

**SERVICE LEVEL AGREEMENT
BETWEEN
UNIVERSITY OF HOUSTON SYSTEM
INFORMATION TECHNOLOGY
&
ITAC & IT Federation(DS)**

For the definition of ownership and responsibilities pertaining to Wireless Access Service.

**Service Level Agreement
Between
Computing and Telecommunications Services
&
Residential Life and Housing**

APPROVAL SIGNATURES

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Wireless Users Of Record

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Summary of Changes

<u>Date</u>	<u>Version</u>	<u>Change(s)</u>	<u>Pages Affected</u>
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1.0 Introduction

This document is an agreement between University of Houston System Information Technology (UHS IT), UH College and Department IT Representatives and the UHS Wireless Users, for the delineation of ownership and responsibilities pertaining to Wireless Services

This Service Level Agreement (SLA) will be updated, reviewed and approved at least annually.

The UH-IT Wireless Service provides a system of access for wireless clients and serves Students, Faculty and staff alike. It is maintained and operated by UH IT,

This is a working agreement between UHS IT Information Systems, College and department IT rep's and the Wireless Users.

1.1 Assumptions

- 1.1.1 Information Technology Availability Center (ITAC) support is available 24 hours, 365 days.
- 1.1.2 UHS Information Technology Enterprise Systems Change Control is the governing board for configuration changes.
- 1.1.3 The maintenance/remedial plan will utilize an incident management and reporting process for software, hardware both Client and Supporting infrastructure and data problems.

1.2 Objectives – UHS ITAC

Information Technology Availability Center shall provide:

- 1.2.1 To manage the centralized resources identified by the Partner unit in conjunction with TSS.
- 1.2.2 To monitor **wireless access** in the Designated Buildings and Outside Areas as shown on the Wireless web-site www.xxx.yyy
- 1.2.3 To serve as **Level 3** Helpdesk Support 24/7 365 days a year.

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- 1.2.4 To remotely query the state of any wireless device being tested for system load utilization and configuration.
- 1.2.5 Scheduled maintenance will occur during scheduled maintenance time. Scheduled maintenance will be coordinated with those affected by the system administrators responsible for the maintenance.
- 1.2.6 Handling wireless outage questions. If the problem cannot be addressed in a satisfactory manner, the technical contact should work with IT staff for further research.
- 1.2.7 User problem response as per Table 1-1, Impact Assessment Table as per severity level definition in Table 1-2, Problem Response Objective.
- 1.2.8 To designate an individual to serve as a contact between CTS and the Partner unit. This individual will expedite the resolution of problems and minimize the required involvement of each Partner unit's administrative head.
- 1.2.9 During normal business hours a maximum elapsed time between Technology Provider (TP) notification and UHS IT response back to the user of four (4) hours.
 - 1.2.9.1 To establish disaster recovery procedures to minimize loss of data and processing capabilities in the event of a catastrophe.
- 1.3 Objectives – College and Departmental IT Representatives and Wireless users. ??????????**
 - 1.3.1 The wireless support partner shall report problems to User Help Desks (ITSC Information Technology Support Center) or 713 743 1411 and provide such details as requested.
 - 1.3.2 To designate one or more technical contacts for the Partner unit. These contacts should have appropriate subject matter expertise to provide the support needed by the Partner unit. This technical contact will be responsible for:

Interacting with CTS and TSS on an operational basis to ensure on-going quality service to the users.

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Handling usage questions from support. If the problem cannot be addressed in a satisfactory manner, the technical contact should work with IT staff for further research.

To identify the tools to be used for Partner-specific hardware, software, maintenance, training and support staff.

To acquire and install the selected client systems (hardware, software and network connectivity).

- 1.3.3 The IT Partners group provides recommendations about departmental purchases to ensure they are consistent with UH's systems and can be supported.
- 1.3.4 To provide system administration expertise to support and maintain the hardware and operating system software on the server and to ensure security and software upgrade issues are handled and kept up to date
- 1.3.5 If a College has no support available, IT suggests faculty and staff members call the IT Support Center at 713-743-1411, which will contact the appropriate person with the information.

1.4 Concurrence

This SLA shall remain in force until cancelled or modified by written agreement of all parties.

1.5 Declared Disaster Exclusion

In the event that a disaster is declared by UHS IT, the terms of this SLA are null and void until these services are restored at the termination of the disaster. The UHS IT Incident Action, Business and Service Continuity Plan will be activated in the event of a Incident to restore services stated by this SLA. Provisions have been made for the permanent storage of all tapes necessary for the restoration and operation of the system on other equipment. Systems are backed up on both a daily and weekly basis based on the system function. Tapes are transported to an offsite facility daily. In the case of a incident, the UH Information Technology , Incident Action, Business and Service Continuity Plan will be followed.

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1.6 Roles – Supplier of Service

UHS IT shall serve as the “Supplier of Wireless Service”

- 1.6.1 Planning for and providing UHS mutually agreed upon capacity and performance levels.
- 1.6.2 A minimum monthly reporting of:
 - a. SLA performance levels
 - b. Status of open issues related to the fulfillment of this SLA
 - c. Provide additional access to outage and performance information upon request
- 1.6.3 Advising and gaining the concurrence of the “User of Record for each college” for changes to service.
 - a. Notification is required 5 business days before the change is to occur. The scope, description, and affect of changes proposed to the “User of Record for each College” will be provided via email to designated contact list. This advance notice may be waived for emergency changes or those agreed to by UH IT and the WIRELESS USER Component affected by the change.
 - b. The primary or secondary contact for the “User of Record” will provide response within 5 business days of initial contact, to allow planning to proceed. In the event of a negative response, a list of issues needing to be addressed will accompany the response.
 - c. In the event of an emergency change, all contacts of the “User of Record” will be contacted via phone, email and/or pager. In this case, the change request process will be followed for the purpose of reviewing the change by the “User of Record”.
- 1.6.4 Scheduling all routine/preventive maintenance during pre-defined periods of minimal impacts.
- 1.6.5 Maintaining required software and/or hardware fixes and/or updates.
- 1.6.6 Supplier of service shall maintain ownership and responsibility of all supporting Infrastructure including Access Points, Wired Connectivity and centralized control and monitoring equipment.

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1.7 Roles – College User’s of Record

College or Department Embedded IT support personnel shall serve as the “User of Record” of the environment provided by UHS IT. Responsibilities of the “User of Record” shall include:

- 1.7.1 Using data provided from section 1.6.2 on a monthly basis, provide feedback to the “Supplier of Service” relative to capacity, performance, availability, reliability and resource projections.
- 1.7.2 Advising and gaining the concurrence of the “Supplier of Service” for changes to the network backbone. (See section 1.6.3).
- 1.7.3 Update their respective Remote Campus Monitoring List and provide such updates via email to ITAC@UH.EDU .

1.7.4 Roles – User

IT User Practices and Guidelines

Users shall be in compliance with UH policy as stated in:

http://www.uh.edu/infotech/php/template.php?nonsvc_id=285#guidelines

Wireless Map:

http://www.uh.edu/campus_map/wireless/

1.7.5 *The Wireless Network (UHWireless)*

Users can connect using a computer or other device:

http://www.uh.edu/infotech/php/template.php?network_id=39

1.7.5 For User computing, account or support issues:

<http://www.uh.edu/infotech/help/#contact>

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1.7.6 Users may call the UH IT Help Desk 24/7 by calling 713-743-1411.

1.8 Measurement Tools

Software tools for the measurement of availability and reliability of the WAN/Internet systems are employed within ITAC.

1.9 Configuration and Change Management

Primary application of maintenance will be performed by the local operational support group, as appropriate. Maintenance or changes shall be coordinated with and UHS IT ES Change Management Committee. PeopleSoft currently has a change management committee that reviews production changes.

1.9.1 Service Demark

The default demarks between UHS IT and WIRELESS USER facilities will be the remote interface of UHS IT equipment located at the WIRELESS USER site(s). Management of IT-UH Telecommunications facilities including power and environmental issues will be the sole responsibility of the UH-Telecommunications Department

1.10 Network Operations

UHS IT provides network availability for the WIRELESS USER environment 24 hours a day, 365 days. All problems pertaining to the service will be reported by User's of Record ITAC at (713) 743-2700. All others should report problems to their designated helpdesks.

1.11 Problem Management

All system problems are initially reported by WIRELESS USER Components to ITAC at (713) 743-2700. One of ITAC's primary responsibilities is to properly document all necessary information. The problems are entered into the PIER system and tracked by a unique number assigned to each problem. ITAC contacts and assigns the technical group

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to resolve the problem. The major problem categories are: hardware, software, network, information and documentation. The reported problem will be assessed and ranked according to the Impact Assessment Chart and managed according to that protocol. Refer to Appendix E for all policies, procedures and examples.

1.12 Post Problem Analysis

After the problem is resolved, all parties involved or associated with the problem are responsible to analyze the problem. The Post Problem Analysis involves identifying the actual cause of the problem, short and long term effects, the resolutions, proposed preventions, initiated preventions, procedure changes, discoveries, and action items that may be assigned to groups and/or individuals. If the problem has escalated to the point of Urgent assessment, ITAC will facilitate a Lessons Learned Review. If the problem was resolved before it escalated to that point, it is the responsibility of both UHS IT and the WIRELESS USER Managers to identify the items in the Post Problem Analysis and provide that information to ITAC via email so that it can be included in the problem record.

1.13 Data and Software Integrity Responsibilities

UHS IT, as it relates to Operating Systems and network, is responsible, using access control and backup mechanisms, for ensuring UHS data resident in the UHS IT host servers is protected from modifications by unauthorized users and maintained as a proper physical and semantic representation of that which has been entered.

1.14 Security Roles

Security and Disaster Recovery department (SDR) will be responsible for performing risk analysis that include the host servers, their operating system, locally attached workstations, internal networks, external network interfaces and the physical environment.

1.15 Security Incident Notification (SIN)

As directed by SDR, ITAC notifies and provides information to the UHS management regarding the occurrence of security incidents that may affect the security of any part of the UHS.

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Appendix A: Definitions

A.1 Backbone Availability

Backbone availability is defined as the ready accessibility of backbone components to end-users to enable connection to registered products and services.

Network availability will be measured as the minimum of any backbone component which, when not readily accessible, prevents end-user connection to registered products and services. Outages of components where back-up or alternate facilities are available will be measured by the amount of time from initial outage to accessibility of such back-up or alternate facility.

Availability will be expressed as a percentage of scheduled outage outside of “Prime Time” with 24 hours or more notice to the University of Houston System management. Average availability percentage will be calculated monthly for the previous 30 days as:

$\% = ((\text{scheduled hours} - \text{unscheduled downtime}) / \text{scheduled hours})$.

A.2 Backbone Reliability

Backbone reliability is expressed in terms of the Number of Unscheduled Outages during Scheduled Availability hours (outside maintenance windows) and outage duration per week. An outage of a backbone component preventing end-user connection to registered products and services will be included in reports of reliability.

Reliability numbers (both number of unscheduled outages and their duration) express the objective to be tolerated and not the number, which is to be achieved.

A.3 UHS IT

University of Houston Information Technology is responsible for providing the solutions to meet the computing and telecommunications needs of UHS.

A.4 ITAC

Information Technology Availability Center is responsible for maintaining a high level of network and/or systems availability by monitoring of the mission critical systems and networks utilized by the University of Houston Systems through centralized reporting and by providing a highly functional and reliable staffed control center 24 hours by 365 days a year.

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ITAC will accept calls from UHS components relating to problems encountered by using the WAN/Internet systems. All problems are logged into the PIER system as they occur.

A.4 Maintenance Windows

Maintenance window is the period of time outside of the Scheduled Availability Hours in which maintenance is performed.

A.5 Problem Response

UHS IT technicians either provide a problem solution upon receiving the call or research the problem or then contacts University of Houston System management with the solution. ITAC makes a follow-up call to verify that the problem has been resolved to the University of Houston management satisfaction.

A.6 Primary Support (Maintenance)

The University of Houston System management maintains primary support maintenance contracts to insure hardware and software reliability. These maintenance contracts are generally directly with the vendor who produces a product or platform.

A.7 System Availability

System Availability is defined as the ready accessibility of system components to end-users to enable connection to registered products and services.

System Availability will be measured as the minimum availability of any system component which, when not readily accessible, prevents end-user connection to registered products and services.

Availability will be expressed as a percentage of scheduled outage outside of “Prime Time” with 24 hours or more notice to users (and accepted by users). Average availability percentage will be calculated monthly for the previous 30 days as:

$$\% = ((\text{scheduled hours} - \text{unscheduled downtime}) / \text{scheduled hours}) * 100$$

A.8 System Reliability

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System reliability is expressed in terms of the Number of Unscheduled Outages during Scheduled Availability hours (outside maintenance windows) and outage duration per week. An outage of a system component preventing end-user connection to registered products and services will be included in reports of reliability. Where such components are backed up or protected with alternate facilities, duration will be reported as the time from the onset of the outage until the back up or alternate facility is available.

Reliability numbers (both number of unscheduled outages and their duration) express the objective to be tolerated and not the number, which is to be achieved.

A.9 Technology Providers

Support personnel as outlined in Appendix B: Authorized Contacts.

A.10 WIRELESS USER

All Wireless Users Facilities affiliated with the University of Houston Main Campus.

A.11 Telecommunications Definitions:

Telecommunication facilities are spaces and secured rooms housing telecommunication and network equipment consisting of but not limited to Data, Voice, Cable Television (CATV), Closed Circuit Television (CCTV) components and their associated wiring. Secured rooms have stringent requirements due to the expense and complexity of the equipment housed in them supporting the University's telecommunications and network infrastructure. The types of telecommunication facilities are as follows:

The Entrance Facility (EF) is the main telecommunications service entrance into the building. It is the area where the demarcation between the inter-building and intra-building cabling systems is affected. This securable room is to be dedicated to this purpose with no other building services sharing the space.

Main Cross-Connect (MC): The cross-connect normally located in the (main) equipment room for cross-connection and interconnection of entrance cables, first-level backbone cables, and equipment cables.

Horizontal Cross-Connect (HC): A group of connectors (e.g. patch panel or punch-down block) that allows equipment and backbone cabling to be cross connected with patch cords or jumpers.

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Equipment Room (ER): a special-purpose room that provides space and maintains a suitable operating environment for large communications equipment. These rooms tend to serve a building as compared to a Telecommunications Room that serves a floor. This securable room is to be dedicated to this purpose with no other building services sharing the space

Telecommunication Enclosure (TE): A secured case, cabinet or housing for telecommunications equipment, cable terminations, and cross-connect cabling.

Telecommunication Room (TR): provides for demarcation between the per-floor horizontal customer service cabling and the buildings video, data and voice backbone cabling. Additionally this room contains the electronic equipment that transitions between the data, voice and video building backbone and the end user's telecommunications equipment. This securable room is to be dedicated to this purpose with no other building services sharing the space.

Telecommunication Rooms are allocated to each floor of a building and house the communications equipment and related wiring that serves that specific floor. Several telecommunication rooms may be located on a single floor in order to maintain the cable length limitations specified within particular standards.

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Appendix B: Authorized Contacts

The following are the individuals who are authorized contacts for their respective buildings.

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Appendix C: Help Desk Contacts

The following list contains contact information for IT Help Desk.:

Main Campus
(713) 743-1411
support@uh.edu
Hours: 24x7
Holidays Closed

Any IT Helpdesk

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Appendix D: List of Relevant Documentation

The master copy of each document is maintained by ITAC.

Incident and Problem Management: When an incident is reported, the Campus Help Desk classifies the priority as follows:

Case Priority	Initial Response Time	Follow-Up Response Time	UIT Systems Team Criteria	Completion Timeframe	
				Business Hours	After Hours
Urgent	15 minutes to customer by support personnel; (30 minutes to customers after hours)	30 minutes to respond to user inquiry and inform user of current status of issue	<ul style="list-style-type: none"> Unable to conduct business Multiple Failures (a group of more than 5 people are down) 	Completed within 4 hours, 90% of the time	On site within 2 hours, completed within 6 hours 90% of the time
High	Response time 15 minutes to customer by support personnel; (30 minutes to customers after hours)	30 minutes to respond to user inquiry and inform user of current status of issue	<ul style="list-style-type: none"> Critical task cannot be performed. Affects a small group of users (less than 5) 	Completed within one business day, 90% of the time	Completed within one business day, 90% of the time
Medium	Response time within 2 hours to customer by support personnel	One Business Day to respond to user inquiry and inform user of current status of issue	<ul style="list-style-type: none"> Service is lost by a single user or small number of users minimally affecting business functionality. Problems or incidents where a workaround exists or can be developed with a small amount of incremental 	Completed within 2 business days, 90% of the time.	N/A

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resources.

Low	Response time one business day to customer by support personnel	One Business Day to respond to user inquiry and inform user of current status of issue	<ul style="list-style-type: none"> • Single users can operate some of the system activities normally, but a definite problem is identified. • Scheduled move, add or change • Non-critical repair 	Completed within 5 business days, 90% of the time	N/A
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A yearly report will be made available on the web site showing response and completion time statistics.

In the event a request cannot be handled within the indicated time frame, the customer will be notified and given a estimated time for response or completion.