

DID / DNIS Fax Routing Data Sheet for FastFax/Enterprise & FastFax/LAN



If you're looking for a way to dramatically increase the efficiency of your FastFax/Enterprise or FastFax/LAN installation while also saving some money, then DID (Direct Inward Dialing) or DNIS (Dialed Number Identification Service) combined with ANI (Automatic Number Identification) fax routing may be just the thing for you. This paper will provide an overview of DID/DNIS and ANI, covering their benefits and how to route faxes to individuals within departments.

DID

When purchasing DID line service, the phone company assigns multiple phone numbers in numerical order to one or more DID trunks (a single physical phone line that supports multiple phone numbers). When a phone call (voice or fax) comes into the private branch exchange (PBX) via a DID trunk line, the telephone company's central office signals to the PBX the phone number digits of the call dialed. When using the FastFax server on a DID line, the fax board detects those signals and passes the digits along to the fax application software to route the fax once it is received. This operation cross-references the sender's fax number against a table residing in FastFax to determine which user should receive the inbound fax.

DNIS

DID routing applies to both analog and digital (T1) lines; however, while it is referred to as DID in the analog world, it's usually called DNIS when using digital T1 lines. Despite the name differences, the concept is the same. The phone company passes digits to the fax card that checks them against FastFax so that an incoming fax can be routed to an individual or department. DNIS routing also works on all forms of digital service including E1 and fractional T1.

ANI

Where DID and DNIS identifies the destination fax number dialed by the sending fax machine, ANI identifies the phone number doing the dialing (caller ID). Through ANI, FastFax can pinpoint the sender and provide more flexible delivery/routing options for any incoming fax.

Benefits of Inbound Routing

DID/DNIS routing lets the FastFax server deliver inbound faxes directly to the intended recipient based on the phone number assigned to that user or department. DID/DNIS combines flexibility with ease-of-use for an almost maintenance free approach to inbound routing.

By setting up a unique fax number for each user or department, you can ensure that faxes will be immediately delivered to that person's desktop using either the FastFax Message user interface or to the user's email inbox. Each user receives and views only their own faxes because their fax number is unique.

But what if you don't want to set up unique fax numbers for each individual? That's where FastFax and ANI routing comes into play.

Using FastFax's cross-platform security architecture, you can create a single departmental profile that allow only authorized users to access faxes through the FastFax Message user interface. This is a perfect solution for an ordering or a purchasing department where any departmental user can view that department's faxes.

When specific individuals within a department handle certain customers or vendors, ANI routing can be used in conjunction with DID/DNIS routing to deliver inbound faxes to those individuals. Because ANI uses the sending fax device's phone number, a FastFax table can be created to sort transmissions from certain fax numbers and delivery them appropriately. In the end, combining ANI routing with DID/DNIS allows you to route certain faxes to specific individuals, while other inbound faxes are received departmentally.

The DID/DNIS with ANI method for fax routing provides several important benefits:

- **Speed & Efficiency:** Faxes are delivered to the client end-user immediately. No more walking to the fax machine or waiting for a secretary or delivery person to deliver the fax. Mission-critical documents get into the right hands faster to reduce ordering, processing, shipping, and other financial cycles.
- **Reduced Costs:** Since the network delivers the fax, trips to the fax machine are eliminated, and companies employing delivery services can eliminate these expenses. Also, dedicated fax machines (and the telephone lines that support them) for individuals requiring high service levels (executives) or privacy (human resources) can be eliminated entirely.
- **Privacy:** Faxes are delivered directly to the addressee on the network. The public fax inbox, with potentially sensitive faxes lying out in the open, is eliminated.

Configuring FastFax with DID / DNIS and ANI

It's easy to configure FastFax with DID, DNIS, and ANI functionality.

Analog — DID

An analog DID trunk line is different from a standard analog loop-start line. With analog DID trunk lines the battery (or power) to the line is supplied by the PBX (in the case of a FastFax server, the PBX is the fax card). Unlike T1 service, which supports both inbound and outbound service, DID trunk lines only support inbound calls. So you can only receive faxes and not send them. For that reason, FastFax servers utilizing DID trunk lines for inbound routing use loop-start lines for outbound fax transmission.

FastFax routes incoming faxes using an internal table that matches the received digits to a user or department. So, the FastFax card and software work together to pass the inbound fax to the line number on which it was received, match the line number with the assigned user, and the fax is then routed to that user. If the user accesses the received fax through FastFax, they will see it in their inbound fax message queue. If they use an email gateway, they will see their inbound fax in their inbox.

Digital — DNIS

T1 service multiplexes 24 digitized voice channels over a single circuit. This allows FastFax to manage inbound and outbound faxing without adding fax cards to the FastFax Server. For inbound fax routing using DNIS, FastFax uses a process similar to routing on Analog DID.

The benefit of T1 line service over DID is the easy management of two-way fax traffic entering and leaving your environment from user desktops.

T1 lines are typically used for high-capacity fax servers (at least eight ports or more), or fax servers that sit behind PBXs that can provide T1 line service but not analog DID line service.

ANI for Dependable Delivery

With ANI routing, the FastFax fax card identifies the sender's fax number and passes that number to the FastFax software. At the same time, the software determines the routing based on the DNIS digits and then further routes it based on the ANI digits. Using ANI, rules can be created to route faxes according to the area code, the area code plus the telephone exchange number (the first three digits in a phone number excluding the area code), or the entire phone number.

For example, if you receive orders from many sources but have a few very important customers, FastFax can forward those important customers' faxes to a senior order-processing clerk using ANI configured to recognize the sender's entire phone number. Also, if a specific person or team handles orders from particular states, then ANI can be used to forward all transmission from one or several area codes to a targeted destination. Meanwhile, other department members handle the rest of the faxes

normally. This method ensures that faxes are handled based on the sender's importance, eliminating manual distribution. ANI routing is only available with T1 ISDN/PRI installations.

Inbound Routing Destination Options

Using any of the combinations listed above, FastFax can route inbound faxes in a variety of ways including:

- Email inboxes (MS Exchange, Lotus Notes/Domino, Novell GroupWise, SMTP)
- FastFax Inbound Queues (Windows and iSeries 400)
- Local or remote printers
- Any folder anywhere on the network
- Directly into any imaging/archival solution (Gauss Enterprise's VIP DocManager, RealVision Software's RVI, Vanguard Systems' IMS/21)

Cost, Configurations, and ROI

Achieving the right configuration requires careful estimation of the network fax requirements. The quantity of DID/DNIS numbers that a network requires depends on the number of network users or destinations that will use the fax service. The quantity of DID lines or T1 channels required to support those users depends on the expected fax traffic.

The cost of DID installation and maintenance varies from state to state, and sometime from city to city within a state, but recent research by Brooktrout Technology, Inc., the leading supplier of digital and analog fax cards, yields the following averages in the US and Canada:

	United States	Canada
Monthly trunk fee	\$51.00 approximately	\$70.00 (depends on rate group; same as business line charge)
Monthly number fee	\$0.39/number (minimum quantity varies)	\$2.85
Installation fee	\$384.00 one time charge	\$100.00 per trunk, one time charge*

Fortunately, Quadrant Software's Sales and Professional Services staff has extensive experience with digital and analog configurations and can help you put together the right configuration for your network. In addition, Quadrant Software can provide a detailed estimate of your potential ROI using inbound fax routing based on your specific fax traffic estimates.

For more information about implementing inbound fax routing at your company, contact Quadrant Software's Sales Department at 800-258-3399 or 508-828-6222, or email sales@quadrantsoftware.com. You can also visit us online at www.quadrantsoftware.com.