

ANI SERVICE RESULTS
TYPE B, C AND D

1. GENERAL

1.01 This Section describes the method of measuring the type of service being provided by Automatic Numbering Identification (ANI) equipment and to a degree the additional load being presented to Traffic Operating forces for Operator Number Identification (ONI) due to failures in the ANI equipment.

1.02 The purpose of an ANI system is to provide automatic identification of the calling customer's number and for the transmission of this number to the CAMA or TSPS office for entry on the billing equipment.

1.03 Justification for ANI equipment in an office is based on two factors:

- (a) Improved service to the customer.
- (b) Reduced load on Traffic Operating forces.

When these two factors are not being accomplished, the cause is either equipment malfunction or wiring errors. Both causes are a reflection of the quality of the administration job.

1.04 This measurement of ANI performance has been designed as an aid in determining the equipment components requiring additional maintenance attention.

1.05 Items or work operations that have an impact on the total ANI operation are as follows:

- (a) Number network frame strapping.

- (b) Verification of completed service order work by frame forces.
- (c) Proper identification of tip station set wiring.
- (d) Equipment or trunks out of service during heavy load periods.
- (e) Prompt disconnection of stations on 2-party lines if the line cannot be opened on the MDF.

2. DESCRIPTION OF PLAN

2.01 Three components are used to measure ANI service. These components are as follows:

- (a) Output Service.
- (b) Output Connection Service.
- (c) Identifier Service.

Information for these components is obtained from Plant and Traffic registers provided with the system. (Note: At locations equipped with type C and type D ANI, the OSF registers and OP attempts register may not be wired. These registers should be wired locally.) Plant registers shall be read daily at attended locations and weekly at unattended locations. The peg counts shall be recorded on Form SW-6986 (Exhibit 2). Test calls are counted and excluded so that test activity does not distort results (Type B ANI ONLY).

2.02 Traffic registers used in compiling results are as follows:

(a) Outputer Usage Register (OP):

Registration scored on this register are the number of times a particular out-pulser within an identifier group is seized.

(b) Outputer Seizure Failure Register

(OSF): This register scores the number of times the outputers within an identifier group have failed to be seized on an ANI call.

2.03 Plant Registers: The Test Call

Register (TC), Type B ANI Only, scores the number of times the outputer is engaged in one of the following test calls:

- (1) Trunk test call.
- (2) Line verification test call.
- (3) Permanent signal test call.
- (4) Outputer test call.
- (5) Identifier test call.

2.04 The Second Trial Identifier Failure

Register (2TF), Type B ANI Only, scores each time the outputer has failed to receive all digits after the second attempt of the second identifier which was called in when the first identifier failed to identify in two attempts.

2.05 The Outputer Second Attempt Failure

Registers (2AF), Type C and D Only, scores each time the outputer fails to register a calling number identification on the second attempt.

2.06 The Cut Through Register (CT) scores

each time the Automatic Trunk test frame cuts through and tests an ANI trunk (Type B ANI Only).

3. PREPARATION OF ANI SERVICE RESULTS - FORM SW-6985 (Exhibit 1)

3.01 Form SW-6985, ANI Service Results, shall be prepared monthly for each central office equipped with Type B, C and D ANI. The report period is the 23rd day of the month to the 22nd day of the following month. Forwarding instructions are located in Part 5.

3.02 Detailed preparation by line follows:

- LINE 1 - Enter the total usage of all outputers (OP) traffic registers.
- LINE 2 - Test Calls Registered on the Plant TC Register. There is a TC register in the Plant register group and a TC register in the Traffic register group. These two registers should correspond in number of registrations, but only one should be used as the source data for this report. A difference in readings of the two registers should be considered a trouble indication (Type B ANI Only).
- LINE 3 - Enter test call failures of outputers that were placed from locations other than OITT, ATTC or Line Verification Unit (Type B ANI Only).
- LINE 4 - Enter test call failures of identifiers that were placed from locations other than OITT, ATTC or Line Verification Unit (Type B ANI Only).
- LINE 5 - Total of lines 2, 3 and 4.
- LINE 6 - Net Outputer Usages - Line 1 minus Line 5.
- LINE 7 - Total Outputer Failure, as registered on OPF registers.
- LINE 8 - Outputer Test Calls as entered on Line 3 (Type B ANI Only).
- LINE 9 - Net Outputer Failures - Line 7 minus Line 8.
- LINE 10 - Outputer Sizure Failures as registered on the Traffic OSF register.

- LINE 11 - Identifier Second Trial Failures as scored on the 2TF register (Type B ANI Only).
- LINE 11A - Identifier Second Attempt Failures scored on the 2AF register (Type C and Type D Only).
- LINE 11B - Total Identifier Failures: For Type B ANI, enter figure shown on Line 11.
For Type C or Type D ANI, enter figure shown on Line 11A.
For combined results that reflect both Types B, C and D ANI, enter the sum of Line 11 plus Line 11A.
- LINE 12 - Identifier test calls as entered on Line 4.
- LINE 13 - Net Identifier Failures - Line 11B minus Line 12.
- LINE 14 - Trunk tests registers on the cut-through CT register. This indicates the number of times the Automatic Trunk Test Frame cuts through and tests an ANI trunk (Type B ANI Only).
- LINE 16 - Outputpulser Failures, as shown on Line 9, shall be entered under Column A.
Outputpulser Seizure Failures, as shown on Line 10, shall be entered under Column B.
Net Identifier Failures, as shown on Line 13, shall be entered under Column C.
- LINE 17 - Enter usage expressed in terms of 10,000 in Columns A, B and C, i.e., $\text{Line 6} \div 10,000$. (Show two digits to the right of the decimal point by carrying out to three decimal points and rounding to two.)
- LINE 18 - Enter ratio of failures to usages as determined by dividing Line 16 by Line 17.
- LINE 19 - Component index, as determines from the index table for each category. (Table 1 & 2)
- LINE 20 - Index points corresponding to the component index shown on the index tables (Table 1 & 2).
- LINE 21 - Total of index points for each category shown on Line 20.
- LINE 22 - Identification Failure Reports Received from CAMA or TSPS recording location:
Some failures of ANI equipment are not apparent to the office where the equipment is located. These failures are only apparent to the CAMA recording location and are registered on a trouble card for analysis. The trouble information shown on these trouble cards must be passed to the ANI Office to make maintenance forces aware of the trouble and furnish them with the indicators necessary to correct the trouble.
Enter on this line the number of such reports received from the CAMA recording location.
- REMARK: 1. Enter type ANI equipment installed.
2. Enter explanation of excessive failures and corrective action taken.
3. Lines 1 thru 13 actual figures Line 16 adjusted figures.
4. FAILURE RATIOS EXCEEDING COMPONENT
- 4.01 If the failure ratio of any component of the ANI service results for a particular outputpulser, outputpulser seizure or identifier exceeds the maximum in the index tables, the maximum should be multiplied by the usage and the product will be used for combined results.
- EXAMPLE: Assume the outputpulse for the 232 Office has 46,293 failures.
- Line 16A = 46,293
Line 17A = 625.69
Line 18A = 73.99
Line 19A = 0
- Line 16A would be adjusted before combining with other outputpulsers as follows:

EXHIBIT 1

BSP227-500-900SW

FORM SW 6985
(1-76)

ANI SERVICE RESULTS

OFFICES WITH TYPE B, C AND D ANI

OUTPULSER AND TEST CALL DATA			TEST FRAME TESTS MADE THIS MONTH (CT)				
1	OP USAGES (OP)		14	TESTS MADE THIS MONTH (CT)			
2	TEST CALLS REGISTERED (TC)		ANI SERVICE RESULTS				
3	OTHER CALLS	OUTPULSER					
4	(SEE NOTE)	IDENTIFIER	(A)	(B)	(C)		
5	TOTAL TEST CALLS (L2-L3-L4)			OUT PULSER	OUT PULSER SEI-SURES	IDEN-TIFIERS	
6	NET OP USAGES (L1-L5)		15	MAXIMUM POINTS	20	20	60
OUTPULSER SERVICE			16	FAILURES (L9, L10, L13)			
7	OP FAILURES (OPF-)		17	USAGE (L6 ÷ 10,000)			
8	LESS TEST CALLS (L3)		18	RATIO (L16 ÷ L17)			
9	NET OP FAILURES (L7-L8)		19	COMPONENT INDEX			
OUTPULSER CONNECTION SERVICE			20	INDEX POINTS			
10	OP SEIZURE FAILURES (OSF)		21	TOTAL ANI INDEX (20A + 20B + 20C)			
IDENTIFIER SERVICE			22	IDENT. FAILURE REPORTS FROM RECORDING LOCATION			
11	2ND TRIAL FAILURES (2TF)		REMARKS: _____				
11 A	2ND ATTEMPT FAILURES (2AF)		_____				
11 B	TOTAL IDENTIFIER FAILURES		_____				
12	LESS TEST CALLS (L4)		_____				
13	NET IDENT. FAILURES (L11B-L12)		_____				

NOTE: TEST CALL FAILURES FROM LOCATIONS OTHER THAN CITT, ATTC OR LINE VERIFICATION UNIT. DO NOT SUBTRACT TICKETS WITH DIGITS 3, 4 OR 5 IN CHARACTER POSITION 3.

OFFICE	DISTRICT	DIVISION	STATE	REPORT PERIOD

ANI CONTROL RECORD

MONTH		OUTPULSER SERVICE									OP-CONN SERVICE	IDENTIFIER SERVICE						OPERATOR IDENTIFIED			CT
D A T E	TOTAL USAGE (NET)	OPF 0	OPF 1	OPF 2	OPF 3	OPF 4	OPF 5	OPF 6	TC	NET OUT- PULSER FAILURES	OSF	1AF 0	1AF 1	1TF 0	1TF 1	2AF TYPE "C" "D"	2TF TYPE "B"	ID	TC	NET ID	
23																					
24																					
25																					
26																					
27																					
28																					
29																					
30																					
31																					
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
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13																					
14																					
15																					
16																					
17																					
18																					
19																					
20																					
21																					
22																					
TOTAL																					
OBJECTIVES		10D																			
		20D																			
		30D																			

EXHIBIT 2
FORM SW-6986
(Front)

DATE	OUTPULSER USAGE									REMARKS
	OP 0	OP 1	OP 2	OP 3	OP 4	OP 5	OP 6	TC	NET OP USAGE	
23										
24										
25										
26										
27										
28										
29										
30										
31										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
TOTAL										
FORECAST 30 DAYS										

TABLE 1

TABLE 1

ANI PERFORMANCE

INDEX TABLE FOR - OUTPUTS FAILURES PER 10,000 OUTPUTS USAGES
 OUTPUTS SEIZURE FAILURES PER 10,000 OUTPUTS USAGES

PERFORM- ANCE	COMP. INDEX	INDEX POINTS	PERFORM- ANCE	COMP. INDEX	INDEX POINTS	PERFORM- ANCE	COMP. INDEX	INDEX POINTS
.00	100.0	20.00	11.60	73.0	14.60	25.20	36.0	7.20
.50	99.5	19.90	12.00	72.0	14.40	25.60	35.0	7.00
.90	99.0	19.80	12.40	71.0	14.20	25.90	34.0	6.80
1.30	98.5	19.70	12.70	70.0	14.00	26.20	33.0	6.60
1.70	98.0	19.60	13.10	69.0	13.80	26.60	32.0	6.40
2.00	97.5	19.50	13.40	68.0	13.60	26.90	31.0	6.20
2.30	97.0	19.40	13.80	67.0	13.40	27.30	30.0	6.00
2.60	96.5	19.30	14.20	66.0	13.20	27.60	29.0	5.80
2.90	96.0	19.20	14.60	65.0	13.00	28.00	28.0	5.60
3.20	95.5	19.10	15.00	64.0	12.80	28.40	27.0	5.40
3.50	95.0	19.00	15.40	63.0	12.60	28.80	26.0	5.20
3.70	94.5	18.90	15.80	62.0	12.40	29.20	25.0	5.00
3.90	94.0	18.80	16.10	61.0	12.20	29.50	24.0	4.80
4.10	93.5	18.70	16.50	60.0	12.00	29.90	23.0	4.60
4.30	93.0	18.60	16.80	59.0	11.80	30.20	22.0	4.40
4.50	92.5	18.50	17.20	58.0	11.60	30.50	21.0	4.20
4.70	92.0	18.40	17.50	57.0	11.40	30.90	20.0	4.00
4.90	91.5	18.30	17.90	56.0	11.20	31.20	19.0	3.80
5.10	91.0	18.20	18.20	55.0	11.00	31.60	18.0	3.60
5.30	90.5	18.10	18.60	54.0	10.80	31.90	17.0	3.40
5.50	90.0	19.00	19.00	53.0	10.60	32.30	16.0	3.20
5.80	89.0	17.80	19.30	52.0	10.40	32.70	15.0	3.00
6.20	88.0	17.60	19.70	51.0	10.20	33.10	14.0	2.80
6.50	87.0	17.40	20.00	50.0	10.00	33.50	13.0	2.60
6.90	86.0	17.20	20.40	49.0	9.80	33.80	12.0	2.40
7.20	85.0	17.00	20.80	48.0	9.60	34.20	11.0	2.20
7.60	84.0	16.80	21.20	47.0	9.40	34.50	10.0	2.00
8.00	83.0	16.60	21.60	46.0	9.20	34.90	9.0	1.80
8.30	82.0	16.40	22.0	45.0	9.00	35.30	8.0	1.60
8.70	81.0	16.20	22.40	44.0	8.80	35.70	7.0	1.40
9.10	80.0	16.00	22.70	43.0	8.60	36.10	6.0	1.20
9.40	79.0	15.80	23.10	42.0	8.40	36.60	5.0	1.00
9.70	78.0	15.60	23.40	41.0	8.20	37.10	4.0	.80
10.10	77.0	15.40	23.80	40.0	8.00	37.70	3.0	.60
10.40	76.0	15.20	24.20	39.0	7.80	38.30	2.0	.40
10.80	75.0	15.00	24.60	38.0	7.60	39.10	1.0	.20
11.20	74.0	14.80	24.80	37.0	7.40	40 or more	0.0	.00

If a result falls anywhere between two figures in the "Performance" column, use the number of index points for the poorer result, i.e., the lower number of index points.

TABLE 2

TABLE 2

ANI PERFORMANCE

INDEX TABLE FOR 2ND TRIAL IDENTIFIER FAILURES PER 10,000 OUTPUTS
USAGES

PERFORM- ANCE	COMP. INDEX	INDEX POINTS	PERFORM- ANCE	COMP. INDEX	INDEX POINTS	PERFORM- ANCE	COMP. INDEX	INDEX POINTS
.00	100.0	60.00	36.50	73.0	43.80	41.85	36.0	21.60
3.80	99.5	59.72	36.70	72.0	43.20	42.00	35.0	21.00
6.00	99.0	59.40	36.90	71.0	42.60	42.15	34.0	20.40
7.80	98.5	59.12	37.10	70.0	42.00	42.30	33.0	19.80
9.30	98.0	58.80	37.30	69.0	41.40	42.45	32.0	19.20
10.70	97.5	58.52	37.45	68.0	40.80	42.60	31.0	18.60
12.00	97.0	58.20	37.60	67.0	40.20	42.80	30.0	18.00
13.20	96.5	57.92	37.75	66.0	39.60	43.00	29.0	17.40
14.30	96.0	57.60	37.90	65.0	39.00	43.20	28.0	16.80
15.40	95.5	57.32	38.05	64.0	38.40	43.40	27.0	16.20
16.40	95.0	57.00	38.20	63.0	37.80	43.60	26.0	15.60
17.40	94.5	56.72	38.35	62.0	37.20	43.80	25.0	15.00
18.40	94.0	56.40	38.50	61.0	36.60	44.10	24.0	14.40
19.40	93.5	56.12	38.65	60.0	36.00	44.40	23.0	13.80
20.40	93.0	55.80	38.80	59.0	35.40	44.70	22.0	13.20
21.40	92.5	55.52	38.95	58.0	34.80	45.10	21.0	12.60
22.40	92.0	55.20	39.10	57.0	34.20	45.50	20.0	12.00
23.40	91.5	54.92	39.25	56.0	33.60	46.0	19.0	11.40
24.30	91.0	54.60	39.40	55.0	33.00	46.50	18.0	10.80
25.20	90.5	54.32	39.55	54.0	32.40	47.00	17.0	10.20
26.00	90.0	54.00	36.95	53.0	31.80	47.50	16.0	9.60
27.60	89.0	53.40	39.75	52.0	31.20	48.20	15.0	9.00
29.20	88.0	52.80	39.85	51.0	30.60	49.00	14.0	8.40
30.20	87.0	52.20	39.95	50.0	30.00	49.80	13.0	7.80
31.00	86.0	51.60	40.05	49.0	29.40	50.80	12.0	7.20
31.80	85.0	51.00	40.15	48.0	28.80	52.00	11.0	6.60
32.50	84.0	50.40	40.25	47.0	28.20	53.80	10.0	6.00
33.00	83.0	49.80	40.35	46.0	27.60	55.60	9.0	5.40
33.50	82.0	49.20	40.50	45.0	27.00	57.60	8.0	4.80
34.00	81.0	48.60	40.65	44.0	26.40	59.60	7.0	4.20
34.40	80.0	48.00	40.80	43.0	25.80	61.60	6.0	3.60
34.80	79.0	47.40	40.95	42.0	25.20	63.60	5.0	3.00
35.20	78.0	46.80	41.10	41.0	24.60	65.80	4.0	2.40
35.60	77.0	46.20	41.25	40.0	24.00	68.00	3.0	1.80
35.90	76.0	45.60	41.40	39.0	23.40	70.80	2.0	1.20
36.10	75.0	45.00	41.55	38.0	22.80	74.00	1.0	.60
36.30	74.0	44.40	41.70	37.0	22.20	80 or more	0.0	.00

If a result falls anywhere between two figures in the "Performance" column, use the number of index points for the poorer result, i.e., the lower number of index points.