Number: **1428-A**

Date: **May 2002**

Symposium TAPI Server for Meridian 1 Release 2.3.1

Nortel Networks is pleased to announce the availability of Release 2.3.1 of the Symposium TAPI Server for Meridian 1. This release is the first Service Update for Release 2.3.0 which was introduced during 2001. Release 2.3.1 is now shipping as the standard 2.3 version and is available for free-of-charge download as a PEP (Product Enhancement Patch) for existing 2.3.0 installations. All existing 2.3 Security Devices and Keycodes support Release 2.3.1 without modification.

Software up-issues from TAPI 2.1 and 2.2 to Release 2.3.1 are available.

Symposium TAPI Server for Meridian 1 is a full function service provider for Microsoft's Telephony Applications Programming Interface (TAPI) Release 2.x for Windows NT4 as well as TAPI Releases 2.x and 3.0 for Windows 2000. The combination is a client-server telephony monitoring and control API for the Windows NT4 and 2000 operating systems that is powerful and very cost-effective.

Release 2.3.0 was introduced during 2001 adding support for several new features including:

- Dynamic TAPI SP database,
- Compatibility with Windows 2000 Server and Clients,
- Microsoft TAPI 3.0 compatibility,
- TAPI SP operation and administration GUI enhancements,
- Call Data Networking Functional Enhancements,
- Logger Application enhancements,
- Version/PEP Viewer,
- Support for a new Meridian Link Message (DN Release Indication)
- Co-residency with Symposium Agent 2.3
- Compatibility with the latest Windows NT/2000 Service Packs
- M3900 Set range Compatibility

Release 2.3.1 supports all functionality in 2.3.0 and adds the following:

- Support for the i2004 Internet Telephone
- Support for the i2050 soft phone
- Support for Succession Server for Enterprise CSE1000
- Ability to select / deselect attached data for consultative calls
- Compliance with SAPphone R/3 from mySAP™ solutions

Release 2.3.1 is an ideal base for wide scale deployment of Symposium Agent 2.3, several Symposium Partner Products, and a variety of TAPI-compliant products from Nortel Networks Developer Partners. Microsoft TAPI products are revolutionizing the deployment of computer telephony integrated applications for businesses that have widely deployed Windows-based computers.

Symposium TAPI Server for Meridian 1 Release 2.3 New Product Features

Listed below are the features that were introduced with version 2.3.0 of the Symposium TAPI Service Provider for Meridian 1.

Dynamic TAPI SP Database

The Dynamic Database feature allows the Symposium TAPI Service Provider database to be updated dynamically. Line devices can be added, changed or removed while the TAPI service provider is running. It is no longer necessary to plan a service outage in order to recognize the addition or removal of line devices. TAPI Application users are no longer affected by the addition or removal of line devices by the administrator. TAPI SP Network Managers or administrators no longer have to schedule additions, moves and changes at obscure times.

Create new line device

The database configuration utility now sends a message to the Symposium TAPI Service provider about the addition of a new line as soon as the database is written. The Symposium TAPI Service provider sends a LINE_CREATE message to LINEEVENT callback function when it receives a message from the database configuration application.

Remove line device

The database configuration utility now sends a message to the Symposium TAPI Service provider when a line is removed from the database. The Symposium TAPI Service provider sends a LINE_REMOVE message to LINEEVENT callback function when it receives a message from the database configuration application.

Update line device features

The database configuration utility now sends a message to the Symposium TAPI Service provider when a line or address feature is changed. This provides the user of the TAPI service provider to dynamically setup and take away the features from particular line device.

TAPI SP Operation and Administration GUI enhancements

The database configuration utility in version 2.3 of the Symposium TAPI SP for M1 is now equipped with a new search engine that makes it easier to find information in the database and allows information to be added and removed more quickly. The user interface has also been modified to make information easier to access.

Microsoft TAPI 3.0 compatibility

The Symposium TAPI Service Provider in a Windows 2000 environment negotiates with Microsoft's TAPI 3.0 version during the TAPI interaction to the service provider. It is also backward compatible with Microsoft TAPI versions 2.0 and 2.1 supported in Windows NT4.

Compatibility with Windows 2000 Server and Clients

Version 2.3 of the Symposium TAPI SP for M1 has been enhanced to support interoperability with Windows 2000. It can now be run in the following Windows NT4 and 2000 environments.

- Symposium TAPI Service Provider installed on a Windows NT 4.0 Server configured as a standalone server in a Microsoft Windows network with Windows 2000/NT/98/95 clients.

- Symposium TAPI Service Provider installed on a Windows NT 4.0 Server configured as a domain controller in a Microsoft Windows network with Windows 2000/NT/98/95 clients.

- Symposium TAPI Service Provider installed on a Windows 2000 Server configured as a standalone server in a Microsoft Windows network with Windows 2000/NT/98/95 clients.

- Symposium TAPI Service Provider installed on Windows 2000 Server configured as a domain controller in a Microsoft Windows network with Windows 2000/NT/98/95 clients.

Call Data Networking Functional Enhancements

The Symposium TAPI Service provider function of Call data networking between TAPI servers was changed from a Broadcast" method in release 2.1 to an "On Demand" method in release 2.2. The "On-Demand" method is still used in Release 2.3. The “On-Demand” method of Releases 2.2 and 2.3 reduce LAN/WAN overhead and increase the performance of the TAPI server. This change however means that TAPI 2.1 Networking is not compatible with TAPI 2.2 and 2.3.
It is recommended that all Networked TAPI servers are running the same version of TAPI SP, preferably Release 2.3.1.

Call Data Networking in Release 2.2 supported only a single Home Location Code (HLOC) or ESN per Meridian 1 switch. This restricts the TAPI SP from requesting call data from the same TAPI SP for two different Home Location Codes.

TAPI SP Release 2.3 has been enhanced to allow more than one HLOC to be configured in the database and the TAPI SP 2.3 sends request call data messages to multiple TAPI servers that have the same HLOC configured.

Logger Application Enhancements

The Logger application has been improved to provide

- A configurable timer option to recycle the overflow log file.
- An option for the user to browse and select a location where the overflow log file should be created.
- Bolding the way error logs appear.
- Providing troubleshooting tips when error log occurs.

Version/PEP Viewer

This new tool helps network manager's diagnose release and versions of the Symposium TAPI SP for M1. This tool allows Network Managers to view the latest release number of the software and any Product Enhancement Packages (PEPs) that have been applied to fix bugs or provide enhancements.

Support for new Meridian Link Messages

DN Release Indication

A new message called DNReleaseIndication has been added to the MLSM message set only and is delivered with SCCS 1.5, 3.0, 4.0 and 4.2, and SECS3.0. This message informs host applications when a registered (monitored), device has been released by the switch. This may happen when such device is deleted or reconfigured by the switch administrator. This message was not needed for Legacy Meridian Link because the registrations were local to the MLink machine and the switch did not know about them. The new message is supported in Release 2.3 of the Symposium TAPI Service Provider for Meridian 1.

Co-Residency with other Symposium applications

Symposium TAPI SP Release 2.3.1 can be installed on the same server as Symposium Agent 2.3. Refer to the detailed Engineering Guidelines for both products as certain restrictions apply, such as:

- The number of agents that are supported in co-resident configuration
- Limitation that Symposium Agent is only supported on single-CPU server

Current Windows 2000/NT 4.0 Service Pack Compatibility

Symposium TAPI SP Release 2.3.1 is compatible with Windows NT Service Pack 6a.

Symposium TAPI SP Release 2.3.1 is compatible with Windows 2000 Service Pack 2.

M3900 Set Compatibility

Symposium TAPI SP Release 2.3 supports the M39xx series sets (M3901, M3902, M3903, M3904 and 3905).

Symposium TAPI Server for Meridian 1 Release 2.3.1 New Product Features

All functionality supported in TAPI SP Release 2.3.0 is supported in TAPI SP Release 2.3.1

Listed below are the new features that are introduced with Release 2.3.1 of the Symposium TAPI Service Provider for Meridian 1.

i2004 Set Compatibility

Symposium TAPI SP Release 2.3.1 supports the i2004 Internet telephone.

i2050 Soft phone Compatibility

Symposium TAPI SP Release 2.3.1 supports the i2050 soft phone

Succession CSE 1k Compatibility

Symposium TAPI SP Release 2.3.1 is compatible with Succession CSE 1k

Ability to select / deselect attached data for consultative calls

Symposium TAPI SP Release 2.3.1 contains a new feature that allows the Administrator to select whether to enable or disable the copying of call data during consultative calls. Examples of consultative calls are transfer and conference. This selection is made by the addition of a new check box in the Provider tab.

Prior to TAPI SP Release 2.3.1,call data was always copied during consultative calls.

Compliance with SAPphone R/3 from mySAP™ CRM solutions

TAPI SP Release 2.3.1 has been validated as compliant with SAPphone*, the softphone interface to mySAP* customer relationship management (mySAP™ CRM) solutions.

This compatibility is achieved between Nortel Networks Symposium TAPI SP CTI middleware and SAPphone*, the softphone interface to mySAP* customer relationship management (mySAP™ CRM) solutions with the Service Update 1 for TAPI SP 2.3 from Nortel Networks contact center solutions. This integration will allow call center agents to perform incoming and outgoing telephony activities from their client PCs running mySAP CRM Customer Interaction Center for increased productivity.

The SAPphone-based integration enables the ability to screen pop customer data based on information collected by an IVR system connected to the Meridian* 1* and Symposium* Call Center Server. Nortel Networks Service Update 1 for TAPI SP 2.3 for the Meridian 1 provides fast deployment with out-of-the-box integration with the mySAP CRM Customer Interaction Center desktop without the need for complex configuration or custom development assuring timely deployment without business disruption.

Refer to Appendix C for a copy of the Nortel Networks Web Release on this compliance.

A new Compliance tab has been added to TAPI SP Release 2.3.1 to allow the Administrator to select SAP compliance.

TAPI SP 2.3.1 Server Guidelines in relation to SAPphone R/3

Refer to bulletin TAPI SP Server Guidelines in relation to SAPphone server Bulletin 2002-046

The TAPI SP product must be deployed on a server meeting the requirements of these guidelines in order to operate to design specification and meet the support requirements of Nortel Networks.

Nortel Networks do not recommend and are unable to support co-residency of the SAPphone* server application with Service Update 1 of the TAPI SP 2.3 for the Meridian 1.

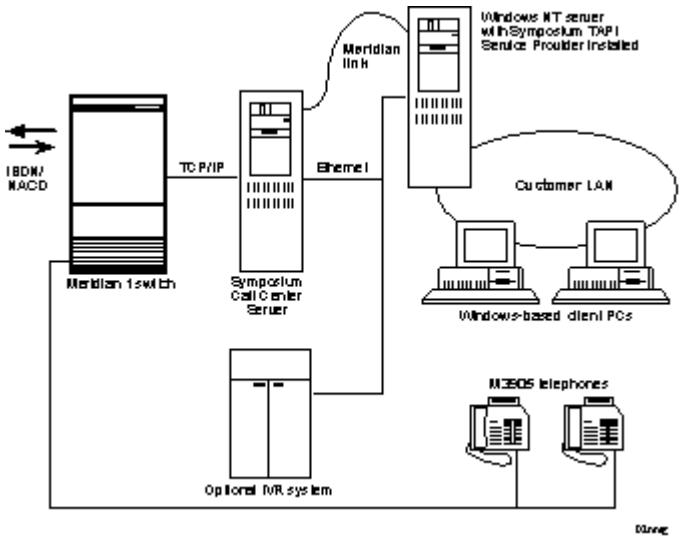
Provisioning of the SAPhone* server application should follow the recommendations of mySAP™ CRM solutions. Refer to the following SAP* Bulletins OSS 501643 and OSS 458628 for further information.

Symposium TAPI SP architecture options

Symposium TAPI SP is a flexible application that enables a Meridian 1 switch to integrate with Microsoft TAPI services. In a call center environment the service provider delivers TAPI capabilities within a skill-based routing (SBR) environment. In a knowledge worker environment where automatic call distribution (ACD) routing is sufficient, Symposium TAPI SP delivers TAPI capabilities through a direct connection with the Meridian 1 switch. The optional networked TAPI/IVR optional feature supports networked skill-based routing (NSBR) and network ACD (NACD) in a call center environment, or just NACD in knowledge worker environment.

Call center environment

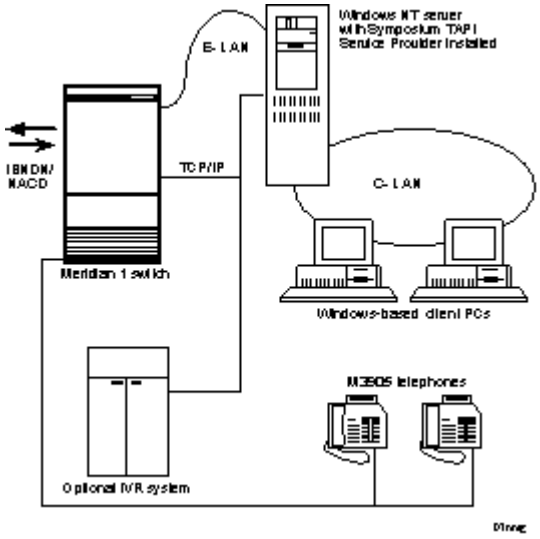
In a call center environment Symposium TAPI Service Provider monitors TAPI ports on the Meridian 1 switch and passes information such as ANI/DNIS and CLID, via the Microsoft TAPI server, to a TAPI-



compliant application on a client PC. The TAPI application on the client PC presents this information to the agent, perhaps in the form of a screen-pop. If you install an IVR system in a call center, Symposium TAPI SP uses similar processes to present caller entered data (CED), such as customer account number, to an agent. In a call center environment, Symposium TAPI SP connects to a Meridian 1 switch via the Meridian Link Services application that is installed on the Symposium Call Center The SCCS provides skill-based routing and call center reporting services and Symposium TAPI SP adds rich computer telephony integration (CTI) features within this environment. To support installations served by the SCCS, Symposium TAPI SP links with the Meridian 1 switch via the Meridian Link Services application that is resident on the SCCS. All Meridian 1 switches use a private, embedded LAN (E-LAN) to isolate Meridian system traffic from the customer local area network (C-LAN). In a call center, the SCCS is configured as a member of both the E-LAN and the C-LAN via separate 10/100BASE-T Ethernet ports on the server, maintaining this isolation between telephony and data traffic. The TAPI server has one 10/100 BASE-T Ethernet connection to the C-LAN, and communicates with the E-LAN via a direct connection to the SCCS.

Knowledge worker environment

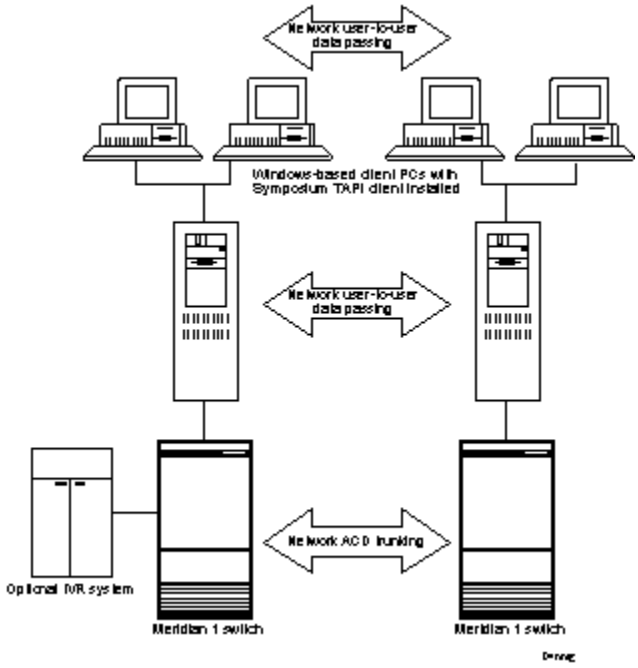
In a knowledge worker environment, where ACD routing is sufficient to requirements, you can configure a direct connection from Symposium TAPI SP to the Meridian 1 switch. Symposium TAPI Service Provider monitors TAPI ports on the Meridian 1 switch and passes information such as ANI/DNIS and CLID, via the Microsoft TAPI server, to a TAPI-compliant application on the client PC. The TAPI client presents this information to the agent, perhaps in the form of a screenpop. This section provides an overview of an implementation in a knowledge worker environment.
In a knowledge worker environment Symposium TAPI SP connects directly to a Meridian 1 switch via a TCP/IP Ethernet connection.
With a direct connection implementation a single Meridian 1 switch can support up to sixteen TAPI servers.



Networked TAPI and IVR

Symposium TAPI SP provides server-to-server networking over LAN or WAN. The service provider has an open interface through which it can obtain information collected by IVR systems. IVR information is passed to TAPI-compliant applications using the standard TAPI interface.
Symposium TAPI Service Provider works transparently with multiple Windows NT or Microsoft Windows 2000 servers. This environment is commonly used for NACD with a default of 512 bytes passed with a call locally or between servers in a NACD configuration. Note the limit is 4096 bytes maximum per call maximum

TAPI system architecture supporting IVR functionality



Microsoft TAPI server and client

The Microsoft TAPI Server (TAPISRV) is a server service which can be accessed by clients via the MS remote service provider (RSP). On client PCs, access to the TAPISRV is provided by installing the Microsoft Windows RSP telephony module. This module routes TAPI requests to a specific TAPI service provider. TAPI-compliant applications on client PCs issue TAPI messages. TAPISRV communicates with the client via the LAN over a TCP/IP Ethernet connection. TAPISRV routes TAPI messages from TAPI-compliant applications on the client to Symposium TAPI SP on the TAPI server. Symposium TAPI SP converts TAPI messages to corresponding switch messages through the Meridian Link Services application installed on an SCCS, or via a direct Ethernet connection to the Meridian 1 switch. Likewise, Symposium TAPI SP converts Meridian 1 switch messages to TAPI messages for routing to client applications via TAPISRV.

Performance Improvements in TAPI Networking in TAPI SP Release 2.2 and 2.3

Performance improvements were introduced with TAPI SP Release 2.2 for TAPI Networking.
TAPI SP Release 2.1 utilized a “linear link list” to store and search for call data objects. TAPI SP Release 2.2 and 2.3 instead use an index schema, which improves the speed of operations and reduces the processing power required.
Further, Release 2.1 utilized a broadcast mechanism to send the call data, as each call arrived, to all other networked TAPI servers. While this method was effective, it resulted in the use of considerable memory and network resources. Release 2.2 & 2.3 identify the call data required by using switch home location codes and require that call data be passed on a request only basis.

Note: TAPI SP 2.1 IVR Networking and TAPI SP 2.2/2.3 IVR Networking features are not compatible. All servers must be running on at least Symposium TAPI Release 2.2 in order to take advantage of the above features.

It is recommended that all TAPI Servers are operating the same Release of TAPI SP server in a TAPI Networking environment.

Compatibility

Symposium M1 TAPI SP Release 2.3.1 supports the following interfaces:

- Direct Connect,
- Meridian Link Release 5(6.03), 5C (6.42),
- Symposium Link 6.01
- Meridian Link Services (MLS) 3.0,4.0,4.2.

Symposium M1 TAPI SP Release 2.3.1 is compatible with the following products:

- Symposium Agent 2.3
- SWCP 3
- SCCS 3.0, 4.0,4.2
- SECS 2.0,3.0
- IPML 2.0

Notice of forthcoming end of life of TAPI SP 2.1 and 2.2

Notice has been given in Bulletin 2002-043, issued March 2002, of the forthcoming end-of-life of TAPI Releases 2.1 and 2.2.
As of 30th September 2002, Nortel will withdraw GNTS support for TAPI SP Releases 2.1 and 2.2.

Note – The same bulletin states that Symposium Agent 1.1, 2.0 and 2.01 will reach end of life on 30th September 2002 also.

Training

NA and EMEA regions
Globalknowledge, a Nortel Networks Premier Education Partner, offers both self-paced and leader-led courses on Symposium Meridian 1 TAPI Service Provider and Symposium Agent. Courses are available on a regularly scheduled basis and on demand. For more information, click on http://get.globalknowledge.com/norteltraining/ and select Course #331, Symposium TAPI Service Provider for Meridian 1 and Symposium Agent Installation, Administration and Maintenance.

Asia Pacific region
Nortel Networks Enterprise Voice, Singapore Technical Training Centre
Meridian 1, Symposium, CallPilot, VoIP, BCM, Succession CSE 1000 and Periphonics IVR.
Course schedule and training related information can be found at <http://www.nortelnetworks.com/td>)
Contacts:
Tracy Ng, Tel: 65 6380 8715, Fax: 65 6380 8725, Email: tracyng@nortelnetworks.com
Jeffrey Woo, Tel: 65 6380 8602, Fax: 65 6380 8725, Email: jeffwoo@nortelnetworks.com

Compatible Products Program

Several leading software developers, many of whom are Nortel Networks Developer Partners, have already introduced compatible software or will do so soon on this powerful new CTI environment. Descriptions of applications being introduced by Nortel Networks Developer Partners vendors will be provided in separate sales and marketing bulletins. To get up-to-date information on currently available applications, click on the Developer Partner web site at http://www.nortelnetworks.com/dpp.

Nortel Networks TAPI Server Developers Support

For developers or customers wanting to develop their own TAPI applications, Nortel Networks offers a Symposium TAPI Server for Meridian 1 Toolkit. This toolkit is available through the Nortel Networks Developer Partners Program. The toolkit includes software and documentation. Nortel Networks offers a wide range of developer support services and developmental laboratories to both commercial and "in-house" developers. Those interested should visit the web site http://www.nortelnetworks.com/dpp.

Engineering Information

Care must be taken to properly engineer the Symposium TAPI Server and Meridian 1 installation to ensure the product operates to design intent.

Refer to the Engineering Guidelines and Network Managers Guide supplied with TAPI SP Release 2.3.1 for full details on the following:

- Server Hardware
- Software
- 3rd party software guidelines, including anti-virus and remote access products
- TAPI SP and Symposium Agent
- SAPphone R/3
- LAN traffic

Note:
TAPI SP Release 2.3.1 can only be deployed on a server that contains an Integrated IBM compatible, 25 pin, D type parallel port. This port is required to connect the TAPI SP Security device.

TAPI SP Release 2.3.1 is only supported in a true Microsoft Windows environment. TAPI SP 2.3.1 is not supported if it is installed in a Microsoft Terminal Services environment, or terminal services environments from other vendors, such as Citrix.

Meridian 1 Engineering

Refer to the Ordering Guide and Network Managers Guide supplied with TAPI SP Release 2.3.1 for full details on the following:

- X11 requirements
- M1 configuration to support TAPI SP

The minimum release required for Symposium TAPI Service Provider with Link or Link & IVR connectivity is X11 Release 22.
The minimum release for Direct and Direct & IVR connectivity is X11 Release 23.37.

Ordering Information and Procedures – TAPI SP 2.3

The information presented applies to the NA and EMEA regions.
For Asia Pacific, please refer to the ENTERPRISE SOLUTIONS ASIA PACIFIC - MERIDIAN 1 CATALOGUE.

The order codes and rules for TAPI SP Release 2.3.1 and identical to that of TAPI 2.3.0, indeed all order codes refer to TAPI SP 2.3 without the 3rd digit suffix.
No changes to the ordering procedure or tools have been made with introduction of TAPISP Release 2.3.1.

The Symposium TAPI Server for Meridian 1 Release 2.3.1 software is shipped on CD-ROM together with a Security device and floppy disc containing the Keycode. The Keycode enables the required functionality.

Note:
TAPI SP Release 2.3.1 can only be deployed on a server that contains an Integrated IBM compatible, 25 pin, D type parallel port for the Security device.

A maximum of one TAPI SP Server is supported in an SCCS/SECS environment.
A maximum of 16 TAPI SP Servers are supported in a Direct Connect environment, however particular attention must be given to the Meridian 1, LAN and TAPI engineering.

For Asia Pacific, please refer to the ENTERPRISE SOLUTIONS ASIA PACIFIC - MERIDIAN 1 CATALOGUE

Ordering for new installations with Meridian Link Services (MLS), Symposium Express Call Center (SECC) or Symposium Call Center Server (SCCS) - Link

To order the basic Symposium TAPI Server for Meridian 1 Release 2.3 software, order the following CD-ROM package for each production server. The base package integrates with either Symposium Express Call Center (with networking option), Meridian Link Services or Symposium Call Center Server to provide connections for up to 10 users.

NT Order Code	Description
NTL432CA	TAPI SP R2.3 Link Base Package (10 Users)

Additional user licenses are available in increments of 1 to 1000 users.

The maximum number of agents supported per TAPI SP Server is 1200.

NT Order Code	Description
NTVF97AA	TAPI SP (Link) 1 License File
NTVF98AA	TAPI SP (Link) 10 License File
NTVF99AA	TAPI SP (Link) 50 License File
NTL420AA	TAPI SP (Link) 100 License File
NTL421AA	TAPI SP (Link) 200 License File
NTL422AA	TAPI SP (Link) 500 License File

NTL423AA	TAPI SP (Link) 1000 License File

To order the Symposium TAPI Server for Meridian 1 Release 2.3 software for Meridian Link environments requiring IVR/Networking, order the following CD-ROM package for each production server. The package provides integrates with either Meridian Link modules Symposium Express Call Center (with net option), Meridian Link Services 4.0 or Symposium Call Center Server and provides connections for up to 10 users.

NT Order Code	**Description**
NTL497CA	TAPI SP 2.3 Link&IVR Base Package (10 Users)

Additional user licenses are available in increments of 1 to 1000 users.

The maximum number of agents supported per TAPI SP Server is 1200.

NT Order Code	**Description**
NTL424AA	TAPI SP (Link&IVR) 1 License File
NTL400AA	TAPI SP (Link&IVR) 10 License File
NTL401AA	TAPI SP (Link&IVR) 50 License File
NTL402AA	TAPI SP (Link&IVR) 100 License File
NTL403AA	TAPI SP (Link&IVR) 200 License File
NTL404AA	TAPI SP (Link&IVR) 500 License File
NTL405AA	TAPI SP (Link&IVR) 1000 License File

The above products come with one year of software support. To continue software support services in subsequent years, use the following order code to continue support for one year:

NT Order Code	**Description**	**Notes**
SV000091	TAPI Server Software Support	Provides 12 months support after first year.

Ordering for new installations without Meridian Link Services or Symposium Server – Direct Connect

X11 software is ordered under the normal ordering procedures for Meridian 1 software.

Order codes for Option 11 X11 software prerequisites for Symposium TAPI Server for Meridian 1 Direct Connect configuration are listed in the table below:

NT Order Code	**Description**
NTSF8022	Enterprise Business package - X11 Rls 23. X11 Rls 23.3X or greater is required.

Note: Refer to the Option 11 Meridian 1 Pricing Manual for complete ordering information.

Order codes for X11 software prerequisites for Symposium TAPI Server for Meridian 1 Direct configurations are listed in the table below. For Option 21 through 81 systems, ISM increment requirements for X11 software pre-

requisites for Symposium TAPI Server Direct configurations are dependent upon the number of Associated Stations (ASTs).

Desired Symposium TAPI Server Release 2 Features	X11 Release 25
Basic Call Control and Monitoring	SW0251A

As shown in the Table A below, the X11 prerequisites SW0251A for Symposium TAPI Server Direct Connect configurations is purchased increments base on the number of ASTs to be assigned in the system. A telephone set that is to be controlled or monitored by a TAPI Server application must be configured with the "AST" feature. A set with this feature is known as an "Associated Station" or "AST set." AST feature prices are in increments of 20 from 1 to 200 agents and increments of 100 above 200 agents. Sufficient AST increments must be purchased to allow the assignment of the AST feature to each telephone set to be controlled or monitored by Meridian Link. To determine the increments of SW0251A to order, refer to the X11 Release 25 Software Meridian Link Associated Station TN Pricing Table below and the maximum increment levels in the Meridian 1 price book. If the maximum AST increments in the Meridian 1 price book are ordered, the AST limit will be set to equal the system TN limit for "base" X11 software features..

Table A. X11 Release 25 Software: AST Pricing

Number of Associated Stations configured	SW0251A Increments required (subject to maximum increments level noted above)
1-20	1
21-40	2
41-60	3
61-80	4
81-100	5
101-120	6
121-140	7
141-160	8
161-180	9
181-200	10
201-300	11
301-400	12
401-500	13
501-600	14
601-700	15
701-800	16
801-900	17
900 – to system TN limit	NOTE: When the maximum level of 18 increments is ordered, the AST limit is set equal to the system TN limit.

Appendix B provides detailed procedure for Determining the Minimum Level of AST Software Increments for Symposium TAPI Server Direct Connect configurations.

To order the Symposium TAPI Server for Meridian 1 Release 2.3 software for Direct Connect configurations, order the basic Direct Connect CD-ROM package for each production server. The base package provides for connections up to 10 users.

NT Order Code	Description
NTL498CA	**TAPI SP 2.3 Direct Base Package (10 Users)**

Additional user licenses are available in increments of 1 to 1000 users.

The maximum number of agents supported per TAPI SP Server is 1200.

NT Order Code	Description
NTL406AA	TAPI SP (Direct) 1 License File
NTL407AA	TAPI SP (Direct) 10 License File
NTL408AA	TAPI SP (Direct) 50 License File
NTL409AA	TAPI SP (Direct) 100 License File
NTL410AA	TAPI SP (Direct) 200 License File
NTL411AA	TAPI SP (Direct) 500 License File
NTL412AA	TAPI SP (Direct) 1000 License File

To order the Symposium TAPI Server for Meridian 1 Release 2.3 software for Direct Connection environments requiring IVR/Networking, order the following CD-ROM package for each production server. The base package provides for connections up to 10 users.

NT Order Code	Description
NTL499CA	TAPI SP 2.3 Direct&IVR Base Package (10 Users)

Additional user licenses are available in increments of 1 to 1000 users.

The maximum number of agents supported per TAPI SP Server is 1200.

NT Order Code	Description
NTL413AA	TAPI SP (Dir&IVR) 1 License File
NTL414AA	TAPI SP (Dir&IVR) 10 License File
NTL415AA	TAPI SP (Dir&IVR) 50 License File
NTL416AA	TAPI SP (Dir&IVR) 100 License File
NTL417AA	TAPI SP (Dir&IVR) 200 License File
NTL418AA	TAPI SP (Dir&IVR) 500 License File

NTL419AA	TAPI SP (Dir&IVR) 1000 License File

The above products come with one year of software support service. To continue software support services in subsequent years, use the following order code to continue support for one year:

NT Order Code	Description	Notes
SV000091	TAPI Server Software Support	Provides 12 months support after first year.

To facilitate the ELAN connection from the TAPI server to the Meridian 1 system, insure the following items have been ordered:

NT Order Code	Description
NT7D90DA	**Ethernet Cable**
NT5D20BA	**IOP/CMDU Card**
NT6D63BA	**IOP Card**

Ordering Upgrades

To upgrade existing Symposium TAPI Server Release 2.1 or 2.2 users to Symposium TAPI Server for Meridian 1 Release 2.3.1 or to add options, follow the procedures in the following table.

When adding features, such as IVR/Networking to an existing installation, it will be necessary to first upgrade to Release 2.3 before adding the feature. The existing number of user licenses are carried forward when upgrading to Release 2.3. For example, all North American manufactured product Symposium TAPI Server Releases 2.1 and 2.2 included licenses for up to 1000 users. Ordering an upgrade to Symposium TAPI Server Release 2.3 will result in a 1010 user configuration.

	Desired Configuration			
Existing Configuration	**Symposium TAPI Server for Meridian 1 Release 2.3** **Meridian Link**	**Symposium TAPI Server for Meridian 1 Release 2.3** **Meridian Link + IVR/Networking**	**Symposium TAPI Server for Meridian 1 Release 2.3** **Direct Connect**	**Symposium TAPI Server for Meridian 1 Release 2.3** **Direct Connect + IVR/Networking**
Symposium TAPI Server for Meridian 1 Release 2.1 **Meridian Link**	Order NTPH27AA TAPI Server Upgrade			
Symposium TAPI Server for Meridian 1 Release 2.1 **Meridian Link with IVR/Net Option**		Order NTPH28AA TAPI Server Upgrade		
Symposium TAPI Server for Meridian 1 Release 2.1 **Direct Connect**			Order NTPH29AA TAPI Server Upgrade	
Symposium TAPI Server for Meridian 1 Release 2.1 **Direct Connect with IVR/Net Option**				Order NTPH30AA TAPI Server Upgrade
Symposium TAPI Server for Meridian 1 Release 2.2 **Meridian Link**	Order NTPH23AA TAPI Server Upgrade			
Symposium TAPI Server for Meridian 1 Release 2.2		Order NTPH24AA TAPI Server Upgrade pack (as required)		

Meridian Link with IVR/Net Option				
Symposium TAPI Server for Meridian 1 Release 2.2 **Direct Connect**			Order NTPH25AA TAPI Server Upgrade	
Symposium TAPI Server for Meridian 1 Release 2.2 **Direct Connect with IVR/Net Option**				Order NTPH26AA TAPI Server Upgrade

Licensing Terms

Each copy of the Symposium TAPI Server for Meridian 1 Software can only be used on a single server.

For More Information

Contact your Nortel Networks Representative for additional information.

APPENDIX A

Symposium TAPI Server for Meridian 1 Release 2.3 Functionality

Symposium TAPI Server for Meridian 1 consists of software that runs on a Windows NT4 or Windows 2000 Server. The Symposium Agent 2.3 application, or 3rd party MS TAPI compliant applications can use the TAPI 2.1 to monitor and control calls at a device associated with the user. TAPI is a set of C-language routines that support telephony control capabilities for a generic PBX environment.

Symposium TAPI Server for Meridian 1 Release 2.3.1 supports the following functions. Refer to the Network Managers Guide supplied with Release 2.3.1 for full information.

- **TAPI applications can monitor and/or control the following types of Meridian 1 devices:**
  - 500/2500 analog sets
  - Line Side T1 channels
  - Meridian 1 Digital Sets
  - i2004 Internet Telephone
  - i2050 soft phone
  - Meridian Mail ports (Monitor only)
- **TAPI applications can activate the following call control functions on behalf of monitored devices:**
  - Make call
  - Answer call
  - Release call
  - Hold call
  - Unhold call
  - Conference call
  - Supervised Transfer call
  - Blink Transfer call
- **TAPI applications can activate the following ACD features on behalf of monitored ACD sets:**
  - Login
  - Logout
  - Ready
  - Not Ready
  - Make set busy
  - Make set in service
  - Message Waiting Lamp activation
- **TAPI applications are informed of the following events for any monitored device:**
  - Call abandoned in Queue
  - Call offered including DNIS, ACD Position ID, and CLID information
  - Station has gone on hook
  - Station has gone off hook
  - Station is ringing
  - Station has established an active call
  - Call has been disconnected from a Station
  - A station is no longer ringing
  - Station has been put on hold

- Station has retrieved a held call
- Station has initiated a transfer
- Station has completed a Transfer
- Station has initiated a conference
- Station has completed a conference
- A 3-party conference has reverted to a 2-party call

- **TAPI applications are informed of the following events for any monitored ACD device:**
  - Agent has made set busy
  - Agent has made set in service
  - Agent has Logged in
  - Agent has Logged out
  - Agent has gone Ready
  - Agent has gone Not Ready
  - Agent has unplugged the head-set - agent walk away
  - Agent has plugged in the head-set - agent return

- **TAPI applications can activate the following Device Control features on behalf of monitored sets:**
  - Activate/Deactivate Call Forwarding
  - Activate/Deactivate Message waiting lamp (must not be controlled by another application such as Meridian Mail)

- **TAPI applications can route calls or activate other call treatments via Meridian Link protocol Host Enhanced Routing Features on behalf of monitored Meridian 1 Control DNs (CDNs):**
  - Give ringback tone
  - Give silence
  - Give music
  - Route call to any DN

- **TAPI applications can <u>NOT</u> access Meridian Link Voice Processing functions.**

- **Host Enhanced Routing Feature is not available with the Direct Connect option.**

- **Meridian 1 TAPI Servers using the IVR/Networking Option can obtain private data such as Caller Entered Digits from an IVR system and make this data available to TAPI applications.**

- **Meridian 1 TAPI Servers using the IVR/Networking Option can be arranged pass private data associated with calls transferred or routed within a network of Meridian 1 systems.**

- **The Symposium TAPI Server for Meridian 1 provides the following OA&M functions:**
  - Configuration/Database utilities
  - Logging/Debug interface

APPENDIX B

Detailed procedure for Determining the Minimum Level of AST Software Increments for Symposium TAPI Server Direct configurations.

To determine the minimum level of Associated Stations software increments to be ordered for Symposium TAPI Server Direct configurations, sufficient increments of SW0251 need to be ordered to cover the following three categories of users.

Table B1. Associated Stations

ACD Agents	Non-Agents	Other
ACD Agent Sets to be associated with Symposium TAPI Server (i.e., assigned the AST attribute)	Non-Agent Users to be associated with Symposium TAPI Server (i.e., assigned the AST attribute)	Other 500/2500 set interfaces to be associated with Symposium TAPI Server (i.e., assigned the AST attribute) for VRU, Autodialer Ports, or other such connections

In order to be controlled or monitored by Symposium TAPI Server, a device must be configured with the "Associated Station" (AST) attribute. This applies only to line-side devices, namely 500/2500 sets, Meridian 1 digital sets, i2004 Internet telephones and i2050 soft phones. Third party devices like auto dialers and VRUs that are connected via 2500 set ports must have the corresponding TN configured as AST if they are to be controlled and monitored by Meridian Link applications. This attribute must be set regardless of whether or not the set is an ACD set.

The following worksheet provides a simple way of determining the number of Associated Station software levels for ordering purposes.

Work Sheet

ACD Agent Sets to be assigned the AST Attribute _____

Non-Agent Users to be assigned the AST Attribute _____

Other set interfaces to be assigned the AST attribute
(for VRU, Autodialer Ports, or other such connections) _____

Total Associated Station levels required for X11 Software Ordering _____

Examples

Example 1 – Company with Sales department, Collections department and 3rd party applications
The Sales department has 50 ACD agents, each with one telephone set.
The Collections department has 40 ACD agents, each with one telephone set and uses 20 auto-dialers to make outbound calls.
A predictive outbound dialing application is connected to the Meridian 1 via Meridian Link Services, and is used to make outbound call son behalf of the Collections department, who transfer answered calls to the Sales department, when answer is detected.

Work Sheet for Example 1

ACD Agent Sets to be assigned the AST Attribute	90
Non-Agent Users to be assigned the AST Attribute	0
Other set interfaces to be assigned the AST attribute (for VRU, Autodialer Ports, or other such connections)	20
Total Associated Station levels required for X11 Software Ordering	110

Result: X11 software needs to be ordered for 110 Associated Stations.

Example 2
A Technical Support department has 100 staff.
Of these, 80 have one non-ACD telephone and a workstation running personal productivity applications integrated to the Meridian 1 via Meridian Link Services.
The remaining 20 have one ACD telephone each.
The Repairs department has 15 staff, each with one ACD set, however they do not have personal productivity workstations.

A business employs 100 staff who have workstations that run personal productivity applications (non-ACD) that integrate with the switch through Meridian Link Services.
Of these workstation-based employees, 20 staff the Call Center with telephone sets equipped as ACD sets.

Work Sheet for Example 2

ACD Agent Sets to be assigned the AST Attribute	35
Non-Agent Users to be assigned the AST Attribute	80
Other set interfaces to be assigned the AST attribute (for VRU, Autodialer Ports, or other such connections)	0
Total Agents required for X11 Software Ordering	115

While there are only 35 ACD agents, each of the 80 agents with the personal productivity tool connected via MLS also require an AST to be assigned.
Result: X11 software levels needs to be ordered for 115 Associated Stations.

APPENDIX C

Copy of Nortel Web Release stating SAP Interface Certification

www.nortelnetworks.com **February 14, 2002**

Nortel Networks CTI Solutions Achieve SAP Interface Certification

Nortel Networks*, a leader in customer contact and Interactive Voice Response (IVR) solutions, has achieved Symposium* TAPI Service Provider (SP) interface certification to enable the interaction of its computer telephony integration (CTI) solutions with SAPphone based on mySAP.com* desktop applications.

This compatibility is achieved between Nortel Networks Symposium TAPI SP CTI middleware and SAPphone*, the softphone interface to mySAP* customer relationship management (mySAP™ CRM) solutions with the Service Update 1 for TAPI SP 2.3 from Nortel Networks contact center solutions. This integration will allow call center agents to perform incoming and outgoing telephony activities from their client PCs running mySAP CRM Customer Interaction Center for increased productivity.

The SAPphone-based integration enables the ability to screen pop customer data based on information collected by an IVR system connected to the Meridian* 1* and Symposium* Call Center Server. Nortel Networks Service Update 1 for TAPI SP 2.3 for the Meridian 1 provides fast deployment with out-of-the-box integration with the mySAP CRM Customer Interaction Center desktop without the need for complex configuration or custom development assuring timely deployment without business disruption.

The integration to mySAP CRM brings significant enhancements to the contact center desktop by increasing agent productivity and shortening both inquiry-response times and incoming calls, as customer data is now at the agent's fingertips via the softphone.

For more information, contact Dana Hughens, 615-432-4636, dhughens@nortelnetworks.com.

Web Releases are intended to provide customers, shareholders and employees with additional information, background and context on events and trends at Nortel Networks and the market as a whole. Breaking news and announcements will be communicated through news releases distributed via Business Wire.