Dialect® Media Queue 1.1

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Product Overview

PO DMQ072701

Introduction

Dialect Media Queue (DMQ) is an advanced software solution that transforms a traditional call center into a multimedia contact center. Using existing switching and call distribution technology, DMQ blends different media types into a call distribution system alongside voice calls from a PBX. Customer e-mails, faxes, and web-initiated call back requests are handled using the same routing and prioritizing methods applied to incoming telephone calls. This technique enables contact center supervisors to use reporting tools already on hand to track statistics for a variety of media types.

DMQ provides significant benefits for call centers:

- Leverages the investment already made in a PBX and call distribution system by integrating new customer interaction methods into a call center's existing workflow.
- Extends traditional call center management tools and methods to new media types.
- Historical and real-time statistics tracking includes both voice calls and new media types.
- Presents media requests to the agent via a single graphical user interface.
- Features an open, modular architecture that allows for future expandability as new media types emerge.

Routing Media Requests through the PBX

Due to the widespread use of the Internet, customers are seeking to reach businesses in an expanding variety of ways. E-mails, web-initiated call back requests, and faxes are all supplementing the standard voice call. The traditional means of trying to take advantage of the business opportunities afforded by emerging customer contact methods is to install separate "silo" systems, each dedicated to handling a particular kind of request. That approach faces serious drawbacks, however. For one thing, it requires an expensive investment in new, specialized systems. Furthermore, it fragments a contact center by forcing agents into a task-switching work mode. They have to log out of a system devoted to one media type (e.g., voice calls) and log in to another system (e.g., one dedicated to e-mails) to handle requests for different media types. This complicates managing agent workflow and often results in a significant productivity loss.

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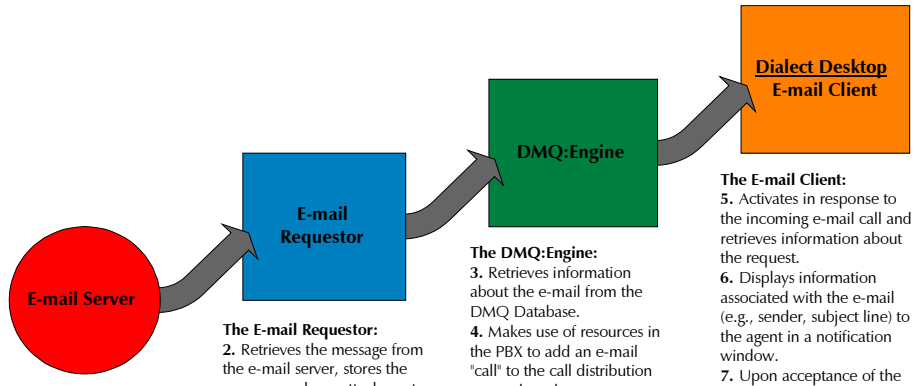
Dialect Media Queue creates media "calls" in the PBX, enabling a contact center to apply proven and familiar voice call handling and queuing techniques to media types such as fax, e-mail, and web-initiated call back requests. Agents are notified of new requests via the phone and are able to accept requests from different media types one after another, without having to continually log in and out of different systems. Supervisory personnel can use existing reporting tools to track statistics for new media types and can manage agent workflow and productivity using already established methods.

How DMQ Works

DMQ utilizes resources in the PBX to route media requests to the existing call distribution system's queues or skillsets, blending those requests with the contact center's voice calls. The resources within the PBX are used to place calls on behalf of the media requests, enabling them to move through the **DMQ Server** and into the appropriate queues or skillsets. The media "call" is then delivered to an agent according to the call routing and processing methods defined in the call distribution system.

Each **media requestor** monitors its associated server for new transactions. When a media request is detected, the corresponding content (e-mail, fax, or web data) is stored and the DMQ:Engine places a call in the PBX to represent the request. The call distribution system then routes the call to the appropriate queue or skillset to await agent availability. When an agent becomes available, the media call is presented and triggers a notification message that prompts the agent to accept the call. Once the agent accepts, the **media client** launched by **Dialect Desktop** retrieves the original request content and displays it to the agent.

The figure below depicts the call flow for an e-mail request, giving a step-by-step explanation of how a message gets from an e-mail server to a call distribution system to being displayed on an agent's desktop.



The E-mail Server:
1. An e-mail arrives at a mailbox monitored by the DMQ E-mail Requestor.

The E-mail Requestor:
2. Retrieves the message from the e-mail server, stores the message and any attachments, and creates a new request record in the DMQ Database.

The DMQ:Engine:
3. Retrieves information about the e-mail from the DMQ Database.
4. Makes use of resources in the PBX to add an e-mail "call" to the call distribution system based on DMQ:Engine scheduling prioritizing parameters.

The E-mail Client:
5. Activates in response to the incoming e-mail call and retrieves information about the request.
6. Displays information associated with the e-mail (e.g., sender, subject line) to the agent in a notification window.
7. Upon acceptance of the e-mail call, retrieves the e-mail record from the DMQ Database.
8. Displays the e-mail message to the agent for processing.

DMQ Components

DMQ Server
The DMQ Server software:

- Creates calls in the PBX on behalf of media requests.
- Stores the configuration parameters for DMQ.
- Stores request records that are tied to the media calls and are retrievable by the DMQ client software.

DMQ Media Modules
A separate DMQ media module is available for each supported media type. Each media module includes a **media requestor** and a **media client**.

- The media requestor retrieves requests from designated media servers (e.g., an e-mail server) and moves them to the DMQ Server.
- The media client ("hosted" by Dialect Desktop) provides a list of recent requests. When a new media call rings an agent's phone, the media client displays a notification message prompting the agent to accept the call. If the call is accepted, the media client presents the content of the request in the appropriate window for agent processing.

DMQ:Reporting Module
The DMQ:Reporting module includes:

- Server components that extract data from the DMQ database.
- A DMQ:Reporting client used to request, format, and display reports from the data in the DMQ Database.

Dialect Desktop
Dialect Desktop is the base user window for DMQ, as well as for future software solutions from Nextira. Its interface looks and works like the Microsoft® Outlook frame. Contained within Dialect Desktop are the client applications for each supported media type. Dialect Desktop also offers access to configuration settings for the DMQ Server and media requestors.

Although the preceding graphic illustrates specifically how an e-mail is handled within the DMQ system, the example can be extended to other media types supported by DMQ by substituting the server, requestor, and client particular to each media type.

Scheduling and Prioritization

The DMQ:Engine scheduling parameters perform workflow management on media requests before they are inserted into the call distribution system. Scheduling lets contact centers maintain a consistent volume of call processing by adding media requests to the call distribution system during known periods of low voice call activity and by preventing media requests from entering the call distribution system during known periods of high voice call activity. DMQ provides the flexibility to create customized schedules that fit a contact center's particular needs.

A prioritization scheme that assigns values to each media type can be configured, so that higher priority requests are inserted into the call distribution system ahead of lower priority requests. For example, active media requests, such as web-initiated call backs, can be assigned a higher priority than more passive media requests, such as e-mails. Once media calls are initiated, they are managed according to the routing and queuing rules that have been established in the call distribution system.

Individual PBX ports can be reserved for use by a specific media type. This prevents situations in which a steady stream of high priority requests continuously preempt all other requests from being processed.

Integration with Meridian ACD

When DMQ is integrated with Nortel Networks™ Meridian™ ACD, media requests can be added to existing voice queues or separate queues can be set up for each media type. Because the media requests are distributed through the ACD, Meridian MAX™ statistical reporting capabilities can be extended to include both traditional voice calls and media requests. Call center supervisors can keep informed of statistics such as Calls Answered, Calls in Queue, and Positions on MAX Calls for each media type.

Integration with Symposium Call Center Server

When DMQ is integrated with Nortel Networks Symposium™ Call Center Server, media requests can be added to existing skillsets or specific skillsets can be created for each media type.

The ability to extend skills-based routing to different media types makes it possible to assign agents to media skillsets with the appropriate priorities. For example:

- Priority 1 to real-time voice callers
- Priority 2 to web-initiated call back requests
- Priority 3 to e-mail messages
- Priority 4 to faxes

Agents receive requests according to the skillsets and priorities assigned, ensuring that voice and media requests are routed efficiently.

Symposium Call Center Server's real-time and reporting capabilities are also extended to include new media types. Supervisors can view the status of both voice calls and media requests through familiar real-time displays. Reports can be printed that provide historical information on disparate media types such as voice calls, e-mails, faxes, and web-initiated call backs.

Installation with Dialect Information Suite

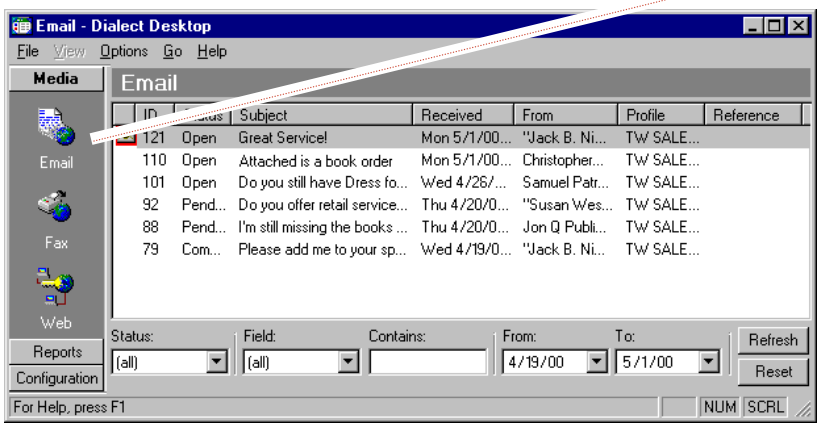
Dialect Information Suite delivers near real-time statistics to the Windows desktop, allowing users to easily view Meridian MAX or Symposium Call Center Server data. With this information, contact centers can quickly respond to changes in workloads. Because DMQ routes media requests through the call distribution system, Information Suite can provide users access to real-time statistics for different media types:

- For Meridian MAX, agents can monitor e-mail, fax, and web-initiated call back queue statistics alongside voice queue statistics.
- For Symposium Call Center Server, agents can monitor e-mail, fax, and web-initiated call back skillset statistics alongside agent, applications, IVR queues, nodes, routes, and other skillset statistics.

Dialect Information Suite's Headline interface can present real-time statistics for media calls at agent desktops. Headline can display contact center information in either a scrolling ticker (as shown) or a tabular format.

Dialect Desktop

Media processing and configuration for Dialect Media Queue takes place using the Dialect Desktop window, which looks and functions much like Microsoft Outlook. This window has a navigation bar that contains shortcuts to both configuration settings and each installed media client. Depending upon the shortcut selected, the viewer area shows the currently selected DMQ module configuration or request information.



For each media client installed on a user's workstation, a shortcut icon is included in the Dialect Desktop bar along the left side. Clicking on a shortcut icon displays recently processed requests for that media type.

If DMQ configuration tools are installed on a workstation, they can be accessed by clicking the **Configuration** group button and then clicking the DMQ configuration shortcut icon in the Dialect Desktop bar.

If the DMQ:Reporting client is installed on the workstation, DMQ reports can be accessed by clicking the **Reports** group button and then clicking the DMQ report shortcut icon in the Dialect Desktop bar.

User Types

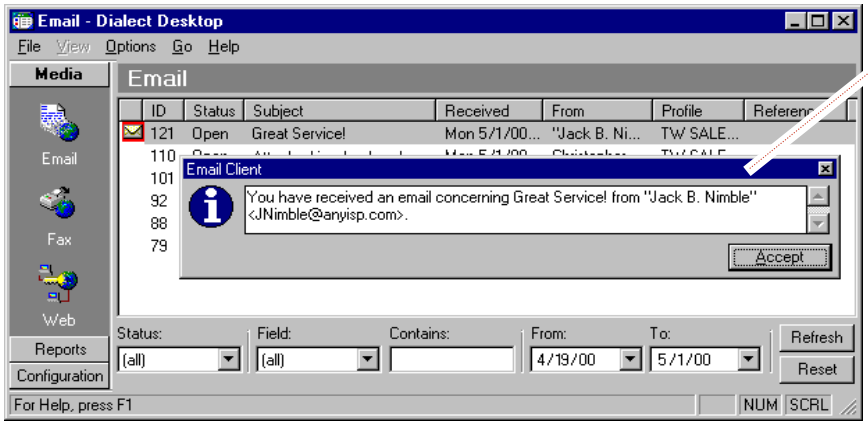
Dialect Desktop supports three assignable user types that give call center personnel different levels of access to DMQ features and settings. Standard **Users** have access to the DMQ client windows and features for media calls directed to them. **Superusers** have access to the DMQ client windows and features for all open, closed, or pending media calls directed to them or their assigned agents. **Administrative** users have access to DMQ configuration windows and features, and access to all media calls, including those that have not yet been merged into the call distribution system. User is the default setting and Superuser and Administrative settings can be assigned to the appropriate personnel during software installation.

Media Interfaces

Recently processed requests for each media type can be accessed by clicking the media shortcut buttons in the navigation bar. When a specific media request is selected, its associated reader window is opened.

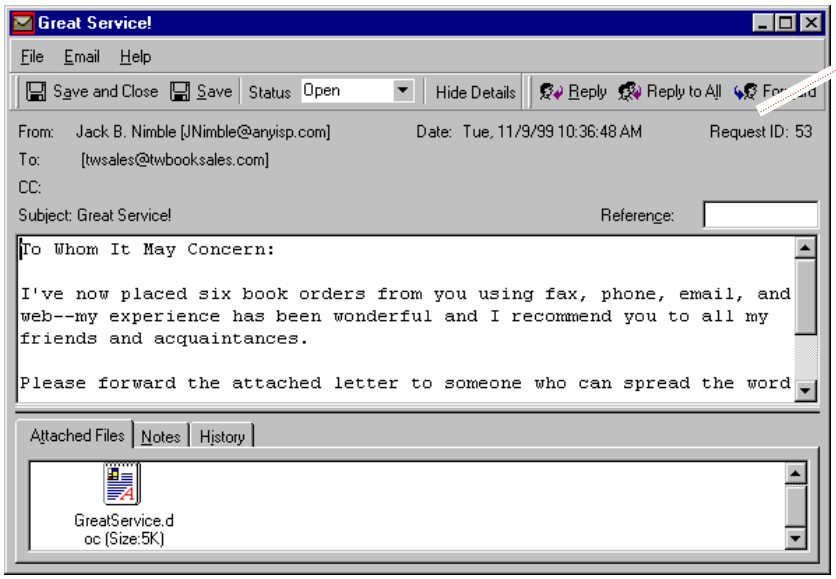
When a media call rings the phone at an agent's desktop, the client for that media type adds the new request to the viewer area and a notification message which allows the agent to accept the call is presented. Once the call is accepted, the appropriate window for handling the request is opened. The following example walks through the various screens an agent would see while handling an e-mail call.

Upon the arrival of a new e-mail at an agent's desktop, a notification message prompts the agent to accept the request.



The notification message launched by the e-mail client tells the agent the subject of the e-mail and the name of the e-mail's sender. The agent accepts the e-mail call by clicking the **Accept** button.

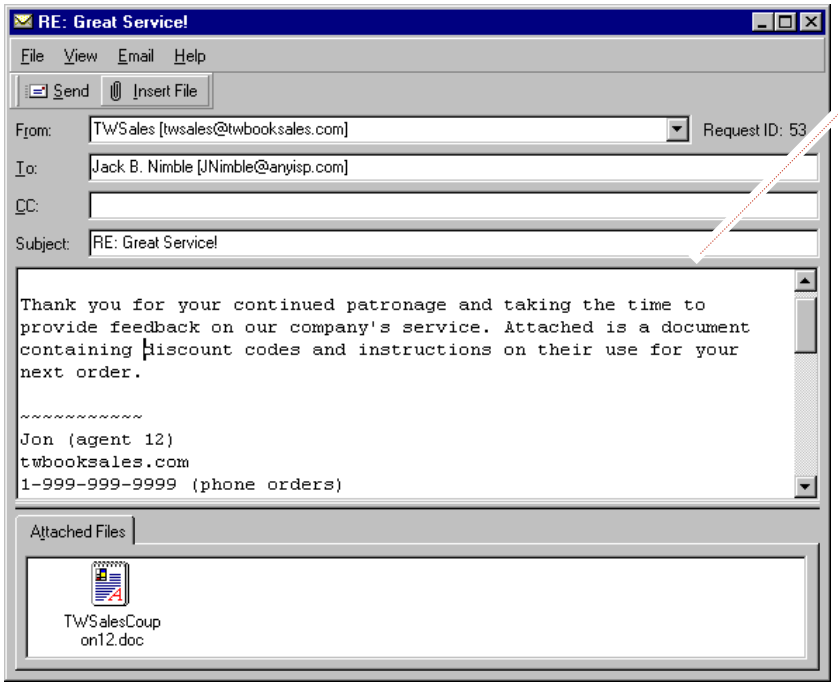
After the agent accepts the request, the e-mail "reader" window is opened and the incoming e-mail is displayed.



The e-mail reader window presents the content of the received message and the **Attached Files** area displays any files accompanying the request. The toolbar buttons can be used to save, close, change the status of, reply to, and forward the e-mail.

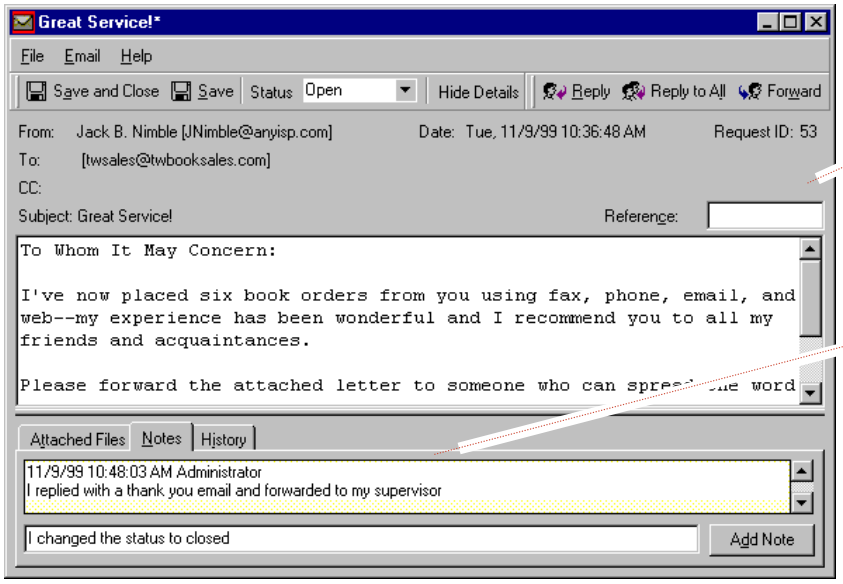
Clicking the **Notes** tab displays any notes that agents have attached to the e-mail. The **Add Note** button at the bottom of the screen lets the agent append a new note to the e-mail. Clicking the **History** tab displays an account of all previously applied updates to the e-mail.

The agent responds to the customer's e-mail by choosing **Reply** from the reader window toolbar. An e-mail response window is displayed, into which the agent can enter text. Files can be attached to the agent's response, if necessary.



The agent enters text in the e-mail response window and can attach files, if needed, to respond to the sender's inquiry. The **Attached Files** area displays any files the agent has inserted into the e-mail.

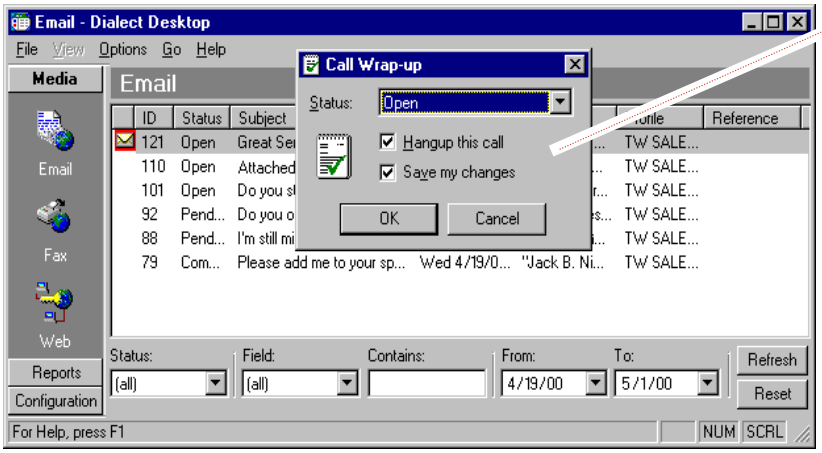
Once the e-mail is responded to, the agent can enter notes about the response sent (e.g., questions answered, attachments sent) using the **Add Note** feature and can change the e-mail's status (e.g., from Open to Closed) using the **Status** drop-down list. The notes entered are permanently stored with the e-mail and can be viewed by anyone opening the e-mail. The agent then saves and closes the e-mail.



The Reference field lets the agent add alphanumeric text, such as an account code or customer number, to relate individual media requests to external business systems.

Sending a response e-mail returns the agent to the original message. Any notes entered using **Add Notes** are automatically time-stamped and identify the creator of the note.

After saving and closing the e-mail, the agent can confirm the e-mail's status and hang up the call. The agent is now ready to accept another voice or media call.



The call wrap-up window lets agents change the e-mail's status, confirm if changes should be made, and hang-up the media call using the **Hangup this call** checkbox.

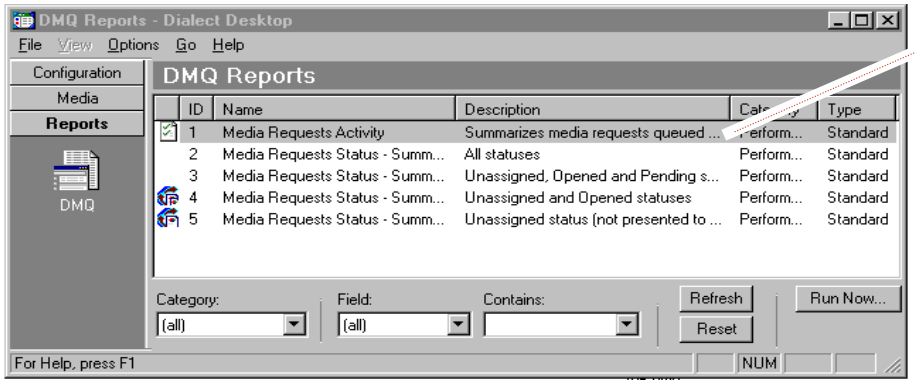
Other Media Types

Call-handling scenarios for other media types supported by DMQ would follow a pattern similar to that of the example for e-mail given in the preceding section, but with a user interface particular to each media type. For further details regarding DMQ's user interface screens for each media type, please see the **Dialect Media Queue Product Tour**, available through your Nextira representative.

Reporting Interface

ACD reports include call statistics for DMQ media requests while the corresponding "call" remains active in the PBX. DMQ provides the DMQ:Reporting module that complements standard ACD reports by accounting for media requests from the time they are received by DMQ until they are purged from the DMQ database.

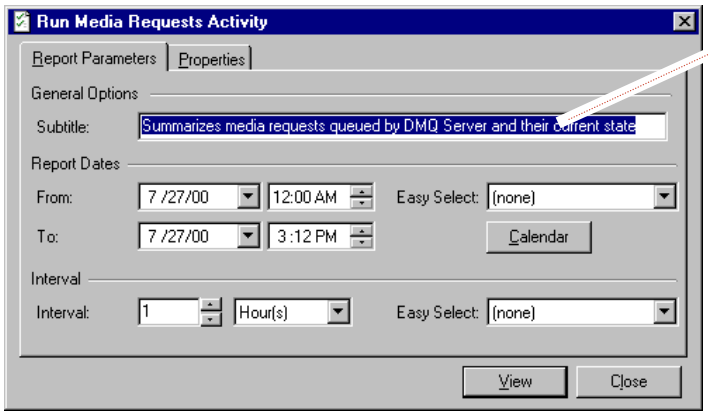
DMQ Reports can be accessed by clicking the **Reports** shortcut button in the navigation bar. When a specific report is launched, its associated Run Report window is opened.



The reports available to a DMQ user are displayed in the Dialect Desktop. Users launch a report either by:

- Selecting it and clicking **Run Now**.
- Double-clicking on a report.

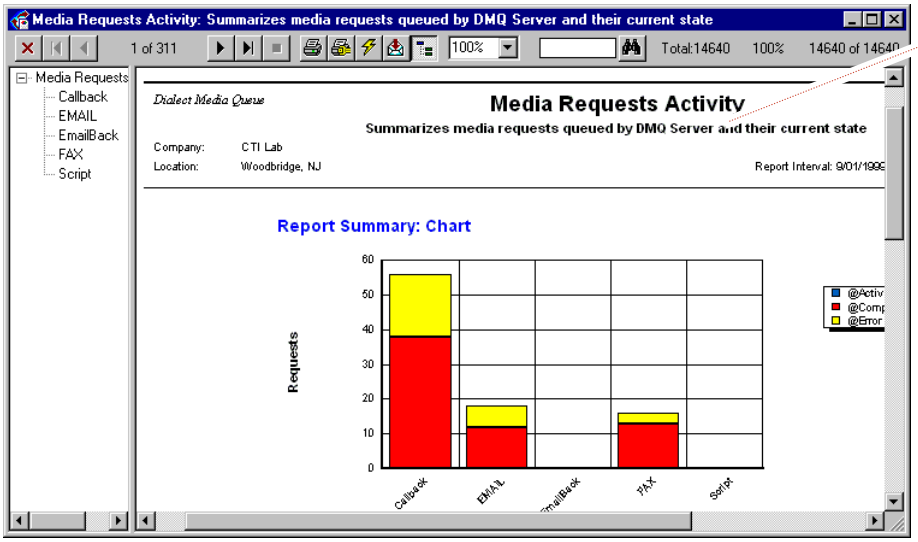
The Run Report window can be used to set run-time parameters for the current report request. Alternatively, the user can accept the default parameters and submit the report request by clicking **View**.



After launching the report, users can either:

- Set report-specific, run-time parameters such as a custom subtitle, a specific reporting period, or a specific data collection interval, before clicking **View** to submit the report request.
- Use the default report parameters by clicking **View** without making any changes.

After clicking **View**, the report request and any run-time parameters are sent to the DMQ Server. The DMQ:Reporting Server extracts the data from the DMQ Database and sends it back to the DMQ Reporting Client for display in the Preview window.



The DMQ:Reporting client displays the results of the report request in a Preview window.

From the Preview window, the user can:

- Page through the report
- Jump to a report subsection
- Search the report for a specific character string
- Zoom in or out
- Print the report
- Export the report to a file format for use in another application (such as Excel)

The Preview window uses a run-time version of Crystal Reports™ to format and display the report for viewing online. Users can also print the report or export it to a file format for use in another application, such as Excel.

Available DMQ Reports

Included with the DMQ 1.1 release are the following reports:

- Media Requests Activity—Summarizes all media requests queued by DMQ Server and their state (Active, Completed, or Error) for specific reporting intervals.

  Use this report to track media request activity and throughput for specific reporting periods and time intervals.

- Media Requests Status-Summary for All Requests—Summarizes all media requests by media type, all client statuses (Unassigned, Open, Closed, and Pending), all DMQ:Engine Statuses (Complete, De-queue, Dead, and Deleted), and all DMQ:Engine states (Complete and Error).

  Use this report to get a “snapshot” of media request volume and corresponding statuses for specific reporting periods and time intervals.

- Media Requests Status-Summary for Unassigned, Opened and Pending Statuses—Summarizes non-closed media requests by media type, client statuses (Unassigned, Open, and Pending), all DMQ:Engine Statuses (Complete, De-queue, Dead, and Deleted), and all DMQ:Engine states (Complete and Error).

Additional reports are anticipated for future releases. If the standard reports available in the current DMQ:Reporting release don't meet your requirements, custom reports can be developed. Contact your Nextira Representative for more information.

Use this report to get a "snapshot" of media requests still in progress for specific reporting periods and time intervals.

- Media Requests Status-Summary for Unassigned and Opened Statuses—Summarizes yet-to-be-accepted and opened media requests by media type, client statuses (Unassigned and Open), all DMQ:Engine Statuses (Complete, De-queue, Dead, and Deleted), and all DMQ:Engine states (Complete and Error).

  Use this report to get a "snapshot" of media requests still waiting to be opened for specific reporting periods and time intervals.

- Media Requests Status-Summary for Unassigned Statuses—Summarizes yet-to-be-accepted media requests by media type, client status (Unassigned), all DMQ:Engine Statuses (Complete, De-queue, Dead, and Deleted), and all DMQ:Engine states (Complete and Error).

  Use this report to get a "snapshot" of media requests that have not be accepted by agents during specific reporting periods and time intervals.

A Single Solution for Today and Tomorrow

For organizations looking to offer additional interaction methods to customers, Dialect Media Queue provides the opportunity to use the technology already on hand (PBX, call distribution system, and reporting tools) to integrate multiple media types with existing voice traffic. DMQ's open, modular architecture ensures that contact centers can use it to support current media types today and future media types as they emerge.

The extensive flexibility of the Universal Requestor, already used for web-initiated call back requests, will facilitate the development of modules to support almost any media type. Additionally, the Universal Client is capable of both invoking external programs and displaying (within its own browser-based reader window) information that includes HTML, Dynamic HTML, and embedded COM-based applications (such as Microsoft® Excel). This provides a foundation upon which sophisticated end-user applications can be developed; greatly enhancing the level of service that can be delivered.

System Requirements

Dialect Media Queue integration with a Nortel® Meridian 1™ PBX requires the following:

- Meridian Link or Meridian Link Services (MLS) on Symposium
- For Option 11, contact your Nextira representative
- For Option 21-81
  - E-Net (QPC 414) network card(s)
  - X11 Release 20 or higher, with software option 254

Component	Requirement
DMQ Server	▸ Pentium® II 266 MHz computer with 128 MB RAM. (Pentium II 450 MHz with 256MB RAM recommended.) ▸ Windows NT® (Server 4.0 with Service Pack 4 or higher) or Windows 2000. ▸ 250 MB of free disk space. ▸ A CD-ROM drive. ▸ Network access to the call distribution system, DMQ Media Requestors, and DMQ Clients. ▸ Dialogic® CT-Connect™ 2.0 or later.
DMQ Media Requestors	▸ *If not installed on the DMQ Server:* Pentium II 266 MHz computer with 128 MB RAM. (Pentium II 450 MHz with 256MB RAM recommended.) ▸ Windows NT® (Server 4.0 with Service Pack 4 or higher) or Windows 2000. ▸ 250 MB of free disk space **plus** storage sufficient to hold media request traffic (e-mails, e-mail attachments, and faxes). ▸ One customer-provided server for each media type: - E-mail — E-mail servers that are POP3 and SMTP compliant - Fax — Fax servers that produce TIFF CCITT formatted files - Internet — Web servers supporting COM and scripting ▸ Network access to the e-mail, fax, and/or web servers, DMQ Server, and DMQ Clients.

Component	Requirement
DMQ Client	▸ Processor and memory as required by the 32-bit Windows® operating system in use. (Pentium 166 with 32 MB RAM recommended for Windows 95 and 98; Pentium II 266 MHz with 64 MB RAM recommended for Windows NT; Pentium II 266 with 128 MB RAM recommended for Windows 2000. ▸ Windows 95 with Service Pack 1, Windows 98, Windows NT (Workstation 4.0 with Service Pack 4 or higher), or Windows 2000. ▸ 40 MB of free disk space. ▸ Network access to DMQ Server and DMQ Media Requestors. ▸ 14″ monitor with a screen resolution of at least 640x480 pixels and support for 256 colors. (15″ monitor with a screen resolution of 800x600 recommended.)
DMQ Reporting	▸ For a single seat of DMQ:Reporting—Satisfied by meeting existing DMQ Server and DMQ Client requirements. ▸ For more than one concurrent DMQ:Reporting user—An additional SQL Server license is required for each additional seat of DMQ:Reporting..

Please contact us for more information on Media Queue or our end-to-end call center solutions:

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Product Overview
Dialect® Media Queue 1.1
PO DMQ072701