Request for Proposal

Voice Infrastructure

October 22, 2010

A VASCUPP Member Institution
Issued by
Procurement Services
Charlottesville, Virginia
# Voice Infrastructure

Request for Proposal #SH102210

October 22, 2010

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This Request for Proposal (RFP) has been posted on Procurement Services web site for your convenience. Addenda and attachments are posted if issued. The RFP can be downloaded at this web site: [http://www.procurement.virginia.edu/pagerfp](http://www.procurement.virginia.edu/pagerfp). It is the firm’s responsibility to ensure that the latest version of the entire RFP and related links are reviewed prior to submission of a proposal. We encourage you to check the web site frequently for any changes prior to the due date. Call (434) 924-1346 if you have trouble accessing the RFP from the web. For questions about the content of the RFP, contact the buyer listed in Section VI, Information about this RFP. Additional information can be found on Procurement Services web site: [http://www.procurement.virginia.edu/pagehome](http://www.procurement.virginia.edu/pagehome)

I. Overview of the RFP Process

The Rector and Visitors of the University of Virginia (the “University”), a Virginia public corporation, seeks an experienced firm (or firms) to build, provision, and operate a modern voice communications system. This RFP is part of a competitive procurement process which helps to serve the University's best interests. It also provides firms with a fair opportunity for their services to be considered. The process of competitive negotiation being used in this case should not be confused with the different process of competitive sealed bidding. The latter process is usually used where the goods or services being procured can be described precisely and price is generally the determinative factor. With competitive negotiation, however, price is not required to be the determinative factor, although it may be, and the University has the flexibility it needs to negotiate with firms to arrive at a mutually agreeable relationship.

For ease of reference, each firm receiving this RFP is referred to as a "firm" and the firm (or firms) selected to provide goods and/or services for the University is referred to as the "Selected Firm". (Any reference in the RFP to the "Selected Firm" may refer to more than one Selected Firm if the University chooses to make multiple awards as a result of this RFP.) This RFP states the instructions for submitting proposals, the procedure and criteria by which a firm may be selected, and the contractual terms by which the University proposes to govern the relationship between it and the Selected Firm.
It is the policy of the Commonwealth of Virginia and the University to contribute to the establishment, preservation, and strengthening of small businesses and businesses owned by women and minorities, and to encourage their participation in State procurement activities. The Commonwealth and the University encourage firms to provide for the participation of small businesses and businesses owned by women and minorities through partnerships, joint ventures, subcontracts, or other contractual opportunities.

II. Background Discussion and Goals of the University

When Thomas Jefferson founded the University in 1819, he intended it to be nothing less than a world-class institution of higher learning. Jefferson’s spirit lives on – not only in the Rotunda and Academical Village he designed, and which remain treasures of American architecture, but in the University’s standing as a leader in education, research, and community service.

The over 21,000 students attending the University work within a true meritocracy and live by an Honor Code unique among American universities. Each student is exposed to the widest spectrum of disciplines – from arts and athletics to humanities and technology. Our students also enjoy a unique connection to the world beyond college through the University’s outstanding professional training, exemplified by its nationally ranked schools of Law, Business, and Medicine. The University as a whole has had a consistently high ranking not only among public schools, where it often heads the list, but among all American universities, public and private.

Over 12,400 permanent University faculty and staff are committed to serving both the local and national community. The University makes a real difference in the world, through its invaluable research, a hospital ranked among the nation’s finest, and graduates who have consistently been among the forefront of our nation’s shapers. At the University, our bright future is the direct result of our great history.
The University’s Health System is a nationally renowned academic medical center committed to providing outstanding patient care, educating tomorrow’s health care leaders, and discovering new and better ways to treat diseases. The University’s Medical Center is an integrated network of primary and specialty care, offering services ranging from wellness programs and routine checkups to the most technologically advanced care. The University’s Health System will have up to 710 beds: the 579-bed acute care University Hospital which will add an additional 72 beds in the next year; the Emily Couric Cancer Center, opening in April 2011; the off-site care sites of Kluge Children’s Rehabilitation Center with 19 beds; the new Transitional Care Hospital with 40 beds; and the addition of the Bill and Barry Battle Building at the University’s Children’s Hospital to be completed in the next several years. The University’s Medical Center also includes numerous clinics on University Grounds, as well as a number of medical practices throughout Charlottesville and its neighboring counties.

The University owns an extensive voice infrastructure primarily based on a large Siemens/Rolm 9751 distributed switch using Model 70 and Model 50 technology. CoreNet is used to connect this switch to a small Siemens 9751 Model 80 switch and a pair of Siemens 4000 VoIP switches. The overall existing voice system provides approximately 27,000 telephone ports with 20,000 of these ports supporting digital station equipment and 7,000 ports providing service to analog devices. Trunking to connect the University’s existing system to the rest of the world includes 43 local PRIs supporting CallerID, 6 T1s for blocked Caller ID, 8 T1s for long distance service, and an assortment of analog CO trunks to support emergency calls. The existing voice system uses Siemens’ Xpression product for voicemail and supports approximately 12,500 voicemail boxes. Telephone numbers are primarily derived from three local exchanges with over 31,500 numbers in use. (Note that definitions for many of the acronyms and technical terms used in this RFP are found in Attachment 7, Definitions.)

The operation of the existing voice system is fully outsourced to Siemens. Siemens maintains and operates the switches, manages the cable plant, handles moves, adds, and changes, performs software configuration tasks, call center consulting, trunking
coordination, and all of the other goods and services that would be reasonably expected
from a telephone company. Local trunking and telephone numbers are provided by
CenturyLink, the local ILEC. Long distance trunks are obtained from Verizon/MCI via a
state-wide contract for long distance services.

While the existing voice infrastructure has served the University well and for a much
longer period of time than anticipated, it has exceeded its useful life, does not provide
many of the modern features University users now expect, and is more expensive to
maintain than newer voice technology. The general environment around telephony
services has also evolved since the current system was deployed. When it was first
installed, the existing telephone system was the primary, and often only, mode of real
time communication available to employees. In the current environment, many
employees are multiply connected with email, cell phones, instant messaging and other
such services reducing the importance of the absolute reliability of the telephone system
for these users. However, many others, including those in the University’s Medical
Center, still require the high levels of reliability associated with a traditional telephone
system. This changed environment enables trade-offs between reliability and cost that
were not possible when previous generations of telephone systems were deployed. The
environment has also changed as users expect to be able to access their data, in this case
their voice services, from anywhere at any time from any location without barriers.
University users should be able to use the tools that make them most productive without
being limited by technology or antiquated component-based pricing methodologies.

A. The University’s goal for this RFP is to replace the existing voice infrastructure
with a modern standards-based system/infrastructure, providing more features,
and decreasing costs. Specific high-level sub-goals for the new replacement
system include, but are not limited to:

1. The ability to provide differentiated levels of service at different price
points. For example, the new system should be able to provide University
users with a choice of services incorporating uptime reliability ranging
from carrier-grade to a level comparable to that of typical University-
provided computer services, with the later level available at radically reduced fees. To this end, the University is willing to evaluate proposals for both large single monolithic systems and for proposals that incorporate a set of interconnected products that together meet all of the University’s requirements.

2. Reduce the cost of the trunking needed to connect the University’s system to local and national networks.

3. Provide users with access to the new system and their extension number from multiple locations using multiple devices. Enable users to access the new system in the way that best fits the user’s work style via a computer, mobile device, or desktop device.

4. Support for modern call center technology, ability to support multiple CRM products (e.g. Epic CRM, Remedy, etc), and the APIs needed to interface to external call center systems.

5. To the extent practical, continue to rely on outsourced firms to provide many of the products and services necessary to operate and maintain the University’s system.

This RFP has been specifically designed to enable firms to explain how their replacement systems are best able to assist the University to meet its feature, business, and technical objectives. There are no extensive mandatory technical requirements and no fixed set of other service provisions that any individual firm must meet in order to be considered for an award as a result of this RFP. Firms should assume that a sufficiently high-quality data network exists and submit a proposal that clearly expresses how their proposed products, services, and systems best helps the University achieve its goals.

This RFP has been designed anticipating that no single firm is likely to supply the entire scope of products and services needed to build and operate the University’s next generation voice system/infrastructure. For example, a firm proposing VoIP switch software is unlikely to also provide trunking services in the Charlottesville
area. The University expects to receive some proposals that respond to a single aspect of the goods and services related to the new system, other proposals that respond to multiple areas, and possibly small number of proposals that respond to all aspects of this RFP. Firms are asked to clearly indicate in the response template which of the following Focus Areas their proposals are intended to address:

1. **Trunking and Telephone Numbers**
   The connection of the University’s voice communications infrastructure to local and long distance networks and the telephone numbers used by the University. The requirements for this Focus Area are described primarily in Section III.A with additional information and requirements identified in Sections III.H, and III.I.

2. **Fiber Optic Cable IRU**
   The University requires an IRU to the Northern Virginia area to meet its communications and research needs. The requirements for this Focus Area are described in Section III.C.

3. **Outdoor Cable Plant Maintenance and Expansion**
   The University requires a firm to manage and expand its outdoor fiber optic and copper cable plant. The requirements for this Focus Area are described in Section III.D.

4. **Moves, Adds, and Changes**
   The University requires a firm or firms to install copper and optical cable within buildings, relocate telephone instruments, and perform other similar work. The requirements for this Focus Area are described in Section III.E.

5. **Telephony System**
   This Focus Area comprises the main telephone system and its associated call control logic, trunking gateways, telephone instruments, and software. Requirements for this Focus Area are described primarily in Section III.F with additional information in Sections III.A, III.B, III.H, and III.I.
6. Advanced Contact and Call Center Functionality
Several University call centers require advanced functionality. The requirements for this Focus Area are described primarily in Section III.G with additional information in Sections III.B, III.H, and III.I.

7. Other Goods and Services
The University is interested in receiving proposals that assist the University to meet its needs as described in this RFP but are not directly described as one of the University’s response Focus Areas. Additional information is available in Sections III.J, III.B, and III.H.

In support of its mission and in an effort to maintain the highest quality services for its customers, the University seeks an experienced firm to provide goods and services for its voice infrastructure.

The University invites firms responding to this RFP to submit proposals that present different options for provision of the Goods and Services, and/or alternate creative proposals. The University will, in its sole judgment, consider such options and/or alternatives as long as the functionality and minimum requirements of the University are met.

The University reserves the right to award to different Selected Firms to respectively provide any part of the goods and services discussed in this RFP.

III. Scope of Goods and Services
It is the University's intent to enter into Agreement(s) with the Selected Firm(s) for a voice infrastructure to include those goods and services (the “Goods and Services”) necessary to help the University achieve its goals as outlined in this RFP with respect to building, provisioning, and operating a modern voice communications system/infrastructure (the “System”). In order to achieve this goal the Selected Firm may be requested to provide those Goods and Services outlined in this Section III. Note that the
term “System” as used in this Section III is used to both refer to the entire voice communications system/infrastructure and/or to the individual component(s) of the voice communications system/infrastructure being addressed -- either of which (collectively or individually) may be provided by the Selected Firm(s).

Note immediately below the individual sections pertaining to the respective components of the Goods and Services. (The individual sections below describe key components of the anticipated system and its services. It is assumed that standard telephony features and services not specifically described in the RFP are handled competently by all modern products that the firm will propose.)

A - Trunking and Telephone Numbers
B - Data Network
C - Fiber Optic Cable IRU
D - Outdoor Cable Plant Maintenance and Expansion
E – Moves, Adds, and Changes
F - Telephony System
G - Advanced Contact and Call Center Functionality
H - System Implementation Plan
I - Direct Manufacturer Support
J - Other Goods and Services

A. Trunking and Telephone Numbers
The Selected Firm will provide Goods and Services related to Trunking and Telephone Numbers which will meet the requirements herein.

The University will require trunking from CLEC,s ILECs, and/or other carriers to connect the voice System to the national network. (Note that sizing information on existing trunking and trunk types is provided in Section II, Background Discussion and Goals of the University. Firms should use this information to understand peak trunk load on the System as they evaluate their capabilities in the Charlottesville area.)
The Selected Firm will provide highly reliable trunking services to support both the University’s general teaching and research mission and, more critically, the patient care focus of its hospital and clinics. No single point of failure is permissible. Multiple physical pathways into geographically diverse points at the University are required. Call routing must automatically failover around malfunctioning equipment and/or broken cables.

The University is not able to change telephone numbers. The University will continue to use its existing set of telephone numbers. Inbound and outbound caller-id capabilities are required on all trunks.

Specific Carrier requirements include:

1. Ability to provision the set of PRI and T1 trunks described in Section II, Background Discussion and Goals of the University.
2. Provision University trunks using geographically diverse physical paths on to University property.
3. Provision University trunks using redundant electronics.
4. Provision University trunks and call routing such that failure on a trunk or trunk group causes inbound calls to be redirected on to another trunk group.
5. Implement a seamless trunking transition from the existing University voice system and trunking to the new System and trunking services.
6. Provide 24x7x365 support with one-hour response to major issues. Provide support that enables the University to bypass Level I help desk and proceed directly to Level II when appropriate.
7. Provide telephone numbers and number routing services to the University.
8. Optionally provide alternate trunking capabilities (e.g., SIP Trunking) that may be recommended as a more efficient or cost effective replacement for PRI and T1 services.
9. Provide calling capability over local trunks to the general Charlottesville area.
10. Optionally provide national and international long distance trunking services to the University.
11. Provide billing information in electronic form.
12. Describe other appropriate services that may interest the University.

(Note that firms should ensure that they specify these equipment manufacturer requirements in their proposal:

13. Equipment that interfaces with the combination of trunks specified in Section II, Background Discussion and Goals of the University.
14. Alternate equipment configuration, if available, that uses alternative technology such as SIP-based trunking.
15. Any capability to leverage SS7.

B. Data Network

The Selected Firm will provide Goods and Services related to the Data Network which will meet the requirements herein.

Network services are delivered to end-user devices via 100 or 1,000 Mbps Ethernet. The University intends to deploy 802.11af POE LAN switches or power injectors as needed to support the replacement telephony solution. Assert that the firm’ equipment will function properly in a LAN environment where:

1. 802.11af power is available to power end user devices.
2. Layer 3 QoS is managed using DiffServ (RFC2475) and Layer 2 QoS is managed using IEEE 802.1p.
3. Voice traffic is isolated and travels on a private VLAN.
4. IP Multicast is not required for proper operation of the System.

(Note that firms should, for the proposal purposes, assume that a suitable data network exists at the University and that any needed reconfiguration or upgrades will be managed outside of the scope of this RFP.)
C. Fiber Optic Cable IRU

The Selected Firm will provide Goods and Services related to Fiber Optic Cable IRU which will meet the requirements herein.

In order to better support various aspects of the University’s research mission and provide redundancy for existing Internet connectivity, the Selected Firm will provide a dark fiber IRU from one of its Charlottesville locations to either the Level-3 collocation facility in McLean, Virginia or to the Equinix facility in Ashburn, Virginia. The University seeks a standard 20-year IRU on two strands of high-quality single-mode fiber along one of these paths and optionally, depending on associated fees, may also acquire an additional two strands of fiber along a physically diverse path. Note that firms with or planning to build physically diverse paths available are encouraged to provide two proposed paths. The primary path must be ready for use within one year of date of the firm’s proposal submission to this RFP. The timing for the redundant path will be subject to negotiation between the University and the Selected Firm.

(Note that firms submitting responses for telephone System trunking that do not include a fiber IRU proposal should respond with their plan, if any, to assist the University to obtain the needed fiber IRU.)

D. Outdoor Cable Plant Maintenance and Expansion

The Selected Firm will provide Goods and Services related to Outdoor Cable Plant Maintenance and Expansion which will meet the requirements herein.

The University owns an extensive outdoor copper and fiber cable plant. While some portions of this infrastructure are aerial, the majority is located in underground conduit systems or in the University’s steam tunnels. The Selected Firm should provide these services:

1. Mark cable locations as per Miss Utility requirements.
2. On-call to repair cable cuts and other cable related service outages.
3. Install new fiber optic and copper cable plant based on per-job cost/fee proposals.

4. Respond to major cable cuts within four hours.

5. Respond to and diagnose cable pair issues.

6. Maintain records of installed outside cable plant.

7. Maintain an established parts inventory for splicing high count copper and fiber cables on short notice. The University experiences cable cuts at least on an annual basis.

8. Have experience working in large campus environments, preferably one including a hospital environment.

The University estimates that Outdoor Cable Plant Maintenance and Expansion Goods and Services will routinely consume one to two FTE with more staff required during installation and repair work. The Selected Firm must also have the ability and resources to estimate costs/fees and install outside plant copper and fiber cable on short notice following standard University procedures. These standards and procedures are documented at:

http://itc.virginia.edu/csd/net/buildingtelecom/uvatelecomstandards.html
http://fmweb.virginia.edu/directives/dir562e.doc
http://www.fm.virginia.edu/DocumentsAndForms.aspx

E. Moves, Adds, and Changes

The Selected Firm will provide Goods and Services related toMoves, Adds, and Changes which will meet the requirements herein.

The University’s in-building cable plant consists of Communication Outlets based on Category 5e data network cabling, copper telephone riser cable, and a combination of Category 5e cable and fiber optic cable to interconnect data network wiring closets. The fiber-optic wiring closet interconnect cable is a combination of single-mode and multi-mode cable. The Selected Firm will provide these services:
1. Install individual or small numbers of communication outlets in a building for a fixed per-outlet fee on a routine basis with little to no advance notice per University standards. These standards and procedures are documented at:
   - http://fmweb.virginia.edu/directives/dir562e.doc

2. Install new and/or relocate existing telephones including full documentation of the services performed and the location of the devices. Documentation includes the maintenance of accurate building and room location information to support the University’s E-911 database.

3. Troubleshoot end-user telephone problems including both traditional analog service and VoIP systems.

4. Respond within one hour for outages on a small list of critical extensions or for major outages within a building.

5. Install larger quantities of inside cable plant based on per-job cost/fee proposals.

6. Provide the above Goods and Services to academic locations based on standard procedures and to the University Hospital and other clinical locations where strict adherence to enhanced procedures are as or more important than the actual cable installation services.

7. Monitor response and activity trends so that if wait times for actions increase the Selected Firm is required to add personnel to match at least a minimum required time for call response, scheduling, and the actual action itself to be performed.

The University estimates that Moves, Adds and Changes will require two personnel to be assigned on-site at the University most days.
F. Telephony System

The Selected Firm will provide Goods and Services related to the Telephony System which will meet the requirements herein.

As discussed in Section II, Background Discussion and Goals of the University, the University’s existing voice communications platform is approaching the end of its useful life and needs to be replaced. The University expects to replace the existing voice platform with a data-network-centric System (or Systems) that provide a wide range of modern telephony features. The University assumes that all modern systems will provide the basic common telephony features used by University faculty and staff. Features that are particularly important to the University are those that help improve end user efficiency such as support for user control over their call routing, multi-platform soft client support, support for fixed-mobile convergence, and the use of their number from multiple devices without financial disincentives. Equally important are features that enable the University to control central costs such as the ability to use cost-effective trunking, low maintenance costs, the ability to use non-proprietary components, cost effective physically diverse redundancy, and APIs that enable integration into the University’s Information Technology infrastructure.

1. Off-site Locations

The University has a growing number of off-site locations that are not part of the University’s core network and thus rely on the Internet for connectivity back to the University’s Grounds. The University expects to incorporate some of these sites into the main System while others may remain more loosely coupled to the System. Special provisions will be needed to keep them on-line during Internet outages. With respect to these off-site locations the Selected Firm’s Goods and Services should represent a telephony System that will:

a. Maintain intercom functionality via a low cost building controller while Internet connectivity is down.
2. System Capacity
The Selected Firm will provide a System that meets the sizing described in Section II, Background Discussion and Goals of the University. The Selected Firm’s telephony system should be designed to meet the University’s requirements as per your firm’s normal design criteria and these specific additional requirements:

a. Ability to process at least 25% more busy hour call attempts than your firm’s design guidelines show will be needed for the University’s environment. The 25% design capacity overhead must be in place when ½ of the redundant processing capacity has failed.

b. Ability to grow by 25% in the number of extensions that it can support without additional hardware and by at least 50% with the possible addition of expanded processing capacity.

c. Ability to support ad-hoc conference calls of at least three internal and one external extension. The System must either be able to support at least 1% of lines in a conference call state at any point in time or the firm must explain why this figure is too low or too high based on their experience in similar environments.

3. Fault Tolerant System
The University operates an extensive data network infrastructure. Note that firms should assume that the University will provide space in two physically diverse data center locations with generator back-up power and cooling and single-mode fiber via physically diverse paths between the data center locations. The fiber path length between these two locations is well under 10 km. The University will use these network facilities to provide redundant Layer 2 or Layer 3 data network connectivity between the two data center locations for the exclusive use of the voice communications System. Dedicated fiber is also available if needed.
The Selected Firm will provide a fault tolerant System that is software redundant and has physically redundant call control using telephone system equipment that is installed in two data centers. The fault tolerant System should incorporate the firm’s normal design principles and best practices and support these functions:

a. Failover from the failed primary call control to the backup system must be automatic and require no more than five minutes to complete.*

b. Active telephone calls between extensions and through gateways should not be dropped when the main call control fails over to the backup unit.*

c. Provide a design that, with proper operation, should be able to meet a 99.999% overall uptime specification for the main call control logic. This specification excludes planned maintenance and failures of more minor components such as gateways, MCUs, and individual ports.

* Note that if the firm’s fault tolerant System is unable to meet this requirement, other actions the University can take to minimize impact should be documented.

4. System Expansion and Maintenance

The largest possible sizing increase that the University anticipates could happen during the lifetime of the telephony System is a doubling of the number of endpoints. Accordingly, the proposed telephony System must be able to be doubled in capacity with the appropriate additions in hardware and software. The process to install the additional hardware or software should result in minimal, if any, System downtime.

While planned System maintenance is not counted against the uptime percentages as described in Section III.F.3.c, it is critical that routine hardware and software maintenance not impact System availability.
Downtime associated with routine software and firmware patching and upgrade processes should consume less than 10 minutes per month or otherwise be minimized.

5. Call Control and Trunking Interfaces
The Selected Firm will provide products that will have a long supported lifespan. The main components of the telephony System (or their functional replacements) will be required to either (a) still be manufactured for the next five years or (b) are commercial off the shelf products that are widely available.

6. Hard Endpoints
The Selected Firm will provide a set of fully supported hard telephone endpoints that are available and certified for use on the telephony System. These telephone endpoint devices do not need to be manufactured by the Selected Firm but must be known to work and be supported by the Selected Firm’s software. In particular, at least three types of telephone endpoints are required:

a. Single line telephone device with simple button access for hold and mute and a message waiting indicator.

b. Multi-line telephone device supporting at least two numbers, simple button access for hold and mute, a message waiting indicator, and a full duplex speakerphone.

c. Multi-line telephone device supporting the needs of administrative assistants supporting multiple people, with capability for: several numbers; simple button access for hold, mute, forward, transfer, pick and conference; a message waiting indicator; and a full duplex speaker phone.

d. A multiport device that is suitable for wiring closet installation that accepts Ethernet on one port and provides multiple FXS analog output ports for connection to conventional analog telephony devices such as phones, answering machines, modems, and fax machines.
Both types of telephone devices must include the following capabilities:

a. 10/100 Ethernet switch (gigabit preferred) that supports the VLAN and QoS capabilities described in Section III.B and placing the phone in one VLAN and the attached personal computer on a different VLAN.

b. Support for power from the wiring closet via the 802.1af standard

c. A non-proprietary headset jack

d. Support for voice channel encryption

7. Soft Endpoints

The Selected Firm will provide support for softphone client software that provides at least the ability to place and receive telephone calls. Softphone client software may be developed and distributed either by the Selected Firm or by a 3rd party but formal support for the software must be available from the Selected Firm. The University prefers softphone clients that leverage SIP.

While softphone client software must be available for Windows, the preferred solution will include softphone support for Macintosh computers as well as a wide variety of mobile device operating systems.

8. End User Call Routing Control

The Selected Firm will provide a web interface or some other easy to use application that provides end users with the ability to control the flow of calls placed to their number. Examples of this type of functionality include forwarding to voicemail, a different extension, a soft client, or a mobile device, simultaneous ringing on hard and soft endpoints, personal auto attendant, etc. Note that APIs required and available to achieve functionality in the base System must be identified by the Selected Firm. Integration with external Single Sign-on authentication infrastructure is highly desired but not required.
9. **System APIs and SDKs**

The telephony system must provide the interfaces needed to integrate with external billing, system management, and call center technologies. These interfaces should be standards-based (e.g., REST, SOAP, SOA, RPC) but may be proprietary as long as appropriate documentation for the interfaces are available.

10. **Native Voicemail**

While integration with Microsoft Exchange as a Unified Messaging option is anticipated, the telephony System must also include a competent default voice mail System that at least matches the functionality typically provided by cell phone carriers. This voice mail System must be fully capable of supporting the number of the voicemail subscribers provided in Section II, Background Discussion and Goals of the University.

11. **Native Automatic Call Distribution (ACD) Features**

Some University call centers, such as Patient Financial Services, have specialized needs and utilize the Siemens ProCenter product. Support for these specialized needs areas is documented below in Section III.G on Advanced Contact and Call Center Functionality. This section deals with the more modest needs of the majority of University call centers. (Note here and in Section III.G, if the firm’s proposed System covers both high-end and modest-need call centers with the same technology.)

Most University call centers have modest technology needs and operate without specialized call center technology using the native ACD features in the telephone switch. The needs of these centers are presently met with a combination of internal ACD functionality, automated call processing using the Siemens Xpressions voicemail product, and digital recorders to hold voice messages. Limited fixed format ACD statistical reports are generated by the System. Equivalent functionality is a core requirement of this RFP. In addition to matching the capabilities of the existing
system, the new System must produce daily ACD reports that are
generated in a user friendly format that allows for trending and
consolidation. This format must be importable into spreadsheets,
databases, etc. (e.g., .csv).

12. Microsoft Exchange Integration
Integration of the System with Microsoft Exchange for Unified Messaging
must be practical, supported, and have been implemented with the
Selected Firm’s Goods and Services. The University is presently
migrating to an Exchange 2010 platform.

13. Fixed Mobile Convergence
Implementation of Fixed/Mobile Convergence (FMC) to the extent that is
practical and affordable is desirable. Examples of FMC can range from
simple mechanisms such as intelligent call forwarding and soft clients for
various mobile devices and WiFi handsets to network-based services that
facilitate seamless handoff between cellular and fixed or WiFi handsets
(e.g., UMA).

14. Standards Support and 3rd Party Devices
The Selected Firm will provide a System with the ability to support
international standards for telecommunications. In particular, the System
must be able to support the Session Initiation Protocol (SIP) for voice call control. This stipulation does not preclude the use of proprietary systems but requires the ability to also use standards based mechanisms and support for 3rd party devices.

15. Standard Calling Features
The following set of standard calling features is either Required or
Preferred as indicated in the table below.

<table>
<thead>
<tr>
<th>Standard Calling Features</th>
<th>Required</th>
<th>Preferred</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Call Forwarding - forward an extension to another number</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>2 Call Pickup - answer a ringing number from a different extension</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>3 Camp On - wait for a called party extension to become free</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Feature</td>
<td>Status</td>
</tr>
<tr>
<td>---</td>
<td>------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>4</td>
<td>Conference calls – ability to create an ad-hoc conference call with at least two other extensions with ability to mute the line to protect from background noise</td>
<td>✓</td>
</tr>
<tr>
<td>5</td>
<td>Conference calls – ability to create an ad-hoc conference call with at least eight other external or internal extensions with ability to mute the line to protect from background noise</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Call Transfer – transfer a call to another extension</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Consultation Call Transfer – talk to the 2nd party before connecting the transfer call</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Message Waiting – a lamp to indicate waiting voicemail</td>
<td>✓</td>
</tr>
<tr>
<td>9</td>
<td>Support for a 2nd message waiting lamp</td>
<td>✓</td>
</tr>
<tr>
<td>10</td>
<td>Call Hold – place a call on hold</td>
<td>✓</td>
</tr>
<tr>
<td>11</td>
<td>Caller ID – both internal and external from the trunk provider including the ability to mask or rename specific number from receiving device on external calls</td>
<td>✓</td>
</tr>
<tr>
<td>12</td>
<td>Caller ID – the ability to permanently mask outbound Caller-ID on a per-line as opposed to per-call basis.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Multi-line appearances – have multiple number appearances on a single phone</td>
<td>✓</td>
</tr>
<tr>
<td>14</td>
<td>Last number redial – redial the last number called</td>
<td>✓</td>
</tr>
<tr>
<td>15</td>
<td>Mute – audio mute</td>
<td>✓</td>
</tr>
<tr>
<td>16</td>
<td>Call park and retrieve – park a call and later reconnect to it</td>
<td>✓</td>
</tr>
<tr>
<td>17</td>
<td>Missed call log</td>
<td>✓</td>
</tr>
<tr>
<td>18</td>
<td>Ability to play a recording to callers placed on hold</td>
<td>✓</td>
</tr>
<tr>
<td>19</td>
<td>TDDY Support</td>
<td>✓</td>
</tr>
<tr>
<td>20</td>
<td>Programmable telephone function keys for autodial</td>
<td>✓</td>
</tr>
<tr>
<td>21</td>
<td>Ability to forward calls to internal and off-System locations</td>
<td>✓</td>
</tr>
</tbody>
</table>
16. Hunt Groups and Call Routing
The telephony System must have the ability to support Hunt Groups that route calls to a free line out of a group of lines. This feature is typically used in modem pools and other similar services.

17. Built-in Diagnostic and Error Alarm Reporting Capability
The Selected Firm will provide a System that is easy to manage and includes appropriate automated alarms that alert University staff to critical events. A console that displays system critical alerts to the University’s telephone operator staff is required. Additional alarm functionality such as SNMP, email, text messaging, etc, is desired. Critical alarms must be generated for both Telephony and Information Technology issues. Examples of critical issues include items such as, but not limited to, trunk down, gateway not responding, high CPU utilization, memory shortfall, disk nearly full, and network congestion. Support for the rapid identification of VoIP issues is also required.

18. Logging and Reports
The System must support a robust logging infrastructure that includes error and warning alerts, call detail recording (long distance required, local and internal optional) and security related events.

19. E-911
The System must provide full support for the region’s E-911 infrastructure. The University expects to go-live on the new System using the existing fixed device location mechanism for E-911. The real-time component of this process is based on three two-port Amcom/Telident Call Locator systems. The PBX forwards 911 calls to one of the three Call Locator systems. The Call Locator device translates the number to the required 10-digits and passes it out over a CenturyLink CAMA trunk to the Emergency Communications Center. The System must either support the existing environment or provide a suitable alternative.

The non-real-time component of the E-911 process of preparing and
transmitting the NEMA formatted location index file is outside of the scope of this RFP. Existing mechanisms using a Compco, Inc. telemanagement system will be retained.

The University expects to migrate to an environment where an individual is able to move their own phone to a new location without the need to send a telephone technician to relocate the device. Automation of the form of existing or planned integration between the System and network management databases designed to address E-911 issues is desired.

20. Console Operations
The System must support an operator console operation that often processes over 20,000 calls per week with normal peaks of 400 to 500 calls per hour and nearly 600 calls per hour during unusual events such as a paging system outage. The operators process between 4,000 and 4,500 calls during a typical busy day. Console automation is implemented using Amcom Software http://www.amcomsoftware.com/ products (Smart Center, Smart Web, Smart Console, e.Notify) and connected to the PBX using RolmPhone 624SL devices.

While a total of 15 operator console positions exist, typically eight or nine operators are on duty during peak hours. Due to the busy nature of their work (the operators also handle hospital emergency codes, deal with traumas, monitor fire panels, etc.) switch alarms must be highly visible, easy to interpret, and have clear remedy actions.

The System must either interface to the existing Amcom Software system or a suitable replacement System must be included in the proposal.

21. Teleworking
The ability to support teleworkers using IP-based telephony from a remote location using standard residential grade Internet connections is a required function of the System. These types of residential Internet connections
sometimes have round trip delay that can approach 200 msec and significant jitter is possible.

22. IM Capabilities, Presence, and Video Conferencing
The robust ability to support Instant Messaging, Presence, and Video conferencing is not a core requirement for the System but is desired. These forms of communication are all complementary to and enhance overall communication efficiency.

23. Long Distance Billing Integration
The System must be capable of enforcing the use of a PIN before a long distance call can be placed. This PIN must be included in the billing Call Detail Record so that the University is able to bill its departments for long distance service. The University presently uses a 7-digit PIN that is part of the dialing string to authorize long distance calls. If the use of a PIN is not possible with the System, some alternative mechanism must exist for the recovery of long distance costs/fees.

24. System Security
The Selected Firm will provide a voice System that is intrinsically secure and contains modern security measures to protect the integrity of the System and the confidentiality of voice communications. Requirements include the ability for voice and call control encryption, standard IT security mechanisms to protect the computer systems, and a robust System security architecture and security implementation practices.

25. Outbound Call Redirection
A desired, but not mandatory, feature is the ability is the ability to redirect outbound calls to an automated survey or messaging system. This should be configurable on a per-number or all numbers basis.

(Note that all firms that respond to this Section III.F, Telephony System, must also respond to Sections III.I, III.G.1 and III.G.3-5 below.)
G. Advanced Contact and Call Center Functionality

The Selected Firm will provide Goods and Services related to Advanced Contact and Call Center Functionality which will meet the requirements herein.

Many University business units leverage call center technology from Siemens. A small number of the larger units with more complex requirements use Siemens ProCenter technology. Other units use the native ACD capability of the Siemens/Rolm 9751 switches assisted by the University’s Xpressions voice mail system for call processing. The University estimates that there are approximately fifty small groups of three to five attendants and five to ten other groups with more than five attendants.

The University expects to replace its existing call center technology as part of this RFP to leverage more modern technology with better APIs and significantly improved ability for unit business managers to control their call routing and develop and view their own statistical reports. While representing only a small percentage of the overall telephones installed at the University, modern full featured call and contact center technology is a critical component of this RFP.

With the exception of the Amcom Software system described in Section III.F.20, Console Operations, Advanced University call centers presently use Siemens’ ProCenter product to integrate business needs with the telephony environment. While this single-vendor approach has served the University well in the past with previous generations of technology, one of the University’s goals of this RFP is to ensure that the University is positioned to be able to leverage the latest technology in this space.

This RFP thus focuses on three aspects of call/contact center technology:

- Products from the telephony System provider or its partners that are either part of the main System or add-on components.
• The standard interfaces available in the telephony System provider’s products that enable integration with independent call center systems.
• Technology from firms that focus specifically on call center needs and are not providing technology for the main System.

(Note that all firms that respond to Section III.F, Telephony System, must respond to sections III.G.1 and III.G.3-5 and III.I below. Firms proposing Advanced Call and Contact Center functionality must respond to section III.G.2 and any other appropriate sections below.)

1. Advanced Call Center: Core Integration Capability
The telephony System must include the capability to interface to Advanced Call and Contact Center systems. The System interfaces should be standards-based and sufficiently open to enable wide assortment of 3rd party call center systems to integrate with the proposed telephony System. (Note that telephony systems with closed and proprietary interfaces may be proposed as long as their accompanying call center products fully meet all of the University’s requirements as described in Section III.G.2 below.)

2. Advanced Call Center: Call and Contact Center Features
The Selected Firm will provide an advanced call and contact center product that, at a minimum, provides at least the same set of capabilities as the Siemens ProCenter product that is presently in use at the University.

While the ability to match the University’s existing call center capabilities is the baseline requirement, the University will also consider solutions that provide enhanced capability and/or have features that are known to enhance productivity when used in conjunction with the major business automation systems that are presently in use at the University. These major business systems include:

a. EPIC Systems software (http://www.epic.com), for the operation of the University’s hospital
b. PeopleSoft, when used as a Student Information System
c. PeopleSoft, when used as a central accounting and Human Resources system, and
d. Oracle Applications, when used as a central accounting and Human Resources system
e. Capabilities such as integration with CRM products, web contact centers, web chat/collaboration, IM, and other similar services may be desired by some University departments.

3. Interactive Voice Response (IVR) System

The Selected Firm will provide an IVR System that provides at least the functionality presently available to University departments via the use of the University’s existing Xpressions voicemail product integrated with the native ACD functionality of the existing Siemens/Rolm telephone switches.

The University will consider, at its option, integrated or 3rd party IVR Systems that provide some or all of the more advanced capabilities outlined below:

a. Integration with ODBC compliant databases
b. Support of Query, Insert, Update, Delete, Use DDL
c. Support for multiple database connections for a single caller
d. Support for access via TCP/IP sessions, via XML, via SOAP
e. Support for speech recognition
f. Support for multiple languages
g. Support for modular programming (subroutine calls, recursion, etc.) in the IVR design environment
h. Support for placing changes in a live environment

4. Predictive Dialer System

5. The ability to provide a predictive dialer solution to support outbound call center functionality is a System requirement. The predictive dialer solution may be an intrinsic component of the main call control System or a 3rd party product that integrates with the System. The proposed solution
must include the capability to work with applications that operate on secured checks or credit card payments

6. Call Recording

7. The ability to record calls placed into a University call center is a fundamental requirement for the System. This requirement may be met either with functionality that is native to the System or with 3rd party product(s). Preferred call recording capabilities include:
   a. The ability to automatically record calls without agent or supervisor intervention
   b. The ability to record call detail information such as (a) Called number (DNIS), (b) Calling number (ANI), (c) Time of day, (d) Day of week, (e) Agent, (f) Workgroup, and (g) work for Inbound and Outbound calls along with the actual voice recording.
   c. Support for selectable voice compression options
   d. The ability to easily email a selected recording
   e. Support for real time viewing queue and workgroup status
   f. The ability for a remote supervisor to be able to listen in on a remote agent’s calls
   g. 100% network based
   h. Support for an efficient backup/retrieval process
   i. Support for IP and analog protocols
   j. The ability to integrate with a stand-alone recording solution

8. Remote Agent Capability

The Selected Firm will provide support for remote agent capability which will include this support for:
   a. Agents to log onto the system (via VPN) from any location via the Internet without additional hardware at the University’s Medical Center.
   b. SIP phones for remote use
   c. Headsets plugged into connected workstation
   d. Remote agents to receive a screen pop
e. Remote supervisors to view real-time status of queues and workgroups
f. Supervisors to listen to remote agent’s calls
g. Full recording capability

9. Reporting Requirements

10. The Selected Firm will provide reports and reporting support which will include:
   a. Support for Open Reporting architecture
   b. Support for storing report log information in an open database format
   c. Support for real time availability of reports for queues, stations, agents, and lines without causing delays/problems with real time processing of calls
d. Support for running reports by any supervisor’s workstation
e. Support for scheduling reports
f. Support for putting reports in HTML and/or Adobe PDF formats
g. Standard set of reports
h. Standard set of supervisor, ACD and IVR reports
i. The ability to report on amount of time to answer calls, i.e., percentage answered in less than 30 seconds, 20 seconds, and 10 seconds

H. System Implementation Plan

The Selected Firm will provide Goods and Services related to the System Implementation Plan which will meet the requirements herein.

The Selected Firm will work with University to develop and execute the final implementation plan for deployment of the new System. The transition from the existing University telecommunications infrastructure to the new System must be completed in a manner that best minimizes the disruption to the University’s users and call centers while still being cost effective and completed within a reasonable
timeframe. The University prefers a phased approach but will consider implementation plans based on a flash cutover if clearly documented as to why this methodology is in the University’s best technical and/or financial interest. (Note that while the fully detailed cutover implementation and acceptance plan will be developed later in the process with the Selected Firm, sufficient detail is required to enable the University to evaluate at least the implementation plan components addressed below.)

The System implementation plan will address these elements:

1. System cutover strategy that successfully addresses the University’s timing and business/operational goals. (Note that firms should use their knowledge of the new System and the existing Siemens 9751 platform, and explain if the System will be implemented with a flash cutover for all users or a phased implementation over some period of time. If the approach is based on a flash cutover, firms should clearly document why this is the best option for the University. If the cutover is to be implemented over some period of time, use the firm’s experience from conversions at other sites to estimate a timeline.)

2. Documentation incorporating special provisions that will be made for key areas such as the University’s Police department, hospital emergency services, and telephone operator group.

3. Highlighting of risk mitigation strategies typically employed in successful cutover plans. For example, this could include reverting back to the existing system, bringing in additional resources, or other similar strategies.

4. System administrator end user training with respect to implementation of the new System.

5. Typical acceptance testing and System configuration documentation deliverables.
I. Direct Manufacturer Support

The Selected Firm will provide Goods and Services related to Direct Manufacturer Support which will meet the requirements herein.

The University’s assumption is that all computer systems, including the new voice communications System, will encounter some form of in-depth technical problem(s) at some point during its operation at the University. Given the magnitude, impact, and critical nature of the voice communication System to the operation of the University, direct access to key manufacturer technical resources is required. (Note that this requirement applies to firms responding to the requirements documented in Section III.F, Telephony System and Section III.G, Advanced Call Center.)

The University must be provided with full technical documentation for all System components.

The Selected Firm will ensure that manufacturer of the core technical components of the System will enable the University to bypass Tier 1 support and mobilize in-depth manufacturer resources to resolve exceptionally challenging or unexpected technical issues. (Note that firms that are not manufacturers must clearly document why the University should consider having a third party between itself and the manufacturer for such an absolutely critical piece of the University’s technology infrastructure.)

J. Videoconferencing Infrastructure

The Selected Firm will provide Goods and Services related to Videoconferencing Infrastructure which will meet the requirements herein.

The Selected Firm will provide, on an optional basis at the discretion of the University, a videoconferencing infrastructure System which will specifically support the University’s Office of Telemedicine with respect to an enterprise
wide solution to expand its video-conferencing and telehealth capabilities. The videoconferencing infrastructure System will include video conferencing equipment such as MCUs, gatekeepers, and Codec devices.

The videoconferencing infrastructure System must be a standards based solution that is interoperable with the current enterprise video infrastructure and telehealth applications. The videoconferencing infrastructure System must be fault tolerant, scalable to meet the needs of partner sites and allow for growth. The University’s Office of Telemedicine requires enhanced multimedia capabilities, including but not limited to high-definition video and advanced audio.

The Selected Firm should: have direct experience with videoconferencing to include varying bandwidths, application of telehealth hardware, multi-site capabilities; meet HIPAA privacy and confidentiality requirements; and provide innovation in desktop video-conferencing solutions.

The following is provided as background information with respect to telemedicine at the University:

With more than 20,000 clinical encounters by over 36 specialties, the University’s Office of Telemedicine has established expertise in services ranging from point to multi-point, real-time clinical videoconferencing, e-mail clinical consultations for remote international locations, store and forward technology and processes, comprehensive clinical services and patient and professional education. The University’s Office of Telemedicine currently has an IP based network system using H.323 & SIP protocols on gatekeepers, servers, and multiple control units. Through this broad range of experience and technology, the University has also developed specialized expertise in telemedicine site development and network management, as well as unique capacities for the management and review of electronic medical information such as ultrasounds, radiologic images and
laboratory data.

The extensive network of the University’s Office of Telemedicine consists of more than 80 telemedicine sites within the Commonwealth of Virginia and includes correctional facilities, critical access and small rural hospitals, school systems, federally qualified community health centers, health departments, regional cancer centers, educational institutions and mental health facilities. The program also manages a telemedicine clinical facility within the University’s Medical Center with state-of-the-art conference and consult rooms as well as numerous remote Health System sites within the University.

K. Other Goods and Services
Upon reading Section II, Background and Goals of the University, and Section III, Scope of Goods and Services, firms may realize that they have products or services that are not specifically described in this RFP that would help the University achieve its goals. The University invites creative proposals describing such products and services. Examples of Other Goods and Services might include Wireless LAN (WLAN) mobile devices, specialized Fixed-Mobile convergence gateways, and Unlicensed Mobile Access (UMA) technology support.

L. Warranty and Service
For the equipment and software it manufactures, the Selected Firm will provide a minimum three-year premium service contract including parts and labor warranty on the System which will incorporate a comprehensive service and maintenance program to ensure that the System remains fully functional and operational. For non-critical commercial off-the-shelf components that the Selected Firm incorporates into the System, the manufacturer’s warranty shall be passed on to the University. Critical commercial off-the-shelf components are those that the entire System or large portions of the System depend on. Critical commercial off-the-shelf components shall be treated as if they were manufactured by the Selected Firm for the purposes of maintenance and warranty.
If located on site, the Selected Firm will respond immediately to University service requests; otherwise the Selected Firm will respond promptly (within 24 hours) to ensure continuous System availability. Accordingly, attributes of the Selected Firm’s service/support program will include, but not be limited to:

1. 24-hours/7-day-week technical support availability via telephone.
2. Field service/maintenance will be provided by qualified technicians who are trained to install and support the System described in this RFP.
3. Included parts, labor, and travel expenses related to maintenance/repairs.
4. Remote assistance, if not on-site.
5. Regular preventative maintenance.

Warranty will commence as of the date of System Acceptance by the University as described in RFP Attachment 2, Section X. The Selected Firm warrants that the System, including software and any other components, does not and will not abridge or violate any patent right, copyright, or similar claim or property right.

IV. Basis of Selection

The University will evaluate proposals and, if a firm is to be selected, select the firm on the basis of:

A. The firm's plan to assist the University to meet its goals for Voice Services as discussed in Section II, Background Discussion and Goals of the University, and Section III, Scope of Goods and Services;
B. The firm's relevant experience, qualifications and success in providing the goods and services outlined in this RFP;
C. The firm's references from institutions of higher education, teaching hospitals, and clients which are comparable to the University;
D. The firm's financial proposal including but not limited to discounts, service charges and other charges;
E. The quality of the proposal, specifically, responsiveness to requirements and adequacy of information provided;
F. The contractual terms which would govern the relationship between the University and the Selected Firm;

G. The firm’s plan for the utilization of Small, Women-owned and Minority-owned (SWAM) businesses. (In evaluating the firm’s proposal, the University will assign a minimum of 10 percent of the total selection weight to this individual selection criterion.); and

H. Any other factors relevant to the firm's capacity and willingness to satisfy the University.

Note: The University reserves the right to make award to one or more Selected Firms to provide all or part of the Goods and Services.

V. Contents of the Proposal

Proposals should include information outlined in this section. Copies of proposals must be sent to the Issuing Office, Procurement Services, Carruthers Hall, and not to any other office or department whatsoever at the University.

Unnecessarily elaborate brochures and other presentations beyond that sufficient to present a complete and effective proposal are not desired and may be construed as an indication of a firm’s lack of cost consciousness. Elaborate artwork, expensive paper and bindings, and expensive visual and other presentation aids are neither necessary nor desired.

Firms may respond to all of the RFP or any section(s) thereof; however, the appropriate section(s) corresponding to the specific Goods and Services proposed must be clearly identified and appropriately supported in the firm’s proposal for the proposal to be considered and evaluated.

A. Goods and Services

In addition to completion of all relevant Exhibits contained in Attachment 5, Required Supplemental Information for Proposals, and Attachment 6,
Fees/Financial Proposal, firms should provide this information for all proposed Goods and Services:

1. Describe how the firm plans to provide Voice Services which is the primary goal of this RFP.

2. Provide a plan of operation to achieve the objectives set forth in Section II, Background Discussion and Goals of the University, and Section III, Scope of Goods and Services, specifically responding to each paragraph and subparagraph in the order addressed, including, but not limited to provision of any corresponding information pertaining to the paragraph/subparagraph which is requested by the University in Attachment 5, Required Supplemental Information for Proposals. If the Firm does not agree to, or is unable to provide each component of the Goods and Services as described in Section III, clearly indicate and fully describe any deviation.

3. Describe how the firm plans to work with the University to provide the Goods and Services.

4. The University invites proposals that present different options for provision of the Goods and Services, and/or alternate creative proposals from firms. The University will, in its sole judgment, consider such options and/or alternatives as long as the functionality and minimum requirements of the University are met.

B. Firm Information, Personnel, References

In addition to completion of all relevant Exhibits contained in Attachment 5, Required Supplemental Information for Proposals, and Attachment 6, Fees/Financial Proposal, firms should provide this information for all proposed Goods and Services:

1. Provide a brief history of the firm and its experience in providing large scale voice services systems similar to those described in this RFP.

2. Provide information on those individuals assigned to work with the University including a description of their experience in providing large
scale enterprise or carrier voice services systems similar to those described in this RFP. Specifically provide resumes of the key personnel who the firm proposes as Project Managers pursuant to RFP Attachment 1, Section W. The resumes should be sufficiently detailed to enable the University to fully understand the breadth and scope of the individual(s)’ experience. If the firm plans to engage subcontractors or third parties to support the firm’s provision of the Goods and Services, summarize the experience and capabilities of such parties.

3. Specifically identify the name and contact information for the individual assigned to act as the coordinator for both the firm’s proposal and any subsequent responses required of the firm as a part of the RFP process.

4. Describe those aspects of the firm and its proposed Goods and Services that the firm believes will differentiate its proposal from other competing firms.

5. Provide a list of all of the firm's clients comparable to the University indicating the length of service of each account. The University may contact and/or visit any of these accounts.

6. Provide the firm’s references for major voice services systems deployments similar to those described in this RFP, specifically identifying any clients that are academic institutions, and in particular those with large academic medical centers.

7. Provide a list of all clients lost within the last three years which includes:
   a. A contact name and telephone number
   b. Length of service at the account
   c. Reason for the loss

8. Provide a copy of the firm's most recent audited financial statements.

9. Provide the amount of annual sales the firm has with each VASCUPP Member Institution. A list of the VASCUPP Members can be found at [http://www.vcu.edu/procurement/coopcon.htm](http://www.vcu.edu/procurement/coopcon.htm)

10. Provide the name of the individual responsible for the firm’s supplier diversity program. This individual is responsible for implementing and
reporting on the firm’s Small, Women-owned and Minority-owned (SWAM) program as it will relate to this procurement should the firm be selected.

11. State law requires that certain projects within the scope of this RFP be performed by a contractor licensed by the Commonwealth of Virginia. Other projects within the scope of this RFP need not be performed by a licensed contractor. If a firm desires to be considered for all projects within the scope of this RFP, the firm will provide with its proposal a copy of the firm’s Commonwealth of Virginia Contractor’s License. If a firm does not provide with its proposal a copy of the firm’s Commonwealth of Virginia Contractor’s License, the firm will be considered by the University, if at all, only in connection with the award of a contract or contracts for projects which, in the sole and absolute discretion of the University, need not be performed by a licensed contractor.

C. Financial Proposal

In addition to completion of all relevant Exhibits contained in Attachment 5, Required Supplemental Information for Proposals, and Attachment 6, Fees/Financial Proposal, firms should provide this information for all proposed Goods and Services:

1. Describe the fees that will be charged for the Goods and Services. Ensure that fees are provided for all Goods and Services’ categories proposed by the firm.

2. Describe how the University will be charged. Include any additional discounts available for early payment of invoices.

3. Describe how the University will benefit from cost savings by accepting the firm's proposal.

4. State the firm’s agreement to receive payments electronically via Bank of America’s (“BoA”) ePayables® method of electronic payment or BoA’s PayMode® method of electronic payment. Prior to contract award, the Selected Firm will be required to contact University Procurement
Services’ Payment Processor Specialist group to set up its preferred method of receiving electronic payments [Phone: (434) 924-4212 and E-mail: uva-prs-boa@virginia.edu].

D. Contractual Arrangements

1. State the firm's acceptance of Attachment 1, Mandatory Contractual Provisions.

2. State the firm's acceptance, with any proposed modifications, of Attachment 2, Preferred Contractual Provisions.

3. Provide a written statement with the firm’s proposal that its principals or legal counsel has reviewed Attachment 1, Mandatory Contractual Provisions, and Attachment 2, Preferred Contractual Provisions, and agrees that these provisions will become a part of any final agreement.

4. Provide a list of clients with which the firm has signed a term contract for voice services systems similar to what is described in the RFP that allows for cooperative procurement and/or if the firm has established a relevant General Service Administration (GSA) schedule contract.

E. Site Visits

It may be necessary or desirable for the University's evaluation team of less than ten people to travel to a site chosen jointly by the firm and the University to view its operation. Each firm will indicate whether it will reimburse the University for the reasonable and actual expenses (travel, lodging, meals, etc.) incurred by the University for its travel.

F. Small, Women-owned and Minority-owned (SWAM) Business

The University is committed to the goal of non-discrimination and to giving fair consideration for all vendors in its procurement programs. The University has set a voluntary goal of doing 5% more business with SWAM firms each year. The University’s 2008 SWAM plan spend goal for firms certified by the
Commonwealth of Virginia’s Department of Minority Business Enterprise (DMBE) is 40%. Targets for each business segment are:

<table>
<thead>
<tr>
<th>Business Segment</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minority Business Enterprises</td>
<td>4.0 %</td>
</tr>
<tr>
<td>Women Business Enterprises</td>
<td>5.0 %</td>
</tr>
<tr>
<td>Small Business Enterprises</td>
<td>31.0 %</td>
</tr>
</tbody>
</table>

This goal does not allow for "set aside" purchases. SWAM firms must compete equally with majority firms and be able to provide the University with quality goods and services at competitive prices. To view the University’s current quarterly achievements, click here [Current SWAM Report]. As this report shows, the University is in need of assistance in the Minority-owned and Women-owned categories. Please tailor your firm’s SWAM plan to assist the University in meeting its goal and targets.

Specify whether the firm is a SWAM. Firms can only be considered a Small, Women-owned or a Minority-owned Business Enterprise if certified by DMBE. All certified SWAM firms will be assigned a specific identification number. No SWAM firm is required to certify under this program and no SWAM firm will be excluded from doing business with the Commonwealth because of their failure to certify as a SWAM firm.

If the firm is not a SWAM firm, describe the firm’s partnering relationships with SWAM firms and how it plans to support the University’s goal to increase business annually by 5% with these firms in accordance with Attachment 4, Executive VP and COO’s Request for Commitment letter.

G. Other Information

Provide any other information which the University should consider in evaluating the firm's proposal.
VI. Information about this RFP

A. Procurement Schedule

Here is a brief schedule for this procurement, specifying the important dates and milestones:

- Issue Date of RFP: 10/22/10
- Preproposal Conference: 11/09/10
- Deadline for Receipt of Proposals: 11/22/10
- Oral Presentations: 01/18/11 – 01/26/11
- Negotiations: 02/07/11 – 02/14/11 and 03/01/11 – 06/15/11 (as needed)
- Contract Award(s): 04/01/11 – 06/30/11

B. Issuance of RFP and Questions

The Issuing Office for this RFP is:

Procurement Services
University of Virginia
1001 North Emmet Street
P.O. Box 400202*
Charlottesville, Virginia 22904-4202

**NOTE: If RFP proposal is sent U. S. Postal Service use the P. O. Box. The University does not take responsibility for lost or misdirected mail.

Attention: Steve Heldreth, Major Procurements Manager
Telephone: (434) 924-4217
Fax: (434) 982-2690
TDD: (434) 982-HEAR
Email: heldreth@virginia.edu

Any questions concerning this RFP will be directed to Steve Heldreth as listed above and not to any other person at the University, with the exception of issues directly related to SWAM business and SWAM subcontracting opportunities.

Such SWAM issues may be alternately directed to Bill Cooper, the University’s Director of Supplier Diversity, at (434) 924-7174 or wsc6ja@virginia.edu. The University will determine whether any addenda should be issued as a result of any question or other matters raised.
C. Preproposal Conference

A conference for firms receiving this RFP will be held on Tuesday, November 9, 2010 at 9:00 a.m. EST in Zehmer Hall, Main Auditorium, Charlottesville, Virginia (map viewed at this web site: [http://www.virginia.edu/Map/](http://www.virginia.edu/Map/). Attendance at this conference is advised if your firm wishes to raise any questions in connection with this RFP. Please print a copy of the RFP and bring it with you as no additional copies will be provided at the conference. The University intends to present general information which may be helpful in the preparation of proposals and to offer firms the opportunity to ask questions concerning this RFP. No firm may have more than two representatives present at the conference.

Firms planning to attend the Preproposal Conference should notify Rebecca Sims by email (pur-rfp@virginia.edu), no later than 12:00 p.m. EST on Friday, November 5, 2010 of the names, titles, and phone numbers of the individuals who will attend.

Due to the complex nature of the Goods and Services described in this RFP, the Preproposal Conference will be conducted via the use of several independent sessions based on the Focus Areas described in Section II, Background Discussion and Goals of the University, instead of one large meeting. Firms planning to respond to multiple Focus Areas are encouraged to attend all sessions even though this may mean hearing portions of the RFP overview more than once. The Preproposal Conference schedule, listed by Focus Area, is provided below:

1. Session 1, 9:00 a.m.
   a. Outdoor Cable Plant Maintenance and Expansion
   b. Moves, Adds, and Changes
2. Session 2, 10:30 a.m.
   a. Fiber Optic Cable IRU
   b. Trunking and Telephone Numbers
3. Lunch Break (on your own) 12:00 p.m.
4. Session 3, 1:30 p.m.
   a. Telephony System
5. Session 4, 3:00 p.m
   a. Advanced Contact and Call Center Functionality

6. Session 5, 4:30 p.m.
   a. Wrap-Up/Summary
   b. Other Goods and Services

D. Proposal Deadline
All proposals must be received at the Issuing Office by 3:00 p.m. EST, on Monday, November 22, 2010. Five copies of each proposal must be provided in individual, bound volumes. Firms must also include an electronic copy of the proposal on a CD, DVD, or thumb drive with each proposal, excluding any pre-printed materials such as financial statements. The electronic copy should be formatted as a Microsoft Word document.

E. Oral Presentations and Negotiations
An oral presentation by two or more firms may be required after written proposals are received by the University. If the University requires such a presentation, the Issuing Office will schedule a time and place. Each firm should be prepared to discuss and substantiate any of the areas of the proposal it submitted, its own qualifications for the services required and any other area of interest relative to its proposal. Oral presentations are tentatively scheduled for Tuesday, January 18, 2011 through Wednesday, January 26, 2011. Negotiations with two or more firms will be conducted by the University on the firms' financial proposals and proposed terms and conditions. Negotiations are tentatively scheduled for: Monday, February 7, 2011 through Monday, February 14, 2011; and subsequently during the period from March 1, 2011 through June 15, 2011, as deemed appropriate by the University.

F. Communications Between the University and the firms Regarding This RFP
Informal Communications

From the date of receipt of this Request for Proposal by each firm until a binding contractual agreement exists with the Selected Firm and all other firms have been
notified, or when the University rejects all proposals, informal communications regarding this procurement will cease. Informal communications will include but not be limited to:

1. Requests from the firms to any department at the University, with the exception of Procurement Services for information, comments, speculation, etc.; and
2. Requests from any department at the University, or any employee of the University, with the exception of Procurement Services for information, comments, speculation, etc.

Formal Communications

From the date of receipt of this Request for Proposal by each firm until a binding contractual agreement exists with the Selected Firm and all other firms have been notified, or when the University rejects all proposals, all communications between the University and the firms will be formal, or as provided for in this Request for Proposal, or as requested by Procurement Services. Formal communications will include but not be limited to:

1. Preproposal Conference
2. Oral presentations
3. Site visits, Interviews, etc.

Any failure to adhere to the provisions set forth in Informal Communications and the Formal Communications sections above may result in the rejection of any firm's proposal or cancellation of this RFP.

G. Formation of the Agreement with the Selected Firm

All proposals received will first be carefully evaluated by the University, and then the University intends to conduct negotiations with two or more firms. After negotiations have been conducted, if the University chooses to make award, the University will select the firm which, in its opinion, best meets the needs of the University. Alternately, if the University determines in writing and in its sole discretion that only one firm is fully qualified, or that one firm is clearly more highly qualified than the others under consideration, it may decide to negotiate
and award an agreement to that single firm. In either event, the University intends to execute a mutually satisfactory written agreement which will reflect and largely incorporate this RFP as reconciled with any pertinent documents, such as the proposal submitted and relevant negotiation correspondence.

**Because the University may choose to negotiate and award to a single firm as discussed above, each firm must include in its written proposal all requirements, terms or conditions it may have, and should not assume that an opportunity will exist to add such matters after the proposal is submitted.**

Any firm(s) invited to negotiations should note that the University reserves the right to begin negotiations by combining the best aspects of submitted proposals from all responding firms as the basis for subsequent formation of any Agreement resulting from this RFP.

Firms should also note that, as described in Section H, Provisions Deemed Included in the Proposal, certain matters will automatically be deemed part of the proposal.

**H. Provisions Deemed Included in the Proposal**

The University will consider each proposal to include not only the matters expressly stated in the proposal as requested in Section V, Contents of the Proposal, but also other provisions which consist of two different types: those which are "mandatory" and cannot be changed by a firm in its proposal; and those which are "preferred" by the University, but which a firm may wish to alter by expressly and specifically so stating in its proposal.

The University includes mandatory provisions so that all proposals will be governed by the same basic contractual terms. The University encourages any firm which feels that a mandatory provision is unreasonable to contact the University before proposals are due so the University can consider amending the
provision. The University includes preferred provisions so that any difference between the firm and the University's preferred contractual provisions can be considered during the University's evaluation of proposals.

1. Mandatory Provisions

Each proposal received by the University in response to this RFP will automatically be deemed to include the firm's agreement to the provisions of (a) and (b) below. Although such provisions will govern the firm's proposals as submitted, the University and one or more firms may later mutually agree to amend such provisions, such as when additional time is needed to consider proposals, or when contractual negotiations or performance indicate that such amendments are appropriate.

a. The proposal constitutes an offer by the firm which will remain open and irrevocable for a period of 120 days from the deadline for submitting proposals as stated in Section VI-D, Proposal Deadline.

b. If selected by the University, the provisions governing the firm's performance will include all the provisions of Attachment 1, Mandatory Contractual Provisions.


Unless a firm expressly and specifically provides otherwise in its written proposal, the proposal received by the University in response to this RFP will automatically be deemed to include the firm's agreement to these provisions:

a. The firm consents to the University contacting and obtaining any information relevant to this RFP from the references and others identified by the firm in its proposal, as well as from any other persons, firms, or organizations which the University wishes to contact; and

b. If selected by the University, the provisions governing the firm's performance will include all the provisions of Attachment 2, Preferred Contractual Provisions.
I. Rejection of Proposals
The University reserves the right to reject any or all proposals received. Nonacceptance of a firm's proposal will mean that one or more proposals were deemed more advantageous to the University or that all proposals were rejected. Firms whose proposals are not accepted will be notified after a binding contractual agreement between the University and the Selected Firm exists, or when the University rejects all proposals.

J. Virginia Freedom of Information Act
Except as provided below, once an award is announced, all proposals submitted in response to this RFP will be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Virginia Freedom of Information Act. Trade secrets or proprietary information submitted by a firm as part of its proposal will not be subject to public disclosure under the Virginia Freedom of Information Act; however, the firm must invoke the protections of this section prior to or upon submission of its proposal, and must identify the specific data or other materials to be protected and state the reasons why protection is necessary. A firm may not request that its entire proposal be treated as a trade secret or proprietary information. Nor may a firm request that its pricing be treated as a trade secret or proprietary information, or otherwise be deemed confidential.
Attachment 1
Mandatory Contractual Provisions

A. Nondiscrimination
During the performance of this Agreement, the Selected Firm will comply with the contract provisions contained in Section 2.2-4311 (1) & (2) of the Code of Virginia or any successor provisions which may be applicable to this Agreement. Also, in accordance with Section 2.2-4343.1, the University does not discriminate against faith-based organizations.

B. Conflict of Interests
The Selected Firm represents to the University that its entering into this Agreement with the University and its performance through its agents, officers and employees does not and will not involve, contribute to nor create a conflict of interest prohibited by the Virginia State and Local Government Conflict of Interests Act (Va. Code 2.2-3100 et seq), the Virginia Ethics In Public Contracting Act (Va. Code 2.2-4367 et seq), the Virginia Governmental Frauds Act (Va. Code 18.2-498.1 et seq) or any other applicable law or regulation.

C. Assignment
Neither party to this Agreement will have the right to assign this Agreement in whole or in part without the prior written consent of the other.

D. Amendments
No amendment of this Agreement will be effective unless it is reduced to writing and executed by the University's Director of Procurement Services and by the individual signing the Selected Firm's proposal or by other individuals named by either party as specified in Section E, Notices below. If the Selected Firm deviates from the terms of this Agreement without a written amendment, it does so at its own risk.
E. Notices

Any notice required or permitted to be given under this Agreement will be in writing and will be deemed duly given: (1) if delivered personally, when received; (2) if sent by recognized overnight courier service, on the date of the receipt provided by such courier service; (3) if sent by registered mail, postage prepaid, return receipt requested, on the date shown on the signed receipt; or (4) if sent by facsimile, when received (as verified by sender’s machine) if delivered no later than 4:00 p.m. (receiver’s time) on a business day or on the next business day if delivered (as verified by sender’s machine) after 4:00 p.m. (receiver’s time) on a business day or on a non-business day. All such notices will be addressed to a party at such party’s address or facsimile number as shown below.

If to the University:
Eric N. Denby
Director of Procurement Services
Carruthers Hall
University of Virginia
1001 North Emmet Street
P.O. Box 400202
Charlottesville, Virginia 22904-4202
Fax: (434) 982-2690

If to the Selected Firm:
The person signing the Selected Firm's proposal in response to the University's RFP, at the Selected Firm's address indicated in such proposal; or to such other person or address as either may designate for itself in writing and provide to the other.

F. Independent Contractor

The Selected Firm is not an employee of the University, but is engaged as an independent contractor. The Selected Firm will indemnify and hold harmless the Commonwealth of Virginia, the University, and its employees and agents, with respect to all withholding, Social Security, unemployment compensation and all other taxes or amounts of any kind relating to the Selected Firm's performance of this Agreement. Nothing in this Agreement will be construed as authority for the Selected Firm to make commitments which will bind the University, or to otherwise act on behalf of the University, except as the University may expressly authorize in writing.
G. Workers' Compensation and Employers' Liability
The Selected Firm will (i) maintain Employers Liability coverage of at least $100,000 and (ii) comply with all federal or state laws and regulations pertaining to Workers' Compensation Requirements for insured or self-insured programs, particularly as it relates to the Virginia Workers’ Compensation Act.

H. Drug-Free Workplace
The Selected Firm, its agents and employees are prohibited, under the terms of this Agreement, Code of Virginia Section 2.2-4312, and the Commonwealth of Virginia, Department of Human Relations Management Policy Number 1.05, from manufacturing, distributing, dispensing, possessing, or using any unlawful or unauthorized drugs or alcohol while on University property.

During the performance of this Agreement, the Selected Firm agrees to 1) provide a drug-free workplace for the Selected Firm's employees; 2) post in conspicuous places, available to employees and applicants for employment, a statement notifying employees that the unlawful manufacture, sale, distribution, dispensation, possession, or use of a controlled substance or marijuana is prohibited in the Selected Firm's workplace and specifying the actions that will be taken against employees for violations of such prohibition; 3) state in all solicitations or advertisements for employees placed by or on behalf of the Selected Firm that it maintains a drug-free workplace; and 4) include the provisions of the foregoing clauses in every subcontract or purchase order of over $10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "drug-free workplace" means a site for the performance of work done in connection with a specific agreement awarded to a Selected Firm, the employees of whom are prohibited from engaging in the unlawful manufacturing, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the agreement.
I. Information Technology Access

All electronic and information technology procured through this RFP must meet the applicable accessibility standards of Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d) as amended and is viewable at [http://www.section508.gov](http://www.section508.gov).

Additionally, in accordance with § 2.2-3504 of the Code of Virginia, the following will apply to all information technology Agreements:

NON-VISUAL ACCESS TO TECHNOLOGY: All information technology (the "Technology") which is purchased or upgraded by the University will comply with the following non-visual access standards from the date of purchase or upgrade until the expiration of the Agreement:

- Effective, interactive control and use of the Technology will be readily achievable by non-visual means;
- Technology equipped for non-visual access will be compatible with information technology used by other individuals with whom any blind or visually impaired user of the Technology interacts;
- Non-visual access technology will be integrated into any networks used to share communications among employees, program participants or the public; and
- Technology for non-visual access will have the capability of providing equivalent access by non-visual means to telecommunications or other interconnected network services used by persons who are not blind or visually impaired.

Compliance with the foregoing non-visual access standards will not be required if the Director of Procurement Services, University of Virginia determines that 1) the Technology is not available with non-visual access because the essential elements of the Technology are visual and 2) non-visual equivalence is not available.

Installation of hardware, software, or peripheral devices used for non-visual access is not required when the Technology is being used exclusively by individuals who are not blind or visually impaired, but applications programs and underlying operating systems (including the format of the data) used for the manipulation and presentation of
information will permit the installation and effective use of non-visual access software and peripheral devices.

If requested, the Agreement must provide a detailed explanation of how compliance with the foregoing non-visual access standards is achieved and a validation of concept demonstration.

J. eVA Business To Government Registration
The eVA Internet electronic procurement solution, web site portal [www.eva.virginia.gov](http://www.eva.virginia.gov), is the Commonwealth of Virginia's comprehensive electronic procurement system. The portal is the gateway for firms to conduct business with state agencies and public bodies. All agencies and public bodies are expected to utilize eVA. All firms desiring to provide goods and/or services in the Commonwealth are encouraged to participate in the eVA Internet e-procurement solution. The Selected Firm is required to register in the eVA Internet e-procurement solution prior to an award being made.

K. eVA Transaction Fee
The Selected Firm agrees, by accepting an award as a result of this RFP, that it is a registered eVA vendor and will be subject to an eVA transaction fee, for which the Selected Firm will be invoiced by Commonwealth of Virginia, Department of General Services. Additional information is available at [www.eva.virginia.gov](http://www.eva.virginia.gov).

M. License Requirements
State statutes and regulatory agencies require that some firms be properly registered and licensed, or hold a permit, prior to performing specific types of services. If firms provide removal, repair, improvement, renovation or construction-type services they, or a qualified individual employed by the firm, must possess and maintain an appropriate State of Virginia Class A, B, or C Contractor License (as required by applicable regulations and value of services to be performed) for the duration of the Agreement. It is the firm’s responsibility to comply with the rules and regulations issued by the appropriate State regulatory agencies.
If applicable to the Services described in this Agreement, the Selected Firm must possess and maintain such an appropriate license. A copy of the license must be furnished upon request to the University or VASCUPP member institution.

N. Unauthorized Alien Use.

The Selected Firm warrants that it does not knowingly employ an “unauthorized alien,” as such term is defined in the federal Immigration Reform and Control Act of 1986. The Selected Firm furthermore agrees that, during the term of the Agreement, it will not knowingly employ an unauthorized alien.
Attachment 2
Preferred Contractual Provisions

A. Goods and Services
During the term of this Agreement, the Selected Firm will provide for the University the goods and services offered to the University by the firm in its proposal and/or any addenda to its proposal which has been approved in writing by the University and as may be further specified by the University in writing when it selected the firm.

B. Term of Agreement
The term of this Agreement will be for five years, with the ability to renew on the same or similar terms and conditions, for three additional five-year periods if mutually agreeable to the University and the Selected Firm. The Selected Firm and the University will mutually agree at least 180 days prior to each renewal period whether to renew the terms of the Agreement.

C. Contract Administrator
The University will identify a Contract Administrator for any Agreement which results from this RFP. The individual will be the point of contact at the University for day-to-day operations but cannot approve amendments to the Agreement or price changes.

D. Waiver
No waiver of any right will be deemed a continuing waiver, and no failure on the part of either party to exercise wholly or in part any right will prevent a later exercise of such or any other right.

E. Indemnification
The Selected Firm will indemnify and hold harmless The Commonwealth of Virginia, The Rector and Visitors of the University of Virginia, and their agents, employees and officials from any and all costs, damage or loss, claims, liability, damages, expenses (including, without limitation, attorneys' fees and expenses) caused by or arising out of
the performance or non performance of the Agreement by the Selected Firm or its agents
or subcontractors, including the provision of any services or products. The Selected Firm
warrants that the products, goods and services provided the University may be used by
the University without being in violation of any copyright, patent or similar property
right or claim by others and will defend, indemnify and save the University (its
employees and agents) from and against any such claim.

F. Governing Law
This Agreement will be governed in all respects by the laws of the Commonwealth of
Virginia.

G. Termination
If the Selected Firm fails to provide quality goods or services in a professional manner,
solely as determined by the University, and, upon receipt of notice from the University,
does not correct the deficiency, to the University's satisfaction within a reasonable period
of time, not to exceed five calendar days unless otherwise agreed to by both parties in
writing, the University reserves the right to terminate this Agreement upon written notice
to the Selected Firm.

H. Non-Appropriation
Funding for any Agreement between the University and a Selected Firm is dependent at
all times upon the appropriation of funds by the Virginia General Assembly and/or any
other organization of the Commonwealth authorized to appropriate such funds. In the
event that funding to support this Agreement is not appropriated, whether in whole or in
part, then the Agreement may be terminated by the University effective the last day for
which appropriated funding is available.

I. Right of Audit
The University reserves the right to audit or cause to be audited the Selected Firm's books
and accounts regarding the University's account at any time during the term of this
Agreement and for five years thereafter. The Selected Firm will make available to the
University all books and records relating to performance of this Agreement as may be requested during said period. This specifically includes, but is not limited to, the right of the University to require that the Selected Firm perform self-audits within reasonable parameters established by the University.

J. Contractual Claims

This Agreement is subject to the University's policy on Contractual Claims which is provided as Attachment 3, Procedure for Resolution of Contractual Claims.

K. Insurance

Listed below is the insurance the Selected Firm must maintain under any Agreement resulting from this RFP. In no event should the Selected Firm construe these minimum required limits to be their limit of liability to the University. The Selected Firm will maintain insurance which meets or exceeds the requirements of the University with insurance companies that hold at least an A- financial rating with A.M. Best Company. No Agreement will be executed by the University until the Selected Firm satisfies the insurance requirements of the University. The Selected Firm will be required to provide the University with a valid Certificate of Insurance before providing any goods or services to the University. The University reserves the right to approve any insurance proposed by the Selected Firm.

Comprehensive Commercial General Liability:

The Selected Firm and any Subcontractor will provide a minimum combined single Limit of Liability for bodily injury and property damage of $2,000,000 per occurrence and a $5,000,000 aggregate, with coverage for the following:

- Premises/Operations
- Products/Completed Operations
- Contractual
- Independent Contractors
- Personal Injury
- Additional Insured

Automobile Insurance:

The Selected Firm and any Subcontractor will provide a minimum combined single Limit of Liability for bodily injury and property damage of $1,000,000 per accident with the following coverages for vehicles operated by their employees:

- Any Automobile
- Owned and Non-Owned Automobiles
Errors and Omissions Liability:
The Selected Firm and any Subcontractor will provide a minimum of $1,000,000 per
claim for errors and omissions in the performance of the services outlined in this RFP.

*Additional Insured:
The University will be named as an Additional Insured, and the proper name is: “The
Commonwealth of Virginia, and the Rector and Visitors of the University of Virginia, its
officers, employees, and agents”.

L. Use of Agreement by Third Parties
It is the intent of this RFP and any resulting Agreement to allow for cooperative
procurement. Accordingly, any public body, public or private health or educational
institution, or any University related foundation may access the Agreement if authorized
by the Selected Firm.

Participation in this cooperative procurement is strictly voluntary. If authorized by the
Selected Firm, the Agreement may be extended to the entities indicated above to
purchase at fees in accordance with the Agreement. The Selected Firm will notify the
University in writing of any such entities accessing the Agreement. No modification of
this Agreement or execution of a separate agreement is required to participate. The
Selected Firm will provide semi-annual usage reports for all entities accessing the
Agreement. Participating entities will place their own orders directly with the Selected
Firm and will fully and independently administer their use of the Agreement to include
contractual disputes, invoicing and payments without direct administration from the
University. The University will not be held liable for any costs or damages incurred by
any other participating entity as a result of any authorization by the Selected Firm to
extend the Agreement. It is understood and agreed that the University is not responsible
for the acts or omissions of any entity, and will not be considered in default of the
Agreement no matter the circumstances.
Use of this Agreement does not preclude any participating entity from using other agreements or competitive processes as the need may be.

M. Favored Nations
The Selected Firm represents that the prices, terms, warranties, and benefits specified in its proposal are comparable to or better than the equivalent terms being offered by the firm to any present customer.

N. The University's Authorized Representatives
The only persons who are or will be authorized to speak or act for the University in any way with respect to this Agreement are those whose positions or names have been specifically designated in writing to the Selected Firm by the University's Director of Procurement Services.

O. Purchasing Manual
This Agreement is subject to the provisions of the Commonwealth of Virginia "Purchasing Manual for Institutions of Higher Education and Their Vendors" and any subsequent revisions, which is available at this web site: [https://vascupp.org/hem.pdf](https://vascupp.org/hem.pdf)

P. Small, Women-owned and Minority-owned (SWAM) Business Reporting
The Selected Firm will identify and fairly consider SWAM firms for subcontracting opportunities when qualified SWAM firms are available to perform a given task in performing for the University under the resulting Agreement. The Selected Firm will submit a quarterly SWAM business report to the University by the 8th of the month following each calendar quarter, specifically the months of April, July, October, and January. The Selected Firm will submit the quarterly SWAM business reports to:

Nancy Noblette
Administrative Assistant to the Director of Procurement Services
E-mail: [nn9g@virginia.edu](mailto:nn9g@virginia.edu)

The quarterly SWAM business reports will contain this information:
• SWAM firm’s name, address and phone number with which the Selected Firm has contracted over the specified quarterly period.
• Contact person at the SWAM firm who has knowledge of the specified information.
• Type of goods and/or services provided over the specified period of time.
• Total amount paid to the SWAM firm as it relates to the University’s account.

The Selected Firm’s failure to provide SWAM reports on a quarterly basis which contain the information required by this section and/or the Selected Firm’s failure to comply with the plan for utilizing SWAM businesses submitted by the Selected Firm as part of its proposal and/or negotiation response may be grounds for debarment pursuant to Section 9. G. 4 of the “Purchasing Manual for Institutions of Higher Education and their Vendors.”

Q. Intellectual Property Rights/Disclosure

Unless expressly agreed to the contrary in writing, all goods, products, materials, documents reports, writings, video images, photographs or papers of any nature including software or computer images prepared or provided by the Selected Firm (or its subcontractors) for the University will not be disclosed to any other person or entity without the written permission of the University. The Selected Firm warrants to the University that the University will own all rights, title and interest in any and all intellectual property rights created in the performance or otherwise arising from any Agreement resulting from this RFP and will have full ownership and beneficial use thereof free and clear of claims of any nature by any third party including without limitation copyright or patent infringement claims. The Selected Firm will execute any assignments or other documents needed for the University to perfect such rights. Notwithstanding the foregoing, for research collaboration pursuant to subcontracts under sponsored research agreements administered by the University's Office of Sponsored Programs, intellectual property rights will be governed by the terms of the grant or contract to the University to the extent such grant or contract requires intellectual property terms to apply to subcontractors.
R. Payment Terms

The Selected Firm may indicate payment terms of less than 30 days so long as those terms also contain a cash discount for early payment. For example: “5% 15/Net 30” would correspond to a 5% discount if paid in 15 days, otherwise net 30. The University will compute discounts from the date of delivery of goods at destination, after final inspection, and acceptance, from the date of completion of services, or from the date the correct invoice is received in Accounts Payable, whichever is later. The University will take the cash discount if payment is made within the specified time frame.

Unless alternate payment terms, with cash discounts, are proposed by the Selected Firm, invoices submitted to the University by the Selected Firm for the Goods and Services described in this RFP will be paid on a Net 30 days after receipt of the Goods and Services and University receipt and approval of the corresponding invoice.

The Selected Firm agrees to receive payments electronically and provide any additional discounts that may result from paying electronically. The firm will contact the University’s Payment Processor Specialist group in Procurement Services to set up its preferred method of receiving electronic payments [Phone: (434) 924-4212 or email: uva-prs-boa@virginia.edu]. Accordingly, the Selected Firm agrees to accept Bank of America’s (“BoA”) ePayables® method of electronic payment or BoA’s PayMode® method of electronic payment.

S. Marketing

The University encourages the Selected Firm to appropriately and specifically market itself to applicable end-using University departments that may be interested in the Selected Firm’s Goods and Services. However, the Selected Firm will not use non-specific mass marketing formats; such as, but not limited to, spam, emails and junk mail. In the event that the Selected Firm engages in non-specific mass marketing formats, the University, in its sole discretion, may choose to terminate this Agreement.
T. Confidentiality

Both parties acknowledge that in the negotiation and performance of this Agreement, confidential and proprietary information of each has been and will be made available to the other. The parties agree to use reasonable efforts to maintain the confidentiality of such material, but in no event lesser than was used with like material of the receiving party, and not to make any internal use of such material not required under this Agreement. Neither party will disclose the information to any third party without prior written authorization from the disclosing party, and will not use the information received by it, except to those of its employees, agents, and consultants whose duties justify the need for access to the information provided that such individuals are subject to obligations of secrecy and limited use commensurate in scope with this Agreement. These obligations will apply to verbal information as well as specific portions of the information that are disclosed in writing or other tangible form and marked to indicate its confidential nature. These obligations will not apply to any of the information which:

1. Was known to the receiving party prior to receipt under this Agreement, as demonstrated by the receiving party's records; or

2. Was publicly known or available prior to receipt under this Agreement, or later becomes publicly known or available through no fault of the receiving party; or

3. Is disclosed to the receiving party without restrictions on disclosure by a third party having the legal right to disclose the same; or

4. Is disclosed to a third party by the disclosing party without an obligation of confidentiality, unless such information must be retained by that party for that party to fulfill its legal or contractual obligations under this Agreement; or

5. Is independently developed by an employee, consultant, or agent of the receiving party without access to the information as received under this Agreement; or

6. The receiving party is obligated to produce as required by law, lawfully issued subpoena, or a court order, provided that the disclosing party has been given notice thereof and an opportunity to waive its rights or to seek a protective order or other appropriate remedy.

Upon written request of a disclosing party, the receiving party will return all information disclosed in written or tangible form, and the receiving party will destroy all of its copies,
excerpts, or notes made by it which contain any portions of the information unless otherwise provided for by the parties.

U. Mailing List
The Selected Firm will not sell or give the lists of University personnel to third parties or otherwise use such personnel information except as needed to provide the Goods and Services listed in this Agreement.

To the extent that particular information is subject to specific statutory confidentiality requirements, the requirements of such statute, rather than this section, shall be controlling.

V. Future Goods and Services
The University reserves the right to have the Selected Firm provide additional Goods and Services under the same Favored Nations pricing, terms, and conditions across the Selected Firm’s product/service line. Such additional Goods and Services may include Goods and Services that are newly introduced during the term of this Agreement. Such newly introduced additional Goods and Services will be provided to the University at Favored Nations pricing, terms, and conditions.

W. Project Manager
The Selected Firm agrees to provide these named individual(s) to respectively serve as “Project Manager(s)”. The Project Manager(s) will implement, perform, and manage provision of the Goods and Services as indicated in Section III, Scope of Goods and Services. The University must approve the appointment of the Project Manager(s) prior to execution of any Agreement with the Selected Firm resulting from this RFP. The Project Manager(s) will be the University’s primary contact(s), although the Project Manager(s) will be assisted as needed by other members of the Selected Firm’s staff in completing key activities.
In the event that a Project Manager is no longer employed by the Selected Firm, is unavailable for any reason, or is performing in an unsatisfactory manner as determined by the University’s Contract Administrator, the Selected Firm will propose a replacement for that individual within a reasonable time frame, so as not to significantly delay the provision of the Goods and Services to the University. The University reserves the right to approve the replacement, or to cancel the Agreement. If a proposed replacement is accepted by the University, the replacement will be provided as a part of the Goods and Services at no additional charge to the University and in accordance with all terms and conditions specified in the Agreement.

X. System Acceptance

“System Acceptance” will encompass testing and observation of the fully functional and operational System. The University’s Contract Administrator will determine if the System specifications have been met, shortly after installation and integration of the System. Warranty will begin as of the date of System Acceptance. In the event that the University does not accept the System, the University may elect to require the Selected Firm to provide a replacement System or terminate the Agreement.

The University’s Contract Administrator will be the sole representative of the University and will have sole authority to act on the University’s behalf with regard to System Acceptance; provided; however, that in the event of a dispute regarding any material aspect of System Acceptance unable to be resolved by the University’s Contract Administrator, then the procedures in Attachment 3, Procedure for Resolution of Contractual Claims, will be followed.

Y. Ordering Procedures

The University does not place verbal orders for the Goods and Services. The University may only place orders for the Goods and Services by issuing a formal written purchase order in advance of the Selected Firm’s provision of the Goods and Services. Accordingly, at the University’s request, the Selected Firm will issue a proposal/quotation listing the Goods and Services desired by the University and the
corresponding fees and/or fee estimates. After any necessary discussions and/or revisions, the University will issue a corresponding purchase order for a specified fee amount. This specified fee amount cannot be exceeded by the Selected Firm unless a new formal written purchase order or purchase order revision is issued by the University authorizing a specific additional fee amount. Under no circumstances does the University authorize the Selected Firm to provide the Goods and Services before receipt of a formal written purchase order corresponding to its proposal/quotatation. If the Selected Firm provides Goods and Services prior to receipt of a formal written purchase order, or incurs costs in excess of authorized purchase order fee amounts, it does so at its own risk.
Attachment 3

Procedure for Resolution of Contractual Claims

The Virginia Acts of Assembly of 2009, Chapter 685, Chapter 3, Exhibit P and its attachments requires contractors with the University to submit any claims, whether for money or other relief, in writing no later than 60 days after final payment; however, written notice of the contractors intention to file such a claim must be given at the time of the occurrence or beginning of the work upon which the claim is based.

The University's procedure for deciding such contractual claims is:

A. The Selected Firm must provide the written claim to:
   Assistant Director of Procurement Services
   University of Virginia
   1001 North Emmet Street
   P. O. Box 400202
   Charlottesville, Virginia  22904-4202

B. Although the Selected Firm may, if it chooses, attempt to resolve its claim by dealing with a University department other than the one stated in Section A above, the Selected Firm must submit any unresolved claim in writing no later than 60 days after final payment to the Assistant Director of Procurement Services if it wishes to pursue its claim.

C. Upon receiving the written claim, the Assistant Director of Procurement Services will review the written materials relating to the claim and decide whether to discuss the merits of the claim with the Selected Firm. If such discussion is to be held, the Assistant Director of Procurement Services will contact the Selected Firm and arrange such discussion. The manner of conducting such discussion will be as the Assistant Director and the Selected Firm mutually agree.
D. The Assistant Director of Procurement Services will mail his or her decision to the Selected Firm within 60 days after receipt of the claim. The decision will state the reason for granting or denying the claim.

E. The Selected Firm may appeal the decision to:
   
   Director of Procurement Services  
   University of Virginia  
   Carruthers Hall  
   1001 North Emmet Street  
   P.O. Box 400202  
   Charlottesville, Virginia 22904-4202

   by providing a written statement explaining the basis of the appeal, within 15 days after the Selected Firm's receipt of the decision.

F. Upon receiving the written appeal, the Director of Procurement Services will review the written materials relating to the claim and decide whether to discuss the merits of the claim with the Selected Firm. If such discussion is to be held, the Director of Procurement Services will contact the Selected Firm and arrange such discussion. The manner of conducting such discussion will be as the Director of Procurement Services and the Selected Firm mutually agree.

G. The Director of Procurement Services will mail his or her decision to the Selected Firm within 60 days after the Director of Procurement Services receipt of the appeal. The decision will state the reasons for granting or denying the appeal.

H. Nothing in this Attachment 3 will preclude either party from filing a claim in any court of the Commonwealth of Virginia to seek legal or equitable remedy if a dispute should arise, in addition to such other remedies as are expressly provided in this Agreement; provided, the Selected Firm may not file such claim unless and until it has complied fully with the procedure set forth in this Attachment 3.
Executive Vice President and Chief Operating Officer’s Request for Commitment

Greetings:

The quality of service the University of Virginia is able to deliver to its customers is directly related to the excellent support we receive from you and many other outstanding suppliers of goods and services. Without you, we would not be able to fulfill our educational, health care and research missions. An important part of our procurement program involves our commitment to doing business with small, women-and minority-owned (SWAM) businesses. As one of our most important vendors, we look to you to help us achieve this objective.

We conduct substantial business with small firms. We have been less effective in securing long-term business relationships with minority-and women-owned businesses. We are determined to improve our record.

I seek your assistance in two areas. First, to the extent practical, I ask that you involve small, women-and minority-owned businesses in the delivery of services you provide to UVa. Second, I seek your help in reporting your results through our quarterly subcontracting reports. The terms and conditions previously provided to your organization outlined this process.

This effort is important to us. We depend on you in so many ways – this is another way that we can partner with your company to make things better.

Sincerely,

Leonard W. Sandridge  
Executive Vice President and Chief Operating Officer

LWS:dr

Madison Hall · Post Office Box 400228 · Charlottesville, Virginia 22904-4228
Attachment 5

Required Supplemental Information for Proposals

In order to ensure that firm’s proposal is responsive to the RFP’s requirements, the firm should respond to RFP Section V, Contents of Proposal, and include responses to the additional information identified and requested in this Attachment 5. In all cases, firms should respond to all sections pertaining to the particular Goods and Services being proposed by the firm as indicated on the Proposal Cover Sheet Template.
Proposal Cover Sheet Template

Firm Name: ______________________________________

Primary Contact
Name: ______________________________________
Phone: ______________________________________
Email: ______________________________________

Proposed Services
All proposals must respond to one or more of the Focus Areas indicated by the check boxes below. Proposals must respond to both the Primary RFP Section and any Required Additional Sections as indicated below. Place a check in each box corresponding to the Focus Areas covered in the firm’s proposal.

☐ Trunking and Telephone Numbers
  Primary RFP Section: III.A
  Required Additional Sections: III.H, and III.I

☐ Fiber Optic Cable IRU
  Primary RFP Section: III.C

☐ Outdoor Cable Plant Maintenance and Expansion
  Primary RFP Section: III.D

☐ Moves, Adds, and Changes
  Primary RFP Section: III.E

☐ Telephony System
  Primary RFP Section: III.F
  Required Additional Sections: III.A, III.B, III.H, and III.I
Contents of Proposal

University Proposal Cover Sheet Template

The first page of your firm’s proposal must be the Proposal Cover Sheet Template found on the previous page of this Attachment 5. Fill in the template marking the Goods and Services components that your firm’s proposal addresses. The University expects that some proposals will cover the entire spectrum of Goods and Services while other proposals will focus on only one or more component elements.

Goals Summary

In no more than two paragraphs, summarize your firm’s understanding of Section II, Background Discussion and Goals of the University.

Goods and Services

As required in Section V.A.2, Contents of Proposal, remember to respond to each Appropriate Item in Section II, Background Discussion and Goals of the University, and Section III, Scope of Goods and Services, and provide a clear and detailed explanation of how your firm’s proposed solution meets the requirements described by the University. “Appropriate Items” are those sections that relate to the particular good and/or service that your firm is proposing. (For example, firms choosing to respond only to the University’s requirement for a fiber optic cable IRU would respond specifically to Section III.C, Fiber Optic Cable IRU.)

A few of the components of Section III, Scope of Goods and Services are sufficiently complex that the University has some specific questions that firms must address in their proposals. These are detailed in the subsections below.

Please be concise but complete in providing the firm’s responses. Your firm may provide additional information and technical details, as needed, for any section in an Appendix or via a URL. The subsections below are keyed to and in the same order as Section III, Scope of Goods and Services.
1. **Section III.F: Telephony System**

The sections below apply to all firms proposing PBX functionality. Some firms may elect to respond to this proposal with more than one switch in order to meet the distinct roles of basic call routing for all University numbers and a second switch for more advanced features or reliability. Firms proposing more than one switch should clearly indicate how their answers in these sections apply to each of the proposed switches. Answers should generally be a set of bullets or a paragraph or two. Only occasionally should answers stretch to the length of an entire page.

a. **System Architecture**

   Briefly, in at most one page, provide a technical overview of the proposed System. Include at an overview level, items such as: the set of servers used to build a complete System; the role that these servers play; the gateways used for trunking; MCUs; etc. Include information on what operating system or systems run on the servers, if the System is packaged with specific hardware or sold as software only, etc. What protocol(s) are supported for call control?

   Provide a URL or include in an appendix a more in-depth technical white paper on the technology of the proposed System.

b. **Trunking Interface**

   Describe, at a very high level, the trunk gateway devices (or device options) supported by the firm’s System. Indicate which of the following trunk types can be supported: CO; T1; PRI; SIP; and/or SS7. How many physical devices are anticipated (e.g., does the System use racks of off-the-shelf commercial gateway appliances or a small number of specialized switch platforms)?

c. **Hard Endpoints**

   Provide information in an appendix or via a URL on each of the three types of hard endpoint devices described in Section 2.F.6.
Confirm that facsimile and modems operate properly via the supported gateway devices and that basic call control features are supported. Detail any special restrictions on analog service functionality.

d. Soft Endpoints
List available softphone clients and supported operating systems.
Provide additional materials on the software in an Appendix or via a public URL.

e. Native VoiceMail
Provide a brief synopsis of the proposed voice mail System and include additional information in an appendix or a URL for reference to more detailed information. Specifically include this information in the firm’s response to this section:

i. Does the System provide a supervisor with the ability to monitor the size of a staff member’s voice mail box?

ii. Describe how individual and group voice mail boxes are added and deleted.

iii. Describe how an individual forwards a voice mail message to another user.

f. Native Automatic Call Distribution (ACD) Features
In no more than a page, describe the native ACD capabilities of the System focusing on its basic ability to meet this need, the statistical reports that are available for the call center manager, and the ability of the call center manager to deal with unexpected changes such as snow closings, extended hours, etc. Detailed information can be provided in the Appendix or via a public URL.

Describe if the combination of the Native ACD and Native VoiceMail of your firm’s products provide the ability to provision an auto-attendant function that enables callers to either leave a message or call directly to an individual telephone extension.
g. Standard Calling Features

Indicate compliance with or take exception to the minimal list of standard calling features identified in the table below. A full list of features should be provided in the Appendix or via a URL.

<table>
<thead>
<tr>
<th>Function</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td>Call Forwarding - forward an extension to another number</td>
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<tr>
<td>Call Pickup - answer a ringing number from a different extension</td>
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<td>Camp On - wait for a called party extension to become free</td>
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<tr>
<td>Conference calls – ability to create an ad-hoc conference call with at least two other extensions with ability to mute the line to protect from background noise</td>
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<tr>
<td>Conference calls – ability to create an ad-hoc conference call with at least eight other extensions with ability to mute the line to protect from background noise</td>
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<tr>
<td>Call Transfer – transfer a call to another extension</td>
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<tr>
<td>Consultation Call Transfer – talk to the 2nd party before connecting the transfer call</td>
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<tr>
<td>Message Waiting – a lamp to indicate waiting voicemail</td>
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<td>Call Hold – place a call on hold</td>
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<tr>
<td>Caller ID – both internal and external from the trunk provider including the ability to mask or rename specific number from receiving device on external calls</td>
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<tr>
<td>Multi-line appearances – have multiple number appearances on a single phone</td>
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<td>Last number redial – redial the last number called</td>
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<tr>
<td>Mute – audio mute</td>
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<tr>
<td>Call park and retrieve – park a call and later reconnect to it</td>
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<tr>
<td>Missed call log</td>
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<tr>
<td>Ability to play a recording to callers placed on hold</td>
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<tr>
<td>TDDY Support</td>
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<tr>
<td>Programmable telephone function keys for autodial</td>
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<tr>
<td>Ability to forward calls to internal and off-System locations</td>
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</table>

h. Hunt Groups and Call Routing

Briefly describe the System’s ability to route calls to a free line out
of a group of lines and the supported algorithms (linear, LRU, rotating, random, etc.). Describe the System’s ability to automatically route around failed gateway devices and/or to use gateway devices that contain multiple IP addresses.

i. Built-in Diagnostic and Error Alarm Reporting Capability
Describe, in a high level overview, the types of alarms that are automatically generated by the System and how this alarm information is conveyed to the University’s telephone operators.

Describe, in summary form, the System’s ability to monitor (a) VoIP call quality on a per-call basis, (b) status of each endpoint configured in the System, (c) the operational state of trunks (IP and Telephony), (d) failover status of key System components, (e) other critical System elements.

j. Security
In the firm’s response to overall System security requirements, ensure that the security aspects related to these areas are adequately described:

i. The external and System administration tasks required to keep the overall System secure.

ii. Are firewalls recommended and, if so, are remote teleworkers typically required to use a VPN or lose some level of functionality. Do devices support NAT Transversal?

iii. Describe any needed Session Border Controllers and if these are a standard component of your firm’s product’s deployment.

iv. Describe the firm’s product’s voice and call control path encryption options.

v. Describe the authentication process for hard endpoints.

vi. Describe the authentication process for soft endpoints.
vii. How are replay and password guessing attacks mitigated?

k. What questions should the University have asked about the technical infrastructure that it did not?

This section is the firm’s opportunity to highlight specialized features or services that the firm offers that might be of special interest or value to the University. This might include ways to further decrease operational costs, highlight specialized projects that your firm has implemented at other universities or hospitals, or describe new technology that would be of interest to the University.

2. Section III.G Advanced Contact and Call Center Functionality

Section III.G.2, Advanced Contact and Call Center Functionality, describes both required and optional functionality. Firms responding to the subsections of III.G.2 must include answers to the specific questions and templates below.

a. Provide, in a narrative format of no more than three pages, a description of the key features of the firm’s System. Specifically focus on hospital, large clinic, and student information system applications. Be sure to highlight applications that interface with EPIC Systems software (http://www.epic.com) and PeopleSoft as used for a Student Information System. Additional materials beyond three pages such as technical documentation, application briefs, and other such documents should be provided in an appendix or via a web URL.

b. Briefly describe the firm’s System’s support, if any, for routing calls based on specific agent attributes. This function is called “Skills Based Routing” by some call center automation manufacturers.

c. List the available reports and reporting mechanisms that assist with call agent and call center productivity monitoring as well as summary reports giving total calls received, answered, time to
answer in a format that allows trending and analysis. Does the proposed System support real-time queue monitoring and active supervisor actions? If so, are Service level Longest Call Waiting, Number of Calls Waiting, and Abandoned Call statistics available?

d. Fill in the table below. In cases where the firm needs to elaborate on an answer, please provide the supporting text in subsections immediately below the table. Be sure that this additional information keyed to the Question Index of the table.

<table>
<thead>
<tr>
<th>Num</th>
<th>Description</th>
<th>Yes</th>
<th>No</th>
<th>See Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Desktop interface that supports dialing, disconnection, mute, transfer, conference, listen and other standard phone features</td>
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<tr>
<td>2</td>
<td>Desktop interface for supervisors to select real-time status of agents, listen to and monitor calls</td>
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<tr>
<td>3</td>
<td>Support for supervisors to move calls from queue to queue</td>
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<td>4</td>
<td>Support for screen pop capability to display an application on the agent’s workstation screen without having to ask the caller for identifying number</td>
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<td>5</td>
<td>Support for multiple speed-dial directories</td>
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<tr>
<td>6</td>
<td>Support for desktop interface for agents to set status and return time from set status</td>
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<td>7</td>
<td>Support for supervisor to see updates to agent status, and get alerts if an agent remains in a particular status too long</td>
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<td>8</td>
<td>Support for agents to see the status of other agents in case they need to transfer a call</td>
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<tr>
<td>9</td>
<td>Support for internal chat capability</td>
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<tr>
<td>10</td>
<td>Support for agents to activate themselves in selected workgroup queues but not others, i.e., the ability to work certain queues at certain times</td>
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<tr>
<td>11</td>
<td>Support agent/supervisor capability to modify messages/scripting on the incoming lines</td>
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<td>12</td>
<td>Ability to provide wait time notification to caller</td>
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<tr>
<td>13</td>
<td>Ability to route calls to the last agent the caller spoke with</td>
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<td>14</td>
<td>Support for call back option for callers and callers</td>
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<tr>
<td>15</td>
<td>Support for unlimited number of Dialed Number Identification Service (DNIS) codes that may be configured for routing purposes</td>
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<tr>
<td>16</td>
<td>Automatic Number Identification and DNIS information displayed on client and phone (if applicable)</td>
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<tr>
<td>17</td>
<td>Support for supervisors and agents to see a detailed list of agents by workgroup or team and view their current status</td>
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<td>18</td>
<td>Support for a supervisor desktop interface that includes the capabilities of the agent interface for on-screen control of calls and other interactions that are active on the System</td>
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<tr>
<td>19</td>
<td>Support for display of summary information regarding number of agents logged in, number on calls, etc.</td>
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<td>20</td>
<td>Support for setting alerts on each monitored value to watch for certain conditions</td>
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<td>21</td>
<td>Support for selecting a particular user to listen to their specific calls</td>
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<tr>
<td>22</td>
<td>Support for the supervisor to view detailed information regarding calls in queue such as name and CallerID</td>
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<tr>
<td>23</td>
<td>Support for supervisor moving a call to an available agent to get it answered</td>
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<tr>
<td>24</td>
<td>Support for supervisor to elect to answer any call that is waiting in queue regardless of that caller’s position in queue</td>
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<tr>
<td>25</td>
<td>Support for supervisor to change status of agent</td>
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<td>26</td>
<td>Support for a recording or music on hold</td>
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<tr>
<td>27</td>
<td>Support for full function remote agents</td>
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<td>28</td>
<td>Interface for adding lines, stations, and ACD agents</td>
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<td>29</td>
<td>Ability to do simple adds and changes</td>
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<tr>
<td>30</td>
<td>Ability to add lines through a simple point and click menu-driven interface</td>
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<tr>
<td>31</td>
<td>Simple process for adding a line, station, workgroup, or user.</td>
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</tbody>
</table>

**Other Goods and Services**

If the firm has other specialized services, opportunities, or features that will assist the
University to achieve its goals as expressed in this RFP, but not specifically identified in Section II, Background Discussion and Goals of the University, and Section III, Scope of Goods and Services, please summarize them in this section. For example, a cellular carrier might propose the installation of a fixed mobile integration solution or a trunking provider might also propose a creative long distance solution. Please use no more than a paragraph or two for each feature or service and include additional materials, if needed, in an appendix or via a URL. The University encourages creative solutions that will help it to meet its goals.
Financial Proposal Overview
The University will evaluate the financial proposal using a life-cycle cost model methodology where the capital and installation costs are added to the operational and maintenance costs to yield a lifetime cost for the voice System represented by the proposed Goods and Services. The University will use the financial data provided by each firm and examine it using several potential estimated useful lifetimes for the voice System. Beyond the simple life-cycle cost model, the University is also focused on a cost allocation strategy that enables users to interact with their communications infrastructure in the way that makes them most efficient and without financial disincentives for using the key features of the System. Old-style port-based mechanisms where charges are assessed for each endpoint or trunk on the System significantly deter use and no longer reflect the actual cost to provision a service. Likewise, per-copy pricing for end-user software is a licensing nightmare and a significant disincentive for casual use. The stronger financial proposals will take into account the University’s goal of improving efficiency through the use of technology and will not include financial penalties that were, in a past era with old-style technology, designed to ration the use of a scarce resource.

Maintenance pricing should clearly document what is included and what is not. For example, does software maintenance automatically include product feature upgrades as is typical in the computing industry or are these presented as future mandatory or recommended upgrade fees?

Telephony System Pricing
Using the rough sizing information included in Section II, Background Discussion and Goals of the University, include a detailed summary spreadsheet containing your firm’s financial proposal. The proposal should clearly include rows for each of the major financial components including physically diverse redundant equipment, software, installation fees, project management charges, typical custom integration fees, estimated hard endpoint fees using the mix of endpoints described in Section III.F.6 with 60% of the devices being high end and 40% low-end, 15% of users with soft endpoints and/or mobile device clients (if applicable), Native
Voicemail and ACD as described in Section III.F.10, and any other service or equipment the University is expected to need for a successful implementation. Each row of the spreadsheet should clearly indicate unit as well as aggregate fees along with annual maintenance fees and the initial warranty period. Annual software maintenance fees may also be bundled and not broken out on a per-component basis.

**Advanced Contact and Call Center Pricing**
An independent detailed summary spreadsheet showing pricing for the type of Advanced Call and Contact Center technology described in Section III.G is required for firms proposing products in this space. If the firm does not directly supply this type of technology, firms may instead supply the name of companies that can provide this type of service and integrate with the proposed voice System.

Since the fee proposal is being developed using approximate sizing information and likely lacking the level of detail normally used for pricing, firms are expected to use their experience from other similar projects to develop a realistic overall project fees. Clearly document all fee assumptions.

**Fiber Optic Cable IRU Pricing**
Firms proposing a fiber IRU must specify the one-time fee for the IRU, and annual maintenance fees.

**Pricing for Other Proposal Sections**
Firms responding to the sections on Trunking, Outdoor Cable Plant Maintenance and Expansion, and other sections not specified above should develop their own format to submit their fee proposals. These fee proposals should clearly document: the goods and services to be provided; the fee components; and the overall expected annual and one-time fees. Trunking vendors with the ability to provide significant price breaks for multi-year contacts may supply three and five year proposals along with the requested annual pricing.
Attachment 7

Definitions

This Attachment 7 lists definitions for many of the acronyms and technical terms used in this RFP:

<table>
<thead>
<tr>
<th>Defined Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACD</td>
<td>Automatic Call Distribution: the ability to distribute calls coming into a service desk to a set of agents based on availability and other factors.</td>
</tr>
<tr>
<td>API</td>
<td>Application Programming Interface: a programming interface that enables a developer writing a new application to obtain services and/or cause things to happen in another system or application.</td>
</tr>
<tr>
<td>Call and Contact Center</td>
<td>A set of people who answer telephone calls for a service center. Common UVa applications at the University include patient appointment scheduling and financial aid questions.</td>
</tr>
<tr>
<td>CLEC</td>
<td>Competitive Local Exchange Carrier: A firm that competes with the ILEC to provide telephony and trunking services in a region.</td>
</tr>
<tr>
<td>CRM System</td>
<td>Customer Relationship Management: A CRM System assists and automates aspects of managing the relationship between a business and its customers.</td>
</tr>
<tr>
<td>DiffServ</td>
<td>Differentiated Services. A standardized mechanism for implementing QoS at the IP layer of a network.</td>
</tr>
<tr>
<td>Ethernet</td>
<td>A set of Standards for how data is transmitted over a LAN. See IEEE 802.3</td>
</tr>
<tr>
<td>IEEE 802.11af PoE</td>
<td>An Institute of Electrical and Electronics Engineers Standard for providing electrical power to user devices using network cabling when the LAN is based on Ethernet standards. PoE stands for Power over Ethernet.</td>
</tr>
<tr>
<td>IEEE 802.1p</td>
<td>IEEE 802.1p is a mechanism that enables QoS at the LAN layer.</td>
</tr>
<tr>
<td>IEEE 802.3</td>
<td>The Ethernet standard for data transmission over wired networks.</td>
</tr>
<tr>
<td>ILEC</td>
<td>Incumbent Local Exchange Carrier: A local telephone services provider that was in existence during the breakup of the Bell System and provided local telephone services at the time of the breakup.</td>
</tr>
<tr>
<td>IRU</td>
<td>Indefeasible Right of Use: An IRU is an agreement between a communications cable operator and a client to provide the client with the exclusive use of a set of fibers over a fixed path for a specified period of time.</td>
</tr>
<tr>
<td>LAN</td>
<td>Local Area Network: The wiring, electronics, and management systems that are used to provide data connectivity to computer systems in a localized area. The area typically spans a small building or portions of a larger building.</td>
</tr>
<tr>
<td>LAN Switch</td>
<td>An electrical device that forms the basis for building a LAN. At UVa, Ethernet is the LAN technology that is used and the LAN Switches are Ethernet switches.</td>
</tr>
<tr>
<td>MCU</td>
<td>Multipoint Control Unit: a device that enables three or more</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<td>------------</td>
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<tr>
<td>Multicast</td>
<td>A network technology that enables data packets to be replicated by the network hardware and delivered to all devices that subscribe to a data stream. Multicast differs from Broadcast in that the network only delivers the replicated packets to network devices that have subscribed to the data stream.</td>
</tr>
<tr>
<td>ODBC</td>
<td>Open Database Connectivity: A standardized API that applications can use to query a database system.</td>
</tr>
<tr>
<td>PRI</td>
<td>Primary Rate Interface: A telecommunications standard for the interconnection of telecommunications equipment. A PRI provides more call control functionality than a T1 interface.</td>
</tr>
<tr>
<td>QoS</td>
<td>Quality of Service: a generic term used by network engineers to describe a set of technical mechanisms that can control packet throughput, loss, jitter and other parameters of a data from on a network.</td>
</tr>
<tr>
<td>REST, SOAP, SOA, RPC</td>
<td>Technical standards and methodologies that can be used to implement an API.</td>
</tr>
<tr>
<td>SIP</td>
<td>Session Initiation Protocol: SIP is an Internet Standard signaling protocol that is used to the control a wide variety of multimedia applications. It is typically a component of a Standards-based (as opposed to vendor proprietary) VoIP system.</td>
</tr>
<tr>
<td>SIP Trunking</td>
<td>SIP Trunking is Trunking that is delivered via the SIP protocol over an Internet Protocol (IP) connection instead of a PRI or DS1/T1.</td>
</tr>
<tr>
<td>SS7</td>
<td>Signaling System Number 7: a set of telephony signaling protocols that are used by Long Distance, ILECs, and CLECs (and their international equivalents) to connect and disconnect telephone calls.</td>
</tr>
<tr>
<td>T1/DS1</td>
<td>Digital Signal 1: A DS1 or T1 is a telecommunications standard for the interconnection of telecommunications equipment. This is an older standard with less functionality than a PRI but is still widely used for many applications.</td>
</tr>
<tr>
<td>Trunking</td>
<td>Trunking: the system, services, and technology used to connect an enterprise voice system to the outside world. This typically involves the provision of local and/or long distance connectivity to the enterprise’s voice communications system using PRI or T1/DS1 technology. The firm providing trunking also typically provides the telephone numbers used by the enterprise. Trunking technologies are also often used between the components of an enterprise telephony system.</td>
</tr>
<tr>
<td>UMA</td>
<td>Unlicensed Mobile Access: An extremely useful technology that enables wireless carriers to deploy handsets that enable voice calling over both their cellular radio network and an enterprise’s local WiFi network.</td>
</tr>
<tr>
<td><strong>VoIP</strong></td>
<td>Voice over Internet Protocol: a generic term used to describe any mechanism that transports voice between users using Internet Protocols instead of a separate non-Internet Technology network.</td>
</tr>
<tr>
<td><strong>WiFi</strong></td>
<td>A popularized name for IEEE 802.11 WLAN devices that have been certified as interoperable by the WiFi Alliance. While differences exist, for the purposes of this RFP, we consider WiFi and IEEE 802.11 equivalent.</td>
</tr>
<tr>
<td><strong>WLAN</strong></td>
<td>Wireless Local Area Network: a Local Area Network (LAN) that is implemented via radio technology and not cables. For the purposes of this RFP, WLAN is equivalent to WiFi and IEEE 802.11.</td>
</tr>
</tbody>
</table>