TOSHIBA

Stratagy®
Technical Bulletin

Let's Talk Stratagy

In a continuing effort to provide our dealers and their technicians with the most up-to-date information on our products, we have created this technical bulletin to discuss the functionality of the Stratagy Voice Processing system.

Stratagy is a full-featured system that is extremely flexible in its configuration and mailbox programming. However, stumbling blocks can arise if the flexibility turns into complexity.

We strive hard to provide you with the kind of information necessary to have an effortless Stratagy installation. Some complications with the Stratagy system can often stem from the way the system was originally programmed.

So let's talk about the Stratagy system and what can be done to make the installation of this product a positive and profitable experience.

Done Chains

Did you know...   If mailboxes do not have any information programmed in their Chain parameters (Groups/Chains screen), calls delivered to the mailboxes are routed to the designated Done chain mailbox of the mailbox that answers the port. In a default state this would be mailbox 991, since 991 is the mailbox designated as the Done chain mailbox of the answering mailbox, 990.

If mailboxes are programmed with Chain mailboxes that create a loop, ports and eventually the entire system can lock up.

For example (using program defaults):
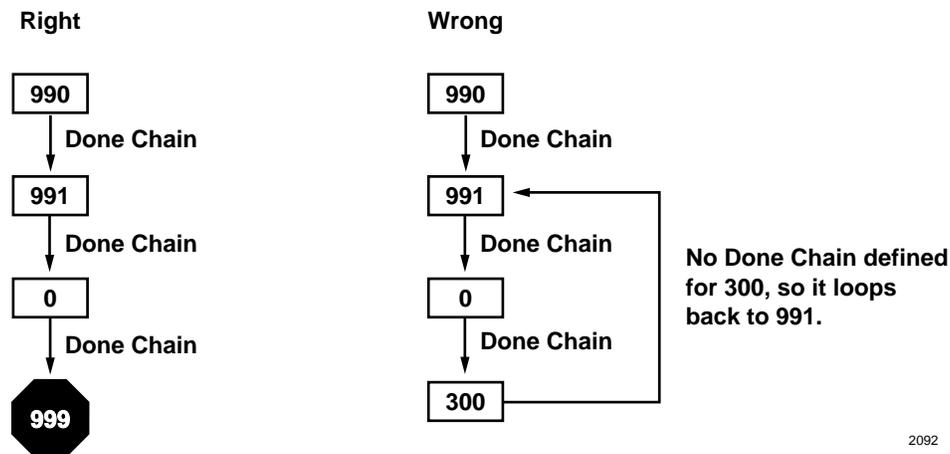
Mailbox 990: Done chains to mailbox 991.

Mailbox 991: Done chains to mailbox 0.

Mailbox 0: Done chains to mailbox 999, programmed to hang up the circuit.

If...	then...
mailbox 0's Done chain is changed to mailbox 300 for a special application, and no mailbox is designated in 300's Done chain	calls routed to mailbox 300 could end up back at mailbox 991, which Done chains to mailbox 0. Mailbox 0 then Done chains back to mailbox 300.

Let's Talk Stratagy

Get the picture? No? Well let's diagram it.

Right

```
┌─────┐
│ 990 │
└─────┘
   │  Done Chain
   ▼
┌─────┐
│ 991 │
└─────┘
   │  Done Chain
   ▼
┌─────┐
│  0  │
└─────┘
   │  Done Chain
   ▼
 ⬛ 999
```

Wrong

```
┌─────┐
│ 990 │
└─────┘
   │  Done Chain
   ▼
┌─────┐ ◄───────┐
│ 991 │          │
└─────┘          │
   │  Done Chain │
   ▼             │
┌─────┐          │
│  0  │          │
└─────┘          │
   │  Done Chain │
   ▼             │
┌─────┐          │
│ 300 │──────────┘
└─────┘
```

No Done Chain defined for 300, so it loops back to 991.

2092

Mailbox Greetings

Did you know... If the port answering mailbox (default 990) does not have an instruction mailbox as its Done Chain, it will affect the way calls are processed in other areas of your system. The system default for mailbox 990 Done chains to 991.

Here is an example:

If...	then...
a technician programs mailbox 990 to Done chain directly to the operator	a caller who dials an invalid entry will be sent to the operator and not given the option of dialing another person's extension.

It is important to remember, a caller after leaving a message in a mailbox that does not have any chains defined will be routed to the Done chain of the mailbox that answered the port.

Programming the 990 mailbox to Done chain to the operator, may also be a problem when using the 411 directory mailbox.

If...	then...
the caller leaves the 411 mailbox without making a selection and there is no Done chain defined for that mailbox	it uses the default Done chain
If...	then...
the greeting mailbox, 990, Done chains to the operator's mailbox	the caller is routed to the operator after leaving the 411 directory mailbox

Needless to say, with a system programmed this way there will be one *busy* operator!

Let's Talk Stratagy

Call Processing (Forwarding, Transferring, and Do Not Disturb)

Have you had a customer complain that their forwarded calls sometimes go to the main greeting instead of their personal mailbox?

Did you know... More often than not, the cause is an interaction between the Stratagy and the Strata DK telephone system. Here is an explanation.

Interaction Between Stratagy and Strata DK

When a call is blind transferred from the Stratagy Automated Attendant to a station that is call forwarded to voice mail, the Strata DK sees the transfer as invalid, if the forwarding returns the call to the port that is initiating the transfer. Let's set it up:

1. Station 205 is Call Forward Busy/No Answer to the first port of voice mail, let's say extension 216.

2. Station 205 is busy on a call.

3. The first port of voice mail (extension 216) answers an incoming call.

4. The caller dials station 205.

5. The Stratagy hook-flashes and tries to blind transfer the call to station 205.

The Strata DK will *not* allow this transfer to happen. Why? Because it sees station 205 as busy and forwarded back to the port that is trying to transfer the call. Strata DK was not designed to forward a call back to the same port that is calling.

Note Think of a boss/secretary setup where the boss' telephone is forwarded to the secretary. What would happen if the secretary wanted to reach the boss?

The end result is:

♦ The Stratagy port goes on-hook because it was programmed to just dial and release.

♦ Station 205 does not accept the call because it is busy and Busy Call Forwarded.

♦ The Strata DK recalls to the voice mail port that attempted the transfer.

♦ The call, since it was an invalid transfer, does not bring the station's voice mail ID codes.

♦ Because there are not integration digits, Stratagy sees the call as a new call and plays the main greeting.

Work Around

That's the bad news; here's the good news. We have a work around. Call forward all of the stations on the Strata DK to either a spare single line station port or a Phantom [DN], if the Strata DK is a DK280 R3 or DK16e. The single line station or Phantom [DN] should have all calls call forwarded to voice mail. This avoids the call being forwarded back to the port that is trying to transfer a call to it.

If the DK280 has Release 3.1 software, use the new Distributed Hunt feature for the Stratagy ports to resolve this issue.

Let's Talk Stratagy

Private Lines

Another way this can happen is with private lines. When private lines are installed on a Strata DK, access to those lines are usually denied to other stations in Program 40. If access to private lines is denied to the Stratagy, the call forwards to the Stratagy from the station but does not bring the voice mail ID digits for the station. Again, Stratagy sees the call as a new call because there are not integration digits and plays the main greeting.

This is the way the Strata DK is designed. The solution is to enable access to station CO lines in Program 40. If you want the voice mail ports to have restricted trunk access to avoid fraudulant use of the voice mail, restrict outgoing access in Program 41.

There are, of course, various ways that an invalid transfer can happen. For instance, an Auto Attendant transfer to a station that is Call Forward Busy/No Answer and is in Do Not Disturb (DND) mode. Since DND is considered busy to the Strata DK, the system handles the call as if the station is in Call Forward All Calls.

If...	then...
you have programmed VM to VM call blocking for your voice mail ports (Program 31, LED 4 ON)	Stratagy will not be able to blind transfer the call to the station and then have it forward back to voice mail.

The point of all this, is that when installing a voice mail system on any telephone system, it is helpful to gain an understanding of how each component works separately before connecting them together.

One of the troubleshooting techniques that Technical Support uses for transfer problems is simply to take the voice mail out of the equation. Connect a test set or standard telephone to the analog port of the telephone system and duplicate the call flow. Pretend you are the voice processing system and you perform the hook-flash and transfer. Experimenting like this, you will gain a better understanding of each system and its role in providing consistent call processing.

Port Call Statistic Reports

Did you know... Stratagy can provide a report on the amount of calls each port takes.

There needs to be some design work and here's what you do:

1. Designate, in the System Configuration file, each port to answer with a different mailbox not 990. Port definitions in Stratagy System Configuration should look something like this:

   ♦ set box_grt 100 1
   ♦ set box_grt 101 2
   ♦ set box_grt 102 3
   ♦ set box_grt 103 4

2. For each mailbox:

   ♦ type `@G(990)` in the extension field
   ♦ set DND off and locked off
   ♦ program the Done and RNA chains to be 991.

Let's Talk Stratagy

Each time a port receives a call, the call goes through these mailboxes and increments by one the *Calls* field (Reports screen) in the mailbox statistics. By including the *Calls* field when you run a report for the mailboxes, you will get a count of how many calls each port has taken.

Message Waiting Notification

Did you know...   One of the most frequent complaints of any voice mail system is one of late messaging. Customers say that when they check their messages, there are new messages that have been in the mailbox for a long time for which they never received a Message Waiting Notification. The problem usually is not that the message was late in being delivered to the mailbox, but rather the Message Waiting Notification was late in turning on.

One cause of this is that the Stratagy may be sending the DTMF digits for notification sooner than the telephone system is ready to receive them. To remedy this, insert a pause in front of the token string in the Method field of the Notification table for the mailbox. (See the Notify table in the Chapter 8 – Notify Menu of the *Stratagy Installation and Maintenance Manual*.)

Another cause is that the voice ports may be too busy to schedule a notification. Notifications have a lower priority than answering incoming calls, so this could lead to some delays. In this case, you should probably discuss a port upgrade with your customer. (See "Determine Stratagy Hardware Sizing, Ports" in Chapter 1 – Before You Install in the *Stratagy Installation and Maintenance Manual*.)

Troubleshooting Tools

Did you know...   Stratagy has several very powerful troubleshooting tools— STRATAGY.LOG, MSG.LOG and TRACE.OUT. All three of these files are stored in the Stratagy directory and are best utilized in combination with each other. For example, if you are looking for a delayed message, enable MSG.LOG and start a trace. If you think you have a site with a power problem, viewing STRATAGY.LOG and TRACE.OUT would be the best course of action.

STRATAGY.LOG

Stratagy contains a file named STRATAGY.LOG which is written to every time the Stratagy system is properly shut down and successfully boots up. If a Stratagy system is turned off without a proper shutdown, there may be file corruption. A start-up without a shutdown preceding it in the STRATAGY.LOG is the first indication.

Some of the information contained in this file is how many channels (ports) the system started up with and the CKDB execution summary, which tells you basically that all of your messages have a home.

MSG.LOG

If your customer complains of problems with messages, such as delayed messages or messages that return after having been deleted, you can enable MSG.LOG in the System Configuration file. In this file, Stratagy logs every message received and every mailbox that checks for messages along with the DTMF entered. (See MSG.LOG in the *Stratagy Installation and Maintenance Manual* on Page 4-37.)

Let's Talk Stratagy

Note Since the MSG.LOG file continuously collects information, we recommend that you not enable the file unless you are looking for a specific problem. Otherwise, the file will take up space on the hard drive that could be used for message storage.

Trace

Another good troubleshooting tool available in Stratagy is the Trace. The trace is started from the DOS command line or as a shutdown option in the Stratagy DK and Stratagy 4 Lite. (See Chapter 20 – Trace in the *Stratagy I&M Manual* for detailed instructions on using this tool.)

The trace contains information on everything Stratagy does from boot up until shutdown. The file size can be limited on all Stratagy systems, so it can easily be filecopied to a floppy disk and viewed from another PC. This eliminates any system down time.

Telephone Administration

Did you know... The Stratagy DK and Stratagy 4 Lite have enhanced telephone administration features. From the System Administrator's mailbox you can add and delete users and set the date and time for the system.

We hope the information contained in this bulletin helps you provide your customer with the high level of satisfaction they have come to expect from Toshiba and the Toshiba authorized dealer network.