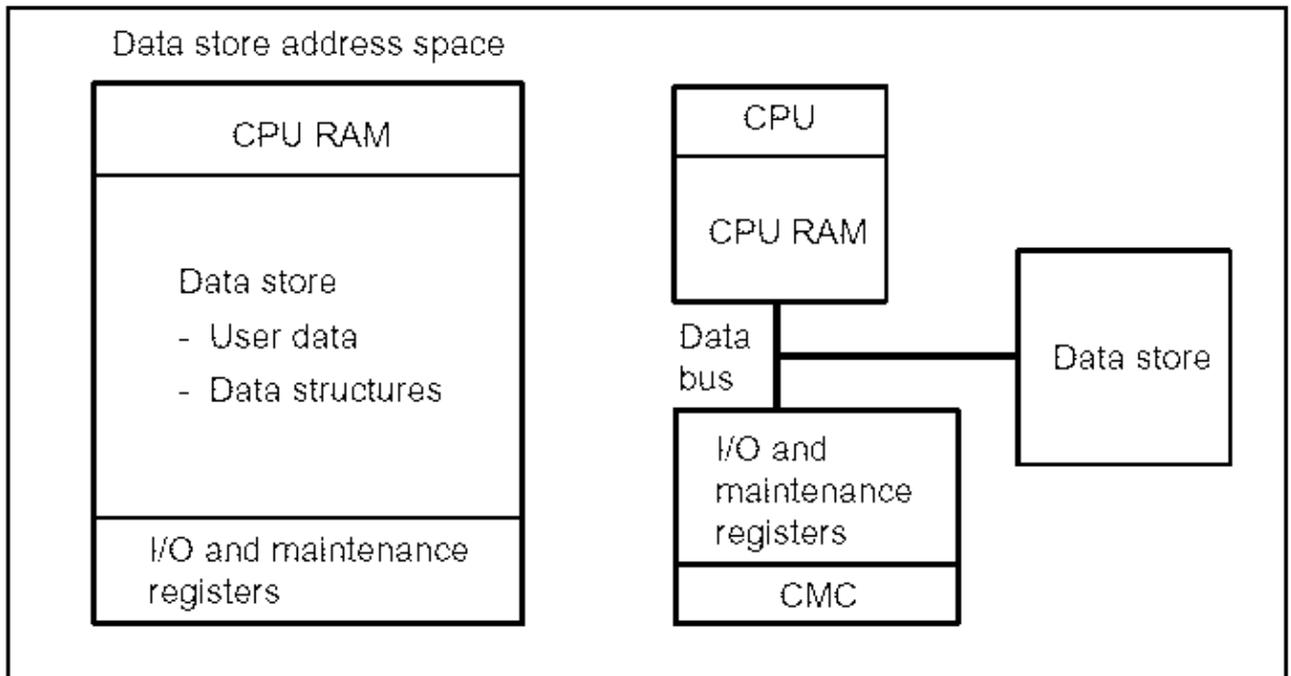
Figure 4 – Three Regions of Data Store

DMS SuperNode

The DMS–Core is the control component of SuperNode and consists of a Computing Module (CM) and a System Load Module (SLM). The computing module contains duplicated DMS SuperNode Central Processing Units (DMS SuperNode CPU).
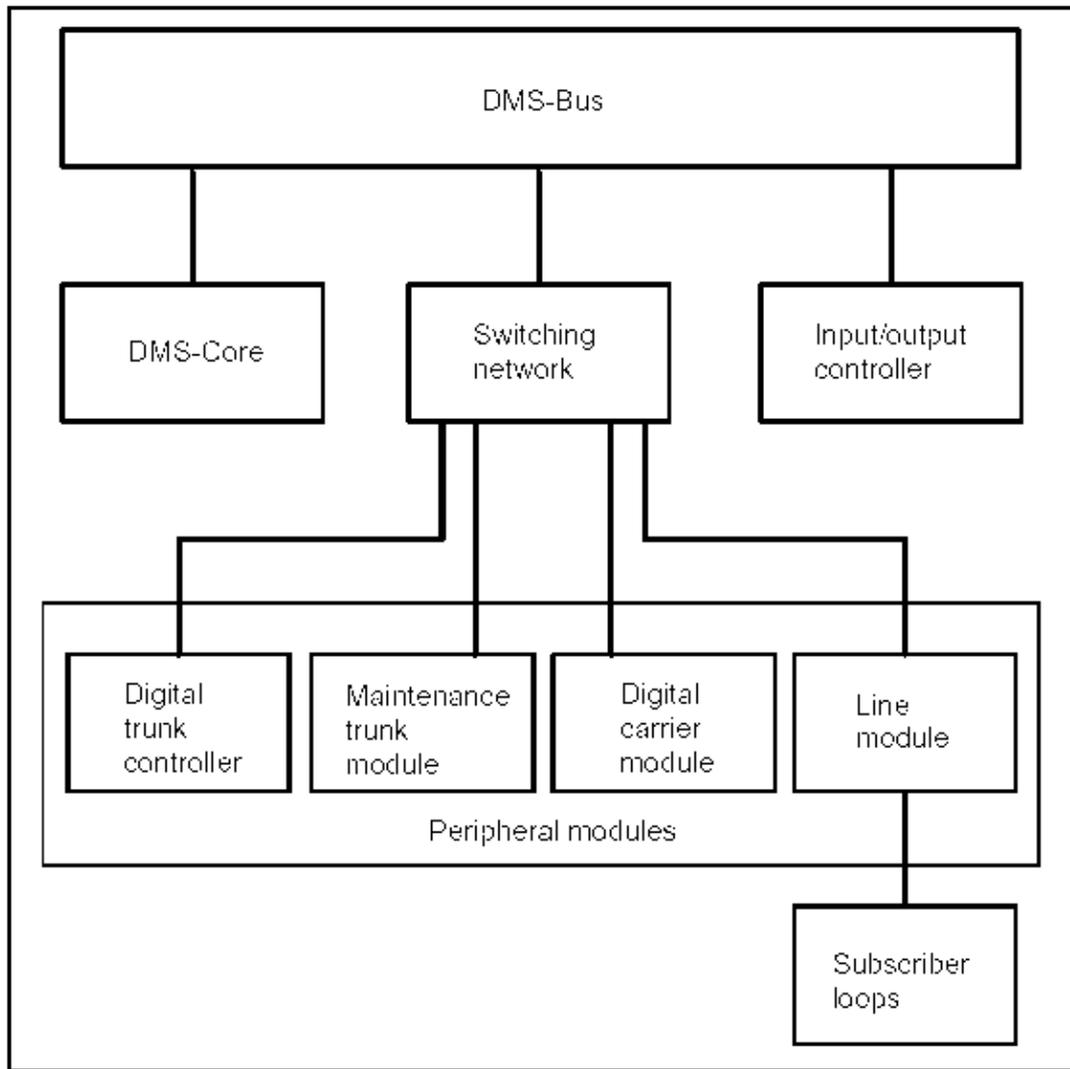
Figure 5 – Functional View of a Second Generation DMS–100 (DMS SuperNode)

DMS SuperNode Memory

DMS SuperNode memory consists of memory circuit packs. Identical memory circuit packs are used, and memory is organized and addressed in the same manner in the computing module and in the message switch.

The memory consists of integrated program store and data store on the same bus. There are separate data and address buses, each 32–bits wide. Memory is byte addressable; thus, the logical address range is 4–Gigabytes.

Data Store

Data Store Hardware – NT40

The NT40 Data Store (DS) shelf has sixteen card slots available for the active data store plus one card slot used as a memory controller. This controller card has 256k words of memory to be used as replacement memory for detected single memory faults in any of the memory cards. Memory cards come in different sizes. For example, the NT3X93 (256k words) and the NT4X80

(1–Mwords).

This shelf has a maximum capacity of 15k to 15.75k words of addressable storage depending upon the central control complex vintage. The rest is reserved for system use, for example, write–protected registers.

Another memory card, which may be present in existing NT40 switches, is the NTX3X40. This card contains 64k words of memory.

Data Store Hardware – DMS SuperNode

Data store and program store are integrated. Memory is provided on memory circuit packs, and there are two types:

- 4–MBytes of Dynamic Random Access Memory (DRAM), divided into two 2–MByte memory modules.
- 6–MBytes of DRAM, divided into three 2–MByte memory modules.

Addressing

To determine where information resides in the NT40, the DS uses an address consisting of a 8–bit page and a 16–bit offset. Each page of DS contains 64k (65,536) words. For example, `#FB12A4` is an address on page `#FB` with an offset of `#12A4` words from the beginning of the page.

The DMS SuperNode uses an address consisting of a 16–bit page and a 16–bit offset. Each page of DS contains 16–Mwords.

Bits within a word of data store are addressed by a number from 0–15, from the least significant bit to the most significant bit. The least significant bit is the bit at the low address end of the word. For example, number `8004` would be represented by setting all of the bits within a word to zero except for bits 15 and 2, which are set to one. The numbering of bits within a word (for example, `8004`) is illustrated in *Figure 6*.
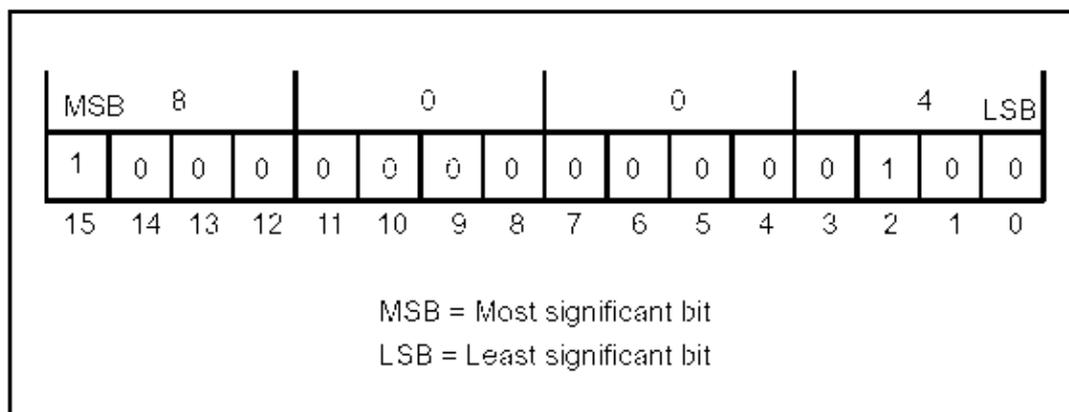
Figure 6 – Bit Numbering

<u>**Data Store Tables**</u>

The DMS–100 data store is comprised of many different data tables containing information required to complete connections between calling and called parties. A table consists of a number of objects of the same type, occupying a contiguous segment of memory in date store, so that each entry in the table may be indexed (located). An illustration of a NT40 table with six entries, four words in

length, is shown in *Figure 7*.

Figure 7 – NT40 Data Store Tables

The following figure is an illustration of a DMS SuperNode table with six entries, eight words in length.

**Figure 8 – DMS SuperNode Data Store Tables**

Pointers and Descriptors

A descriptor is a three–word (for the NT40) or a four–word (for the DMS SuperNode) code that describes a table or a part (slice) of a table. The individual entries in a table are addressed by indexing the descriptor as if it were a table. A descriptor contains the following information for the NT40:

- **Address:** The absolute address of the base of the table or it can be the base of the slice of the table to which the descriptor is pointing.

- **Stride:** Indicates the length of each entry in the table. Strides may be expressed in words or bits.

- **Size:** Indicates the number of entries in the table.

A descriptor for the DMS SuperNode contains the following information:

- **Address:** The absolute address of the base of the table or it can be the base of the slice of the table to which the descriptor is pointing.

- **Bit or Byte Offset:** If the first entry in the table is not aligned on a word boundary, this field contains the bit or byte offset of the first entry in the table. Otherwise, if the first word is on a word boundary, this field is zero.

- **Upper Bound:** The maximum index value of the table pointed to by the descriptor.

In normal usage it is not necessary to know the internal layout of a descriptor, since these parts are not separately manipulated. See *Figure 9* for an illustration of a pointer, a descriptor, and a table.
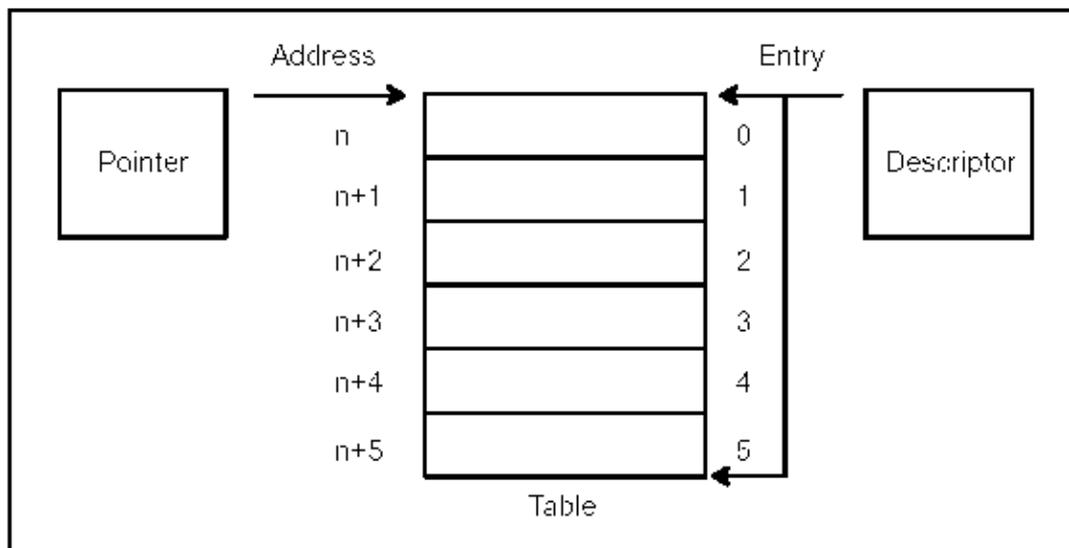
Figure 9 – Example of a Pointer, a Table, and a Descriptor

Dynamic Allocation of Data Store

The DMS–100 operating system allows data store to be managed as a common resource pool. This pool makes it possible for executing programs to allocate (request) store from the unused parts of data store. When this allocated storage is no longer required, it is deallocated (returned) to the common pool for use by other executing programs. Programs that allocate and deallocate tables in the data store use descriptors to store the location and size of these dynamic tables. Pointers can also be used to allocate tables of a fixed size. The fact that PROTEL can dynamically allocate data store has a very important implication: the size of data tables does not have to be decided at design time or at compile time.

Types of Data Store

The following types of data store are in the DMS−100 switch:

- Protected Data Store
- Permanent Data Store
- Temporary Data Store
- DSSAVE Data Store
- DSRAM Data Store

It is the design requirement of a program that determines what store types are used. The low end of memory (CPU RAM) and the high end of memory which is reserved for I/O and maintenance registers are not assigned a data store type and are not allocated by the store allocator.

Protected Data Store

Protected Data Store (DSPROT) is used to define such elements as office configuration, what directory numbers are attached to what lines, and routing tables. Typically, DSPROT changes only in response to a user interface command and is used for constant data.

The DSPROT has hardware write protection and must have the protection removed prior to any write operations. The DSPROT remains allocated, and its contents unchanged over warm and cold restarts. Descriptions of restarts are located at the end of this article.

The CPU RAM Store (DSRAM) is cleared and deallocated on reload restarts. The DSSAVE, which includes information about what caused the previous restart, is not cleared on any type of restart, even when a different software load is installed.

Permanent Data Store

Permanent Data Store (DSPERM) is a memory area that does not have hardware write protection. The DSPERM remains allocated over all restarts, but the contents must be reinitialized after a restart reload.

This area is used to hold control information and long−term statistical information. Examples of control information include shared variables, call information, and the state (free or busy) of the different input/output devices. Examples of long−term statistical information include operational measurements, call statistics, and log report data.

Although the contents of DSPERM survive both cold and warm restarts, the area that is used for control information is normally reinitialized after all restarts except warm.

Temporary Data Store

Temporary Data Store (DSTEMP) does not have hardware write protection. The DSTEMP is deallocated and the contents cleared after every restart.

The DSTEMP area is used for short−term, transient data (for example, data necessary to execute a program and local variables for a procedure call).

DSSAVE Data Store

The DSSAVE Data Store area's page one remains allocated and unchanged over all restarts, even

when a new software load is installed. Therefore, it can be used to store information over reload restarts. There is no hardware write protection on DSSAVE.

DSRAM Data Store

The DSRAM Data Store area remains allocated and unchanged over warm and cold restarts. On reload restarts, it is deallocated by the system. It is used by selected applications that need rapid memory capabilities.

Program Store

Program Store Hardware – NT40

The program store contains the instructions required by the associated CPU for call processing, maintenance, and administrative tasks. The NT40 central processor and memory shelf has eight card slots available for active program store plus one card slot used as a memory controller. This controller card has 256k of memory to be used as replacement memory when a detected single fault occurs in any one of the memory cards. The memory cards come in different sizes, for example, the NT3X93 (256k words) and the NT4X80 (1−Mwords.)

Program Store Hardware – DMS SuperNode

Data store and program store are integrated. Memory is provided on two types of memory circuit packs:

- 4−MBytes of DRAM, divided into two 2−MByte memory modules.
- 6−MBytes of DRAM, divided into three 2−MByte memory modules.

Program Store Organization

The NT40 program store address consists of an 8−bit page and a 16−bit offset. Each page of program store contains 64k (65,536) bytes. For example, `#1FA2B4` is an address on page `1F`, with an offset of `A2B4` bytes from the beginning of the page.

The DMS SuperNode uses an address consisting of a 16−bit page and a 16−bit offset. Each page of DS contains 16−Mwords.

Bits within a byte of program store are addressed by number from 7−0, from the most significant bit to the least significant bit. The numbering of bits within a byte is illustrated in *Figure 10*.
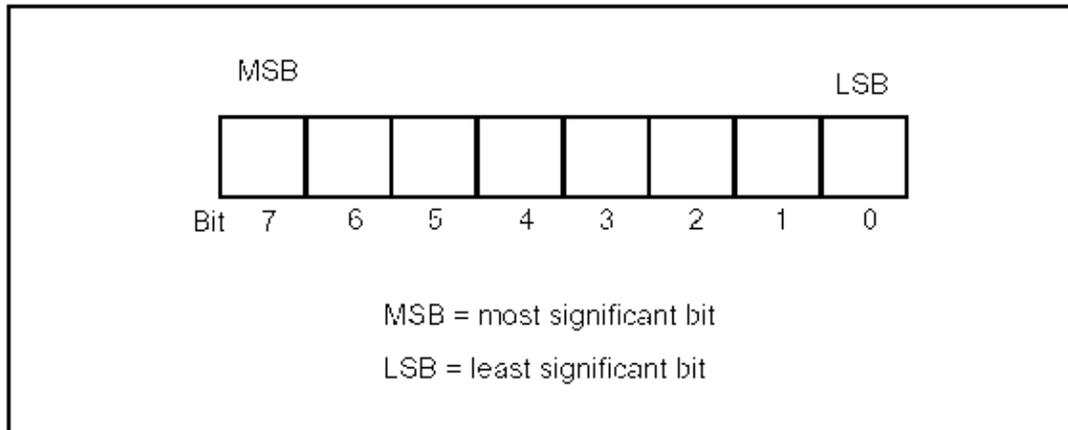
Figure 10 – Program Store Bit Numbering

Pointers and Descriptors

Program store procedure descriptors are located in the protected data segment of the module. They are used to point to procedures stored in the program store.

Dynamic Allocation of Program Store

Only the loader and some debugging tools allocate program store. The same utilities and methods used to allocate data store are used to allocate program store.

Protected Program Store

Protected program store has hardware write protection. All permanent programs are loaded into PSPROT. Program store survives all restarts.

Store Allocation

The Support Operating System (SOS) allocator manages the allocation and deallocation of all memory in the CC. It handles both data store and program store. When the store allocator undergoes initial program loading initialization, all of the data store and program store are divided up into areas of memory known as vast areas. For all types of data store except DSRAM and DSSAVE, vast areas range in size from 16k words to 32k words. For DSRAM and DSSAVE, vast areas can be up to 32k words, with no minimum size. Program store vast areas have 32k bytes.

Initially, vast areas do not have a type associated with them. As allocation requests are made, vast areas are set to the type required, which can be one of the following: DSTEMP, DSPERM, DSPROT, DSSAVE, DSRAM, PSTEMP, and PSPROT.

Vast areas also have an associated status that indicates if the area is available to be allocated as any store type (designated as available) or if it is already in use as a specific type (designated as in use).

Store is allocated in contiguous segments, known as store blocks, which may be any size up to the size of a vast area. Header tables are maintained to keep track of the allocated vast areas and of the store blocks that are allocated within the vast areas.

38

Store Allocation Lists

The store allocator checks to ensure that all allocations of store remain within the limits of one vast area. When store is deallocated, it is entered into the list of free store for that vast area. Adjacent free store blocks are concatenated (linked together). Blocks of store cannot be partially deallocated; therefore, half of a block of store cannot be deallocated. On restarts, vast areas of type DSTEMP are set to a status of available.

Segmented Store

The segmented store utility is provided to allow the store allocation of variable−size tables. Use of the segmented store allows large tables to be extended without the need to copy or change the store already allocated. Segmented store also allows the allocation of tables larger than a vast area.

Segmented store allows a conceptually contiguous table of store to be physically distributed in noncontiguous blocks of store. All the blocks are the same size. It uses a two−level table and is implemented in the module SEGSTOR. The table can have up to 64k items, the addressing range of a 16−bit word.

SuperNode

The DMS SuperNode is part of a second generation of the DMS−100 switch in which the DMS SuperNode replaces the NT40 central processor. There are some DMS SuperNode and the NT40 similarities, for example, both of the control component CPU memory areas consist of two distinct elements, program store and data store. Program store contains variable−length program instructions. Data store contains data. At the same time, one of the most significant differences in the two control components is memory. A comparison of the memory attributes of both switch generations is summarized in the following table:

```
--------------------------------------------------------------------------------
Comparison of Memory – NT40 and SuperNode

Memory Attribute          Central Control CPU          DMS SuperNode CPU
--------------------------------------------------------------------------------
Addressing Unit

  Program Store           Byte addressable             Byte addressable
  Data Store              Word addressable             Byte addressable
--------------------------------------------------------------------------------
Address Bus Width         24 bits                      24 bits
--------------------------------------------------------------------------------
Address Range                                          Combined program store and data
                                                       store: 4 gigabytes

  Program Store           16 megabytes
  Data Store              16 megawords
--------------------------------------------------------------------------------
Data Bus Width            16 bits                      32 bits
--------------------------------------------------------------------------------
Page Size

  Program Store           64 kilobytes                 64 kilobytes
  Data Store              64 kilowords                 64 kilobytes
--------------------------------------------------------------------------------
Vast Area Size

  DSRAM                   Up to 32 kilowords           12 kilobytes
  DSSAVE                  Up to 32 kilowords           32 or 64 kilobytes
  OTHER Data Store        16 to 32 kilowords           32 or 64 kilobytes
  Program Store           32 kilobytes                 32 or 64 kilobytes
  RAM68DT                 N/A                          20 kilobytes
  RAM68PP                 N/A                          32 kilobytes
--------------------------------------------------------------------------------
–End–
```

A DMS SuperNode has ten card slots available for memory on the DMS−Core shelf. The program store and data store memory in a SuperNode configuration is pooled in that the memory cards can be used for either of the two stores, and there is no physical separation of the two stores as there is in the NT40. However, once the memory has been designated as one store or the other, it can only be used for that store until the designation has been changed.

There are two different memory cards available:

- 6−MByte − NT9X14BB
- 24−MByte − NT9X14DB

There are recommended mixed memory card configurations when the initial DMS−SuperNode installation provides only 6−MByte cards and a memory extension job is required. Refer to the following table:

```
--------------------------------------------------------------------------------
Recommended Mixed Memory Card Configurations

Total MBytes Active Plus
Required Administrative          6 MByte   24 MByte   6 MByte        24 MByte
Spare                            Cards     Cards      Spare Cards    Spare Cards
--------------------------------------------------------------------------------
0-42                             7         0          1              0
42-48                            8         0          1              0
48-54                            9         0          1              0
54-60                            7         1          1              1
60-80                            6         2          1              1
84-100                           5         3          1              1
10-116                           4         4          1              1
11-132                           3         5          1              1
12-156                           2         6          1              1
16-168                           1         7          1              1
168-212                          0         9          0              0
--------------------------------------------------------------------------------
-End-
```

Vast Areas

Vast area sizes for each store type are shown in the previous figure. For SuperNode DSRAM, the vast area size is 12–kilobytes. For RAM68DT, it is 20–kilobytes; for RAM68PP, it is 32–kilobytes. For all other types of data store and program store, the vast area size is 32–kilobytes or 64–kilobytes. Vast areas are initially allocated with a size of 64–kilobytes. If less than half of a vast area is used at initial program load time, the store allocator splits the 64–kilobyte vast area into two 32–kilobyte vast areas. Both of these 32–kilobyte areas are of the same store type since they reside on the same 64–kilobyte page of memory. The store allocator reserves the unused 32–kilobyte vast area until some of its assigned type is required.

The store allocator cannot allocate blocks of store larger than the size of a vast area. Thus, for all types of data store, except DSRAM, data structures cannot have more than 64–kilobytes of contiguous store. Larger structures are accommodated by segmenting the structure into blocks of 64–kilobytes or less. However, procedures cannot be segmented; therefore, they cannot be larger than 64–kilobytes in size (32–kilobytes in RAM68PP).

Fragmented Memory

Fragmented memory is the deallocated memory within "INUSE" vast areas that has no data to be assigned to its free blocks; that is, the memory was deallocated, but no additional requests were made that would fit into its space. Therefore, there are holes in the used memory areas. The available blocks of memory that make up the holes may be recovered by either a cold restart or by the dump and restart process when the allocator finds a block of data that fits into the hole. In the engineering process, the provisioning formula provides an additional eight percent of memory in data store to compensate for fragmentation.

The DSTEMP memory can be made available by a warm restart while DSPROT memory can be overwritten by a dump and restore (new software load). The DSRAM memory can be made available by a restart reload.

An accurate status of the switch memory areas may be obtained through the MAP Command Interpreter (CI) utility, STORE AREAS, which displays a complete listing of all vast area memory allocation. Memory addresses are presented in hexadecimal form, and a total free hexadecimal representation of all free data store or program store is displayed at the bottom of the listing.

Determining fragmented memory (in bytes) for the NT40 may be accomplished using the MAP CI utility, `STORE AREAS,` and can be calculated by following the steps in the following procedure:

1. Obtain the start address of the first vast area. Convert the hexadecimal address to decimal. This number is the "Start In Use" value in the percent fragmentation calculation.

2. Obtain the start address of the first vast area with a status of "Available" after the last vast area with a status of "In Use". Convert the hexadecimal address to decimal. This number is the "Start Avail" value in the percent fragmentation calculation.

3. Obtain the start address of the last vast area. Convert the hexadecimal address to decimal. This number is the "End Avail" value in the percent fragmentation calculation.

4. Obtain the hexadecimal value directly below the last vast area. This is the total free space for all memory associated with the vast areas. Convert this number to decimal. This number is the "Total Free" value in the percent fragmentation calculation.

5. Use the following formula to calculate the percentage of fragmentation:

$$\% \text{ Fragmentation} = \frac{\text{Total Free} - (\text{End Avail} - \text{Start Avail})}{(\text{End Avail} - \text{Start In Use})} \times 100$$

Program store memory fragments very little. Sufficient program store is provided for approximately one year of source code, in accordance with current NT software administration policy.

Restarts

A restart is an ordered initialization of every module in the system. Restarts serve two important purposes.

- Initialization of the system, when it is installed or when new system components (either hardware or software) are installed.

- Last-resort error recovery while the system is operational.

There are four types of restart: *warm*, *base*, *cold*, and *reload*.

Warm Restart

A warm restart is the least severe type of restart. Temporary Data Store (DSTEMP) is cleared and deallocated. All other types of store survive a warm restart.

Base Restart

A variation of a warm restart, the base restart is used to debug initialization code during the software development process. A base restart is a drastic measure. It disables the system's call processing capability and, therefore, should never be performed in a system that is operational.

Cold Restart

A cold restart is more severe than a warm restart. DSPERM survives a cold restart, but its contents are suspect since some programs cause automatic cold restarts if their DSPERM appears to be corrupted. For this reason, many modules reinitialize DSPERM on cold restarts. A cold restart has all of the effects of a warm restart, plus additional effects due to the reinitialization of data in DSPERM.

Call processing is affected by the reinitialization of the data in DSPERM in which the following events occur:

- The switching network connection maps in the CC are cleared, allowing existing switching network paths to be reused by new calls after the restart.

- The state of each line and trunk in the CC is set to idle.

- Data associated with each call is reinitialized to the idle state.

Calls in progress that have reached the talking state retain their switching network connections during the restart, but they may be disconnected if their switching network paths are reused by new calls after the restart. There is no record of the call's existence in the CC; the only call processing function that can be performed is call–down. No billing data are recorded for these calls.

Reload Restarts

A reload restart is even more severe than a cold restart. It has all the effects of a cold restart; in addition, DSPERM is cleared but remains allocated. The DSRAM is cleared and deallocated on reload restarts. The DSSAVE, which includes information about what caused the previous restart, is not cleared on any type of restart, even when a different software load is installed.

AT&T Job Aid

```
MLID # or Control # : 22727
          Version : 3.0
       Issue Date : 12/12/2003
   Document Title : Using ALI to Assign Switch OE for DMS, #5 ESS and IOS (SMX–2100)
```

Overview

This document gives an overview on how to use the Access Line Inventory (ALI) database to assign, reserve, unreserve, and update Trunk Group Numbers (TGN) and associated members to selected switch Office Equipment (OE) for Nortel DMS, Lucent #5 ESS, and Unisphere SMX–2100, the Internet Offload Switch (IOS).

Business Rules

- This process is the same for DMS and #5 ESS in ALI.
- This document assumes some knowledge of ALI.
- Switch Production Agent has identified an unused TGN in the switch.
- When assigning OE to a trunk group, the OE must be reserved by you or in "SPARE" status.

Part A: Main Switch OE Inventory Screen

Task

Main Switch Inventory Screen

Action

Enter the **Main Switch Inventory Screen**:

1. Open the **Access Line Inventory and Assignment System** application on your PC.
2. On the **Tool Bar**, click *Edit*.
3. Select **Switch OE – Inventory**.

This following screen appears:

Switch OE Inventory

File Edit DLC DSL Non-LSO Utilities Help ALI DB Server : Production

City   Piscataway
Switch CLLI   Switch Type

Search   Exit
Add Switch   Delete Switch

Switch CLLI   OE Type   OE
Upper Window FULL OE List

SM Type
OE Type
Device ID
Module ID
Card /
Card Range   to
Card DS ID

Clear

Show Translation

Add OE
Delete OE
Bulk Add OE
Bulk Delete OE

Remarks

Update Remarks

OE Status   OE Type
View   SPARE
OE Type   OE

| Lower Window SPARE – RESERVED OE List |

Select OE From
○ Spare OE List
○ Full OE List

Trunk Management
Corporate Lines
CoLocate Assignment
DS0 Assignment

Change OE status to :
Change

Modified By :
On :

Another example:

Switch OE Inventory

File Edit DLC DSLAM Non-LSO Utilities Help

City   Miami
Switch CLLI   0JUSFLTLDS3   Switch Type DMS

Search   Exit
Add Switch   Delete Switch

Switch CLLI   OE Type   OE
0JUSFLTLDS3 SPME 0-SPM-0-100-11661
0JUSFLTLDS3 SPME 0-SPM-0-101-11771
0JUSFLTLDS3 SPME 0-SPM-0-102-11812
0JUSFLTLDS3 SPME 0-SPM-0-103-11922
0JUSFLTLDS3 SPME 0-SPM-0-104-12032
0JUSFLTLDS3 SPME 0-SPM-0-105-12142
0JUSFLTLDS3 SPME 0-SPM-0-106-12252
0JUSFLTLDS3 SPME 0-SPM-0-107-12362
0JUSFLTLDS3 SPME 0-SPM-0-108-12472
0JUSFLTLDS3 SPME 0-SPM-0-109-12513

SM Type
OE Type SPME   ☑ PRI
Device ID 0
Module ID 0
Card /
Card Range 100   to
Card DS ID 11661

Clear

Show Translation

Add OE
Delete OE
Bulk Add OE
Bulk Delete OE

Remarks

Update Remarks

OE Status   OE Type
View   SPARE   SPME
OE Type   OE

SPME 0-SPM-0-100-11661
SPME 0-SPM-0-101-11771
SPME 0-SPM-0-102-11812
SPME 0-SPM-0-103-11922
SPME 0-SPM-0-104-12032
SPME 0-SPM-0-105-12142
SPME 0-SPM-0-106-12252
SPME 0-SPM-0-107-12362
SPME 0-SPM-0-108-12472

Select OE From
○ Spare OE List
○ Full OE List

Trunk Management
Corporate Lines
CoLocate Assignment
SWITCH COLR

Change OE status to :
Change

Modified By :
On :

This is the **Switch OE Inventory Screen**. #5 ESS and DMS switch equipment inventories can be accessed via the **Main Inventory Screen** for all line and trunk products including the Lucent AnyMedia D4 hub.

The following actions are available via this screen:

- ♦ Add, update, or remove remarks – **Update Remarks** button.
- ♦ Change the status of an OE, i.e. "RESERVED" to "SPARE" – **Change** button.
- ♦ Locate or verify the translation of an OE (OE must be highlighted in the *upper* window) – **Show Translation** button.
- ♦ See switch OE by status, i.e. "SPARE", "RESERVED", "ASSIGNED", or "DEFECTIVE" – **View** button.
- ♦ Access the screens needed to complete line and trunk inventory details – **Trunk Management**, **Corporate Lines**, and **DS0 Assignment** buttons.

Search for Spare Switch OE by Type

1. Click **Switch CLLI** – select the CLLI from the drop down box.
2. Click **Search**. This will display the full OE list in the *upper* window.

In the *lower–left* window:

1. Under **OE Status** – select "SPARE".
2. Under **OE Type** – select OE type.
3. Click **View**. This will show unassigned switch OE.
4. Scroll through list and identify a "SPARE" OE.
5. Go to the *upper* window, click on that OE in the **Full OE List** on the *upper* window.
6. Click on **Show Translation** button to verify status is "SPARE".

Adding and Updating Remarks

1. Scroll through inventory to the assigned OE.
2. Click on the OE to highlight.
3. Enter the **Customer Name**, **Pjob**, **ASR**, **SWF**, **Date**, **Your Name**, **Phone Number**.
4. Click **Update Remarks**.

Reserve OE Assignments

1. Search and find the OE to be reserved.
2. Click on the selected OE.
3. Click on **Spare OE List**.
4. Click **Reserve OE**. The OE will disappear from the "spare" window.

Un–Reserve OE Assignments

1. Search and find the OE to be unreserved.
2. Select "RESERVED" instead of "SPARE". The user who reserved the OE will appear in the *lower right–hand* corner of the screen.
3. If you are the user who reserved this, click **Un–Reserve OE**. The OE will change from "RESERVE" to "SPARE" status.
4. If you are *not* the user who reserved this, please contact the ALI administrator via email to remove reserve status.

Part B: Trunk Management Screen

Task

Trunk Assignments Screen

Action

Identify a spare trunk switch OE by type from the **Main Inventory Screen**.

1. Highlight the spare OE in the *lower* window.
2. Click on the **Trunk Management** button.

This will takes you to the **Trunk Assignments Screen**.

The spare OE selected will auto populate in the OE field on this screen.

Task

Trunk Assignment Screen – Create a New Trunk Group Number

Action

Create a *new* trunk group.

1. Click **Search**.
2. Scroll through **Trunk Groups** and find an "open" (missing) trunk group number.
3. Refer to AT&T Job Aid #17336 – *TGN Assignment Reference*.

> **Note:** All spare trunk group numbers must be verified in the switch before adding in ALI.

4. Using the information from the customer contract and your translations; populate each field of the *lower* screen. Fill in as much information as you can.
5. The following fields are *mandatory* data fill:

◊ **Trunk Group No.**, **Trunk Purpose**, **Trunk Class**, **BTN**, **Directions**, **Glare**, **ASR No.**, **In Pulse**, **Out Pulse**, **Screening**, **Hunt**, **Frame**, **Format**

6. Click **Create**.

Task

Trunk Assignment Screen – Associate OE and Trunk Group Number

Action

Associate the *new* trunk group to the switch OE and create members.

The switch OE that was highlighted in the spare OE on the **Main Inventory Screen** should be populated in the OE field (*right* screen). Verify it is the correct OE for this customer.

1. Click **Search** and scroll through the trunk group box to find the TGN you just created.
2. Click on TGN to assign members.
3. Enter the ASR number associated with the members in the **ASR No.** field under the OE field.
4. Enter the trunk group's member in **TG Member From** and **TG Member To** fields.
5. Enter the starting port/channel assignment of the OE in the **Port/Channel From** field.
6. *For #5 ESS –* **TCIC** is the same as the `CLCI TRK ID` in the 5.5 View on the #5 ESS.
7. Click **Assign**.

Task

Trunk Assignment Screen – Change Trunk Group Number Information

Action

Change *existing* trunk group information.

1. Click **Search**.
2. Double−click on the TGN in the **Trunk Groups** field and you will see *all* the members.
3. Change the information in the *lower* window.
4. Click **Update** button.

Task

Trunk Assignment Screen – Delete Trunk Group Members

Action

Delete *existing* trunk group members.

1. Click **Search**.
2. Double−click on the TGN in the **Trunk Groups** field and you will see *all* the members.
3. Enter the members in the **TG Member From** and **TG Member To** fields.
4. Click **Unassign** button.

> *Note:* Unassigning *all* members from an OE will also unassign the switch OE and it will return to "SPARE" status on the **Main Switch Inventory Screen**. Only ranges associated with one OE can be deleted at one time. Repeat as necessary.

Task

Trunk Assignment Screen – Delete Trunk Group

Action

Delete an *existing* trunk group number.

1. Click *Search*.
2. Click on TGN.
3. Click *Delete* button.

   Note: All the trunk members must be removed *prior* to the TGN being deleted.

Part C: Corporate Line Assignment

Task

Corporate Line Screen – Create a New Remote Terminal (RT)

Action

From the **Main Switch Inventory Screen**:

1. Select **OE Status** of "SPARE".
2. Click *View*.
3. Click on OE in box to highlight it.
4. Click on *Corporate Lines*.

   Note: In DMS cities, this screen will appear. In #5 ESS cities, this screen appears without the **Site**, **Frame** and **Unit** boxes, there is a **RT No.** box above the **Switch Interface**.

This is the **Corporate Line Screen**:
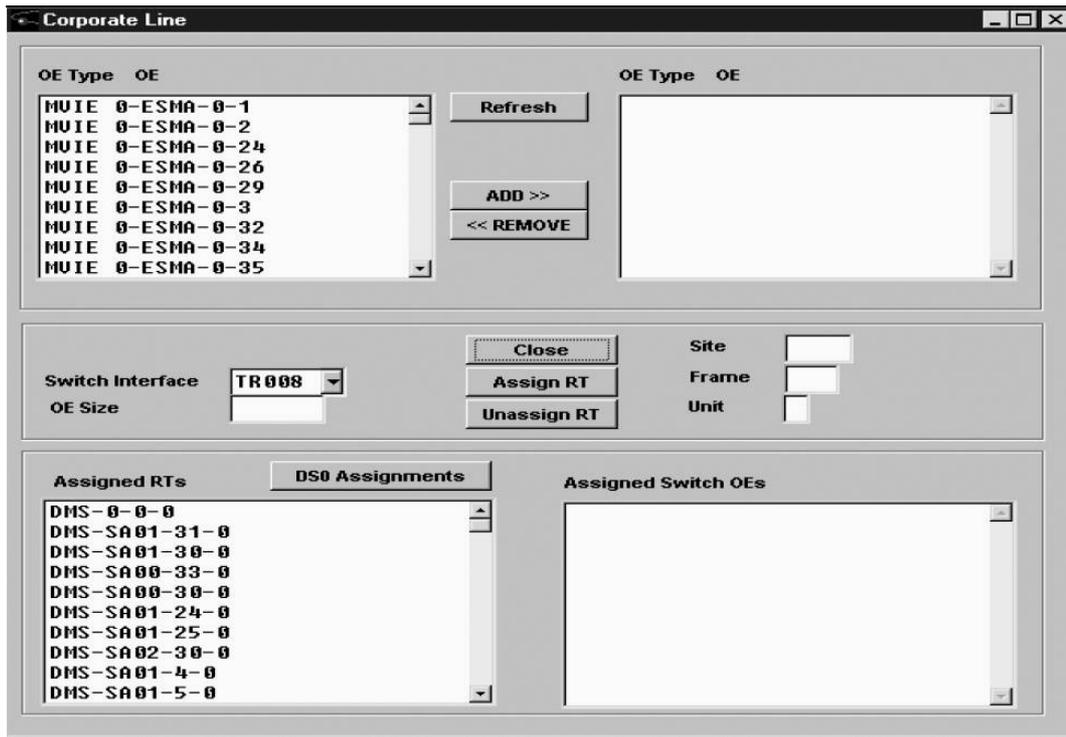
Create a New Remote Terminal/SMA2 Link – Nortel DMS

1. Scroll and highlight the spare OE in the *upper–left* window.
2. Click on **ADD >>**.
3. Enter **Site**. (Use SAxx Where xx is the SMA2)
4. Enter **Frame**. (Use the link number)
5. Enter **Unit**. (Zero is used)
6. Enter **Switch Interface**. (Use TR008)
7. Enter **OE Size**. (Use 24)
8. Click **Assign RT**.
9. The RT will appear in left box under **Assigned RTs**.
10. Click on the assigned RT.

Create a New Remote Terminal – Lucent #5 ESS

1. Scroll and highlight the spare OE in *upper–left* window.
2. Click on **ADD >>**.
3. Enter the **RT No.**
4. Enter **Switch Interface**. ((Use TR008)
5. Enter **OE Size**. (Use 24)
6. Click **Assign RT**.
7. The RT will appear in left box under **Assigned RTs**.
8. Click on the assigned RT.

Part D: DS0 Assignment

Task

DS0 Assignment Screen – Build New DS0s

Action

The **DS0 Assignment Screen** can be reached by clicking the **DS0 Assignment** button on the **Main Switch Inventory Screen**.

This is the **DS0 Assignment Screen**:

Adding DS0s to an Assigned Remote Terminal (DMS and #5 ESS)

1. Click *OE/RT Binocular* button. The assigned OE/RT box will pop up.
2. Double−click the RT to select it.
3. Click *Build Channels*.

Create DS0 Shelf for DMS

1. The **Create DMS Shelf** box pops up with RT in the OE box.
2. Enter **Shelf**. (Use 1)
3. Enter **Channel To** and **From**. (Use 1 to 24)
4. Click *Build Channels*. All 24 LENs will populate.

Task

DS0 Assignment Screen – Assigning the Telephone Number (TN) in the DS0 Screen

Action

1. Click on the **Channel** to highlight.
2. Enter the **ASR/Pjob #** for this customer.
3. For SINA orders enter the entire **CKT ID** of the DS0 then enter the **Customer Name**,
   otherwise, enter only **Customer Name**.
4. Enter the 10−digit TN assigned to this channel.
5. Click *Assign/Update* to assign TN.
6. Click on the **Channel** to highlight.
7. Re−enter the next TN assigned to that channel.
8. Click *Assign/Update* to assign TN.
9. Repeat steps 6, 7, and 8 for each TN on the T1.

Part E: AnyMedia Hub DS0 Assignment – #5 ESS and DMS

Task

DS0 Assignment Screen – AnyMedia Hub

Action

The AnyMedia hub DS0 shelves have been pre–entered into the **DS0 Assignment Screen**. The switch OE name in the switch will match the RT in ALI.

The CRV port range (24 DS0s) is *not* defined; please see the glossary page for a CRV port to DS0 conversion chart.

1. Click *OE/RT Binocular* button. The assigned OE/RT box will pop up.
2. Scroll through the window and highlight the RT for the AnyMedia hub you are working on.
3. Double–click the AnyMedia RT to select it.
4. Click on *Search OE/RT*. All 768 DS0s will populate.
5. Add each TN per the *DS0 Assignment Screen – Assigning the TN in the DS0 Screen* step in Part D.

Part F: Removing DS0s and Remote Terminals

Task

Corporate Line/PRIMEPATH DS0 Assignment Screen – Delete a RT

Action

Removing DS0s to an assigned RT (DMS and #5 ESS).

The **DS0 Assignment Screen** can be reached by clicking the *DS0 Assignment* buttons on either the **Main Switch Inventory Screen** – or select *Edit* –> *Switch_OE* –> *Customer Assignment* on the toolbar.

1. Select the **Correct City**.
2. Select the **Correct Switch**.
3. At the **OE/RT Window** click on the binoculars and select the remote terminal created for your OE, i.e. `DMS-SA20-36-0` or `DEN-1-0-10-0`.
4. Click *Select RT* button.
5. Click *Search OE/RT* button. This will bring up all DS0 assignments for your OE.
6. Click on *Delete OE/RT* button.
7. `"Warning:` This will delete all channels in Selected RT and delete RT also`"`
8. Answer **Yes** , `"OE/RT deleted"`

This is an example **DS0 Assignment Screen**:
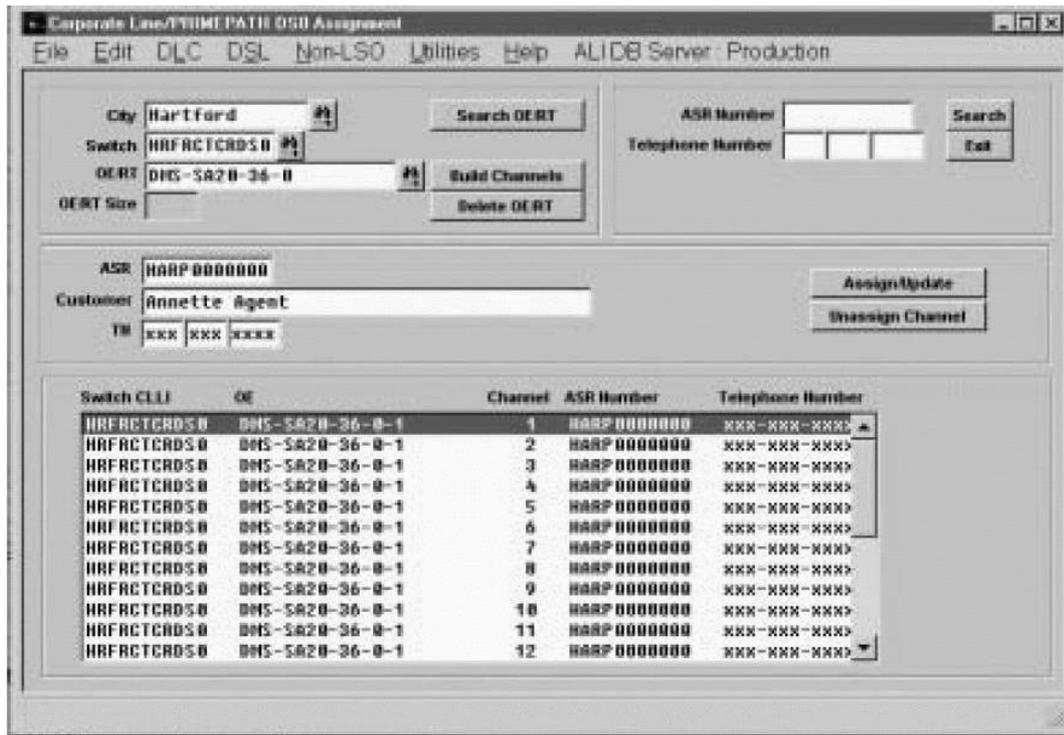
> *Note:* *All* DS0s do not need to be removed *prior* to deleting a RT.

Return OE to Spare on Main Swith OE Inventory Screen

1. Return to **Main Inventory Screen** by selecting **Edit** –> **Switch_OE** –> **Inventory**.
2. Find OE in the *upper* window and clear remarks field that depicts old information.
3. Click on **Show Translation**. It will be defined as "TRANSLATION UNKNOWN".
4. Click on **Update Remarks**.
5. Click on **Show Translation** again – it is now defined as "SPARE".

Update Orderlog Notes

Orderlog notes should show ALI has been updated and equipment returned to spare. Include your name and phone number.

Part G: SMX–2100 IOS Reserving and Assigning

Task

Reserving SMX–2100 IOS Slot and DS1 on Main Switch Inventory Screen

Action

Search for spare switch OE by type.

1. Click **Switch CLLI** – select the CLLI from the drop down box.
2. Click **Search**. This will display the **Full OE List** in the *upper* window.
3. Scroll through inventory to the desired OE.
4. Click on the OE to highlight.
5. Enter the **Customer Name**, **Pjob**, **ASR**, **Date**, **Your Name**, and **Phone Number**.
6. Click **Update Remarks**.
7. Click on **Show Translation** button to verify status is "SPARE".

> **Note:** If remarks show reservation/assignment to another customer, resolve prior to continuing.

All spare OE in ALI must be verified in the switch before completing ALI. See AT&T Job Aid #28353 – *Building a Prime Connect in an IOS (SMX–2100) Switch.*

Assigning SMX–2100 Switch OE

There are no TGN assignments for IOS groups. ***Trunk Management*** cannot be used to assign equipment.

1. In the same **Main Inventory Screen** in the *lower–left* window:
2. Under **OE Status** – select "SPARE".
3. Under **OE Type** – select "DXM1" or "DXM2".
4. Click ***View***. This will show unassigned OE.
5. Scroll through list and identify the same spare OE reserved above.
6. Pull down menu at **Change OE status to:** and select "ASSIGNED".
7. Click ***Change*** button
8. Update orderlog notes as explained in Part F.

Part H: Disconnect ALI for SMX–2100

Task

Returning SMX–2100 OE to Spare Status

Action

1. Click ***Switch CLLI*** – select the CLLI from the drop down box.
2. Click ***Search***. This will display the **Full OE List** in the *upper* window.
3. Scroll through inventory to the desired OE.
4. Click on the OE to highlight.
5. Remove the **Customer Name**, **Pjob**, **ASR**, **Date**, **Your Name**, **Phone Number**.
6. In the same **Main Inventory Screen** in the *lower–left* window, select "ASSIGNED" at OE status.
7. Select "DMX1" or "DMX2" at **OE Type**. Click ***View*** button.
8. Scroll through inventory to same OE as above.
9. Pull down menu at **Change OE status to:** and select "SPARE".
10. Click ***Change*** button.
11. Click ***Update Remarks***. Click ***Show Translation***. Status should be "SPARE".
12. Update orderlog notes as explained in Part F.

Part I: Glossary

#5 ESS & DMS CoLocate (COLR) Card to CRV Port to LEN Assignment Guide

A CRV port is a DS1 equivalent switch OE assignment of 24 DS0s. Each customer is assigned the full 24 sequential DS0s (T1 equivalent) even if there are *less* than 24 TNs assigned. For #5 ESS, the CRV port equals the LEN assignments.

```
--------------------------------------------------------------------------
COLR -> CRV Port -> LEN Assignment Guide

(CoLocate - COLR)    (Switch OE)          (Switch Translations,
                                          SITE = Site name of AnyMedia hub)


Card / Port          CRV Ports            LEN Assignments
--------------------------------------------------------------------------
1-1                  0001-0024            SITE 0_0_0_1 to SITE 0_0_0_24
1-2                  0025-0048            SITE 0_0_0_25 to SITE 0_0_0_48
2-1                  0049-0072            SITE 0_0_0_49 to SITE 0_0_0_72
2-2                  0073-0096            SITE 0_0_0_73 to SITE 0_0_0_96
3-1                  0097-0120            SITE 0_0_0_97 to SITE 0_0_1_20
3-2                  0121-0144            SITE 0_0_1_21 to SITE 0_0_1_44
4-1                  0145-0168            SITE 0_0_1_45 to SITE 0_0_1_68
4-2                  0169-0192            SITE 0_0_1_69 to SITE 0_0_1_92
5-1                  0193-0216            SITE 0_0_1_93 to SITE 0_0_2_16
5-2                  0217-0240            SITE 0_0_2_17 to SITE 0_0_2_40
6-1                  0241-0264            SITE 0_0_2_41 to SITE 0_0_2_64
6-2                  0265-0288            SITE 0_0_2_65 to SITE 0_0_2_88
7-1                  0289-0312            SITE 0_0_2_89 to SITE 0_0_3_12
7-2                  0313-0336            SITE 0_0_3_13 to SITE 0_0_3_36
8-1                  0337-0360            SITE 0_0_3_37 to SITE 0_0_3_60
8-2                  0361-0384            SITE 0_0_3_61 to SITE 0_0_3_84
9-1                  0385-0408            SITE 0_0_3_85 to SITE 0_0_4_08
9-2                  0409-0432            SITE 0_0_4_09 to SITE 0_0_4_32
10-1                 0433-0456            SITE 0_0_4_33 to SITE 0_0_4_56
10-2                 0457-0480            SITE 0_0_4_57 to SITE 0_0_4_80
11-1                 0481-0504            SITE 0_0_4_81 to SITE 0_0_5_04
11-2                 0505-0528            SITE 0_0_5_05 to SITE 0_0_5_28
12-1                 0529-0552            SITE 0_0_5_29 to SITE 0_0_5_52
12-2                 0553-0576            SITE 0_0_5_53 to SITE 0_0_5_76
13-1                 0577-0600            SITE 0_0_5_77 to SITE 0_0_6_00
13-2                 0601-0624            SITE 0_0_6_01 to SITE 0_0_6_24
14-1                 0625-0648            SITE 0_0_6_25 to SITE 0_0_6_48
14-2                 0649-0672            SITE 0_0_6_49 to SITE 0_0_6_72
15-1                 0673-0696            SITE 0_0_6_73 to SITE 0_0_6_96
15-2                 0697-0720            SITE 0_0_6_97 to SITE 0_0_7_20
16-1                 0721-0744            SITE 0_0_7_21 to SITE 0_0_7_44
16-2                 0745-0768            SITE 0_0_7_45 to SITE 0_0_7_68
--------------------------------------------------------------------------
-End-
```

For DMS switches *only*, equipment as it appears in ALI database can be displayed in a different
variation than the switch.

```
-------------------------------------------------------------------------
Product              Switch Format Example          ALI Format Example
-------------------------------------------------------------------------
Prime Path           SMA2 19, link 37               MVIE 10-ESMA-19-37
-------------------------------------------------------------------------
Prime Xpress         DTC 52 DTCCKTTS 1              DTE 40 - DTC-52-1
-------------------------------------------------------------------------
Prime Plex           DTCI 15 DTCCKTTS 2            DTEI 10-DTCI-15-2
-------------------------------------------------------------------------
Prime Plex           SPM 0, DTCCKTTS 100          SPME 0-SPM-0-100-11661
-------------------------------------------------------------------------
DXM1
-------------------------------------------------------------------------
DXM2                 DXM2 9-DXMI0-4-6
-------------------------------------------------------------------------
-End-
```

For DMS switches *only*, LEN assignment information.

There are 768 DS0s in the AnyMedia hub broken out as follows:

The first range of LENs:

```
SITE 00 0 00 xx
```

where **xx** is `01` through `99`.

Example:

```
SITE 00 0 00 01

to

SITE 00 0 00 99
```

The next six ranges of LENs:

```
SITE 00 0 (01-06) xx
```

where **xx** is `00` through `99`.

Example:

```
SITE 00 0 01 00

to

SITE 00 0 06 99
```

The last range of LENs:

```
SITE 00 0 07 xx
```

where **xx** is `00` to `68`.

Example:

```
SITE 00 0 07 00

to

SITE 00 0 07 68
```

Ultrasonic Surveillance Bug

Overview

An ultrasonic technical surveillance device is a device for the covert interception of audio which is transmitted, via an inaudible 40 kHz carrier frequency, to a remote listening post. The use of ultrasonic frequencies is a *very* effective way to prevent any detection of your surveillance bug.

The ideal use for ultrasonic technical surveillance devices is during outdoor or large indoor operations. Ultrasonic waves are fairly directional (about 15° beamwidth), but are easily attenuated. Doors, glass, Plexiglass, etc. will block ultrasonics (to varying degrees) but they can seep through any cracks around windows or under doors. For more information on using ultrasonic surveillance devices, purchase the book The Basement Bugger's Bible by Shifty Bugman.

Applications

Anyone with an I.Q. greater than a Slashdot moderator (i.e. 4) knows that Democrats are the most evil people on this planet. And like the little sheep they are, they always seem to gather in bunches (don't have jobs, most likely) which makes the covert surveillance of their "activities" quite easy – and legal! To protect the welfare of yourself and your family, you should do your best to monitor the activity of these nutcases. Or just shoot them.

Here are some examples from zombietime.com.

Anti–Semitic sign at the February 16, 2003 "peace" rally.

Pro−terrorist sign at the March 20, 2004 rally.

Another pro−terrorist sign at the March 20, 2004 rally. Don't forget the resistance in France!

Another protester and message at the June 5, 2004 "anti–war" march.
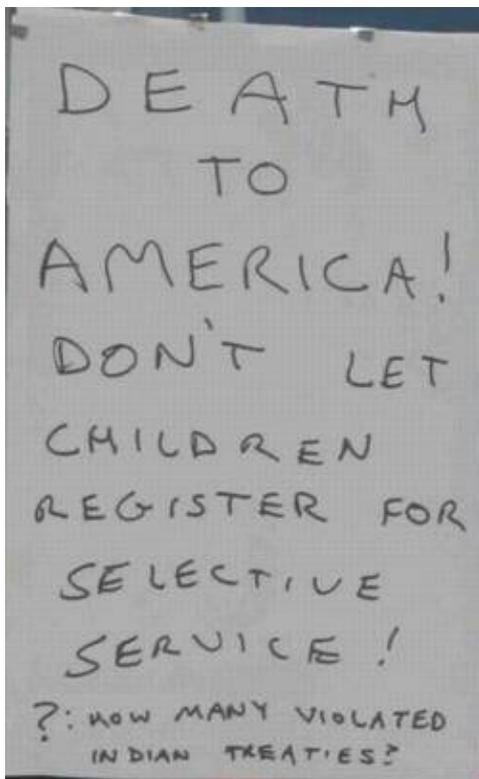
Patriotic message in the parade following the March 20, 2004 rally.

But hard working tax payers in middle America pay for your faggot AIDS medication. Post–election rally on November 3, 2004.

Young child holding a sign accusing Jews of stealing organs from dead Palestinians, at the Bus 19 anti–terror rally in Berkeley on January 16, 2005.

A protester displays her sentiments regarding Israel and the United States on June 5, 2004.

Protesters dressed as terrorists, at the Bus 19 anti–terror rally in Berkeley on January 16, 2005.
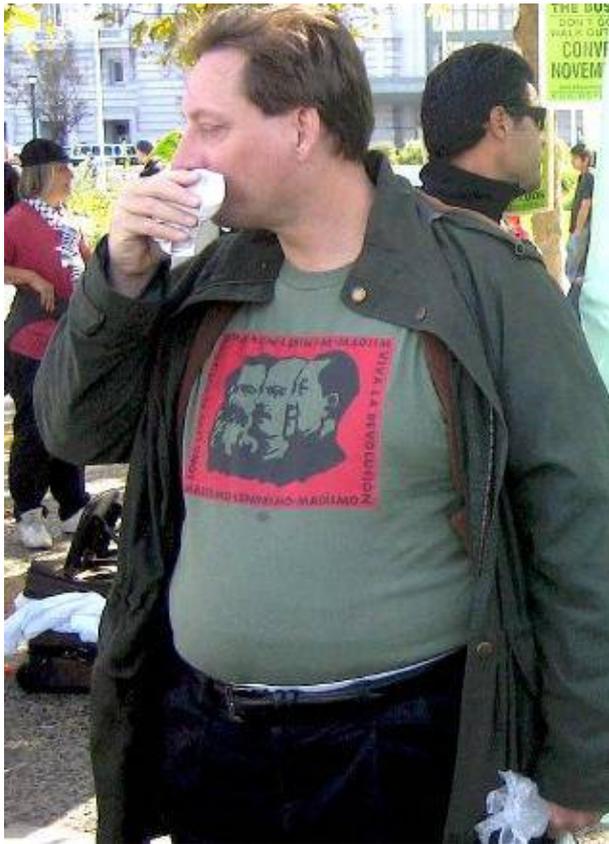
Under a true communist system, everyone is well−fed.
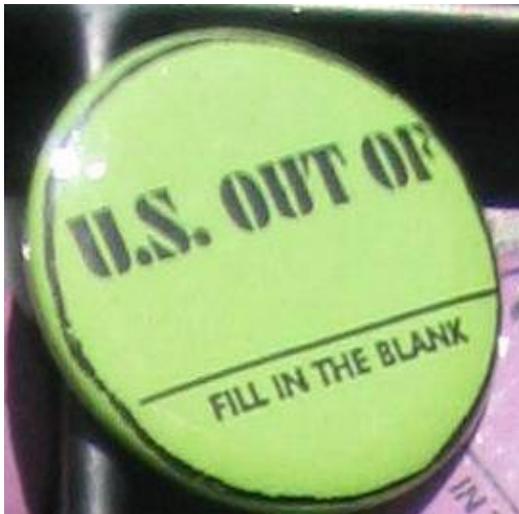
France.

Another pro–terrorist sign.
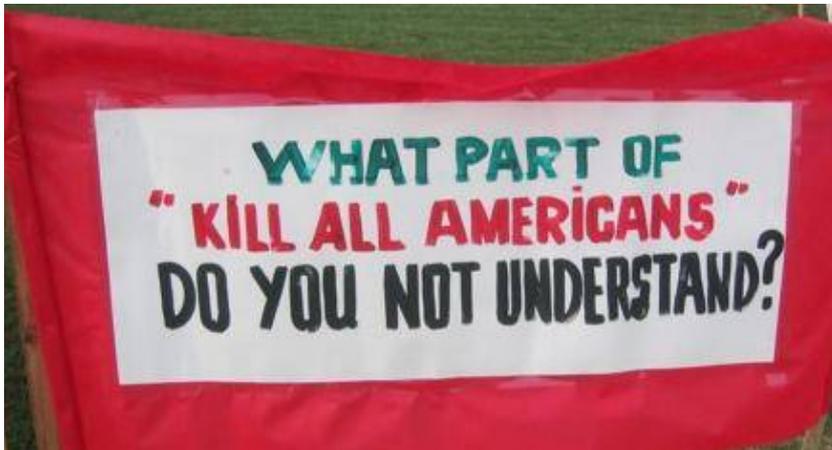
Good riddance... I guess that's what happens when you play video games and watch MTV all day long and can't even spell the word "library."

Operation & Construction Notes

Ultrasonic tranducers operating at 40 kHz are now quite easily found. A "clean" source of these transducers is from old motion detectors or security alarms. Some of which where carried by Radio Shack (Part # `49-303A`) back around 10–20 years ago. New Kobitone 40 kHz ultrasonic tranducers are available from Mouser Electronics, part numbers `255-400ER18` (receive) and `255-400ET18` (transmit). There is actually no difference between the transmit and receive

transducers. Most consumer 40 kHz transducers operate at a maximum peak–to–peak voltage of 20 volts, but some can operate at up to 100 volts. The higher the applied voltage, the higher the output sound pressure, and the farther the transducer will transmit. Also, their frequency deviation is limited, so don't expect "HiFi" audio quality. Maximum deviation is only around 1.5 to 2 kHz. The received audio quality sounds much like cheap FRS radios. Any bass frequencies will also need to be heavily attenuated.

Transmitter Operation

Referring to the transmitter schematic... Be sure during operation that the microphone's little air hole is not obstructed. Experiment with the electret mic's bias resistor (10 kohm) to improve the signal–to–noise ratio. The mic's audio is fed into one–half of a LM833 op–amp. This op–amp is configured to have about 40 dB of gain in the "audio band" of frequencies. The 3 dB frequency roll–off is around 1.7 kHz. The other half of the LM833 acts as a split–rail active bias for the first op–amp. The output of the LM833 is then passed through a RC low–pass filter to remove any remaining ultrasonic frequencies. This processed audio signal is finally fed to pin 5 of a CMOS 555 timer operating near 40 kHz. Adjusting this center frequency is the most critical aspect of this device. The 555 timer's center carrier frequency is "tweaked" via a multiturn 10 kohm potentiometer. Try to use a multimeter which has a frequency counter to help in any adjustments. The use of a CMOS 555 timer is recommended to avoid generating any power supply "spikes" which can interfere with the transmitted audio quality. The output of the 555 timer is a series of square waves centered near the 40 kHz resonant frequency of the transducer. You'll want to then *lower* the 555 timer's frequency slightly to allow the receiver transducer to recover the audio via "slope detection." If you don't know what that means, just adjust the 10 kohm pot until the audio quality is the best. This new output signal (pin 3) is pulse–width modulated by the input audio signal. It is then isolated and fed into a 8 ohm to 1,000 ohm impedance matching transformer (Radio Shack Part # `273-1380`). This is a quick way to increase the voltage applied to the transducer without resorting to using any current–hog active components. The transformer's output is then applied to the ultrasonic transducer. Be sure to isolate the transducer's ground tab (and body) from the rest of the circuit if you use the step–up transformer. For "limited space" covert applications, the 555 timer's output can be run directly into the ultrasonic transducer.

A Texas Instruments TL750L08CD low–dropout voltage regulator (Digi–Key Part # `296-8004-5-ND`) provides a stable +8 VDC for the entire circuit when powered from a standard alkaline 9 volt battery. Current draw for the entire ultrasonic transmitter is around 13 mA.

Receiver Operation

Referring to the receiver schematic... The receive ultrasonic transducer is DC coupled directing into one of the four op–amps on the Maxim MAX414 (Digi–Key Part # `MAX414CPD-ND`). The MAX414 was chosen because it can easily handle about 60 dB of gain at 40 kHz. A common TL074 quad op–amp will also work, but the gain will only be around 40 dB. The output of that op–amp is then sent to a precision full–wave rectifier circuit using two op–amps and two 1N34 diodes. This converts the modulated 40 kHz signal directly into a varying DC voltage via a method called slope detection. As the transmitter's transducer is modulated on–and–off its resonance peak, the receiver's transducer also outputs more or less voltage. This varying DC voltage is the recovered audio from the microphone. This recovered audio signal is then low–pass filtered using one–half of a LM833 and the other half as a high–pass filter. This removes any remaining low–frequency rumbles and high–frequency hiss. Finally, the audio signal is applied to a low–noise MC34119 headphone amplifier. The receiver runs off a standard alkaline 9 volt battery and the current draw is around 63 mA.

Pictures
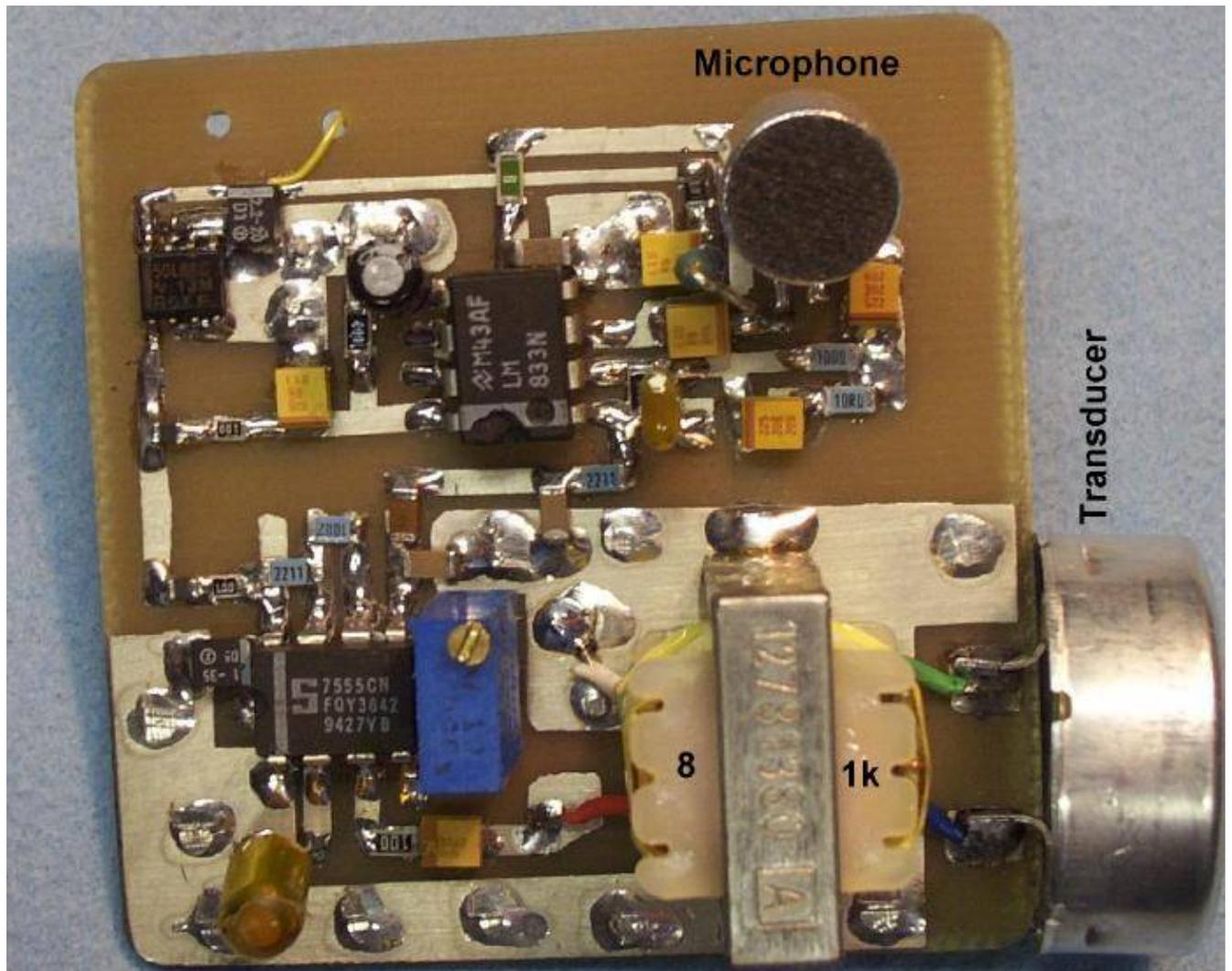
Ultrasonic transmitter overview. Clockwise from the upper–left... TL750L08CD voltage regulator (surface mount), LM833 and supporting passive components, the electret microphone, the 40 kHz ultrasonic transducer (note isolation), the 8 ohm to 1,000 ohm impedance matching transformer, and finally the CMOS 555 timer and its 10 kohm trim pot. A 9 volt battery clip is under the PC board and is not shown.

Ultrasonic receiver overview. Case is an old printer switch. Front panel contains a headphone jack (**PHONE**), volume control (**VOL**), and receiver gain control (**GAIN**). The receive transducer and PC board are held down using double–sided foam tape. This helps reduce any noise caused by vibrations.
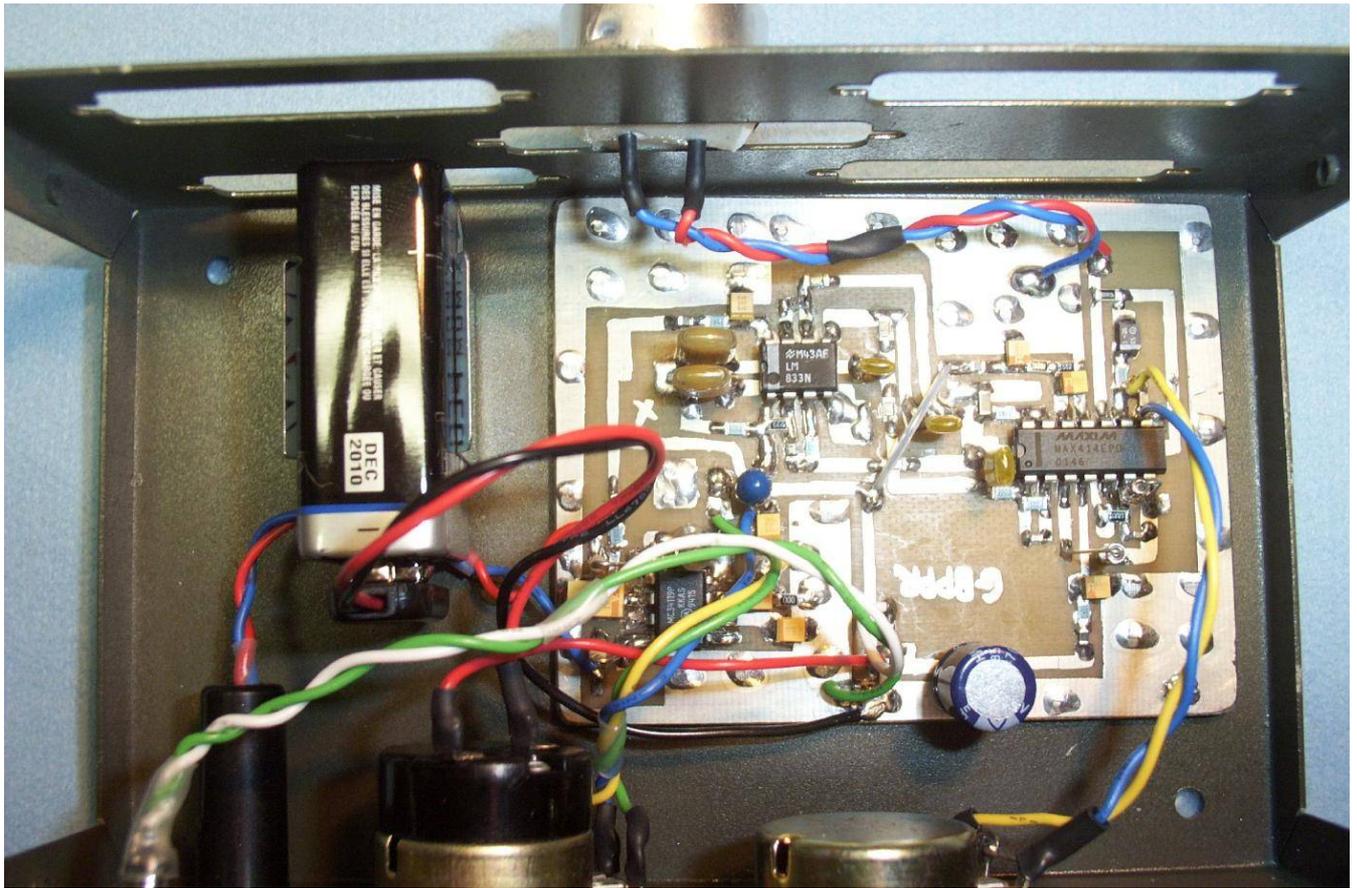
Another overview. Clockwise from the upper−left... LM833 that forms the high−pass/low−pass audio filter, the receive transducer is above that, the Maxim MAX414 quad op−amp, +9 VDC input, and the MC34119 headphone amplifier. Be sure to twist the wires leading to the control pots, the transducer, and the headphone jack. The 10 kohm **VOLUME** pot has an integrated SPST on/off switch.
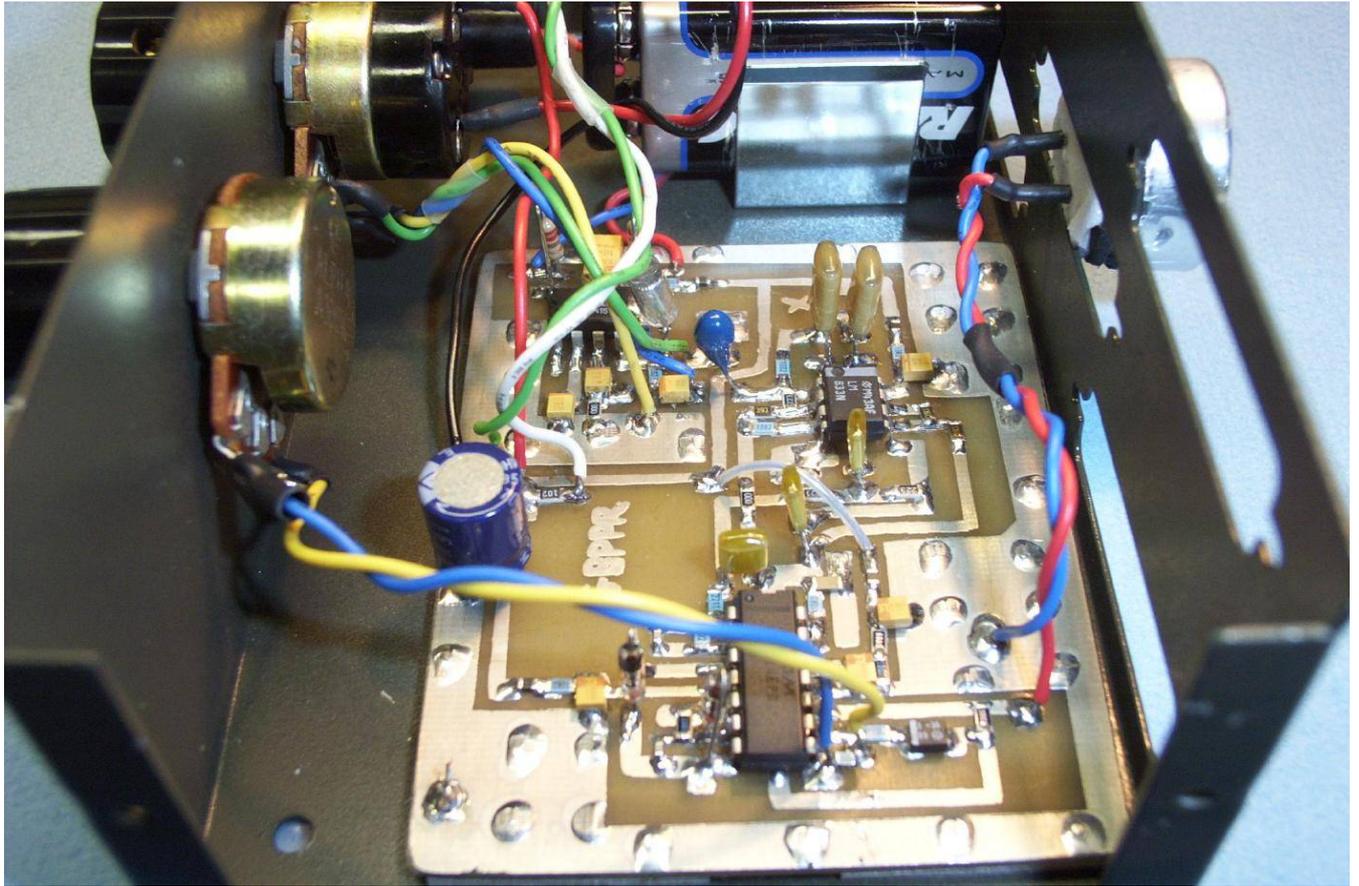
Side view. One bug on this particular unit is that the MAX414 breaks into oscillation when the **GAIN** control pot is at maximum. It does this even with twisted control wires and a good circuit ground plane, so be careful.

Also be sure to use germanium 1N34 or 1N60 diodes in the full−wave rectifier portion of the ultrasonic receiver. These have a lower voltage drop (~200 mV) than the common silicon 1N4148, 1N914, or 1N4001 diodes (~700 mV). Matching the diode's forward voltage drop is not necessary, but useful for those "precision" applications.
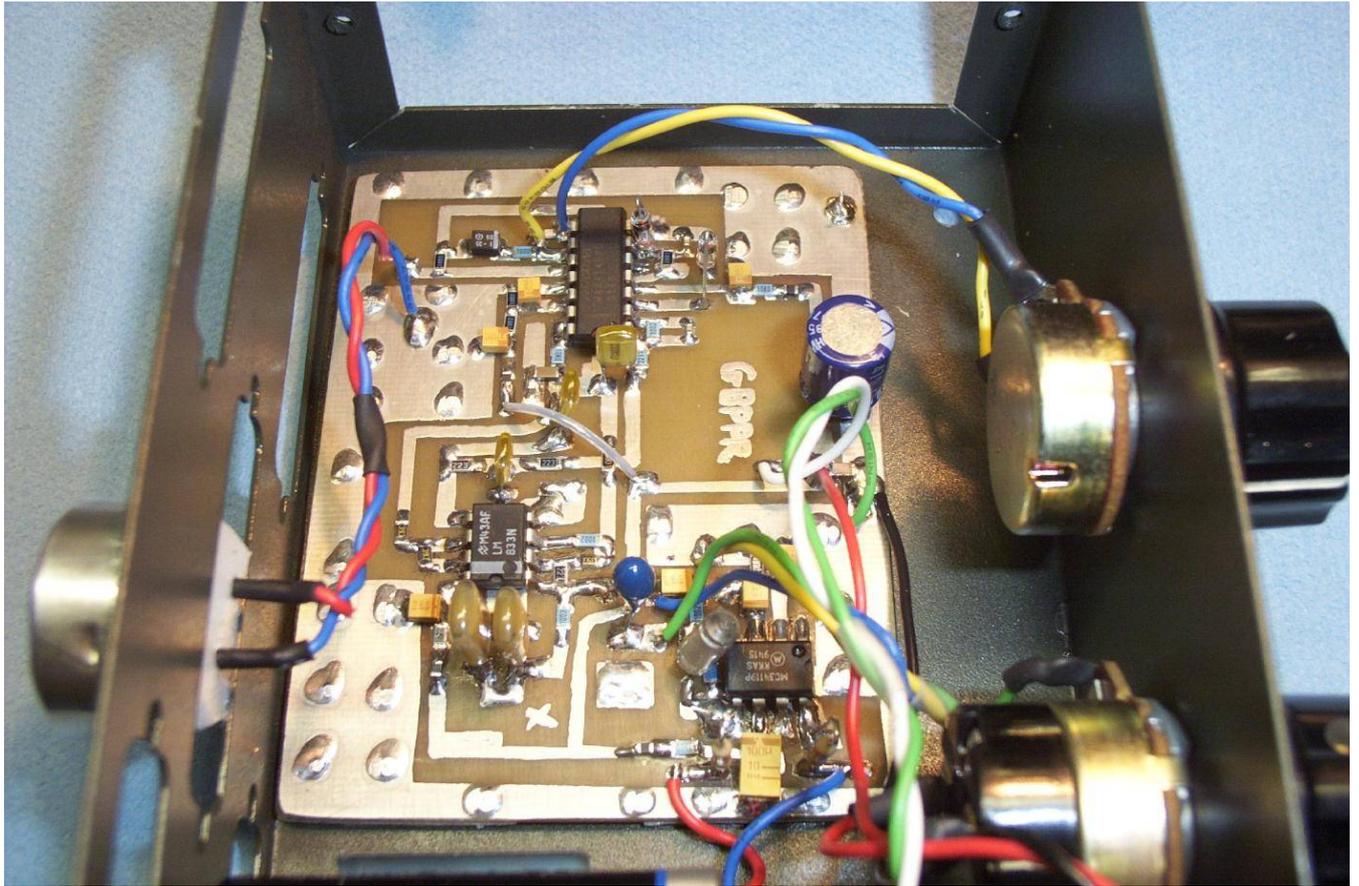
Alternate view. A Motorola MC34119 headphone amplifier (lower right) is used instead of a normal LM386 because of its lower noise figure. An easy-to-find equivalent for the MC34119 is a NJR NJM2113 (Mouser Part # 513-NJM2113D). The output of the MC34119 is a *balanced* signal. Connect one side to the *tip* on a stereo headphone jack and one side to the *ring*. Do not connect the headphone shield (*sleeve*) to circuit ground! Leave the ground pin on the stereo headphone jack open and be sure the jack is plastic or isolated from the metal case. The series 2.2 ohm resistors pad the output impedance of the MC34119 when driving low-impedance headphones.

Ultrasonic Technical Surveillance Device

Transmitter Section

9 Volt Battery

10 µF

TL750L08

0.1 µF

+8 VDC Output

Voltage Regulator

Ultrasonic Transducer

Step-Up Transformer
Radio Shack Part #
273-1380

8 Ω   1 kΩ

10 Ω   2.2 µF

1500 pF

Carrier Frequency

Multiturn

10 kΩ

CMOS 555

10 Ω

+8 VDC

10 kΩ

2.2 kΩ

10 µF

0.01 µF

0.01 µF

40 kHz Carrier Generator

4700 pF

20 kΩ

2.2 kΩ

0.1 µF

1

LM833

8

2

3

47 kΩ

+8 VDC

10 Ω

10 µF

Microphone Pre-Amp

2.2 µF   10 Ω

100 Ω

10 µF

2.2 µF

0.01 µF

10 Ω

7

6

5

4

Active Bias

10 µF

10 kΩ   10 kΩ

10 µF

+8 VDC

+8 VDC

100 Ω

10 kΩ

1000 pF

Electret Microphone
Radio Shack Part #
270-090

Ultrasonic Technical Surveillance Device

Receiver Section

Headphones

Headphone Amplifier

MC34119

Low Noise Pre-Amp

Precision Rectifier

Active Bias

Bias Output
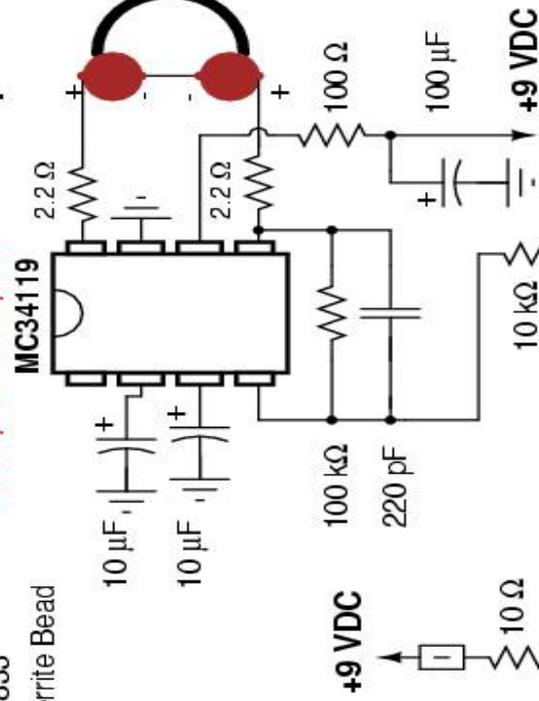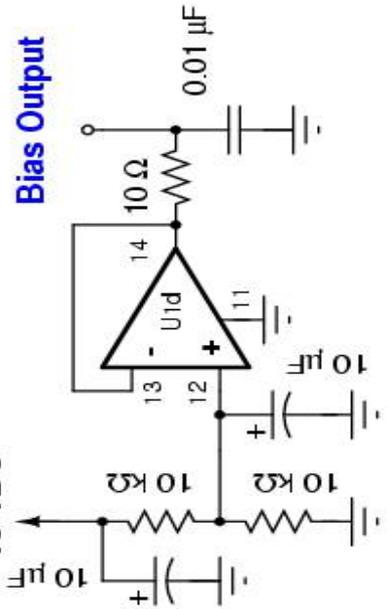
300 Hz High Pass Filter

7000 Hz Low Pass Filter

Ultrasonic Transducer

U1 = Maxim MAX414
U2 = LM833
⊡ Ferrite Bead

Volume 10 kΩ Panel Mount Audio Taper

Gain 100 kΩ Panel Mount Audio Taper

+9 VDC

To Bias
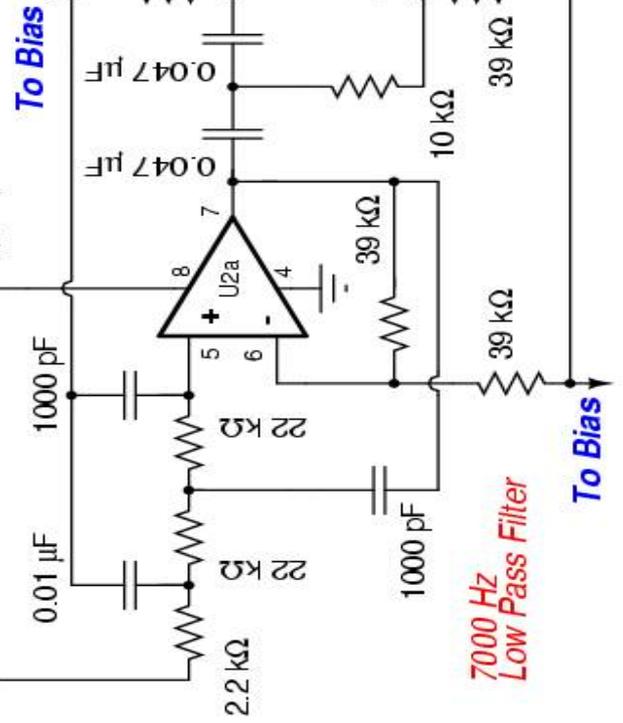
Bonus

Workstation AS704041 Inspection on 11-February-1994 13:28

    Physical Unit ID: E6108017
    DLC Destination Address: 400040000004

    Default Gateway: 144.148.108.246
    IP Address: 144.148.108.17
    Client Name: AS704041
    Pathway User Name: logsr

    LM/X Client Name: AS704041
    LM/X User Name: logsr

    Free Disk: 98544
    Position Number: 41
    Serial Number: 98-25713115
    Token Ring: 08005A57A4A1
    Available Memory: 17263
    PU Name: WTGB0217
    LU #1: W11822A   LU #2: W11822B
    LU #3: W11822C   LU #4: W11822D
    LU #5: W11822E   LU #6:
    LU #7:   LU #8:
    LU #9:   LU #10:

    Personality: WIRESDNC   Level: 1.14
    Server: AS704S01   Level: 1.06
    Client: AS704041   Level: 1.00

    ASCOT Level: 2.4
    MFL Level: 0.0   Offline Notes: 0.00
    LFACS Level: 0.00   Softwin: 2.4
    One Touch Level: 2.09   Inspect: 2.4

    Network ID: LOGSR
    Network Password: LOGSR
    Network Server: AS704S01
    Network Print Queue: AS704Q02

Any Questions?

Editorial and Rants

Democrats suppressing freedom of speech... I'm sure Eric Corley will be all over this!

Democrats Defeat Election–Law Aid for Bloggers

November 2, 2005 – *From: news.com.com*

By Declan McCullagh

Democrats on Wednesday managed to defeat a bill aimed at amending U.S. election laws to immunize bloggers from hundreds of pages of federal regulations.

In an acrimonious debate that broke largely along party lines, more than three–quarters of congressional Democrats voted to oppose the reform bill, which had enjoyed wide support from online activists and Web commentators worried about having to comply with a tangled skein of rules.

The vote tally in the House of Representatives, 225 to 182, was not enough to send the Online Freedom of Speech Act to the Senate. Under the rules that House leaders adopted to accelerate the process, a two–thirds supermajority was required.

"I'm horribly disappointed that this important measure failed to pass," said Rep. Mark Kennedy, R–Minn. "This bill was designed to protect the free–speech rights of Americans whose only alleged crime is wanting to use the Internet to express their opinions."

The Federal Election Commission is under court order to finalize rules extending a controversial 2002 campaign finance law to the Internet. Unless Congress acts, the final regulations are

expected to be announced by the end of the year. (They could cover everything from regulating hyperlinks to politicians' Web sites to forcing disclosure of affiliations with campaigns.)

Opponents of the reform plan mounted a last–minute effort to derail the bill before the vote on Wednesday evening. Liberal advocacy groups circulated letters warning the measure was too broad and would invite "corrupt" activities online, and The New York Times wrote in an editorial this week that "the Internet would become a free–fire zone without any limits on spending."

Rep. Marty Meehan, a Massachusetts Democrat who opposed the bill, said during the floor debate: "We don't allow child pornography on the Internet. We don't exempt it from consumer safety laws... We don't because we think those laws are important." Campaign finance regulations should be extended as well, he said.

Rep. Lloyd Doggett, a Texas Democrat, said that if the bill were approved, the public would have "no idea whether Internet campaign ads are being financed by secret soft money." Soft money is a general term referring to funds not regulated by election laws.

The House reform proposal, only one page long, simply says that the portion of federal election law that deals with publications aimed at the general public "shall not include communications over the Internet." It may eventually receive another vote under a slower, normal procedure that requires only a majority.

Not every Democrat opposed the campaign finance reform proposal. Rep. Zoe Lofgren, a Democrat whose district includes part of Silicon Valley, said her colleagues should not believe the editorials in The New York Times and Washington Post. "What the bill does is a lot more modest than what the rhetoric would have us believe," Lofgren said. "All of the hoo–rah–rah...is incorrect."

Are Canadians the most arrogant and incompetent people on this planet? Thankfully, a U.S. soldier will now catch him.

November 3, 2005 – *From: www.alertnet.org*

Al Qaeda Suspect Left Canada Voluntarily

By Randall Palmer

OTTAWA, Nov 3 (Reuters) – Canadian authorities have broken up what they considered to be a terrorist cell but let the al–Qaeda–trained ringleader go free and leave Canada voluntarily, a government spokeswoman said on Thursday.

The Toronto–area group consisted of four Algerian refugee claimants alleged to be members of the Islamist militant Salafist Group for Preaching and Combat (GPSC), which Canada has listed as a terrorist entity.

The central figure had studied bomb–making at two al Qaeda camps run by Osama bin Laden in eastern Afghanistan and had been an al Qaeda training camp instructor, said Barbara Campion, spokeswoman for the counter–terrorism agency Canadian Security Intelligence Service (CSIS).

Investigators confronted him and he left shortly afterward, in March 2004, she said, confirming details published in Thursday's National Post newspaper.

"It was deemed that a confrontation interview was the best way to go," Campion said.

The other three members were later arrested and deported to the United States, because they had entered from a U.S. border crossing. None of the four were named.

It was not immediately clear why the alleged bomb expert had not been arrested. But Canada's laws –– even after the Sept. 11, 2001, attacks on the United States –– do not make it a crime to be a member of a terrorist group.

Canadian law is tied more to action than membership. The authorities would have to prove someone participated in an activity of a terrorist group.

However, it does criminalize entering or remaining in a country "for the benefit of, at the direction of or in association with a terrorist group."

Canadian law requires stronger evidence to convict a person of a crime, so it is conceivable that the authorities were unwilling to risk a defeat at trial and opted instead to get them out of Canada.

The office of the Public Safety Minister Anne McLellan would not comment on the specific case. "The agencies will do what's appropriate on a case–by–case basis," spokesman Alex Swann said.

Don't expect the "Freedom Downtime" crew to cover this!

Three Indonesian Girls Beheaded

October 29, 2005 – *From: news.bbc.co.uk*

By Tim Johnston

Three girls have been beheaded and another badly injured as they walked to a Christian school in Indonesia.

They were walking through a cocoa plantation near the city of Poso in central Sulawesi province when they were attacked.

This is an area that has a long history of religious violence between Muslims and Christians.

A government–brokered truce has only partially succeeded in reducing the number of incidents in recent years.

Police say the heads were found some distance from the bodies.

It is unclear what was behind the attack, but the girls attended a private Christian school and one of the heads was left outside a church leading to speculation that it might have had a religious motive.

Central Sulawesi and Poso in particular was the scene of bitter fighting between Muslims and Christians in 2001 and 2002.

More than 1,000 people were killed before a government–brokered truce.

Although the violence has been subdued, it has never gone away completely.

A bomb in May in the nearby town of Tentena, which is predominantly Christian, killed 22 people and injured over 30.

The fighting four years ago drew Islamic militants from all over Indonesia and many have never gone home.

Analysts say the militants have targeted central Sulawesi and believe that it could be turned into the foundation stone of an Islamic state.

The analysts have warned that the violence could resurface at any time.

LOL! But Eric Corley told me white people cause all the problems in the world!
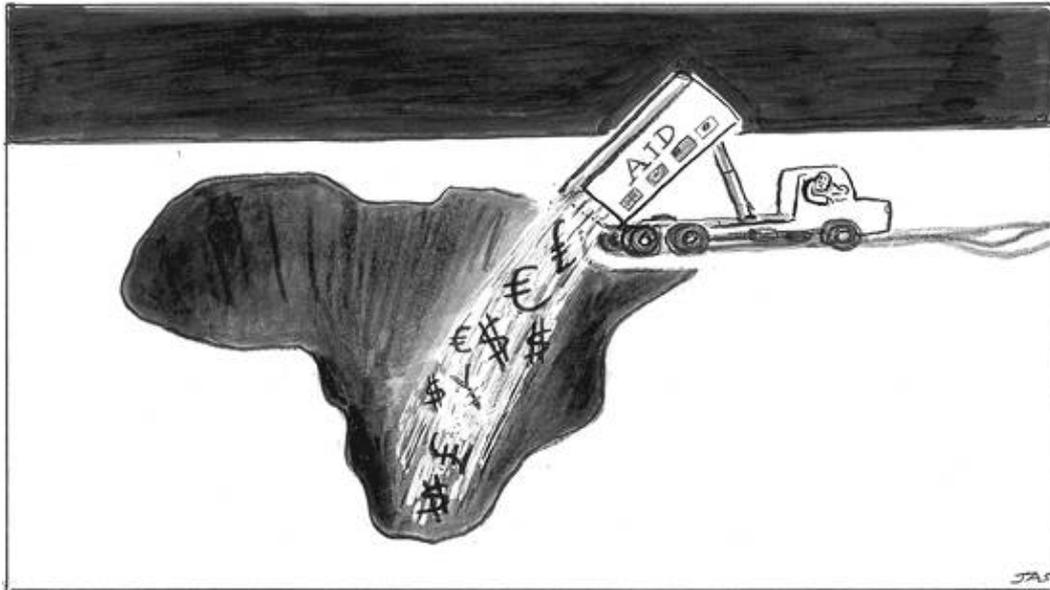
Zimbabwe Confesses to Farm Seizure Mistakes

November 3, 2005 – *From: www.smh.com.au*

By Peta Thornycroft

Zimbabwe's bankrupt government has finally admitted it had run out of food because land seized from whites was given to amateurs with no "passion for farming".

As the country faces its worst agricultural season in its post–colonial history, a newcomer to the cabinet spelled out the scale of the catastrophe more plainly than any of his colleagues.

Sylvester Nguni, the deputy minister of agriculture and a former businessmen, blamed falling food production on President Robert Mugabe's "new" farmers.

"We have a few people that are really committed to production, while many others are doing nothing on the farms," he told the state–controlled Herald newspaper. "The problem is we gave land to people lacking the passion for farming and this is why every year production has been declining."

About 4000 white farmers were violently evicted from their land after a new party, the Movement for Democratic Change, came within a whisker of defeating Mr Mugabe in the 2000 election.

He accused the whites of supporting and funding the MDC and claimed the property seizures were fair because whites took the best land during the colonial era. He also blamed drought for massive

reductions in agriculture over six years.

But the state Meteorological Office said the last serious drought was in 1992 when Zimbabwe still fed itself.

Zimbabwe now imports up to 80 per cent of its cereals, including wheat and the staple food, maize. Its export crops have all but disappeared, leading to a chronic shortage of foreign currency for fuel and other imports.

Bright Matonga, the deputy information minister, last week evicted one of the few surviving white farmers, Tom Beattie, from a citrus farm south west of Harare. He also has a flower farm, which he seized in 2003 and before which produced 10 million blooms for export. He and his wife, Anne, a Briton, produce neither flowers nor food.

Doug Taylor–Freeme, the president of the Commercial Farmers' Union, said: "It is refreshing to note that someone in government has finally seen the reality."

Agricultural experts say Mr Mugabe seized 9 million hectares and gave it to cronies, including judges, army officers and civil servants who use less than 10 per cent of it.

The United Nations has pressed the Government over its refusal to give aid to thousands of people made homeless after the controversial demolition of thousands of shacks and illegally built houses.

Don't expect Muslims to respect the traditions of anyone else!

Police Told to Respect Traditions

October 25, 2005 – *From: www.heraldsun.news.com.au*

By Liam Houlihan

POLICE are being advised to treat Muslim domestic violence cases differently out of respect for Islamic traditions and habits. Officers are also being urged to work with Muslim leaders, who will try to keep the families together.

Women's groups are concerned the politically correct policing could give comfort to wife bashers and keep their victims in a cycle of violence.

The instructions come in a religious diversity handbook given to Victorian police officers that also recommends special treatment for suspects of Aboriginal, Hindu and Buddhist background.

Some police officers have claimed the directives hinder enforcing the law equally.

Police are told: "In incidents such as domestic violence, police need to have an understanding of the traditions, ways of life and habits of Muslims."

They are told it would be appreciated in cases of domestic violence if police consult the local Muslim religious leader who will work against "fragmenting the family unit".

Islamic Women's Welfare Council head Joumanah El Matrah called the guidelines appalling and dangerous.

"The implication is one needs to be more tolerant of violence against Muslim women but they should be entitled to the same protection," Ms El Matrah said.

"Police should not be advising other officers to follow those sorts of protocols.

"It can only lead to harm."

Ms El Matrah said Muslim leaders should be brought into domestic violence investigations only if requested by the abused woman.

The guide also advises officers not to hold interviews with Aboriginal suspects or set court hearings during Aboriginal ceremonies involving "initiation, birth, death, burials, mourning periods, women's meetings and cultural ceremonies in general".

They are told to interview Baha'i suspects only after sunset in the fasting month.

And they are cautioned that when a Sikh is reading the Sikh Holy Script –– a process that normally takes 50 hours –– "he should not be disturbed".

The 50,000 handbooks instruct police to take shoes off before entering Buddhist and Hindu houses and mosques, and remove hats before entering or searching churches.

They are warned that taking photos or samples from Aboriginal suspects could raise fears they could be used for sorcery and spiritual mischief.

Australasian Police Multicultural Advisory Bureau head Gerard Daniells, who created the 82–page full–colour handbook, said common sense would prevail over the guide in an emergency.

Mr Daniells said the next edition would include Maori spiritual beliefs and practices.

The glossy guides would have cost at least $300,000 to produce, a printing industry expert said.

Police Association secretary Paul Mullet said members had an appreciation of different cultures but their overriding concern was for safety of the community.

You almost feel sorry for them... Not!

France is Not a Western Country Anymore

March 31, 2003 – *From: www.frontpagemag.com*

By Guy Milliere

French–bashing is everywhere in the American media. I am French, and I must say if Americans knew completely what's happening in France, the French–bashing would be far harsher.

Jacques Chirac has been a friend of Saddam Hussein for more than thirty years. He allowed the sale of nuclear facilities to Iraq that were destroyed just in time by Israel. He sold Iraq the planes that were been used to gas thousands of Kurds. And Saddam is not the only friend Chirac has. Chirac has never met a ruthless dictator he did not like. Worse, Chirac is unprincipled and greedy. It is common knowledge in France that he stole a lot of money when he was the mayor of Paris, and everyone knows that if he had not been re–elected in May 2002, he would be in jail

now. To hear him speaking about morality or international law nauseates every decent Frenchman.

And Chirac is not the only politician of this stripe in France. These days, it is becoming hard to find a French politician ready to speak about human rights, freedom or democracy. All of them seem to have the same speechwriter or to belong to the same totalitarian political party; all of them are anti–American, anti–Israeli and "pacifists." They regard Western civilization as something filthy and abhorrent.

If you read the newspapers, it's the same. At times it seems the only difference between the Soviet Union twenty years ago and France today is that in Soviet Union you had only one Pravda, and in France you now have at least ten such propaganda outlets: Different titles, same content. Their party line is clear in reporting on the personalities found in the present Middle Eastern crisis. Saddam Hussein, the "President of Iraq"? Well, maybe he has been brutal, but you know, in "those" countries... George W. Bush? He's a "moron" – a former alcoholic, who has become a crazy fanatic, in fact the most dangerous man on the face of earth. Ariel Sharon? A fascist who loves to kill Arabs. Arafat? A great freedom fighter. When an American general speaks, it is merely propaganda, but when Tariq Aziz pontificates, it is pure truth. Almost everyday you hear anti–Semitic remarks, to boot.

The anti–Semitism has created a threat to the physical safety for French Jews. Almost every week, some Jews get mugged, simply for being Jews. Almost nobody pays attention to it. When an anti–Semitic act is so disgusting it is impossible to hide it, journalists will speak of "confrontation between communities." When confronted with the reality that these "confrontations" are always Muslims attacking Jews, the editorial response: "Just because there has yet to be a single documented case of a Jew attacking a Muslim yet doesn't mean it will never happen. . . ."

And Jews are not the only victims of France's new identification with radical Islam. In many French cities with a growing radical Islamist population, no teenage girl can go out in the evening, at least not without a full burqa. If she does, it will mean that "she is for everybody": in short, a whore. In the same cities, every teenage girl – regardless of religion – has to wear the Muslim veil if she does not want to be harassed or killed. Almost every month, a young woman is mugged and rape in a suburb of a big city. Gang rape has become so frequent that a new word, used by the rapists themselves to define their hideous actions, is used by everybody: tournantes (revolving). To the rapists, the woman is nothing, a mere object to be thrown away after use. The people who speak about "revolving" seem to forget a human being is involved as the victim. Policemen do nothing. Every decent person knows the problem is Islam, but no one dares to say it. It could be dangerous. The streets are not safe.

One year ago, a French Muslim decided to create a new business: he was tired of seeing people drinking Coca–Cola – all this money going to Americans! He found a factory and started to produce Mecca Cola. On the label, he put a picture of the Al Aqsa mosque, with a large part of his profits would help to support the Palestinian cause. In some suburbs of Paris, Coca–Cola has disappeared; Mecca Cola has replaced it. A few days ago, another Muslim businessman announced he will start to sell Muslim–Up. It will have the taste of Sprite or Seven–Up, but it will be a Muslim drink – and naturally the profits will go to the Palestinian jihad, as well.

Three radio stations in France are Muslim radio stations, and if you listen to them, dedicated to broadcasting the voice of hate and racism all day long. One radio station belongs to a friend of the rightist Jean–Marie Le Pen, and curiously, if you listen to it, you will hear the same voice of hate and racism. Rightists and radical Muslims have discovered they have many things in common.

If you want to understand why all this is happening, you have to understand one thing: thirty

years ago, French governments started to have a new foreign policy. They called this new policy, "Arabian Policy." France became closer to Arab countries – all of them disgusting dictatorships. France "benefited" by doing business easily in these countries. In exchange, France had to push Europe to unknot its ties with Israel and the United States. In exchange too, "professors" came from the Arabian dictatorships to teach the Arabic language to the young Arabs living in France. The only book they used to teach the Arabic language was THE book, Al Kuran.

Now comes the time to pay the check: six million Muslims live in France, at least ten per cent of them are radical Islamists poised on the edge of violence. And these radical Muslims have allies on both the extreme Left and the extreme Right. France is not a Western country anymore, it is now the leader of the Arab/Muslim world. Israel has to know France is its main enemy. The United States has to understand they have nothing to expect from today's France except nastiness, treason, and cheating.