

# Customer Network Infrastructure Maintenance

## Standard Service Agreement (SA)

---

University of Michigan  
Information Technology Central Services (ITCS)  
Information Technology Communications (ITCom)

July 1, 2008

---

- **1.0 Overview**
  - **2.0 Purpose**
  - **3.0 Service Rates**
  - **4.0 Terms of Agreement**
  - **5.0 IT Communications Responsibilities**
  - **6.0 Customer Unit Responsibilities**
  - **7.0 Performance Measures**
  - **8.0 Problem Resolution**
  - **9.0 Upgrades**
  - **10.0 Security**
  - **11.0 Accountability**
  - **Appendix A - LAN Maintenance Service Rates**
  - **Appendix B - Responsibilities Diagram**
  - **Appendix C - Account Information**
- 

### **1.0 Overview**

This Service Agreement (SA) is between IT Communications (ITCS/ITCom) and a University of Michigan Unit (henceforth referred to as Unit) on the Ann Arbor Campus. Under this SA, ITCom agrees to provide the Unit, Network Infrastructure Maintenance to include data switches, routers, access points, hubs, Uninterruptible Power Supplies (UPS's), firewalls, and other identified and agreed upon components at the service rates and for the duration specified.

This SA also covers performance, reliability and other topics pertinent to maintenance; in particular, it lists the key responsibilities of ITCom and the Unit.

### **2.0 Purpose**

The purpose of this SA is to establish a cooperative partnership between the Unit and ITCom by clarifying roles, setting rates and expectations, and providing mechanisms for resolving problems.

### **3.0 Service Rates**

Service rates are presented in Appendix A and are reviewed annually. Any revisions will be made by ITCOM and presented to the Unit prior to SA renewal

---

#### **4.0 Terms of Agreement**

This SA agreement is effective from the date it is signed until the agreed upon expiration date. At the end of this period, the SA may be renewed. As with the original SA, renewed SA's are signed agreements that reflect terms and conditions agreed upon by both the Unit and ITCOM. Any changes or modifications to this SA must be submitted in writing to the signers of the SA 90 days in advance of the proposed implementation. Changes or modifications agreed to by both the Unit and ITCOM will be signed and attached to the SA as an addendum.

---

#### **5.0 ITCOM Responsibilities**

- 5.1 Provide services for equipment covered by this agreement and/or as identified and agreed upon in this document. ITCOM will retain spares for all products listed in this agreement (with the exception of UPS batteries or EOL (end-of-life)). ITCOM reserves the right to substitute similar equipment, as a temporary solution, in situations where maintaining exact spares is not practical.
- 5.2 Provide and maintain the necessary materials and electronic components to operate the Unit Network Infrastructure.
- 5.3 Provide configuration and Network Infrastructure Administration support necessary to repair and maintain the Unit Network Infrastructure hardware and software covered by this agreement.
- 5.4 Provide operational support for the following procedures:
  - Changing operational state of the Unit Network Infrastructure
  - Maintenance / Repair service
- 5.5 Provide the Network Administrator, via email, 48 hours notice of scheduled, non-emergency outages due to maintenance. These are typically scheduled daily between 5:00 and 8:00 AM.
- 5.6 Monitor 24 hours/day and 365 days/year (24 x 365), supported protocols to the backbone interface of the Units network up to and including the extension to the first hub or switch, which must be accessible at the fiber patch panel access (FPPA) point.
- 5.7 Monitor 24 hours/day and 365 days/year (24 x 365), network interfaces on uninterruptible power supplies (UPS) that support the Unit network switches. Provide notification in the event that a UPS is activated, (input power is lost or degraded and system switches to battery power), deactivated, (input power is restored), or unreachable. Provide notification to the Unit Network Administrator when batteries degrade to the point of needing replacement.
- 5.8 Provide maintenance on the station cabling as installed by ITCOM, or an approved U-M vendor which met ITCOM installation specifications, and was not vandalized, removed, or modified during remodeling and/or construction. In the situation where the cabling was installed by non-ITCOM personnel (including non-approved U-M vendor) and service is required, additional charges may be assessed.
- 5.9 ITCOM will provide Preventative Maintenance (clean & vacuum) on each Customer Unit switch covered in this agreement yearly.

## 6.0 Unit Responsibilities

- 6.1 Submit an Appendix C data to ITCOM with an authorized signature and charge account information. Provide the name of the person who will be the contact for ongoing maintenance.
  - 6.2 Maintain their network(s) such that it does not compromise the performance or integrity of ITCOM Network Infrastructure. In consultation with others, as necessary, handle violations of the University's Proper Use Policy, violations of system security, and all other applicable policies by service users.
  - 6.3 Provide support to the users of this service. Including, but not limited to the following:
    - ❑ First level network support for service users
    - ❑ Distribution of operating system software specific to the Unit network and assistance with installation of user network adapters
    - ❑ Distribution of applicable documentation for this service
    - ❑ Documentation covering security and the proper use of this service
    - ❑ Firewall configuration
  - 6.4 Track user data and administer services, including IP addresses and DNS services, resolve conflicts between users, and correlate IP addresses to individual machines. Provide ITCOM with electronic access to IP and address information 24 x 365.
  - 6.5 Notify ITCOM of any change regarding the Network Administrator at least one week before the change occurs. Notification needs to include the name and appropriate contact information; all information—to include: the email, pager, and phone contact information for the Network Administrator and designate; the identification of which listed contact methods should be used by ITCOM to contact unit designates and which Administrator/Designate should be contacted during business and/or non-business hours-- must be submitted through the use of the Network Information Change Request web site (<http://www.itcom.itd.umich.edu/backbone/umnet/nicr.html>).
  - 6.6 Provide the Security Administrator, as appropriate, contact information by submitting that information through the NICR site.
  - 6.7 Give ITCOM at least two (2) hours advance notice of a change in the Units network configuration that could potentially change the state of connectivity of the equipment covered in this agreement. If the Network Administrator is not sure if there will be an impact, then, he/she will contact the ITCOM UMNOC for advice. Notice must be given either by calling 647-8888, or sending email to [TROUBLE@UMICH.EDU](mailto:TROUBLE@UMICH.EDU). The Unit will be responsible for any incremental charges resulting from the Unit's failure to notify ITCOM.
-

## 7.0 Performance Measures

### 7.1 Network Technical Performance

If a Unit's network compromises the performance of the UMNET Backbone Network, ITCOM will take appropriate action to restore performance (if possible), or take other action, up to and including disconnecting service to the Unit network (or a piece of the network), if necessary, to maintain the integrity of the Network.

### 7.2 Network Maintenance Performance

#### 7.2.1 Normal Business Hours -

Provide the following service in the event that an outage or degradation occurs impacting the entire network or a large portion of the network, (this is dependent upon a number of factors including the number of attached users and the resources being accessed), **during normal business hours**, (i.e., Monday through Friday, 8:00 AM to 5:00 PM, excluding University Holidays and Season days):

- (a) Priority maintenance/repair service, characterized by:
  - ❑ A response within 30 minutes of the ITCOM NOC notification or the Units call, to provide information to the Unit on specific steps that have been/will be taken to resolve the problem.
  - ❑ An on-site visit, if necessary, within two (2) hours of the response (i.e., the maximum on-site response time will be two and a half (2 1/2) hours). An update will be provided to the Unit Network Administrator if on site and a best guess ETR will be provided based on available facts. ITCOM will continue to provide the Unit with updates every two hours during an outage.
  - ❑ If an outage is identified within the agreement service hours ITCOM will resolve the outage even if the repair time extends beyond the service agreement hours.
  - ❑ Conduct monitoring via SNMP POLLING at one minute intervals.
- (b) Provide all time and materials required to restore service.

#### Non-Business Hours -

Provide the following service in the event that an outage or degradation occurs on the entire network or a large portion of the network, (this is dependent upon a number of factors including the number of attached users and the resources being accessed), **during non-business hours**:

- (a) Priority maintenance/repair service, characterized by:
  - ❑ A response within 30 minutes of the ITCOM NOC notification or the Units call, to provide information to the Unit on specific steps that have been/will be taken to resolve the problem.
  - ❑ An on-site visit, if necessary, within two (2) hours of the response (i.e., the maximum on-site response time will be two and a half (2 1/2) hours).
  - ❑ Conduct monitoring via SNMP POLLING at one minute intervals.
- (b) Provide materials only. Labor will be charged at the rates listed in Appendix A.
- (c) For those SA customers with extended coverage (24x7), Time and Material charges are generally covered.

- 7.2.2 Provide service during normal business hours, and within eight (8) business hours, to repair a circuit problem affecting one or more workstations.

### 7.3 User Perceptions of Network Performance

ITCom and the Unit acknowledge that performance and performance measures are affected by many factors that may be difficult to define and/or anticipate due to the nature and uses of the underlying systems and clients. Further, we recognize that “perceived response time” by users is a critical performance measurement. Therefore, in cases where the “perceived response time” by users becomes an issue, problems will be resolved by the procedures outlined in Section 8.0, “Problem Resolution.”

---

### 8.0 Problem Resolution

To help determine the existence and scope of a possible problem, the Network Administrator may call 647-8888, or send a message to TROUBLE@UMICH.EDU. Similarly, ITCom staff will contact the Unit Network Administrator by phone or pager to address any infrastructure problem being caused by the Unit network.

When performance measures do not meet the standards specified in this SA, the Customer Unit and ITCom will jointly work to:

- Identify the cause of the problem.
- Resolve the problem as quickly as possible.
- If after eight (8) hours, the problem is not resolved, the problem will be escalated to the on-call Manager and the appropriate outage process will also be invoked.

ITCom will own the problem until it is resolved or if the problem turns out not to be customer network related, the problem will be articulated to the Unit and transferred to the appropriate party.

If resolution is not achieved within the timeframes listed in section 7.2, the Unit may request to contact the ITCom On-Call Manager or the ITCom Operations Manager. This request must be made through the UMNOC ((7-8888) or TROUBLE@UMICH.EDU).

If resolution is not achieved within 24 hours, the Unit and/or ITCom may escalate the problem to the appropriate ITCom Project Manager (PM). If a resolution is not achieved within 72 hours, the Unit Director and the Director of ITCom, signers of the Service Agreement will be notified.

---

### 9.0 Upgrades

Evaluation and installation of software upgrades and/or patches (especially timely security patches) to the Unit Network Infrastructure components are covered under this SA at the discretion of ITCom. This maintenance will be made with a minimum disruption of service and coordinated in advance with the Unit Network Administrator. Hardware upgrades to the LAN are **not** part of this SA.

---

### 10.0 Security

ITCom will take appropriate steps to provide physically secure access to the routers and connecting cables. At times, ITCom will use a network “sniffer” to look at packets on the backbone to troubleshoot problems. These packets will be used for no other purpose.

### 11.0 Accountability

ITCom warrants that all reasonable measures within its resources shall be taken to ensure the performance, availability, and integrity of the Unit Network Infrastructure covered in this agreement. ITCom assumes responsibility for the hardware and software that it provides to execute this SA, as well as for the actions of ITCom staff. ITCom's liability for damages is limited to hardware replacement or repair, software fixes, and corrections to U-M staff errors.

The Unit agrees to maintain their network such that they do not compromise the performance or integrity of the UMNED Backbone nor violate security or other applicable policies. The Unit also agrees to have all service performed by ITCom Engineers and Technicians. The Unit assumes responsibility for any misuse of their network by users, will remedy such situations, and will be responsible for any expenses related to misuse by persons who use the Unit network

In cases of a natural disaster due to the act of God, (i.e. lightning, electrical storm, tornado, hurricane, hail, ice, snow, sleet, earth movement, flooding, nuclear hazard), or University provided services that fail, ITCom is not financially responsible for replacement of components listed in this SA. ITCom will assist the Unit in replacement of components and restoration of services per the Time and Material schedule. In addition, ITCom will assist the Unit with restitution under the direction of the University's Risk Management organization.

# APPENDIX A

## Network Maintenance Service Rates - Hardware and Software

### **Repeaters & Switches**

The agreement covers all supported repeater and switched hardware and software components of the network up to the jack, and excludes any mini-hubs, the network interface cards (NICs), and line cord.

### **Wireless Access Points**

This agreement covers all supported access point hardware and software components of the network up to and including the access point antenna. Due to the wide variety of antennas, there may be added time to get the antenna repaired or replaced. Wireless network interface cards (NICs) for computers connecting to the network are not covered by this agreement. Due to Wireless Access Point locations, we will only respond to problems during business hours listed in section 7.2.1. Wireless Access Points that fail during non-business hours will be repaired or replaced during the next business day.

### **Uninterruptible Power Supplies (UPS's)**

The agreement covers monitoring for all supported UPS hardware and software components. Supported hardware replacement and battery replacement can be done on a Time and Material basis.

### **Firewalls**

The agreement covers all customer-owned, ITCOM supported firewall hardware (generally Cisco Pix equipment) and software components.

### **Total Hardware and Software Maintenance Prices**

1. The price calculations are based on Cisco SmartNet list prices plus a 30% administrative cost.
2. For equipment that is not covered under SmartNet contract, costs are calculated as:
  - a. \$50 per device per month for 8 x 5 coverage
  - b. \$5 per device per month for 8 x 5 coverage (monitoring and replacement) for Wireless APs; also for UPS (monitoring and notification) and Power Panel (monitoring, notification, and some replacement) devices.
  - c. Server monitoring is available for \$10 per device per month.
3. Wireless Gateway devices (based on ITCOM's maintenance contracts with vendors), annual charges:
  - a. WG1xxx - \$ 719
  - b. WG2xxx - \$1585
  - c. WG5xxx - \$3108
4. An option is available to provide 24 x 7 coverage on all SA covered devices for an additional 20%; a Unit may selected to have all devices (with the exception of AP devices) be covered on a 24/7 basis; or the Unit may select individual devices to be covered on a 24/7 basis. If all devices are selected, the cost would be 20% of the calculated total SA yearly cost; if individual devices are selected for 24/7 coverage, a 20% additional device cost (SmartNet + 30% admin + 20% 24/7 cost) will be assessed.

5. For devices that have reached Cisco's End-of-Life (EOL) date, ITCOM will provide 'best effort' repair service (techs will repair or replace equipment from ITCOM spares inventory); it is expected that the Unit will replace with new equipment within 90 days of ITCOM using spare inventory. For devices that have reached EOL (or will meet during the first six months of the fiscal year (July-Dec), the SA cost will be assessed at 40% of the last Cisco SmartNet charge; this charge will cover 24 x 7 monitoring of the device and temporary replacement (of same or similar equipment) as appropriate. **Note:** any maintenance (repair/replacement) will be handled only during normal business hours (8am to 5pm EST); no 24x7 coverage option is available on End-of Life Cisco equipment.

**Labor Rates:**

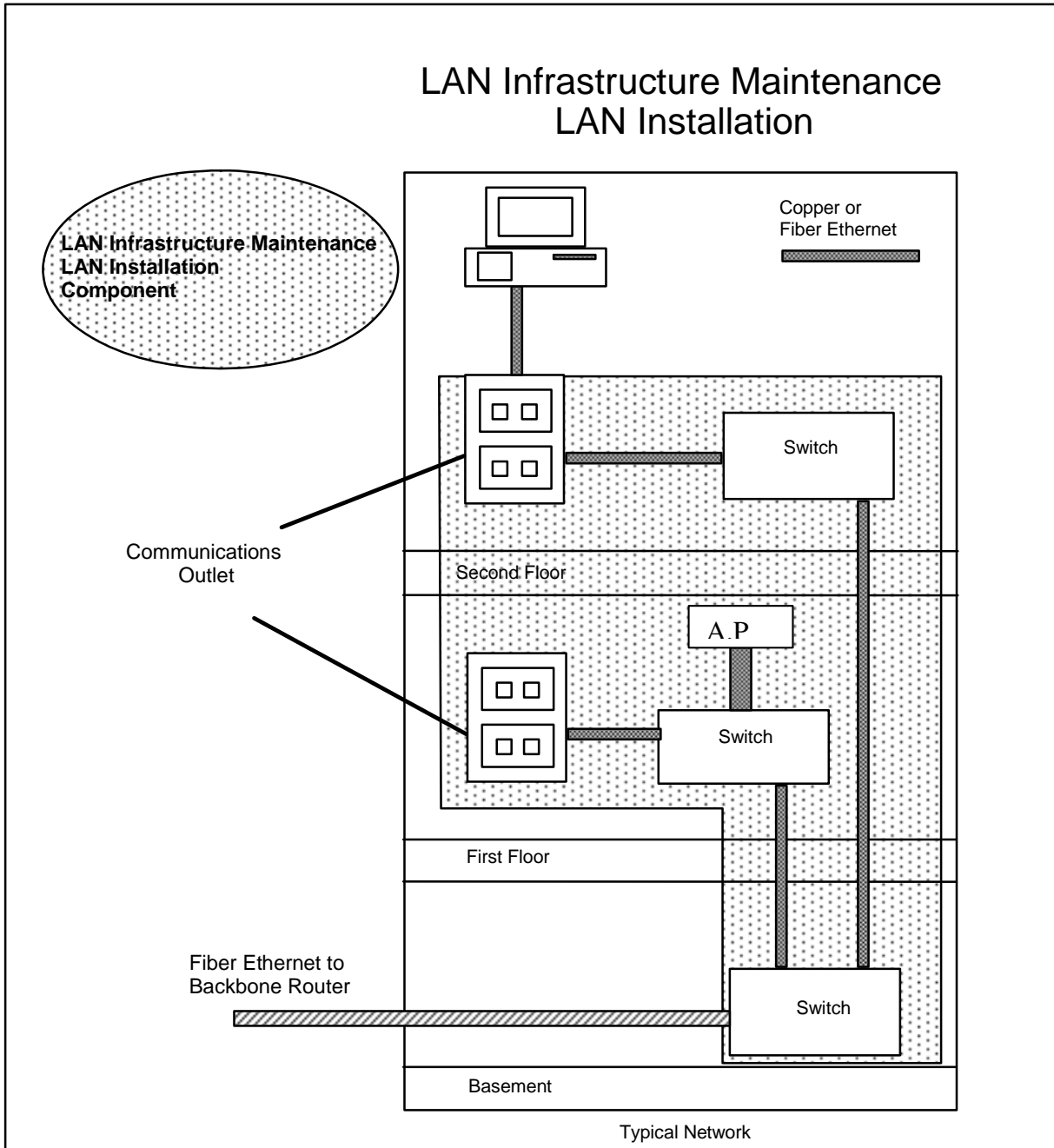
If a problem is found external to SA components and services, (equipment or software that is not covered in this agreement), the Customer Unit network Administrators will be contacted to inform them of the extent of the problem. The Customer Unit will be billed at the hourly rate for the time spent in troubleshooting the reported problem. Hourly rates are based on the ITCOM Data Network and Video repair rates (see rates at <http://www.itcom.itcs.umich.edu/rates/labor.php> for details).

**Normal Business Hours:** 8am to 5pm, EST, Monday-Friday, excluding University Holidays, see specific rates on the ITCOM Service page (<http://www.itcom.itcs.umich.edu/rates/labor.php>)

**Off Hours Support:** Overtime, Seasonal Days, or Holiday as applicable per ITCOM Data Network and Video repair rates (see <http://www.itcom.itcs.umich.edu/rates/labor.php>). There is a minimum charge of two labor hours for all call outs outside of the normal business hours.

# APPENDIX B

## Responsibilities



# APPENDIX C

## Account Information

CUSTOMER NAME: \_\_\_\_\_

YEARLY SA COST: \_\_\_\_\_

MONTHLY SA COST: \_\_\_\_\_

BILLING ID: \_\_\_\_\_

ITCOM SERVICE ORDER #: \_\_\_\_\_

BILLING TYPE/CODE: \_\_\_\_\_

BEGINNING DATE: \_\_\_\_\_

EXPIRATION DATE: \_\_\_\_\_

CHART FIELD NO. (OR LEGACY ACCT. NO.): \_\_\_\_\_

CUSTOMER UNIT  
AUTHORIZED SIGNATURE: \_\_\_\_\_

DATE SIGNED: \_\_\_\_\_

ITCOM AUTHORIZED  
SA MANAGER: \_\_\_\_\_

TERM OF PAYMENT: \_\_\_\_\_