DYNAMIC SERVICE PROTECTION APPLICATION NO. 2 ELECTRONIC SWITCHING SYSTEM

1. GENERAL

1.01 This section describes the application of dynamic service protection (DSP) in the No. 2 Electronic Switching System (ESS).

1.02 This section is reissued to incorporate changes in the TTY messages associated with DSP. These messages are effective with LO-1, Issue 4.6, and EF-1, Issue 3.5.

1.03 The application of DSP provides a means of assuring continuity or originating service to lines which are considered essential. DSP does not deny service to any line. It assures class A essential customers preferential service while serving all other class B customers as rapidly as equipment becomes available. DSP only guarantees originating service, not ringing, idle trunks, etc.

1.04 When DSP is active, the following actions are taken:

(1) Class A lines (see 2.01) are scanned continously while class B lines are looked at only during alternate 25 millisecond periods.

(2) If lines are blocked from selecting a customer digit receiver, no class B lines will be allowed to select a receiver until at least one class A line has succeeded.

1.05 DSP is a program controlled function; however, the telephone company has the option to either allow or deny the system to initiate DSP. This option is exercised by two TTY input messages as covered in Part 4 of this section. Unless the office is unattended or local practice dictates otherwise, DSP should not be allowed.

2. LINE GROUPS

2.01 All lines in a central office are assigned to one of two line classes for DSP purposes. Class A lines are lines which are considered essential and may comprise one-eighth (4 out of 32 terminals in each concentrator) of the lines in an office. Terminals at switch 0- level 0, switch 2- level 0, switch 4- level 0, and switch 6- level 0 of all concentrators are considered class A line terminals. The remaining terminals are class B.

2.02 Coin lines are normally included in essential groups to provide the general public with a means of obtaining communication service for urgent calls. However, all coin lines in a given area may not be included in essential groups if there is a large concentration of those telephones in that area; in this case, coin lines which are considered for assignment to essential groups may be selected for geographic dispersion. Important public locations where the stations are sheltered and accessible can also be included.

3. DESCRIPTION

3.01 The system administers DSP, if it is allowed, only when an excessive dial tone delay condition exists. A delay condition is determined by dial tone speed tests (DTST) which are performed every 4 seconds. A DTST failure results when the traffic program has simulated an off-hook and the system failed to provide dial tone within three seconds. Every 100 seconds the traffic program checks DTST for the number of failures in the last 16 tests performed.

(1) ***Less than seven failures:*** If DSP is in effect, the system will turn it off. If DSP is not in effect the system will do nothing.

(2) ***Seven, eight or nine failures:*** If DSP is in effect, the system will leave it in effect. If DSP is not in effect, the system will ***not*** turn it on.

(3) ***More than nine failures:*** The system ***will*** initiate DSP if allowed in accordance with Part 4.

3.02 The system has three output messages which indicate the status of DSP. All three of these messages will be printed out on the maintenance TTY and the traffic TTY. An explanation of each message follows:

(1) TA SY DSP ACTIVE: This message is printed when DSP has been initiated by the system. This message will be accompanied by a lighted lamp (DSP) located on the maintenance center display panel and a major alarm. This condition is also noted in each of the traffic output messages (schedules) as long as DSP is active.

(2) TA SY DSP NORMAL: This message is printed after DSP has been in effect and the system has turned it off. The DSP lamp at the maintenance center display panel will be extinguished and a spurt minor alarm will be given.

(3) TA SY DSP DENIED: This message is printed when more than nine DTST failures occur, but the telephone company has denied DSP in accordance with Part 4. This message will be printed every 100 seconds until DSP is allowed or the dial tone delay condition subsides. A major alarm will be given at each printout.

4. METHOD

4.01 DSP is a system controlled function; therefore, there are no control keys for starting or stopping DSP. Unless the office is unattended or local practice dictates otherwise, DSP should not be allowed. The telephone company is capable of allowing or denying the initiation of DSP by typing one of the following messages on either the traffic TTY or maintenance center TTY:

(1) T SY:DSP:ALW! This message will allow the system to initiate DSP as defined in 3.01.

(2) T SY:DSP:DNY! This message will deny the initiation of DSP, if and when the system determines that DSP is desired.

Note: These messages by themselves will not initiate or deactivate DSP.

4.02 After any stable clear initialization the system will automatically deny DSP and set DTST failures to zero. Once DSP has been initiated, it cannot be stopped until the overload subsides. If a dial tone delay condition occurs and the deny message is in effect, it will be necessary to type in the allow message before the system can initiate DSP.