



- Audible Call Forward is available with all feature packages – Standard, Enhanced, and Premium and disabled by default for all users but administrators have the ability to turn it on.
- Supported on all phones

Auto Callback Busy

This feature allows AT&T Voice DNA users to request a redial to a number that is currently busy by using *66 (requested canceled using *86).

- Called number cannot be a hunt group
- For users whose TNs are set as MLA or BLA, Auto Callback Busy rings both lines and the caller can pick up the call on either line.
- All call forwarding features are supported. For repeat connection attempts to the called party, call connection busy uses the original called number. When connecting the called party to the caller, call connection busy ignores the caller's call forwarding settings and rings the caller's phone.
- If the caller has the do not disturb feature active, or the phone is busy, Auto Callback Busy will fail when it tries to connect the called party to the caller.
- Simultaneous ring is supported for the called party, but not the caller. The called party can answer any ringing phone. When Auto Callback Busy tries to connect the called party to the caller, only the caller's desk phone will ring, not the caller's other phones configured for simultaneous ring.
- Remote click-to-call is not supported
- Auto Callback Busy is not supported during a conference call.
- All dialing restrictions are maintained
- Emergency numbers are not supported with Auto Callback Busy.
- Auto Callback Busy is available with all feature packages – Standard, Enhanced, and Premium. Administrators have the ability to turn this feature off by user.
- Supported on all phones.
- **Call Waiting**

Notifies a user on an active call that there is a second incoming call. The user can switch between the two incoming calls using the Hold/Flash feature button on their business phone. Analog Phone Sets: Upon hearing the call waiting tone, the user can press hook flash or hold if available, to place the original party on hold and connect the calling party.



- Administrators have the ability to turn this feature off by user.
- Supported on all phones.

Call Waiting Block/Unblock

This feature allows the user to turn off call waiting on a single call by dialing *70 before making a call.

Call Waiting Enable/Disable

This feature allows the user cancel the call waiting feature by invoking a feature code through the phone keypad. To re-enable call waiting the user invokes another feature code.

Call Waiting Disable Tone

This feature allows users to disable the Call Waiting Tone but keep Call Waiting turned ON. This benefits users who find the audible tone associated with Call Waiting to be disruptive. User experience when Call Waiting is ON but Call Waiting Tone is OFF: 2nd call will display on their LCD screen but there will be no audible tone. The silence Call Waiting Tone feature will disable the call waiting tone for the specified device. It will apply to all line appearances on that specified device. If a second call comes in for the TN/line in use, or a call comes in to any line on the phone while another line is in use, there will be no audible indication. This feature is not intended to disable the Call Waiting feature for any of the TNs assigned to that device and it does not impact other phones on which the specified TN(s) may appear. Suppression is controlled at a device level (not line level) and is controlled via the end user portal.

- Supported Equipment List:
 - LG 6812, LG 6830 – phones no longer available to new VDNA customers
 - Polycom 301, Polycom 320/330, Polycom 601/650 (including expansion modules) and Polycom 4000



Caller ID Presentation

Presents the number of the Calling Party to the user. This applies to IP, digital, and analog phones with appropriate caller ID display equipment.

- Location Caller ID – Allows specifying one Caller ID Number (Company Number) per location. The Office Administrator will have the flexibility to select via the Administrator Tool, the following options:
 - No customer Location Caller ID (i.e., the Caller ID number sent for each user is the user's Telephone Number (TN) or Default Calling Number)
 - Different Location Caller ID number for each location
 - Single Location Caller ID number for all locations
 - Exception users for whom the Location Caller ID is not used when a Location Caller ID number has been specified for the location

Caller Name Presentation

Presents the network provided name or derived name (from the company contact database) to the users IP, IP-enabled or analog phone. During the Technical Interview, the Administrator will be asked to set up a Caller ID Name for outbound calls.

- Default Caller ID Name = Company Name
- Customer Caller ID Name for the company or a location
- Block Caller ID Name
- A customer can subsequently change the calling name with a MACD

Caller ID Blocking per call

Allows a user to send caller ID on all outbound and intra-tenant calls but have the ability to block caller ID on certain calls using a star code (*67). Caller ID blocking does not apply to 911 calls or voicemail access number.

- This feature is assigned to users or a group of users via a Class of Service Template.
- Intra-tenant Caller ID blocking is only available to users with Caller ID blocked for external calls
- Call detail reports continue to show Calling Party Number



Caller ID Blocking for all calls (with an override)

Allows a user to block caller ID on all outbound and intra-tenant calls but have the ability to remove blocking on certain calls using a star code (*82).

Call Forward – Busy (via star code)

Allows users to set call forwarding via the phone to direct callers to another number if user is busy.

Call Forward – No Answer (via star code)

Allows users to set call forwarding via the phone to direct callers to another number if user's phone does not answer.

Call Hold

Allows the user place an active call on hold using their business phone. Analog Phone Sets: Allows the user place a call on hold by pressing hook flash.

Call Reason Display

Voice DNA users can now see a Reason display on their LCD associated with intra-tenant calls coming via a Hunt Group (“HG:”), Call Distribution Queue (“ACD:”), Call Forward (“FWD:”), Call Park (“Parked Call:”) and Call Transfer on Blind and Consultative transfer (“Trnsfr:”). The customer administrator must enable this feature in a user's Class of Service in order for this feature to be available to the user. Support on all SIP Phones (not supported on analog devices).

Call Transfer – Blind

Allows a user transfer an active call to another extension through a series of keystrokes on their business phone or using hook flash and transfer on analog sets.

Call Transfer – Consultative

Allows a user converse with a 3rd party and then transfer the call to that party through a series of keystrokes on their business phone. From analog sets the user performs a hook flash, dial, converse and hang-up to perform transfer.



Conferencing (3-way)

Allows the user add up to three parties to a call.

Last Number Redial

Allows the user automatically redial the last dialed number by pressing a single button on the business telephone or accessible via Feature Access Code

DID (Direct Inward Dialing)

Allows a caller access another user's extension directly, without going through an attendant. Allows

DOD (Direct Outward Dialing)

Allows a caller place a call, without going through an attendant, to a seven or ten digit number, by dialing an external access code (such as "9") as defined by the specified dial plan.

Executive Busy Override (EBO)

Allows a Voice DNA user to insert oneself into an ongoing two-party call and either convert it to a three-way call or override an existing call with the target. There are two types of EBO supported with Voice DNA:

- 3-way – The user enters an existing two-way call, turning it into a 3-way conference. Invoked using *77<1>Extension.
- Override – The user can disconnect an ongoing call on the target's phone and have themselves connected to the target. If the target is not on an active call, the caller can by-pass all call forwarding and do not disturb settings on the target's phone. Invoked using *77<4>Extension
- Important Considerations for EBO include:
 - Calling user must enter the extension of a target user, not a hunt group
 - Calling user cannot use call hold, call transfer, or call conferencing features during an EBO call, but other parties can.
 - EBO cannot be invoked if the called user has activated the following features:
- SIP forking and more than one active call
- Bridged Line Appearances



- EBO ignores the following features if the called user has them activated:
 - Locate Me setting
 - Call Forwarding
 - Do not disturb treatments
 - EBO is available with all feature packages – Standard, Enhanced and Premium
 - EBO can be restricted to a call group or allowed across the tenant
 - EBO is disabled by default for all users but administrators have the ability to turn it on.
 - Supported on all SIP Phones

Fax Machines

Utilizing G.711 Protocol – are supported with an IAD (Integrated Access Device). A telephone number and Standard Package must be provisioned for each Fax Machine.

Call Restriction

Allows the administrator allow/restrict dialing of emergency calls, long distance carrier calls, information calls, international calls, international operator calls, local calls, local operator calls, long distance operator calls, and toll free calls.

- Block/Allow Lists – Administrators can set up dialing rules that restrict or expand a Voice DNA user's ability to place outbound calls. These rules are applied in addition to any other dialing limitations imposed within the user's settings. A Block list will disable a user's ability to place outgoing calls according to the dialing rules. An Allow list will expand a user's ability to place outgoing calls and its rules could exempt users from other out-dialing restrictions that may apply to them. The Administrator may specify a maximum of 10 lists per tenant. Block/Allow Lists include the following dialing options:
 - International – restrict or allow dialing at a country code or lower designation
 - Toll Free – restrict or allow dialing at 8YY level or for individual toll free number(s)
 - Domestic – restrict or allow dialing at the Area Code level or a range of telephone number or at a single telephone number.

Station to Station Dialing

Allows the user call other Voice DNA users at any service location within the company by pressing 3 to 7-digit extensions instead of the full 10-digit telephone number.



Dial “0” for Company Operator

Allows Voice DNA customers to configure a company-designated operator assistance service. The feature can only be enabled by the company Voice DNA Office Administrator using the Administrator Web Tool. Group Administrators are prohibited from the Administrator Services Page and therefore from establishing the Company Operator Destination.

- This feature, when enabled, will impact the dialing string as follows:

| Dial String | No Company Operator Specified | Company Operator Specified |
|--------------------|-------------------------------|----------------------------|
| 0 | AT&T LDS Operator | Company Operator |
| On-net prefix + 0 | Fail | Company Operator |
| Off-net prefix + 0 | AT&T LDS Operator | AT&T LDS Operator |

- In conjunction with this feature, a new dialing Restriction option is made available to end users called “Disable Company Operator”. The administrators can disallow certain users in the company from dialing 0 to reach a company designated operator.
- Company Operator Destination CANNOT be one of the following: (N,X are single digits within the following ranges N=2-9: X=0-9)
 - An undefined (Voice DNA or Legacy) extension within the tenant
 - An extension assigned to a fax number
 - 900 NXX XXXX
 - NXX 976 XXXX
 - NXX 970 XXXX
 - NXX 550 XXXX
 - NXX 540 XXXX
 - 710 NXX XXXX
 - 888 288 4387
 - 877 646 4387
 - NXX 555 1212
 - Voicemail pilot number for this tenant
 - ACD queue defined in this tenant
 - Final destination number of ACD queue in this tenant





- Hunt group number defined in this tenant
- Final destination number of Hunt Group in this tenant
- Fax number defined in this tenant

Custom 911 Routing

Enables customers to route emergency calls from their employees at a given location to a security desk on campus, allowing the security personnel to reach out to the 911 Public Safety Answering Points (PSAPs) and direct emergency care appropriately.

- This feature, when enabled, will impact the dialing strings as follows:

| Dial String | No Custom 911 Route Specified | Custom 911 Route Established |
|--|--------------------------------------|---------------------------------------|
| 0911 1911 0911 | Public Safety Answering Point (PSAP) | Call Routed to Custom 911 Destination |
| On-net + 911 On-net + 1911 On-net + 0911 | Public Safety Answering Point (PSAP) | Call Routed to Custom 911 Destination |
| Off-net + 911 Off-net + 1911 Off-net+ 0911 | Public Safety Answering Point (PSAP) | Call Routed to Custom 911 Destination |

- Voice DNA will automatically reset a customer specified 911 route back to 911 when:
 - Telephone Number (TN) currently used as 911 route is removed from the VDNA Service
 - The end-user assigned TN used for 911 routing is deleted
 - TN used as 911 route is added to the Voice DNA service
 - TN used as 911 route is being designated as the default calling party number for a location
- Automated resets will result in email notification to office administrators associated with the impacted tenant. Customer Care will be copied
- An audit trail of 911 route changes will be maintained by AT&T.
- Current 911 processing for nomadic device detection and restriction is unchanged as a result of this feature.
- Group Administrators are restricted from establishing alternate 911 routes.





- Voice DNA end-points designated as customer specified 911 routes will be restricted from moving.
- Custom 911 routes CANNOT be: (N,X are single digits within the following ranges N=2-9: X=0-9)
 - A public un-dialable extension
 - An unallocated TN
 - 900 NXX XXXX
 - NXX 976 XXXX
 - NXX 970 XXXX
 - NXX 550 XXXX
 - NXX 540 XXXX
 - NXX 555 1212
 - 710 NXX XXXX
 - 888 288 4387
 - 877 646 4387
 - Voicemail access number for a tenant
 - Default calling party number for any tenant location within the system
 - A Call Distribution number of a Call Distribution queue in this tenant
 - Hunt group number defined in this tenant
 - Final destination number of a Hunt group in this tenant
 - A fax number

Abbreviated Dialing

Allows for a hybrid environment to be maintained by customers until such time as all their employees are migrated to the Voice DNA Service. Private dialing functionality associated with Voice DNA dialing plans can be extended to other TDM users within the company. TDM (e.g. legacy Centrex) and Voice DNA users can now configure their service for private, two-way (TDM to VDNA and VDNA to TDM) abbreviated dialing within the company.

- The customer's Voice DNA Administrator can designate up to 10 ranges of telephone number to which Voice DNA users are permitted to call using extensions (instead of dialing a 10-digit TN), keeping in mind that :
 - Non-VDNA users must have a 10-digit publically dialable Telephone Number (cannot be extension only users)
 - VDNA and non-VDNA user extensions must be unique



- Extensions are assumed to be the last X digits of the TN (where X is the tenant extension length)
- Individual and bulk upload (using a .csv format) of subscriber information is supported
- Separate directories of Voice DNA users and Non-VDNA users will be maintained for easy lookup.
- Non-VDNA TN ranges may overlap with VDNA public TN ranges but:
 - Non-VDNA Subscriber Provisioning restricts numbers provisioned as part of the VDNA service from being assigned to Non-VDNA end-users
 - VDNA Subscriber Provisioning ensures that VDNA users with extensions in a Non-VDNA range are assigned a public TN and that public TN is the TN associated with the extension in the non-VDNA range.
- Calls from VDNA subscribers to Non-VDNA subscribers will be restricted based on the VDNA dialing restrictions enabled and the 10-digit TN of the Non-VDNA subscriber.
- Non-VDNA Subscribers do NOT:
 - Have BusinessDirect logins or VDNA portal access
 - Have SIP Phones registered within the Administrator Portal
 - Appear in any Administrator Portal report.
- Non-VDNA Subscriber Extensions/TNs cannot be configured as:
 - A Call Distribution queue extension/phone number
 - Hunt Group extension/phone number
 - Hunt Group member, Call Group member, Administrative Group member
 - Secondary line (BLA/MLA) on any VDNA device.

Mask Directory Contact Information

Provides Voice DNA customer administrators the ability to mask from the Company Directory, any user's name and contact information (phone number and extension). This info will not be displayed and hence, designates the user as Unlisted. Note: if the user's TN must be blocked in the Caller ID, the administrator must take additional steps to block the TN. There is no change to the unlisted user's Voice DNA application as a result of the masking of their contact information in the directory.

Music On Hold (MOH)

Allows callers into or from a Voice DNA number to hear music when put on Hold.



- This feature is enabled by default for all new customers
- Customer administrators have the ability to enable or disable the feature at the tenant level
- The music file is the same for all customers and cannot be customized or interspersed with announcements.
- Callers hear music when put on Hold, not when the call is parked
- Callers can choose to hit # and disable music for that call
- Music will also be heard when a call is being transferred

Customized Music On Hold

Provides customer with the following options when using the feature:

- Setting up of groups of users assigned a common Music On Hold selection
- Selection of 10 music files – customers cannot upload their own music files or pre-recorded announcements
- Music may be interspersed with custom announcements – announcements must be recorded by AT&T; customer provides text (as is supported today with Call Distribution Module)
- Up to 3 announcement texts can be recorded per file – for Call Distribution announcements as well as MOH
- Each music/announcement file will be 5 minutes in length
- Customized MOH can be assigned to”
 - A single user
 - A group of users (MOH Group)
 - All users in the tenant
 - A Call Distribution queue
- Three options for MOH (NOT Call Distribution queues)
 - Silence
 - Music Only
 - Music + announcement (up to 3 different texts in one announcement file)
- Two options for Call Distribution queues
 - Default music + announcement
 - Music selection (from list) + custom announcement (up to 3 texts per announcement file)



- Voice DNA Administrators can specify for each customized MOH file:
 - The music interlude
 - Duration of music interludes
 - Up to 3 announcement texts
- Maximum Number of Announcements allowed:
 - 20 for Customer MOH
- Reporting is available to display:
 - All Music On Hold Groups or to Display a Group by name. Details include the Group Name, Description, Music/Announcement Name, and Group Members.
 - Custom Announcements Status Reports – displays the Announcement Name, Description, Current Status, which groups are using announcement
 - Statistics – number of announcements: in use, available, pending approval, submitted, total allowed.

Ring Down

Certain Voice DNA phones can be set up as hotline phones such that when the phone goes off hook, it calls a pre-defined extension within the tenant.

- Supported with Polycom, LG, and analog phones behind an ATA.
- NOT supported with analog phones behind gateway adapters such as the Citel P-phone adapter and the Cisco VG 224, softphones, Polycom IP601 and IP650, Cisco phones and Polycom IP 4000 conference phones.
- A ring down designated phone can receive calls but cannot make any outbound calls other than the automatic call to ring down destination.
- The employee to whom the ring down phone is assigned can only have down devices
- The extension (employee) to whom the ring down phone is assigned cannot be provisioned as an MLB or BLA on another user's device.
- Ring Down will not be assigned to a fax end user.
- A Standard feature package user can only have a single Ring Down device but users with Enhanced and Premium packages can be assigned multiple Ring Down phones, each with its own destination.
- Premium package user with Ring Down cannot have voicemail.



- If a phone is changed from a full featured device to a ring down device, the phone will need to be rebooted for the change to take effect.

Enhanced Feature Package – Includes all features in the Standard Feature Package, the Administrator Tool and Personal Web Site, plus the additional features described below.

Account Codes – Mandatory

Requires users to enter a code each time a call is made. This code is then output in the CDRs allowing the call information to be used for other reasons, e.g., billing codes can be used to identify all calls to a specific client so the client can be billed accordingly.

Account Codes – Optional

Allows users to optionally enter a code when making a call. This code is then out put in the CDRs.

Alternate Name Search

Allows contacts to be searched using alternate names specified in the directory.

Bridged Line Appearances (BLA)

Allows multiple extensions to appear on the same handset and displays the extensions, the caller information is displayed on the attendant's LCD and the line key flashes. BLA is NOT supported on Cisco phones an extension can only be configured as a BLA on a phone whose owner is provisioned at the same location as the extension being configured as a BLA.

- Each extension can be programmed as LED indication only or LED with Ringing
- The max number of phones in a particular employee's TN can appear on is 32
- Supports up to 5 repetitions of BLA appearances on a monitored phone (Polycom 601/650 LG Aastra).
- Support for additional BLA configurations by allowing a monitored extension to be set up without a primary phone assigned to it, e.g., a published Main number for a store has no single "owner" and must be handled by multiple store clerks
- Cross Location BLA – An extension can be configured as a BLA on a phone whose owner is provisioned at ANY Voice DNA location within the same tenant
 - Feature supported only on Polycom phones – IP320/330, IP560 and IP650
 - Inbound only lines – due to 911 considerations, the BLA lines will be blocked from making outbound calls (including 911 calls) from the cross-location



phones where they are configured as BLA. If a user attempts to place a call from a cross-location BLA line, they will hear a restricted call announcement.

- Call transfer between cross location BLA phones is not supported
- The Voice DNA personal web page of the phone owner will show inbound-only line keys in the “My Phone” section.
- All phones belonging to a single extension must be located at the same site.

Call Forking

The ability of the Feature Server to distribute (or “fork”) calls to multiple endpoints that are registered to the same extension. For example, with call forking, a subscriber could register both his desk phone and a soft client to his business phone extension, causing incoming calls to that extension to be presented at both endpoints. Call forking is similar to simultaneous ringing but with call forking, the endpoints must be registered to the same extension, whereas with simultaneous ringing, the endpoints have different extensions and/or PSTN numbers. This feature is enabled on a per subscriber basis through class of service. Configuration and behavioral information can be found in the Administrator User Guide.

Call Forwarding Busy

(via the Locate Me feature on Voice DNA Personal web page) – Allows the user automatically redirect all to calls to another telephone when the user’s extension is busy.

Call Forwarding No Answer

(via the Locate Me feature on Voice DNA Personal web page) – Allows the user automatically redirect all calls to another telephone number when the user doesn’t answer. The user can control the duration of the no answer timer based on the phone to which the call is forwarded.

- Call Forwarding Unconditional

(via the Locate Me feature on Voice DNA Personal web page) – Allows the user forward all call to an alternate number, either a business extension or an external number.

- Call Load Control (Polycom Phones)

Allows Voice DNA customer administrator to set the maximum number of active calls (i.e., “Call Load”) that can be handled by any single phone. This allows for better call management and maximizes phone performance by:



- Ensuring that the estimated call load on a single phone or a group of phones within a BLA group is within the maximum set by the administrator
- Allowing for an optimum number of calls per line key, best suited for the employee handling calls on that phone.

Call Logs

Using the LCD display of IP and IP-enabled digital phones, the user can access the missed, outgoing and incoming call logs. If the user also subscribes to the contact feature, the name of the contact is also displayed in the log. Call logs are also available to users on their Voice DNA Personal web page.

Call Park

Allows users place an active call in a “hold” state, where it can then be retrieved (picked up) by another user. The LCD Allows the user know that a call has been parked. For analog phones, the feature is accessible via feature codes.

Call Pick-Up

Allows users retrieve a call that has been parked against an extension. This feature is accessible via the LCD on IP or IP-enabled digital phones or feature codes for analog phones.

Call Pick-up Directed

Allows the user pick up an incoming call ringing at any extension by entering the feature code and the extension. The pickup can be restricted to the user’s call group.

Call Pick-up Group

Allows any business user pickup an incoming call currently ringing at any phone in the user’s call group using a feature code or preprogrammed feature button.

Click-to-Call LCD

Allows the user call a specific number from the call log or speed dial list shown on their business phone LCD. This feature is not available on Analog phone sets.

Directory/Contacts

The Directory gives users an online phonebook, which includes the company directory as well as their own entries and groups. The Directory allows users to quickly locate the



phone number of a contact and initiate a call automatically from the Directory page. It is also the basis for creating groups of callers such as VIP, Friends & Family, etc. and setting call treatment for these groups of callers.

Distinctive Ringing

Allows users to hear different types of rings depending upon internal or external callers. This option is set on the Distinctive Ringing section (Ring Settings) page of the Personal Web Site for the user). The checkbox for distinctive ringing should be checked. If phone based ring choices are to be used then the Distinctive Ringing checkbox must be unchecked (disabled). The phone will need to be rebooted (power cycle) for the changes to take effect.

Do Not Disturb

Allows the user specific 'do not ring this phone' from a key on the phone set or from personal communications portal. From the phone, the Message Waiting Indicator (MWI) treatments will remain in effect. From the MWI calls will be forwarded to voicemail, if purchased; busy, if no voicemail.

Hunt Groups

Allows the office administrator enter a series of numbers to which calls are routed when the previous number tried does not answer. For example, when the first extension (line) does not ring, the phone set will ring on the second extension (line).

- This feature provides three ring sequences:
 - Top Down/Bottom Up – the hunt order is the same as shown in the member list specified in the Hunt Group profile, starting with the first available member.
 - Last Answered – the hunt order is the same as shown in the member list specified in the Hunt Group profile, starting with the next available (not busy) member listed after the one who answered the last Hunt Group call.
 - Longest Idle – the hunt order is dynamically constructed every time a new call comes to the Hunt Group such that available members who have not answered a Hunt Group call for the longest time are rung first, then the 2nd longest, etc.
- Two additional options available with the ring sequences are:
 - Ring First Available Only – only the first available Hunt Group member will be run (e.g., the first available in Top Down hunting, or the longest idle if Longest Idle hunting) If there is no answer by the first rung party, the caller will be sent to the final destination defined for that Hunt Group.





- Max Number of Loops can be specified for Top Down/Bottom Up, Last Answered, and Longest Idle – allows setting the number of loops of presenting a call to Hunt Group members before the final destination is invoked. (Max of 3 loops, system default of 0). If there is still no answer after all the loops are exhausted, the call will be forwarded to the final destination.
- Reporting is available to display:
 - All Hunt Groups or Display a Group by name or an Extension Range. Details include the Hunt Group Name, Ring Sequence, Description, Telephone Number, Extension, Final Destination, Voicemail Destination and Hunt Group Members.

Intercom Calling

Allows authorized callers, such as attendants, place a call to another user where the user's phone beeps and the phone's microphone and speaker are automatically activated allowing the user to speak hands free with the caller. The intercom feature can also be programmed onto a speed dial button for easy access. The intercom feature is available within a specified user environment (tenant or group). Intercom can be enabled for an entire tenant or for a call group using class of service.

Last Call Return

Allows the user return the last incoming call where caller id was available by dialing a feature code. This is also assignable as a line/feature key through the My Phone tab.

Multiple Line Appearances (MLA) single extension

Allows the user have more than one phone line (of the same extension/DID) appear on their business phone set. Example: Your extension shows up on 3 buttons on your phone.

- Cross Location MLA – An extension can be configured as a Multiple Line Appearance on a phone whose owner is provisioned at any Voice DNA location within the same tenant.
 - Feature supported only on Polycom phones – IP320/330, IP560 and IP650
 - Inbound only lines – Due to 911 considerations, the MLA lines will be blocked from making outbound calls (including 911 calls) from the cross-location phones where they are configured as MLA. If a user attempts to place a call from a cross-location MLA line, they will hear a restricted call announcement.
 - Call transfer between cross location MLA phones is not supported.



- The Voice DNA personal web page of the phone owner will show inbound-only line keys in the “My Phone” section.
- All phones belonging to a single extension must be located at the same site.

Multiple Line Appearances (MLA) multiple extensions

Allows multiple extensions appear on multiple handsets allowing users on a single phone to answer/place calls to/from these extensions. This feature requires the call forking feature. Example: Line 1 is your extension, Line 2 is your neighbor’s extension, and Line 3 is a virtual extension

My Profile

The My Profile option in the Settings menu Allows a user set and change their contract information, phone numbers, e-mail addresses, and physical addresses.

Speed Dialing corporate

There are 28 speed dial codes (programmed by the office administrator) and that are available at the company level. Programmable via Browser Interface to map to a free button, or accessible via Feature Access Codes.

Speed Dialing personal

Allows the user program up to 20 entries (from their web portal) accessible either by their phone keys or through a feature code.

Locate Me (Find Me/Follow Me)

- In addition to all of the other features on the phone, LCD based phones can also set the Locate Me settings from the LCD
- Announcement Choices – This feature will allow the Voice DNA administrator to specific the treatment for Locate Me Rule handled calls. This treatment can be set at a tenant level only and will apply to all users who enable Locate Me Rules within that tenant. A caller placing a call to a Voice DNA user with Locate Me turned on either hears:
 - Default system announcement “Please wait while I locate the person you are calling” or
 - Ring Only – so callers don’t here the default announcement.



- Caller Categories (Groups) – Allows the user associate phone numbers and contacts with one of 5 group (e.g., VIPs, Co-worker, Family & Friends, All Others, and Refuse List)
- Call Treatments – Allows the user define numerous treatments (e.g., standard, at lunch, gone home). The user then defines call routing rules for each of the treatments. The rules include routing of calls to one of three destinations and then ending with voice mail. Additional routing is available when the user's office phone is busy.
- Miss Call Notification – Allows the user configure, for each caller category and call treatment, how the system notifies the user that a call was missed. The user may configure no notification, one of two email notification destinations, and a pager destination. When a call I routed to voicemail, a missed call email is sent to the specified notification location.
- No answer ring timers – Allows users specify the length of time they want to have each leg ring, which can speed up the call forwarding process. Another benefit is that users can define longer ring times for calls to numbers that take longer to set up, such as calls to cell phones.
- Selective Call Forwarding – Allows user selectively forward calls from callers in specific call categories.
- Selective Call Rejection – Allows a user selectively reject callers in specific call categories by specifying voicemail or busy tone.
- Selective Call Acceptance – Allows a user selectively accept calls from callers in specific call categories.
- Locate Me with Scheduler – Voice DNA users with Locate Me have the ability to set recurring call forwarding options by time of day/day of week.
 - Users can select or de-select Scheduler in Locate Me section of the User Portal
 - 7 day 24 hour half hourly calendar available to users to selectively set call forwarding
 - Users have the ability to create recurring treatments for same time on multiple days
 - Max of 5 call treatments per day and 35 treatments per week allowed
 - User can create a default treatment for all slots without scheduled treatment: If default schedule not created, empty slots will be assigned “Ring desk phone treatment
 - Individual call treatments are editable



- Overlapping treatments for single time slot not allowed, i.e., single time slot cannot be assigned to different schedules.
- Does not integrate with user's Outlook or any other desktop calendar

Simultaneous Ring

Is the ability of the Feature Server to initiate simultaneous calls to up to three extensions and or PSTN numbers when incoming calls to a specific extension are received. For example, with simultaneous ringing, a subscriber with Locate Me could configure a ring group that includes her desk phone, and home phone. Incoming calls to that subscriber's number would cause the Feature Server to initiate simultaneous calls to all three locations. Simultaneous ring is enabled using a class of service attribute and it requires that the user also have Locate Me enabled. Configuration and behavioral information can be found in the Voice DNA Administrator Guide.

Premium Feature Package includes the Enhanced Feature Package, the Administrator Tool, and Personal Web Site plus the following features.

Outlook Integration

Outlook Integration Allows you manage all of your telecommunications services from Microsoft Outlook. This feature is supported with the following PC requirements: Windows 2000 or later, Windows XP Operating System and Outlook 2000 or later. With Outlook Integration you can do the following:

- See your missed, incoming, and outgoing call logs from your computer or your phone display
- Click-to-dial or email any Outlook Integration contact directly from Outlook
- Click-to-dial or email anyone in your company directly from Outlook
- Use speed dials with * codes from the display on your telephone, or from the programmable buttons on your phone
- Assign speed dials or features to the programmable buttons on your phone
- Set custom Locate Me (find me follow me) treatments for different groups of callers
- Forward your calls using your custom Locate Me settings



Switch Phone

Allows users to transfer a current call originated from the Voice DNA Personal web page to any other telephone or cell phone. Only one 'move' is supported. This feature has also been referred to as Mid-Call-Move.

Voicemail

Voicemail is provided as part of the Premium Feature Package. When ordering your telephone numbers, remember to add one additional telephone number (TN) for every location that subscribes to voicemail to your total count for assignment to the main voicemail box. The voicemail features are:

- Unified Messaging (UM) – There is a single portal for voicemail and call management features. End users will be able to access, review, play, and send to email, their voice mail message under a cohesive user interface. Administrators will be able to elect (“turn off/on”) which users get access to voicemail/UM.
- Message Waiting Indicator (MWI) also included (dependent on CPE device) – For IP phones, a phone lamp notifies the user a message has been left on voicemail and a message button on the phone acts as a speed dial key to voicemail. Analog phone users (behind an Integrated Access Device) receive stutter dial tone when a message is waiting.
- The voicemail telephone number must be in the customer’s provisioned IP telephone number range. Voice DNA customers must select a unique telephone number per location and assign it as the voicemail TN (access number) for users at that location.
- Message Length: There is a maximum of 2 minutes per message limit, with up to 30 minute max per subscriber.
- Voicemail mailbox size is 100MB
- Messages Log: If the subscriber has more than 150 messages stored in their voice mailbox, the user’s Personal Web page Messages Log will be displayed in order of date and time and cannot be sorted by the user any other way.
- Final Destination of Hunt Groups – This feature will allow customers to establish a voice mailbox as the final destination for unanswered calls to a Hunt Group (HG). The voice mailbox can belong to a member of the Hunt Group or anyone else.
- Future Delivery – This feature allows voicemail subscribers to schedule the delivery of their outgoing messages:



- When creating a message to send to another user, the Future Delivery option will present itself and the message can optionally be marked for delivery at a future date and time, up to 365 days in advance.
- The subscriber can, at any time, access future, and as-yet-undelivered message to edit or delete them.
- Pager Notification – This feature allows voicemail subscribers to receive notifications on their pagers when a voicemail message is left for them. Notification can be set for all voicemail messages or just messages marked as urgent. Users can set up their pager notification on their Voice DNA Personal web site, voicemail settings page. Pager notification can be sent to:
 - An email account or
 - A pager telephone number
- AT&T Wireless Integrated Mailbox – Voice DNA users who also subscribe to wireless service from AT&T in the same service area or Local Access Transport Area (“LATA”) can now maintain a single, common mailbox using Voice DNA. Messages left by calls into the Voice DNA telephone number or the subscriber’s AT&T wireless number can now be access from your Voice DNA mailbox.
 - Up to two wireless numbers belonging to the same subscriber, such as a personal and business wireless number, can be added to the Voice DNA mailbox.
 - There is no additional charge for this feature, however, if the subscriber’s wireless number and Voice DNA voicemail access number are in different LATAs, additional billing charges maybe incurred or usage applied against the wireless minutes when callers calling the AT&T wireless number leave a voicemail message.
- This feature is not available for AT&T Go Phone (prepaid) at this time and is not available in all LATAs. This feature is not available with non-AT&T wireless telephones and only iPhone models 3G/3GS devices are supported Set up information for the wireless integrated mailbox
- Fax Messaging – A Voice DNA user can receive inbound faxes within their Voice DNA mailbox along with their voice messages. When a fax is received the user’s messaging notifications apply such a MWI, email, and pager notifications. When the full fax is displayed in the portal or when the fax header information is played over the phone, MWI is turned off.
 - The User Portal’s Messages tab will display both voicemail and fax messages, with fax messages indicated by a “fax” icon.
- The full fax message can displayed by clicking on the fax message



- The displayed fax can be printed (on a printer, not a fax machine)
- The fax message can be forwarded to an email address
 - By dialing into the voicemail Telephone User Interface (TUI), the user can hear header information on all voice and fax messages. Via the TUI:
- The fax can be sent to a fax machine
- The fax can be forwarded to another User's mailbox
- Disable or enable the fax messaging capability
- Shared Mailbox – VDNA Users with voicemail can have a common (shared) mailbox that provides messaging support for the User's primary Voice DNA telephone number and up to 15 additional telephone numbers. Messages received from busy/unanswered calls are stored in the Shared Mailbox. The telephone numbers associated with the shared mailbox must have their call forwarding programmed to send unanswered calls to the Voice DNA voicemail telephone number.
 - The Shared Mailbox will accept unanswered voice messages, along with fax messages from all telephone numbers that are associated with the mailbox.
 - The additional telephone numbers can be from other Voice DNA users that do not have a mailbox or from non-VDNA users.
- For example, a Shared Mailbox can be configured to accept unanswered calls from the Mailbox Owner's primary Voice DNA telephone number and from a second non-Voice DNA TN associated with the user's home office, along with a third TN assigned as a fax (will receive incoming fax messages).
 - The Mailbox Owner will be able to access the messages through their User Portal with messaging notification supported such as Message Waiting Indicator (MWI), email and paging.
 - Through the messaging Telephone User Interface (TUI) messages may be accessed by the Mailbox Owner and those Users of the additional telephone numbers associated with the shared mailbox. MWI is provided to the phone of the Mailbox Owner and to each Mailbox members' phone.
 - This feature can also be used for sharing a mailbox among different users in a group arrangement.

Appendix B – Reports

This section provides examples of the types of reports that will be available to Customer Administrators via the Voice DNA Administrator Portal.



Administrator Tool Reports

- Extension Details Report: System summary information that shows users, extensions, public numbers, and services. Report output is an Excel spreadsheet
- Service Quantities Report: Shows Service Quantities for every feature package ordered and assigned to your company.
- Features Report: Shows how many times a feature was invoked during a given period
- Line Appearances Reports:
 - Bridged Line Appearances by Authorized User: Shows all line appearances configured for your company
 - Bridged Line Appearance by Authorizer
 - Multiple Line Appearance by Phone
 - Phone Appearances by Multiple Line Appearances
- Account Codes Reports:
 - Account Codes List
 - Account Code Service Usage Reports
 - Minutes
 - Call Types
 - Call Detail by Account Code
- E911 Emergency Support Reports: (includes Remote Worker indicator)
 - Restricted Lines Report
 - Nomadic Devices Report
 - Branch Locations Devices Report
- Call Groups
- Call Usage Detail: These reports can be requested for one month at a time in your time zone of choice and will be available for outbound calls placed in the current month or up to eleven previous months. Call Detail reports can now be requested for:
 - Single Extension
 - Extension Ranges
 - All extensions within the Voice DNA Tenant
- Hunt Groups
- Corporate Speed Dial Codes



- Administrator Reports:
 - Office and Group Administrators
 - Group Members
- Equipment Reports:
 - Managed Router Devices Report
 - MAC Address Report
 - Extension Equipment Report
 - IP Phones Provisioned Report
- Call Distribution Module Reports
- Call Distribution Announcements
- Call Distribution Queues
- Active Call Statistics – Number of calls currently in queue, time of arrival of calls, time waiting in queue
- Daily Calls Statistics – Number of calls received in a queue in a day, offered to agents, answered by agents, abandoned calls, routed to final destination
- Daily Calls Wait Time – Average Queue wait time, average wait time on answered calls, and abandoned calls
- Agent Calls Statistics – Number of calls offered to an agent in a day, number answered, average time with agent

Reports Available via AT&T BusinessDirectSM

In addition to the reports listed above that are available to customer administrators from the Voice DNA Administrator Tool, Call Detail Records on outbound calls are also available via AT&T BusinessDirect, View, Analyze and Pay Your Bill option (aka eBill).

Auto Attendant Reports

Customers ordering the Auto Attendant feature can receive the following reports via email:

- Call Activity – Weekly report which provides call counts by the hour of calls answered by the Call Tree application
- Call Profile – Monthly report which shows call counts and the average length of calls by day.



- Menu Location – Monthly report which shows how often a particular menu option is selected by the caller.

10. The option for the vendor to be responsible for handset deployment, replacement and maintenance.

AT&T Response:

Read and understood. AT&T will gladly take the responsibility for handset deployment, replacement and maintenance. AT&T makes it easy to deploy, manage and grow the number of users on our hosted VoIP platform.

11. The design should allow for the independent functioning of data and voice without adversely affecting the other.

AT&T Response:

The IP connection delivered to a LEA, as well as the AT&T Backbone Network supports the ability to differentiate varying traffic types competing for bandwidth to ensure end to end Quality of Service (QoS). Several factors must be taken into consideration when designing VoIP networks, such as the number of concurrent calls required, CODEC and compatibility of the Local Area Network (LAN). In order to ensure complete independent functioning of voice and data traffic, the LAN should comprise of Layer 2 Ethernet devices that can support 802.1p and 802.1q specifications. AT&T has been supporting QoS and Class of Service (CoS) deployments for many years, partnering with our customers to ensure best practices are followed. AT&T has developed a Best Practices Configuration Guide that can be shared with customers as required.

12. Pricing separately for classroom and office appropriate handsets (Not E-Rate eligible).

AT&T Response:

Read and understood. Please refer to “Admin and Classroom Cost per End User Devices” chart located in Tab III.





D. Technical Requirements for Managed Video Conferencing

The telecommunications component of video conferencing services that provide a means for multiple users to participate in group discussions can be eligible if the services are limited only to eligible educational or library purposes as described in the ESL

The solution must include:

13. Use of LEA network.

AT&T Response:

AT&T Telepresence Solution now provides the flexibility of conducting reservationless, multipoint video meetings on demand with the ease of a conference call. Virtual meeting rooms can help make video collaboration more accessible for your users and enable a new level of collaboration and productivity. It's all part of delivering video collaboration solutions that scale and pursuing our vision of making video communication as widespread and easy to use as a telephone. With Virtual Meeting Rooms you get meeting flexibility by bringing the ad-hoc, on-demand approach into a group meeting setting. Simply insert the dial-in details into your regular meeting invitation, add participants and send an invitation as you normally would. Instead of reserving resources in advance, everyone simply dials a number and enters an access code. Your Virtual Meeting Room is available at any time.

Virtual Meeting Rooms give your participants the flexibility to join from desktop/laptop and select mobile devices using video applications like Cisco Jabber Video for TelePresence, Polycom RealPresence Mobile, LifeSize ClearSea from Logitech, and other standards based video client using Wi-Fi host spots, 3G, 4G, and 4G/LET wireless connections (where available).

AT&T Virtual Meeting Rooms are hosted at the core of the AT&T Business Exchange network and is available to all to schools and libraries who utilize AT&T for managed Internet access and thus use the district's existing network.

The AT&T Business Exchange continues to be a competitive advantage for our customers since we have established the largest Telepresence B2B on-net ecosystem in the industry. This allows our customers to facilitate meetings between more employees, suppliers, and partners while retaining a high level of security on your VPN network.



14. Remote management tool. Bridge management

AT&T Response:

Active Meeting Management

The Active Meeting Management (AMM) enables real-time management of Scheduled and VMR meetings that are currently in progress. Via a web browser, the AMM feature allows customers to perform functions such as locking or unlocking the meeting to control whether additional participants can join, muting or unmuting participants, send text notifications to participants, or dropping endpoints.

With VMR AMM the Host will have the options of entering the AMM application via a direct URL, which is included in the welcome email with the service or via the AMM login or via the AMM login page. The

AMM login page is located at the following URL:

- <https://telepresencemeeting.att.com/meetingweb/app/>

In order to login to the AMM web page the following information is required:

- Meet-Me Meeting ID and Meeting Management PIN or
- VMR Meeting ID and Host PIN associated with the VMR.

It should be noted that unlike the scheduled meeting AMM, the VMR AMM does not allow the Host to add or dial-out to other participants.

15. Proactive bridge monitoring of quality of service and security.

AT&T Response:

The bridge is constantly monitored 24 hours a day, 365 days a year. We also have a live help desk that is also available. Any occurrence of network vulnerabilities is proactively acted upon by AT&T.

16. Endpoint monitoring and management

AT&T Response:

AT&T Telepresence Solution provides a number of flexible options to meet a wide range of customer needs. The service offers two different standard deployment options. The Hosted deployment option provides a fully managed solution with full call control and



scheduling support in a cloud based solution supporting Polycom HDX and OTX, Cisco CTS, TX, MX, SX,EX and C series Endpoints. The Enterprise deployment option provides a fully managed solution with dedicated customer premises based call control and integration with common customer groupware scheduling. A third option is available for existing Telepresence locations where a fully managed bundle cannot be sold and is called Gateway Connect or Network Gateway Connect. The Gateway Connect and Network Gateway Connect deployment options provide B2B calling capabilities for customer managed Telepresence room environments.

ATS offers a fully managed, proactively monitored service for Customer Owned Equipment (COE) Enterprise Video Endpoints (i.e. Cisco (Tandberg), Polycom, and LifeSize) conferencing equipment. The Enterprise deployment option is supported with Enterprise Video based call control on the customer premise. The fully managed Enterprise Video option (Managed ATS Service – COE) supports the COE option where ATS manages the Endpoints and Enterprise Video Infrastructure Devices and provides access to full B2B calling capabilities in the Exchange. The Managed ATS Service – COE offer inherently includes interoperability, both premise based and Exchange based.

17. Remote device monitoring.

AT&T Response:

AT&T Telepresence Solution can monitor and manage various ATS elements, such as:

- Incidents involving managed devices
- Software maintenance updates to AT&T-provided equipment
- Remote configuration backup (for restoral purposes) of the Cisco TelePresence System Manager (CTS-Man) and onsite configuration backup for the Cisco Call Manager cluster
- Remote configuration backup (for restoral purposes) of the Cisco TelePresence Multipoint Switch (CTMS)
- Incidents involving network performance indicators such as network delay, jitter, and packet loss
- Incidents involving AT&T Virtual Private Network (AT&T VPN) transport
- The ATS Business Exchange

So, you can reap the benefits of ATS without having to monitor and manage your solution elements.



18. Problem Management to troubleshoot any technical difficulties.

AT&T Response:

For AT&T's Telepresence Solution (ATS), our remote assistance help desk enables you to report ATS issues and gives you ATS meeting support.

The help desk provides

- 24x7 access to toll-free support by phone, or via the ATS support portal
- Assistance for scheduling or call setup problems that you cannot resolve via your on-site room contact
- Real-time assistance for questions regarding your ATS room
- The ability to report incidents that may affect scheduled calls or the quality of your ATS experience

To get the support you need for important calls, you need AT&T's Telepresence Solution

19. Two levels of assistance for on-the-spot troubleshooting resolution during an event as well as post-meeting evaluation and repair of any ongoing issues.

AT&T Response:

AT&T includes the monitoring and management of the telepresence environment, including the Customer's ability to establish meetings. Monitoring and management activities will be performed on a 24 x 7 basis. The ATS Support portal provides online access to system status, trouble ticket creation, Move, Adds and Changes ticket creation, ticket status, system reports and administration.

AT&T will troubleshoot telepresence calls (to establish a meeting) and other issues that affect a meeting. If an incident is isolated to an ATS Service Component, AT&T will manage the incident to resolution and will notify the appropriate Customer contact of the status.





- Include a proposed quality assurance plan your firm will conduct to ensure the performance of contract deliverables.

AT&T Response:

The Net TN network is a carefully designed network that allows for the highest level of performance to the end customer. An understanding of all the elements that comprise the service offerings and the systems to ensure performance are as follows:

Service Components or Product Features included in the core offering and base price include:

- Circuit to the customer premises
- Fully managed router services (Cisco model dependent on circuit size)
- Internet access – High Availability & Geographically Diverse (optional)
- Fully managed firewall security to and from the Internet (network-based firewall)
- Fully managed intrusion monitoring to and from the Internet
- Private Connectivity to all other education sites and partners on the NetTN network (default)
- Internet2 for eligible entities
- Proactive network management and monitoring
- Industry leading service level agreements
- Multiprotocol Label Switching

The NetTN network is a carrier class, MPLS (Multiprotocol Label Switching) network designed specifically for the State of Tennessee, Tennessee Board of Regents, Tennessee Department of Education K-12 school system, Tennessee higher education and research. The NetTN MPLS network conforms to Internet Engineering Task Force (IETF) MPLS standards including, but not limited to, RFC 3031 Multiprotocol Label Switching Architecture, RFC 4364 BGP/MPLS VPNs (supersedes RFC 2547), RFC 3032 MPLS Label Stack Encoding, RFC 3036, LDP Specification and RFC 2702 MPLS Traffic Engineering. The network employs extensive use of high speed optical facilities, and securely segments customers into virtual private networks (VPN) using MPLS IP/VPN technology. MPLS networks are the next generation of network architecture used by many large network providers such as AT&T.

This managed services network is a leading edge MPLS IP/VPN technology, allowing multiple entities with disparate IP addressing networks to co-exist on the same physical



network infrastructure. IP, Ethernet, optical and wireless are fundamental building blocks of next generation networks, and the NetTN network leverages all of these to enhance a unified, delivery platform for state administration and public services, education, and advanced research. As such, the NetTN network provides local, long distance, mobile and global access to current and emerging data, voice, video and Internet services and is an infrastructure catalyst for tomorrow's advanced and collaborative applications.

Packet prioritization – Data, Voice and Video Quality of Service

Data, packetized voice, and packetized video are supported across a converged IP/MPLS infrastructure. Support for each distinct traffic class will occur at Layer 3, using Differentiated Service (DSCP) markings carried in the IP header of each packet. Each of these types of traffic will be marked by the associated devices in the customer's network. These markings will be examined and used to prioritize traffic according to the handling conventions for that class, by configuring the routers in the network to examine the DSCP markings to set Per Hop Behaviors (PHBs) per class. Once traffic is prioritized, then the traffic is transported across the NetTN WAN infrastructure using an end-to-end QoS architecture. Packetized voice would receive the highest priority, as handling conventions for that class assume that it is the most jitter and delay sensitive. Video would be either prioritized highest as the signaling protocol of a voice call, or the next highest as the signaling protocol of a video session, depending on the device that is generating the signaling traffic. Video devices would be set to mark their traffic differently than packetized voice devices.

Data could fall into business or best effort classes, depending on the type of data. Corporate data necessary for business operation could be handled as the next lower priority than the video to allow reduced delay, better performance, and more packet delivery assurance to be accommodated for business critical functions. Lastly, applications that do not need any special handling, at least in respect to the higher classes of traffic, could be handled as best effort traffic. Customers can mark their application traffic for QoS treatment end-to-end.

Traffic or Packet Classification Handling

Packet classification will be performed at the network edge by inspecting customer markings. This allows the customers to specify what traffic requires special handling by marking that traffic using devices in their network. There are 6 traffic classes (including best-effort) and 8 sub-classes that conform to the NetTN requirements. These DiffServ classes use DiffServ Code Points (DSCP) according to the following:



Expedited Forwarding (EF) - specified in RFC 3246 to have low delay, low loss, and low jitter. It is suitable for Voice over IP and other real time services.

Assured Forwarding (AF) Group - specified in RFC 2597 to provide assurance of delivery as long as designated rate is not exceeded. There will be four classes of this group implemented, each with three levels of drop precedence for further within class differentiation. These Assured Forwarding classes are listed in order of precedence from highest to lowest, they are:

AF41

AF31

AF21

AF11

Best Effort (BE) - This is essentially traffic that doesn't meet the requirements of any other class. It is also known as the default class.

These packet classifications are maintained in the NetTN WAN infrastructure by inspecting each DSCP classification value received at the customer edge and mapping these into MPLS EXP markings in the NetTN MPLS core network per RFC 3270. The MPLS EXP values in the NetTN MPLS core will transport the customer DSCP markings from the source Provider Edge (PE) router to the destination Provider Edge (PE) router where these DSCP values are re-exposed, unaltered, for delivery to the destination customer router. In this manner, traffic and packet classification is maintained end-to-end through the NetTN WAN infrastructure.

Traffic Prioritization and Classes of Service

NetTN traffic prioritization and classes of service is accommodated by examining DSCP values received from the customer's network(s) to determine transmission queue assignment. Bandwidth protection for these classes is accommodated by assigning each traffic queue a percentage of the physical bandwidth for transmission. Any class may re-use any un-used bandwidth assigned to any other class, but any out-of-contract traffic that exceeds its prescribed queue percentage is re-marked to best-effort traffic or is dropped, in which case it may be retransmitted. This allows proper traffic prioritization to be maintained for all TCP/IP traffic. Expedited Forwarding (EF) traffic is assigned to the Low Latency queue, using strict priority queuing, to accommodate the low-latency, low-loss, minimal jitter requirements for such traffic. The percentage of traffic assigned to the EF class on each link, will need to be strictly controlled to prevent queue starvation of the



lower queues. Each of the Assured Forwarding (AF) classes is assigned to a separate queue, in order of priority requirements for AF41, AF31, AF21, and AF11. Best Effort (BE) traffic is assigned to the lowest priority queue.

The following describes the process from customer source to customer destination:

On the ingress Customer Edge router (CE), DSCP traffic markings are examined, and appropriate transmission queue assignments are made based on those markings toward the ingress Provider Edge (PE) router.

On the ingress PE router, the DSCP markings are further examined, and appropriate MPLS EXP markings are assigned, based on the DSCP value. Appropriate transmission queue assignment into the NetTN MPLS core via the Provider (P) router are made based on the MPLS EXP value.

On each P router, the EXP markings are examined and appropriate queue assignment are made, based on this EXP value, forwarding appropriately from P router to P router to egress PE router.

On the egress PE router, the MPLS labels (including EXP) are stripped, so the customer's DSCP value is again used to select the appropriate transmission queue outbound toward the CE router.

Traffic Congestion Avoidance/Management

Traffic congestion avoidance is handled using a combination of Random Early Detection (RED) or Weighted Random Early Detection (WRED) on the receive side of a link, and by Resource Reservation Protocol Traffic Engineering (RSVP-TE) before transmission to allow any congested links to be routed around, if necessary, for a given traffic class. For example, RED will be used upon receipt of a packet to control the amount of tail drops that occur in case of receive buffer overload. These are the typical features used for congestion avoidance in IP routed networks.

AT&T uses our Performance Capacity Service (PCS) methodology to support traffic congestion management on the NetTN network infrastructure. This methodology includes four areas of capacity and congestion management which are Exception Analysis, Traffic Analysis, Forecast Analysis, and Trend Analysis. A description of the PCS methodology is as follows:

Exception Analysis





The Exception Analysis process will identify those network components of the NetTN network that are exceeding engineering threshold guidelines. These guidelines can be established to identify both over and underutilized elements. This analysis provides the ability to apply resources to resolve the “hot spots” and make more efficient use of “cold spots”. The types of network components that will be evaluated are WAN/LAN physical and logical links, CPU, Memory, Latency, Discard and Jitter. The PCS analyst establishes threshold guidelines as they relate to each network component. The analyst takes into consideration the client network architecture and business requirements.

The foundation of Exception Analysis is percentile analysis, which incorporates threshold guidelines that have a time component, as well as, a level component. This type of analysis accurately shows exception conditions, unlike some other performance tools and methodologies that are based on averages or maximums. For example, a WAN Hot threshold rule of 5% of hours over 80% utilization, means that a WAN interface exceeding 80% utilization for over 5% of the time will be flagged as “hot.”

Because service levels and user perceptions can be very situational, it is important to stress that the engineering thresholds are only indicators and that further analysis is needed to determine if action to remedy the exception condition is required. Experience has shown that if the threshold is exceeded only 5% of the time, users have not typically started to report poor performance. Therefore, there is sufficient time to investigate the situation, determine any needed corrective action, and implement a solution. Once an exception has been investigated and it has been determined that corrective action is needed, the analyst will provide a recommendation. The analyst will track the results to ensure that the implemented solution has successfully addressed the exception condition.

Traffic Analysis

Understanding the nature of the traffic on the WAN (e.g., TCP, FTP) is critical to developing solutions to network performance and capacity management challenges, implementing strategic initiatives, and developing plans to implement new technical capabilities. The following are some examples of how traffic flow information can be applied to network management:

Resolution of Network Hot Spots - When a network link has been identified as exceeding utilization guidelines, the next step is to understand what traffic is driving the high utilization.

Quality of Service (QoS) Implementation - Designing and implementing a strategy to deploy Quality of Service on a network requires an in-depth understanding of what traffic



flows traverse a network at peak times of the day so that priorities can be set to ensure that important business traffic has priority on the network.

Capacity Management - Knowledge of network volumes by server or server groups is critical to building an efficient and adequate design.

The PCS Analyst reviews many variables on a given circuit and/or device and determines if site behavior can be modified to reduce network utilization and performance problems rather than making bandwidth upgrades.

Forecast Analysis

Forecast Analysis focuses on predicting network performance up to six months into the future. It consists of a detailed analysis of historical performance to predict future network performance and applies to WAN interfaces and sub-interfaces. Utilization forecasts provide a foundation for high-quality capacity planning. The goal of having the appropriate bandwidth throughout the network in the future requires accurate utilization forecasts. Developing a forecast is a recognition that doesn't assume that current utilizations will remain unchanged in the months and years ahead. Utilization forecasts can point out potential future hot spots, so that action can be taken before users are impacted. Forecasts are also critical when significant network technology or topology changes are considered. In these situations, WAN forecasts can facilitate planning farther in advance and sizing of network connections that may not be implemented for many months in the future.

For each interface that is included in the forecast, a composite forecast for hourly utilization is produced. This forecast utilizes various algorithms to project network utilization. Sample algorithms used for this feature are as follows:

- Linear Regression - constant trend
- Holt Winters Smoothing - dynamic linear regression
- Moving Averages - average of last N observations

Forecast Analysis provides statistical and graphical information with respect to network components for the appropriate future time period.

Trend Analysis

The PCS analyst develops, on a periodic basis, a trend view of all the monitored elements in the NetTN network. Trend Analysis enables AT&T to assess any element in the NetTN network to see if performance is trending up or down. Unlike Exception Analysis that presents the elements that are or about to exceed performance thresholds, Trend



Analysis also shows the elements that are performing within guidelines. This analysis allows AT&T to examine the behavior of any element and check for changes over a long period of time.

Typically, Trend Analysis is presented once a quarter and covers the last 3 months. The performance measurements that we use include all the data that is collected for the network, for example, Interface utilization, VC utilization, CPU utilization.

Percentile of the utilization over the period of time, e.g., for each of the three months in the quarter. Usually, it is the same percentile that is used as a threshold, e.g., the 95th percentile, but any other percentile can be reported or a combination of percentiles.

- Average over the time period
- Standard deviation, which provides additional information to the average, showing the degree of variability
- Maximum over the time period
- Average daily maximum
- Absolute growth within the period, e.g., from month to month
- Percentage growth, which can supplement the absolute growth value.

AT&T PCS uses Trend Analysis presented in a tabular format and certain measurements will be displayed as graphs for better clarity of the trending. The PCS analysts assist NetTN engineering to define and size the NetTN network to meet business needs.

Traffic Burst Handling

Traffic bursts within the NetTN WAN infrastructure are handled according to traffic class. As long as there is bandwidth available that isn't being used by higher priority traffic, the particular traffic burst may use that bandwidth. Any bandwidth allocation reserved for a traffic class that isn't being currently used may be re-used by traffic from another class, regardless of priority. This effectively provides a traffic burst from the same traffic class the full data bandwidth of the circuit, when no other higher or lower priority traffic class is simultaneously requested. If two traffic classes are concurrently bursting over their allocation class bandwidth levels, then the higher priority traffic will be allowed to burst first on this particular routing hop. The lower priority traffic burst will still receive the allocated bandwidth based on the class. The lower priority traffic burst will still vie for remaining bandwidth against the higher priority traffic burst, but now has a higher percentage of being dropped. Both traffic bursts that exceed their class percentage would be re-marked to lower priority treatment towards the subsequent routing hop, so that proper QoS treatment can be maintained on a per hop basis.



- Identify potential risks associated with the execution of this contract and how your firm proposes mitigating those risks.

AT&T Response:

AT&T takes the provision of service to our customers very seriously. We recognize that our customers are looking to AT&T to ensure the services provided are of the highest quality and are monitored and managed continually so we can in many cases recognize issues before our customers.

The Net TN network has been designed to mitigate potential risks for failure. The physical NetTN network consists of a partial mesh topology, designed to eliminate a single point of failure from isolating a NAP (e.g. Nashville, Knoxville, Memphis) or POP (e.g. Johnson City), and minimize increases in network latency in a failover scenario. All main core backbone links between NAPs are 10 Gigabits per second. In a partial mesh arrangement this will provide multiples of 10 Gigabits of raw bandwidth capacity on the core backbone. Our partial mesh arrangement has been so designed that a failed core link will not result in excessive latency across a surviving core link. The Johnson City POP utilizes redundant connections (e.g. 1Gb to Knoxville, 1Gb to Nashville). The NetTN core backbone architecture is scalable to 40 Gigabit services and beyond as end site bandwidth is ordered and aggregated, and managed to the applicable SLAs.

The NetTN network backbone consists of four core Network Access Point (NAP)/ locations located in Memphis, TN, Nashville, TN, Knoxville, TN, and Chattanooga, TN. Additionally our current design includes an aggregation Point of Presence (POP) in Johnson City, TN. This geographic core network placement provides excellent core network availability.

In addition our Project Management processes, as evidenced by the list of tasks previously provided, mitigate the chance of missing installation dates. Our outside technical staff's management team ensures that the installation of circuits is performed professionally and with the least disruption to our customers.

AT&T is not aware of any significant risks that are incumbent in the services contemplated by the RFP. The services contemplated hereunder are core capacities of AT&T and other than ordinary problems that may arise as a normal course of doing business AT&T does not anticipate that Sweetwater will be exposed to any risks that would materially and adversely affect the members of the consortium. Moreover, AT&T has agreed to provide a Performance Bond and AT&T's willingness to post such a generous bond is further indication of AT&T's confidence in the limited risks inherent in this arrangement as well as a significant risk mitigation factor.



- Describe in detail all of the functions of your proposed solution.

AT&T Response:

Response previously provided in Tab I, “Functional Requirement”

- Submit a detailed schedule for implementation of the project

AT&T Response:

AT&T understands the importance of implementing services to coincide with the commencement of the e-rate funding year starting July 1st. AT&T will partner with the client to develop an implementation/project plan to meet the required service delivery intervals.

Installation intervals for new service requests vary depending on service offering. Assuming adequate facilities are available inclusive of site readiness requirements (conduit, power, etc.) the installation interval from receipt of an order to completion is 75-95 days.

Managed Internet:

AT&T will utilize Project Management “Best Practices” to implement the “Bundled Internet Access” solution for the Tennessee K-12 Consortium customers. These industry standards will permit AT&T to complete the scope of services with minimal interruptions to the day to day operations of the School District. The utilization of these standards will also allow AT&T to meet the E-Rate funding deadlines. These standards have been incorporated in the “Project Work Plan”. AT&T recognizes the necessity of providing service in a timely manner and has the resources to ensure that Internet connectivity is provided on time.

Objectives:

- In order for the Schools to be ready for the E-Rate year beginning July 1, 2013, the complete “Bundled Internet Access” solution must be available by June 30th 2013.
- To ensure minimal impact to the Schools operations, site turn up will be closely coordinated with the Schools project team.





- A clear and concise summary will be provided by the project manager within 24 hours after each weekly status meeting.

Guarantees/Commitments:

- AT&T will utilize Project Management “Best Practices” to minimize interruptions to the Schools and minimize the installation interval.
- AT&T will assign a dedicated Project Manager to be responsible for the successful Project Implementation.
- The AT&T Project Manager will conduct weekly “status” calls to ensure communications are timely and the project remains on schedule.
- The AT&T Project Manager will be the single point of contact for escalations to ensure any project jeopardy situations are quickly resolved.
- AT&T will provide an “Executive escalation process” to the Tennessee K-12 Consortium customers to enable them to escalate any situation in which they require Executive involvement.

Hosted VoIP

The project will involve the implementation of Hosted VoIP. Current status will be distributed on a consistent basis tracking the major milestones such as:

- Project Kick-off
- Technical Interview
- Site Survey
- Circuit Installation
- Router Delivery
- Equipment Installation
- Pretest
- Test & Turn up
- Number Porting
- Customer Training

Activities Include:

Schedule, Prepare for, and conduct the Technical Interview



- The AT&T Project Manager (PM) will send you the Technical Questionnaire and schedule the Technical Interview.

AT&T subject matter experts will assist you with completion of the Technical Interview.

Finalize and Freeze Your AT&T Voice DNA Order Information

- AT&T will send you the completed Technical Questionnaire

AT&T schedules and conducts the Site Survey

Finalize Auto Attendant design if applicable

- An AT&T Messaging expert will contact you to finalize design and schedule implementation of Auto Attendant

Plan and schedule Hosted VoIP Test & Turn up/Final Installation. AT&T will perform the following activities to prepare for Test & Turn Up/Final Installation of the customer's AT&T Voice DNA Service:

- Provided you have given AT&T authority to do so, AT&T will place an order with your local service provider for any required circuits, and will work with the service provider to have it installed and tested.
- Schedule Test & Turn Up/Final Installation date with you.
- Install AT&T Voice DNA router and test connectivity to AT&T's Network.
- Connect the router to your equipment and test connectivity to AT&T's IP network.
- Connecting of all telephone and end-user equipment
- Administrator and End User Training
- Auto Attendant Information and Training Provided
- Testing of all telephones to include:
 - Local calling
 - Long Distance calling
 - E911 calling

During the course of the engagement you can expect your assigned HOSTED VoIP team members to provide the following services:

- Support for any questions regarding the implementation of your HOSTED VoIP Service



- Assistance in gathering the requirements for your unique implementation
- Support and assistance in completing the AT&T Technical Interview
- Completion and review of the design document (VADD) for your approval
- Completion of all BusinessDirect and HOSTED VoIP portal configurations
- Staging and configuration of the phone/switch/firewall equipment
- Support during the test & turn-up phase
- Instructor lead web-based training for end users
- Instructor lead web-based training for administrators
- 30 days of support following the implementation of your HOSTED VoIP service
- Turnover of your site(s) to AT&T maintenance following the 30 day confirmation period

Video Conferencing:

Installation and Timelines:

AT&T will assign a Project Manager for the installation of the AT&T TelePresence Solution. The activities include the following:

- Identify video sites and perform pre-qualification
- Any room design and construction, or network build that is required
- Room and network readiness assessment
- Installation of solution
- Test and Train
- Service online



Sweetwater City Schools



TAB II – EXPERIENCE AND QUALIFICATIONS

February 27, 2013

Leslie Daniel
Sales Manager
AT&T
2 Union Sq
Chattanooga, TN 37402
Phone: (423) 903-4117
ld9107@att.com

Proposal Validity Period—The information and pricing contained in this proposal is valid until 1) the parties enter into a fully executed binding contract, 2) AT&T timely withdraws the proposal, or 3) the E-Rate filing window closes for the then-current E-Rate Funding Year, whichever first occurs. **Terms and Conditions**—Unless otherwise stated herein, this proposal is conditioned upon negotiation of mutually acceptable terms and conditions. **Proposal Pricing**—Pricing proposed herein is based upon the specific product/service mix and locations outlined in this proposal, and is subject to AT&T's standard terms and conditions for those products and services and the AT&T E-Rate Rider unless otherwise stated herein. Any changes or variations in the standard terms and conditions, the products/services, length of term, locations, and/or design described herein may result in different pricing. **Providers of Service**—Subsidiaries and affiliates of AT&T Inc. provide products and services under the AT&T brand. **Copyright Notice and Statement of Confidentiality**—© 2013 AT&T Intellectual Property. All rights reserved. AT&T, AT&T logo, and all other marks contained herein are trademarks of AT&T Intellectual Property and/or AT&T affiliated companies. All other marks contained herein are the property of their respective owners. The contents of this document are unpublished, proprietary, and confidential and may not be copied, disclosed, or used, in whole or in part, without the express written permission of AT&T Intellectual Property or affiliated companies, except to the extent required by law and insofar as is reasonably necessary in order to review and evaluate the information contained herein. **Disclaimer**—For purposes of this Proposal, the identification of certain services as "eligible" or "non-eligible" for Universal Service ("E-Rate") funding is not dispositive, nor does it suggest that this or any other services in this Proposal will be deemed eligible for such funding. Any conclusions regarding the eligibility of services for E-Rate funding must be based on several factors, many of which have yet to be determined relative to the proposed services and equipment described herein. Such factors will include, without limitation, the ultimate design configuration of the network, the specific products and services provisioned to operate the network, and the type of customer, and whether the services are used for eligible educational purposes at eligible locations. In its proposal, AT&T will take guidance from the "Eligible Services List" and the specific sections on product and service eligibility on the Schools and Libraries Division ("SLD") of the Universal Service Administrative Company ("USAC") website www.usac.org/sl. This site provides a current listing of eligible products and services, as well as conditionally eligible and ineligible services. This guidance notwithstanding, the final determination of eligibility will be made by the SLD after a review of the customer's E-Rate application for this proposal. If AT&T is awarded the bid for this project, AT&T will provide assistance on the E-Rate application solely on matters relative to the functionality of the services and products which comprise the network. Nevertheless, the responsibility for the E-Rate application is with the customer. AT&T is not responsible for the outcome of the SLD's decision on these matters. **Broadband Internet Access**—For information about AT&T's broadband Internet access services, please visit www.att.com/broadbandinfo.



Table of Contents

Experience (addresses II, b.)..... 1

Key Personnel and Organizational Structure (addresses II.d. and II.e.).....3

Resumes (addresses II.f.)..... 5

Licenses, Certifications, and Hours 6

Financial Stability (addresses I.e.).....10

Expansion Capability (addresses II.c.).....16

AT&T Attachments18





Tab II - Experience and Qualifications

Total points available for this criterion are 10 points.

II.b. Describe in detail the experience your company has in the three categories of service as listed in the title of the RFP.

AT&T serves millions of customers around the world, including global, national,

Mid-size, regional, and government customers. Currently AT&T provides service for all of the Standard & Poor's (S&P) 500 companies and all of the Fortune 1000 companies.

The Southeast Region of AT&T (formerly BellSouth) serves more than 44-million customers in the United States and 16 other countries with the following makeup.

- Large Business- 16,000 customers, 2.8 million retail lines
- Small Business- 1 million customers, 3.5 million lines
- Consumer 14.2 million customers, 16.6 million retail lines
- Interconnection Services: Markets wholesale services to interexchange carriers, CLECs, resellers, payphone service providers, wireless service providers

Managed Internet Access

AT&T's network design builds upon 133+ years of experience engineering and deploying highly available and reliable network infrastructures. AT&T has been serving federal, state, and local government customers since the formation of the Bell System more than 133 years ago.

Our unmatched infrastructure, depth of resources, and industry-leading technologies make AT&T the most qualified telecommunications partner for Sweetwater City Schools. For example, AT&T currently provides services for the following:

- 22 State governments
- More than 13,000 local governments
- 4,000 school districts
- 70 of the top 100 school districts nationwide

AT&T IP Network Highlights & Redundancy



- AT&T's core IP backbone network consists of 106,000 wavelength miles, predominantly 40 Gbps (OC-768 facilities), is designed with no single point of failure.
- The AT&T IP Network is connected to all major Tier 1 ISPs via massive private peering bandwidth in eight cities.
- High reliability of the network is achieved by use of redundant components and connectivity, including network routers, switches and power supplies.
 - Intra-node path redundancy is achieved via dual-homed direct connectivity between routers. The access routers directly connect to the backbone routers, meaning that there is no switch fabric between the devices.
 - All AT&T POPs and the services contained within them are supported by battery backup and diesel generators. A robust disaster recovery scheme is tested regularly to ensure that all components work in the event of a power failure.

Global Network Management & Disaster Recovery

- The condition of AT&T's global IP network is continually monitored in our Global Network Operations Center (GNOC). Any anomalies that threaten or impact the performance of our network are managed by the GNOC staff through a proven incident command process called 3CP (Command, Control, and Communications).
- AT&T's Network Disaster Recovery (NDR) program was specifically developed for rapid service recovery during a wide range of disaster scenarios. NDR provides business continuity and recovery capabilities for both the wireline and wireless networks within AT&T.
- Since its inception in 1991, AT&T has invested over \$500 million in its NDR program, with assets of 150+ network recovery trailers, 350+ HVAC Trailers, Cell Sites on Wheels, and Mobile Command Centers.

AT&T Bell Labs is at the foundation of our technology advancements. Our core research and development group, AT&T Labs has won eight Nobel Prizes and has more than 9,000 patents. Our researchers and engineers developed some of the world's major technological inventions, including the transistor, solar cell, cell phone, and communications satellite.



Managed Voice over IP Solution:

AT&T has been in the business of hosting telecommunications in our data centers for over 20 years. What started out as Centrex has now evolved into a fully hosted voice over IP infrastructure. Our industry leading hosted VoIP service was officially launched back in 2006. Today, we now have over 25,000 users utilizing our service for their total communication needs. We make the transition from a legacy telecommunication environment to a managed VoIP solution very easy for our customers.

Video Conferencing

Since the introduction of AT&T video conferencing, acceptance by the business, government and education communities has been tremendous. We have found many instances where AT&T video conferencing has enabled the education community to enhance learning by assisting with home-bound students and in distance learning. In addition, the platform has been excellent for training and reducing travel costs. AT&T has also adopted the AT&T video conferencing platform and almost 90% of all training and meetings are conducted via the platform.

- Include the description of the proposed team, including key personnel and subcontractors, and the role to be played by each member of the proposed team
- What are the proposed team's organizational structure, interrelationships, and interactions?

AT&T Response:

Please also see organizational charts provided in Tab II Attachments.

Sales and Technical Sales –

Jeannie Gustafson – SCVP Government Education accounts Tennessee, Alabama and Georgia

Leslie Daniel – Sales Director – Tennessee K-12, Higher Education, County / City Government

Charles Ford – Account Manager

John Buchanan – Account Manager



Mark Mowery – Account Manager

Matt Stafford - Technical Sales Consultant

Amy Hall - Technical Sales Consultant

Bill Gassaway - Technical Sales Consultant

Bobby Smith - Emerging Technologies Specialist

Life Cycle Management and Operations -

Jim Graves – Assistant Vice President

Dave Tyler – Director

Robert Wood - Director

Terri Johnson – Business Operations Manager – Tier One Help Desk Support Liaison

Chuck Tillman – Operations Manager K-12

Glenn Kittle - Project Management

Additional personnel will be assigned to the overall project as soon as AT&T is notified of the award.

Because the assignment(s) for specific tasks are not made until the contract is awarded, specific name(s) and biographical information for specific tasks cannot be supplied at this time. The additional required documentation will be furnished if AT&T is your vendor of choice.

Operational Model

The Tier 1 Service Desk provides first line help for NetTN K-12 Partners. K-12 end users reporting incidents and processing service requests, may input a service request via their AT&T BusinessDirect Web Portal account, or contact the K-12 Help Desk via phone at 888-820-0345. Incidents may also be proactively identified and resolved by AT&T with status and reporting provided to all K-12 customers via the LCM team.



- Include the résumés of all managers, senior level supervisors, and key personnel (indicate if they are a subcontractor) who will be involved in providing the required services.

AT&T Response:

The résumés for key sales and management personnel are provided in Tab II, Attachments.

The individuals responsible for the overall project will be assigned as soon as AT&T is notified of the award.

Because the assignment(s) for specific tasks are not made until the contract is awarded, specific name(s) and biographical information for specific tasks cannot be supplied at this time. The additional required documentation will be furnished if AT&T is your vendor of choice.



- What license(s) and certification(s) do these individuals have that would convey their ability to perform this contract?

AT&T Response:

Our equipment solutions group collectively holds more than 300 different certifications and distinctions for more than 45 different vendors and organizations.

Our staff includes experts in various technical disciplines such as:

- Microsoft Certified System Engineers (MCSE)
- Cisco Certified Internetwork Experts (CCIE)
- Checkpoint Certified Security Engineers (CCSE)
- Oracle Masters
- Project Management Professionals (PMP)

Vendor Certifications held by AT&T Equipment Solutions

| Vendor | Certification | Total Certifications |
|--------|---|----------------------|
| 3Com | Certified Networked Telephony Specialist | 3 |
| 3Com | Certified Wireless Specialist | 4 |
| 3M | Fiber Optic Termination & Testing | 1 |
| 3M | Volition Cabling System | 1 |
| 3M | Volition Engineering | 1 |
| Adtran | ACCP-Internetworking | 8 |
| Adtran | ACCP-IP Business Gateways | 8 |
| Adtran | ACCP-Netvanta Wireless Access (Wi-Fi) | 8 |
| Adtran | Adtran Carrier Certified Professional (ACCP) | 20 |
| Adtran | Adtran Certified Solution Professional (ACSP) | 2 |
| Adtran | Adtran Certified Solutions Professional - NetVanta 3000 | 1 |
| Adtran | Adtran Certified Solutions Professional - NetVanta Routers | 2 |
| Adtran | Adtran Certified Solutions Professional - NetVanta Switches | 1 |
| Adtran | ADTRAN Technical Support Associate (ATSA) | 20 |
| Adtran | Adtran Technical Support Professional | 1 |
| Adtran | ASP IP Telephony | 8 |
| Adtran | ASP Wireless | 2 |





AT&T's Response to Tab II – Experience and Qualifications

| Vendor | Certification | Total Certifications |
|----------------|--|----------------------|
| Adtran | ATSA IP Telephony | 28 |
| Adtran | ATSA Wireless | 2 |
| APC | Certified PowerStruXure Systems Engineer | 2 |
| APC | InfraStruXure Certified Engineer (ISXCE) | 2 |
| Aruba Wireless | Aruba Certified Mobility Professional | 1 |
| Aruba Wireless | Aruba Certified Technical Sales Engineer | 2 |
| Avaya | ACA-Design: Modular Messaging | 1 |
| Avaya | ACAD-100 ACA - Design: IP Telephony | 8 |
| Avaya | ACAD-804 ACA-Design Modular Messaging | 1 |
| Avaya | ACS-Design: Modular Messaging | 1 |
| Avaya | ACSD-900 ACS - Design: IP Telephony | 9 |
| Avaya | Avaya Training Only No Certification | 5 |
| Avaya | TIA/CTP | 3 |
| Berk-Tek | Oasis Integrator | 1 |
| BICSI | RCDD LAN | 1 |
| BICSI | RCDD Network Transport (NTS) Specialist (RCDD - NTS) | 2 |
| BICSI | RCDD Outside Plant (OSP) Specialist -(RCDD - OSP) | 12 |
| BICSI | RCDD Wireless Design (WD) Specialist (RCDD - WD) | 2 |
| BICSI | Registered Communications Distribution Designer (RCDD) | 23 |
| Check Point | Certified Security Administrator (CCSA) | 12 |
| Check Point | Certified Security Engineer (CCSE) | 10 |
| Check Point | Checkpoint - Advanced FireWall-1 4.1 Management | 1 |
| Check Point | Checkpoint - VPN-1 for the Security Professional | 1 |
| Cisco | 642-586 Advanced Wireless LAN for System Engineers | 2 |
| Cisco | Advanced Routing and Switching Specialization | 2 |
| Cisco | Advanced Security for Systems Engineers | 1 |
| Cisco | Advanced Unified Communications Specialist | 1 |
| Cisco | Cisco Advanced Wireless LAN Design Specialist | 13 |
| Cisco | Cisco Advanced Wireless LAN Field Specialist | 7 |
| Cisco | Cisco CCNP - Voice Access | 2 |
| Cisco | Cisco Certified Design Associate (CCDA) | 67 |
| Cisco | Cisco Certified Design Professional (CCDP) | 54 |
| Cisco | Cisco Certified Internetwork Expert (CCIE) | 9 |
| Cisco | Cisco Certified Internetwork Expert (CCIE) - Routing & Switching | 18 |

*AT&T's Response to Tab II – Experience and Qualifications*

| Vendor | Certification | Total Certifications |
|---------------|---|-----------------------------|
| Cisco | Cisco Certified Internetwork Expert (CCIE) - Security | 3 |
| Cisco | Cisco Certified Internetwork Expert (CCIE) - Voice | 6 |
| Cisco | Cisco Certified Internetwork Professional (CCIP) | 4 |
| Cisco | Cisco Certified Network Associate (CCNA) | 109 |
| Cisco | Cisco Certified Network Professional (CCNP) | 64 |
| Cisco | Cisco Certified Sales Expert (CCSE) | 5 |
| Cisco | Cisco Certified Security Professional (CCSP) | 20 |
| Cisco | Cisco Certified Voice Professional (CCVP) | 24 |
| Cisco | Cisco Enterprise Voice over Data Design (EVODD) Exam | 1 |
| Cisco | Cisco Implementing Cisco Quality of Service (QOS) | 11 |
| Cisco | Cisco Information Security Specialist | 8 |
| Cisco | Cisco IP Telephony (CIPT) Exam | 6 |
| Cisco | Cisco IP Telephony Design Exam | 3 |
| Cisco | Cisco IP Telephony Troubleshooting (IPTT) | 2 |
| Cisco | Cisco IPS Specialist | 2 |
| Cisco | Cisco Qualified Specialist (CQS) - Firewall | 12 |
| Cisco | Cisco Qualified Specialist (CQS) - IDS | 4 |
| Cisco | Cisco Qualified Specialist (CQS) - IP Telephony Design | 6 |
| Cisco | Cisco Qualified Specialist (CQS) - IP Telephony Express | 2 |
| Cisco | Cisco Qualified Specialist (CQS) - IP Telephony Operations | 6 |
| Cisco | Cisco Qualified Specialist (CQS) - IP Telephony Support | 5 |
| Cisco | Cisco Qualified Specialist (CQS) - Security | 3 |
| Cisco | Cisco Qualified Specialist (CQS) - Security Solutions and Design Specialist | 1 |
| Cisco | Cisco Qualified Specialist (CQS) - VPN | 5 |
| Cisco | Cisco Qualified Specialist (CQS) - Wireless LAN Design Specialist | 10 |
| Cisco | Cisco Qualified Specialist (CQS)-Cisco Call Manager Express Specialist | 1 |
| Cisco | Cisco Qualified Specialist (CQS)-Cisco Unity Design Specialist | 2 |
| Cisco | Cisco Qualified Specialist (CQS)-Cisco Unity Support Specialist | 1 |
| Cisco | Cisco SAFE Implementation (CSI) Exam | 1 |
| Cisco | Cisco Secure Intrusion Detection System (CSIDS) Exam | 2 |
| Cisco | Cisco Secure PIX Firewall Advanced (CSPFA) Exam | 4 |
| Cisco | Cisco Secure Virtual Networks (CSVN) Exam | 3 |



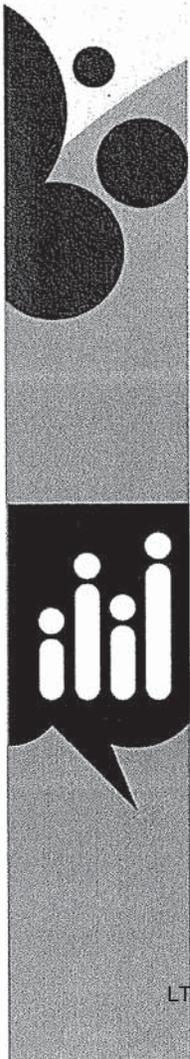
AT&T's Response to Tab II – Experience and Qualifications

| Vendor | Certification | Total Certifications |
|--|---|----------------------|
| Cisco | Cisco Securing Cisco IOS Networks (SECUR) Exam | 2 |
| Cisco | Cisco Unity Engineer Exam | 2 |
| Cisco | Cisco Voice Over IP (CVOICE) Exam | 12 |
| Cisco | CTP Field Engineer | 1 |
| Cisco | CTP Project Manager | 1 |
| Commscope | Commscope | 3 |
| Commscope | Commscope Certified Installer, OSP Fiber | 1 |
| Computer Technology Industry Association (CompTIA) | A + | 5 |
| Computer Technology Industry Association (CompTIA) | Network + | 4 |
| CWNP | Certified Wireless Network Administrator (CWNA) | 3 |
| CWNP | Certified Wireless Security Professional (CWSP) | 2 |
| CWNP | CWAP Certified Wireless Analysis Professional | 1 |
| EMC | Sales Accreditation | 5 |
| EMC | SE Accreditation | 3 |

- Estimated number of hours each person will contribute to the project/contract.

AT&T Response:

Personnel will be assigned to the overall project as soon as AT&T is notified of the award. Because the final total scope of work has not been defined by the customer, total hours required are unknown and therefore estimated hours per person is unknown. Assignment(s) for specific tasks are made once the contract is awarded and the additional required documentation will be furnished if AT&T is your vendor of choice.





- Address your firm's financial health to completely perform the contract. Identify any areas of concern or limitations that SCS should consider.

AT&T Response:

AT&T provides 2012 quarterly 8-K financial reports to illustrate its financial strengths along with our last 3 years of audited financials. Please refer to these documents included in Tab II, Attachments.

AT&T is a large company, but not so large that we lose sight of the value of each and every customer. What the strength of AT&T provides is the resources to effectively deploy, and maintain an ever evolving array of services that enable schools to perform their job better. That is why AT&T has a group of professionals that are focused on government and education. That is why we have endeavored to be a better partner with TETA and TOSS and to truly understand the issues that schools and especially schools in Tennessee face every day. In this era of reduced resources, AT&T is offering products and services that are not only economically viable but also place Districts in the position to embrace new technologies.

For more than a century, AT&T has consistently provided innovative, reliable, high-quality products and services and excellent customer care. Today, our mission is to connect people with their world, everywhere they live and work, and do it better than anyone else. We're fulfilling this vision by creating new solutions for consumers and businesses and by driving innovation in the communications and entertainment industry.

We're recognized as one of the leading worldwide providers of IP-based communications services to businesses. We also have the nation's fastest mobile broadband network and the largest international coverage of any U.S. wireless carrier, offering the most phones that work in the most countries; the largest Wi-Fi network in the United States based on branded and operated hotspots; and the largest number of total broadband connections in the United States.

And we're making huge advances in the entertainment and communications industry. For example, we've expanded our video offerings to include television services such as AT&T U-verse® TV and AT&T DIRECTV. It's part of our "three-screen" integration strategy to deliver services across the three screens people rely on most — the mobile device, the PC and the TV.

As we continue to break new ground and deliver new solutions, we're focused on delivering the high-quality customer service that is our heritage.





We are the largest communications holding company in the world by revenue. Operating globally under the AT&T brand, we are:

Proud to offer one of the world's most advanced and powerful global backbone networks, carrying 23.7 petabytes of data traffic on an average business day to nearly every continent and country, with up to 99.999 percent reliability.

The nation's fastest mobile broadband network - and it's getting faster with 4G - serving millions of customers and enabling them to travel and communicate seamlessly with the best worldwide wireless coverage—offering the most phones that work in the most countries. Offering voice coverage in more than 220 countries, data roaming in 200 countries and 3G in more than 130 countries.

The only U.S. national service provider to offer a 100 percent IP-based television service with U-verse TV. AT&T Advanced TV offers you a TV choice that's better than cable through AT&T U-verse TV and AT&T|DIRECTV.

The nation's largest provider of broadband—more than 17.8 million total broadband connections.

Managing the nation's largest Wi-Fi network with more than 27,000 AT&T Wi-Fi Hot Spots in the United States, and access to more than 188,000 hot spots around the globe.

One of the world's largest providers of IP-based communications services for businesses, with an extensive portfolio of Virtual Private Network (VPN), Voice over IP (VoIP) and other offerings—all backed by innovative security and customer support capabilities.

Publishers and distributor of 1,250 AT&T Real Yellow Pages titles annually.

A global leader in delivering a full portfolio of end-to-end reliable and highly secure network, voice, data and IP solutions to wholesale customers, and its service portfolio has been widely regarded by third parties as industry-leading.

The parent of YP.com, a leading Internet Yellow Pages network that, when combined with AT&T Real Yellow Pages, receives more than 5 billion consumer searches a year.

The leading U.S. provider of local and long distance voice services.

Corporate History

In 1876, Alexander Graham Bell invented the telephone. That was the foundation of the company that would become AT&T — a brand that has become synonymous with the best, most reliable telephone service in the world.



In 1984, through an agreement between the former AT&T and the U.S. Department of Justice, AT&T agreed to divest itself of its local telephone operations but retain its long distance, R&D and manufacturing arms. From this arrangement, SBC Communications Inc. (formerly known as Southwestern Bell Corp.) was born.

Twelve years later, the Telecommunications Act of 1996 triggered dramatic changes in the competitive landscape. SBC Communications Inc. established itself as a global communications provider by acquiring Pacific Telesis Group (1997), Southern New England Telecommunications (1998) and Ameritech Corp. (1999). In 2005, SBC Communications Inc. acquired AT&T Corp., creating the new AT&T.

With the acquisition of BellSouth in 2006, and the consolidated ownership of Cingular Wireless and YP.com, AT&T is positioned to lead our industry in one of its most significant transformations since the invention of the telephone more than 130 years ago.

U.S. Presence

We serve customers nationwide with a broad range of wireless voice and data services. We have the nation's fastest mobile broadband network and serve 95.5 million wireless subscribers. We hold spectrum licenses in all 50 U.S. states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands. We also have the best worldwide coverage of any U.S. carrier with voice coverage in more than 220 countries, data roaming in 200 countries and 3G in more than 130 countries.

We serve millions of customers, concentrated in 22 states, with wired services, including broadband, long distance and local voice.

Global Reach

Our customers work and live in virtually every country and territory in the world. We serve millions of enterprise and multinational business corporations on six continents.

We offer a variety of service plans that enable U.S.-based customers to stay connected to friends and work colleagues who are overseas. We also enable our customers to keep in touch when they travel outside the U.S.

We provide the best coverage of any wireless carrier nationwide. With AT&T, customers have the freedom to make wireless calls using an internationally enabled phone on all seven continents and in more than 220 countries. We offer wireless data coverage in more countries than any U.S. carrier — with wireless data-roaming in 200 countries for laptops, hand-held devices and other data services and third-generation (3G) services in



more than 130 countries. We also offer wireless service on more than 135 cruise ships worldwide.

Diversity

AT&T's century-long history of innovation is a story about people from all walks of life and all kinds of backgrounds coming together to improve the human condition. It is our diversity, coupled with an inclusive culture that welcomes all points of view - which makes us who we are: a great place to work, a desired business partner and a committed member of the communities we serve. Learn more about our people and [AT&T diversity](#).

Global, National, Mid-Size, Regional and Government Portfolio

For our enterprise business customers, AT&T provides a single source for local, national, global and wireless voice and data services.

Our expansive portfolio also gives these customers access to advanced IP and traditional networking solutions for both voice and data. And customers can tap into our array of consulting and management experts for support on any element of network planning, design, deployment and ongoing management. Learn more about [AT&T business enterprise services](#).

Networks

The AT&T network includes extensive wireless and wired access capabilities, as well as one of the world's most advanced and powerful IP backbones.

The AT&T global backbone network carries 23.7 petabytes of data traffic on an average business day.

Our backbone network carries a full range of IP-based services, including wireless data, business video, data and voice services, private line and wavelength traffic, as well as IP-based residential services and Internet access for AT&T's more than 17.8 million total broadband customers.

Our network also incorporates Multiprotocol Label Switching (MPLS), which supports a full range of applications over a single IP network infrastructure with the highest levels of service quality.

To stay ahead of the ever-increasing demand for online video, photos, music and IP-based business applications, we recently switched on the nation's first coast-to-coast IP/MPLS network using new-generation routing technology that carries data at 40 Gbps.



More than 75 percent of the IP traffic carried over the company's backbone network rides on this new-generation platform.

The AT&T global backbone network includes:

- MPLS-based services available to 182 countries over 3,800 service nodes.
- 38 Internet data centers across the globe.
- More than 886,000 worldwide fiber route miles.

Our industry-leading wireless network includes:

- AT&T has the nation's fastest mobile broadband network. And it's getting faster with 4G. HSPA is the high speed evolution of GSM/EDGE (Global System for Mobile Communication/Enhanced Data rates for Global Evolution), which shares a common core network.
- AT&T's mobile broadband service footprint covers more than 80 percent of the U.S. population, including the top 100 U.S. markets.
- With AT&T's HSPA+ deployment and backhaul enhancements, followed by our planned deployment of LTE starting mid-year 2011, its customers will have access to best-in-class network speed and technology.
- Expanded backhaul connectivity enabling faster mobile broadband speeds when combined with our HSPA+ and LTE technology upgrades.

Our U.S. wired network capabilities encompass:

43.6 million access lines.

19.3 million wired broadband connections.

Wi-Fi access to more than 188,000 hot spots spanning countries around the globe.

We're constantly working to deliver new capabilities and applications via our access network. For example, our U-verse service deployment is enhancing our wired access capabilities to deliver advanced IPTV services to residential customers.

Meaningful Innovation

AT&T Labs has a long history of innovation — a heritage that includes eight Nobel Prizes and thousands of patents issued or pending worldwide. We have fueled groundbreaking initiatives that have changed the direction of communications.



Community Support

Corporate social responsibility is integral to AT&T's culture; we continually engage in initiatives that enrich and strengthen our communities. Thanks to these efforts, we contributed \$155 million through corporate-, employee- and AT&T Foundation-giving programs in 2009. In fact, the AT&T Foundation ranked as one of the most generous corporate foundations in the United States.

NYSE: T

AT&T Inc. common stock is listed on the New York Stock Exchange. A Fortune 500 company, AT&T is one of the 30 stocks that make up the Dow Jones Industrial Average.

Leadership

Randall L. Stephenson, chairman and chief executive officer

2012 Reported Consolidated Revenue

\$127.43 billion

AT&T has no areas of concern that will limit our ability to completely perform the contract.



II.c. Describe your expansion/scalable capability during the term of this contract

AT&T Response:

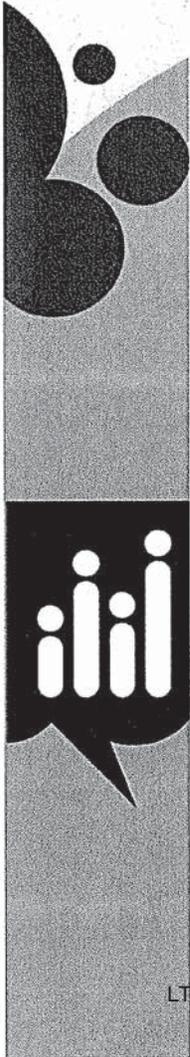
AT&T provides a variety of transport options to meet client requirements. Basic broadband connectivity to Fiber Based solutions are available. Speeds range from sub T1, T1, NxT1(MLPPP), DS3, OC-3, OC-10C-12, OC-48, OC-10C-192 and 1Gig to 10Gig Ethernet. Flexible and scalable SONET ring configurations are available to meet stringent Business Continuity requirements.

Many factors determine the best transport technology to deploy at any given location. The availability of fiber based networks offer the greatest flexibility and the best cost model for deploying IP services. Layer 2 Ethernet services have proven to be the most cost-effective model while also enabling the greatest flexibility. Ethernet based services can be offered over Copper based networks, but are limited in speed, generally capped at 10M. Fiber based Ethernet services are scalable from 1Gig to 10Gig.

The installation of fiber-based services requires close coordination between AT&T Telco and other Access Provider(If applicable), the property owner and the Local Contact. A critical date schedule will be established immediately with a clear understanding of respective responsibilities. AT&T Telco or other Access Provider Engineering Representative will document agreed-upon commitments in a confirmation letter to the Local Contact and, if applicable, to the property owner.

AT&T will make every attempt to deploy fiber based services to customer locations as this provides the greatest level of flexibility and scalability. However, some factors will prohibit the use of fiber, resulting in Copper based deployments. Copper based deployments will limit the availability of transport options and deployable speeds. Generally, copper based services include T1, NxT1(MLPPP) and T3 solutions. While there is the ability to scale within each of these transport options, they will be limited to the line rate that is deployed. As referenced, copper based services are generally not the best transport solution based on limited flexibility and scalability.

AT&T has the largest Ethernet network in the United States covering its 22 state Local Exchange Network footprint. AT&T has numerous agreements to utilize other Competitive Local Exchange Networks where AT&T is not the facilities based provider. In these cases, AT&T will partner with those suppliers to provided Ethernet based services delivered over fiber based networks.





AT&T was the recipient of the Frost & Sullivan 2012 U.S. Retail Carrier Ethernet Services Market Share Leadership Award.

“This award is in recognition of AT&T’s ability to achieve leading market share position, through a combination of broad portfolio of service offerings, excellent marketing strategy, and industry leading service level agreements (SLAs).”

“The company not only has a deep market presence in its 22-state footprint, but also caters to a broad segment of customers nationwide utilizing its MPLS backbone, thus driving adoption of Carrier Ethernet and capturing the highest revenue share in the market”

“The company is in a leading position...to take advantage of the growing market demand throughout the forecast period, with a broad portfolio of service offerings.”