H-ITT CRS Reference Guide V2.4.x (2011)   ^{Rev C}

Introduction:
This Reference Guide provides the user with the necessary information to utilize all features and applications of the H-ITT CRS (Classroom Response Software). The Default settings of the CRS are designed for ease of use in all applications and are recommended for simple first time use. However, the CRS has advanced features to meet the needs of virtually any Response System application and has development tools that provide for custom applications as well.

H-ITT CRS has two programs, Acquisition (used to collect responses) and Analyzer (used to grade and report) these will show up as desktop "icons" when the CRS is installed. Typically both programs are used on the same computer, however they may be used on separate computers which can allow a user to collect responses on a classroom computer and grade or evaluate responses at their office computer.

H-ITT CRS is compatible with all H-ITT hardware products and can be used with Windows, MAC and Linux operating systems. The appearances of the applications are native to the Operating System. This manual depicts the Windows OS appearances for the reference images. Other variations of some features and functions do exist within the various operating systems, and are specifically noted where applicable.

How to use this guide:
This reference guide is provided in PDF format with various search tools available to easily find details on topics or key words. Reading this entire manual is not necessary to effectively use the H-ITT CRS programs, however we do recommend reading The Basics as the starting point. You may also want to reference the Quick Start Guide to get started fast. Once you have started using Acquisition / Analyzer and want to get information on specific topics the following tools provide easy access to your area of interest:

- **Click the bookmark tab on the left of Adobe Acrobat to see and access all sections in an outline form.**
- **Use the Table of Contents links to get information on any section of interest.**
- **Use the Index to locate topics by keyword(s)**
- **Or use Adobe Acrobat's "find feature" to search any key word within this manual.**

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FAX: 321-576-0397

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H-ITT, LLC
420 Shearer Blvd
Cocoa, Florida 32922

A Hyper-Interactive
Teaching Technology
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Major version revisions from version 2.3.x:
- Acquisition registry settings that allow office documents to open in the browser window are made in the user's settings instead of the local-machine settings.
- Analyzer, un-graded classes do not appear in the grades export file.
- Various updates to histogram format, confidence grading and drop x questions preferences and points assignments for fill in the blank question types.
- Points values can be set for all questions in a specific class.

1 Installing H-ITT CRS Software

The H-ITT CRS software programs are free and come in one easy to download self-installing archive. After installation, you will find two new Desktop Icons: Acquisition and Analyzer (Windows specific)
H-ITT CRS is cross platform for Windows, Mac, or Linux versions. The appearances of the applications are native to the Operating System. This manual depicts the Windows OS appearances for the reference images. Other variations of some features and functions do exist within the various operating systems, and where applicable are specifically noted. This cross platform consistency simplifies deployment across the heterogeneous OS landscape that exists at most institutions of higher learning and minimizes training and support costs for IT departments. Here are a couple of things to keep in mind:

- The class files and roster files are cross platform as well. They can be acquired and analyzed on separate operating systems.
- The 'GradeBook.hgb' and '.ini' settings files may NOT be transferable between Windows, Mac, and Linux.

You must install USB drivers for Mac OSX for USB com ports to connect the hardware, see section 5.4 in the appendix or reference H-ITTs Quick start guide for details and instructions.

H-ITT CRS software installation is straightforward and automated but it depends upon what operating system you are using: Windows, MAC or Linux.

1.1 Windows installation instructions

First you must either download the application (e.g. 'H-ITT CRS for windows…) from the Internet at H-ITT.com/downloads, or from the H-ITT CD and save it to your PC. When you insert the CD, an index window should pop up, if not, you will need to browse to your CD drive and open the file named 'index.htm'.

Administrator installation: If you are using Office 2007, the installation should be performed from the ADMINISTRATOR account to avoid problems with Office documents (PowerPoint, Word and Excel) not opening properly within the Acquisitions slides window. Reference the appendix section 5.5 for details.

If you are using H-ITT CRS version 2.x.x, the USB driver installation is automatic, for previous versions you must install the USB drivers separately, reference section 5.4 for details.

Once you have the program (e.g. 'H-ITT_windows_x.y.z.exe'), on your PC, double click on it. A software installation wizard performs the installation. We recommend you accept all the default requests until it is finished.

Once complete, two icons will appear on your desktop,
        H-ITT Acquisition, and
        H-ITT Analyzer

If you are upgrading over an old version follow the same instructions as above. **Your settings and class file information will be preserved and can be used with all of H-ITT's new upgrades.**

1.2 Mac OSX installation instructions

First you must either download the application *(e.g. 'H-ITT CRS for your version of Mac….) from the internet at H-IITT.com/downloads and save it to* your desktop, or insert the H-ITT CD into your CD drive. When you insert the CD, an index window should pop up, if not, you will need to browse to your CD drive and open the file named 'index.htm' Once the file, (e.g. 'H-ITT CRS for *your version of Mac*….), is on your desktop double click on it. A folder will open containing the two applications. Drag both applications to a location of your choosing. If you are upgrading over an old version follow the same instructions as above and overwrite your existing applications with the new ones. Your settings and class file will be preserved and can be used with all H-ITT's new upgrades.

1.3 Linux installation instructions

Once the file, (e.g. 'H-ITT CRS for Linux….), is on your computer open the command prompt and change to the directory where 'H-ITT CRS for Linux…' resides and uncompress the archive and change into the directory H-ITT Linux x.y.z. Login as root by typing 'su root' and entering the root password. Run the install.sh script by typing './install.sh'.

Follow the instructions in the install script. The install script asks for the location of the H-ITT applications. The default location is '/usr/local/H-ITT'.

If you are upgrading over an old version follow the same instructions as above and choose the existing location of the H-ITT applications as the install location. This will overwrite your existing applications with the new ones. Your settings and class file will be preserved.

2 Starting the software

The H-ITT CRS software has two programs: the Acquisition and the Analyzer.

The Acquisition program is the first step, where you create your class (i.e., 1st period Physics 101'), and include other information specific to this class.

Using Acquisition first, starting questions and getting student responses will create all the necessary files that can be used by Analyzer to easily build your roster for grading and reporting purposes.

Starting either program (acquisition or Analyzer depends on your operating system: Windows and MAC, simply double click on the desired Icon, for Linux, open the command shell and change to the directory where the H-ITT applications reside (e.g. '/usr/local/H-ITT'). Type either './H-ITTAcquisition' or './H-ITTAnalyzer'

This schematic depicts the overall process for using the H-ITT software applications. Start in the Acquisition program: Ask questions, and exit. The information collected, called a class file, is automatically created. This file is available to the Analyzer program where you can review, edit and report student grades.
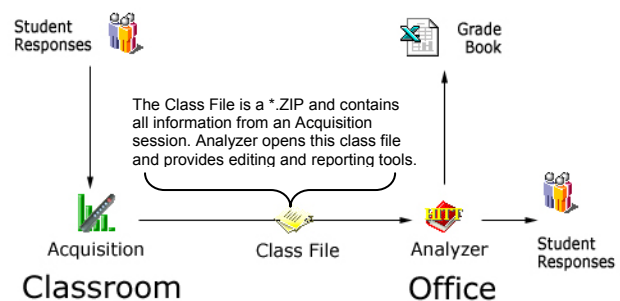
Acquisition is where you start: Verify the hardware is functional and create a class. In an Acquisition class you pose questions, acquire student responses, assign a correct answer and view Histogram of results.

When you exit the Acquisition class the class file is automatically created and available for Analyzer.

Analyzer provides tools for analysis, editing and reporting of the student responses you collected from an Acquisition session as well as creating the roster that associates students with the clicker they used in the Acquisition session.

Details on Acquisition and Analyzer application programs are in the following sections, but first, read the following to get an understanding of the basic steps to collecting responses.

The Basics:

The H-ITT classroom response system is composed of hardware and software. Hardware consists of handheld remote control devices used by students or audience members to respond to questions posed by a teacher or speaker, and base units that collect remote responses and send them to a computer. Software consists of computer program(s) that process, display and report responses collected from the remotes. H-ITT CRS software is simple to use, but because it has so many options, the simplicity is often overlooked. The following steps are the fundamental way the H-ITT CRS works. First, start Acquisition and click create a class, type in a class name and click OK then click the class name.

1. Pose a question to your class in **Acquisition**; it may be a simple verbal question like "press your A/1 key if you agree, press B/2 if you disagree", or could be a content file displayed to the class or audience from a computer projector.
2. Press the green START button to collect responses for the question posed; an ID box with the last 3 digits of the remotes serial number appears when remotes respond which gives visual confirmation of the responses received.
3. When all responses are in, press the red STOP button. A Histogram of the responses will appear, great for instant feedback. If the question has a correct answer, enter it on your computer keyboard, this will "teach the software" the correct answer for grading and will "show" the correct answer by turning the appropriate Histogram "bar" green. *(There are many other ways to "assign" correct answers, but doing this during the question/histogram is a fundamental way).*
   *** *Repeat steps 1,2,3 as many times as you want.*
4. If you intend to grade and report individual student performance you need to create a roster that associates students with the remote they used to answer questions, this is done in **Analyzer**. Creating a roster is retroactive, meaning when a student answers, the answer is associated with remotes serial number and is saved. If you want to report grades and such you need to add the student information to that remote serial number in the H-ITT roster. The most straight-forward (but not the easiest way) is to type in the students information (i.e. name) in the roster window on the same line as the RemoteID they used. *(There are many automated tools and methods provided to build this roster, so hand typing may sound simple, but is probably the most time consuming).*

The time spent learning how to use this depends on what you want to do, for example:
If you just want to get unbiased opinions for surveys, the learning curve is about 2 minutes: Open Acquisition, click on "create a class". Type in a class name like 'opinion pole', click on the class name you just created and follow the above 3 steps (Pose a question, **green button** starts collecting remote responses, and **red button** stops collection and shows Histogram of results). You need not read this manual to do this.

The other end of the learning curve is up to you. There are virtually thousands of combinations of options to suit your teaching style and content delivery method. Acquisition allows you to deliver your content your way and collect gradable responses, for example, from the Acquisition slides pull down menu, select open slides file, browse to and open your PPT, advance to your question slide and do steps 2 & 3 above…you don't need to prepare anything for this, the data collected is automatically saved in the class file and easily associated to a user, edited, graded and reported with the Analyzer program.

After you've collected responses close Acquisition and open Analyzer and click on the class name you created. In Analyzer you can retroactively associate a student with the remote they used via the Roster. Analyzer is also your gradebook, keeping a running total of all responses collected. Many features and options allow you to review, edit, and report grades your way. The best way to "learn" CRS features is to try them. The CRS is renowned for being "bullet-proof" no matter what option or combination of options you try, they work, and if the results are not what you expect or want, simply un-select the option to revert the program to where you were, then refer to this manual to learn how to apply the feature/function you desire. In most cases the H-ITT CRS will do what you need and want, and often provides automated ways to do it.

3 Acquisition

Acquisition: Start this program to:
- Verify hardware connections
- Create a new class
- Pose questions and collect responses from students
- Display student response status via ID box grid.
- Assign the correct answer to questions
- Display Histogram of responses
- Saves responses to the class file for grading later with the Analyzer

3.1 Verify hardware connections

If you have a clicker and a H-ITT base unit connected to your computer, you can verify it is properly connected and collecting responses as follows.
FYI If you do not have a H-ITT base unit connected to the computer, you can simulate clicker responses, refer to the DEMO MODE section.

The com port that the base unit is connected to will appear in the window below "Base Units and Port Settings" when connected. If your computer has a serial port, such as COM1, this port will show if it is not being used by another device, even when a base unit is not connected. For Windows, you can connect the base unit when this screen is up, the com port will "pop-up" a few seconds after the USB cable is connected. For Mac and Linux, the base unit must be connected prior to starting Acquisition.
The "Change" pull down default settings are suited for all H-ITT's remotes, both IR and RF, and you do not need to change this unless you have older hardware (i.e. 1-way clickers or base) or want to change the Baud rate for class sizes over 500.
Note: If you change the baud rate in Acquisition, you MUST change the baud rate on the connected base receiver manually by setting the switches provided on the base receiver.

Test to make sure the program is receiving remote responses by activating a remote. The remotes unique serial number will appear along with the key that you pressed in the right hand column.
USB Com port the base is connected to shows up here (USB Serial Port)

Acquisition start up screen:

CREATE CLASS, see below, sec 3.2

DEMO MODE, Click to simulate responses.

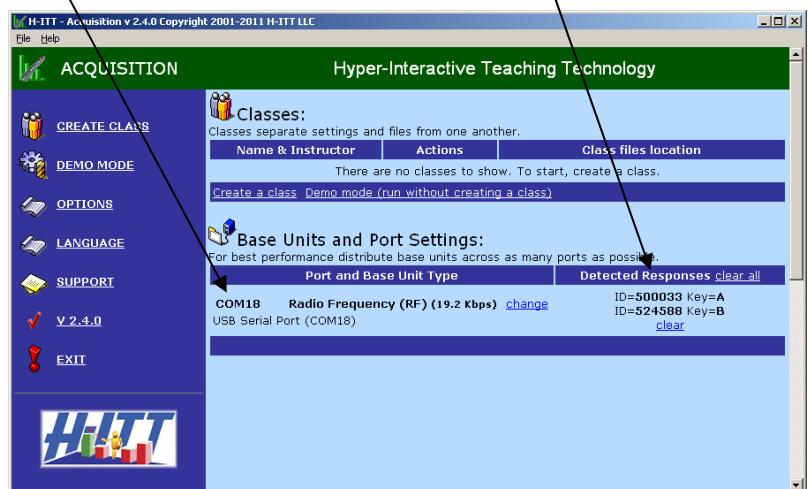OPTIONS, Allows general set up for all classes you create.

LANGUAGE, English is the default.

SUPPORT, links to H-ITT.com support.

Check V2.x.x, Click to check for CRS updates and download latest version

EXIT, Exits Acquisition

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3.2 Create a new class

From Acquisition startup screen, click on CREATE A CLASS at the top left.
Fill in the information in the dialog box.
There are no "required" fields and you can click OK without entering any information in which case the class name will be My Class, and instructor name Me. You can enter this information later from the options pallet for this class

Enter the class name e.g. 1st period math, or MWF physics 101.
CAUTION: Do not use the following characters in the class name:

\ / : * ? " < > |

Enter your name.

If you want to use a remote to control the software and enter the correct answers, enter that remote's serial number here.

Enter the approximate class enrollment here. This is used in Acquisition to appropriately size the ID boxes to fit within the ID grid.

We recommend that the default class file directory be used, but you can create a folder for this class then browse to it here. All class files will be saved to this folder. .

If you want to include a password to access this class, check this box, and enter a password

Click the OK button, the new class will appear in the "list of classes". You only need to create a new class once, the next time you want to collect student responses for this class, just click on the class name.
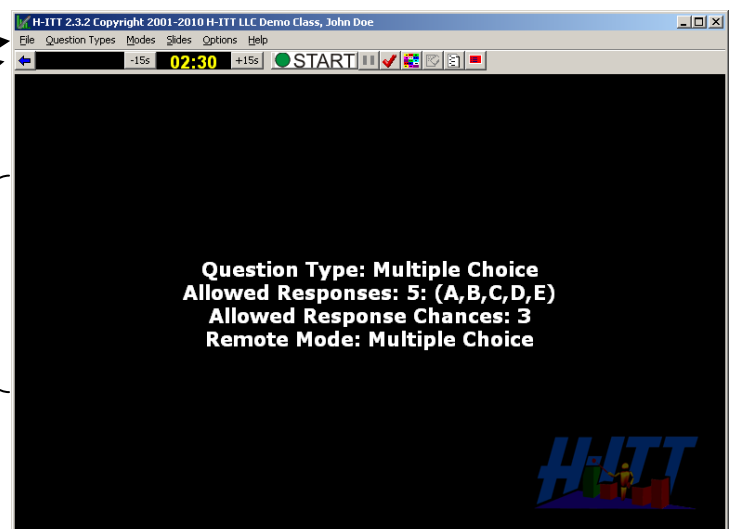
3.3 Collect responses for a class

Click on your class name to start the class, you will be greeted by a black screen and toolbars at the top of the screen. There are two main toolbars, the pull down menus and the Icon menus. Note that as you hover the mouse over the various icons on the toolbar, a description of the function will be displayed. The main screen shows the current question settings, and the default is 5 multiple-choice questions and 3 allowed answer changes. You have many question options available as well as many other options that you can use within the Acquisition program. Most-used options are intuitive and are noted by the "mouse over the icon". However advanced options that provide almost any function you want a response system to have are found in the pull down menus as described below.

Pull down menu items

Icon menu items bar

This area of the window is used to show student responses (the ID grid) as responses are received, to display content slides in a split screen with various layout options, and to show the histogram of the results from responses to questions. Note the text in the screen; It describes the Question type, with pertinent information and also shows the Mode that the students remotes must be set to. This is useful with various question types and modes that can be used with H-ITT's multi-digit capable remotes.

Question Type: Multiple Choice
Allowed Responses: 5: (A,B,C,D,E)
Allowed Response Chances: 3
Remote Mode: Multiple Choice

The Acquisition program has many options and features that you will find useful as you get familiar, and want to do more, but the basic process of collecting responses and viewing results is very simple using 2 buttons: the GREEN START question button and the RED STOP question button.

To demonstrate this, follow these three easy steps to collecting responses:

1. Pose a question to the audience and hit the GREEN START question button on the Icon toolbar.
2. Have the students respond by pressing their response on their remote. A colored box will appear on the screen to show each student's response has been recorded. In addition, the light on his/her remote will turn green.
3. You can either let the timer run out, or click on the RED STOP button and the Histogram of responses will be displayed.

You can repeat the above 3 steps as many times as desired.

If you want to "grade" or rather assign a correct answer to each question, you can enter this on your computer keyboard (i.e. if B is the correct answer, enter B on your keyboard), or you may enter the correct answer with the remote designated as the instructor's remote in section 4.3.1.

If you want to show the class the correct answer, click on the show/hide correct answer button (red "checkmark" on the icon toolbar), and the correct answer bar on the Histogram will turn green.

To exit the application hit the blue back arrow to return to the list of classes, and use the File>exit menu option.

The results of this question and response session will be automatically saved to the class file, and you can access, edit and grade this information with the Analyzer application. If you did assign the correct answer with your keyboard, then grading is already done. If not, you can assign the correct answer by question, or load an answer key to assign correct answers for all questions in the Analyzer program.

The above is a simple verbal or chalk board written question and answer example using the system default settings. The Acquisition program has many features that you will want to use, like displaying pre designed questions from the slides menu or using the testing or toolbar modes. There are many other options to input your preferences like showing the correct answer in the Histogram, showing screen names in the ID boxes, and many more.

About questions/answers and the class file: Each time you start a class, and collect at least 1 response from a question, a new file (called a class file) is automatically created and saved in your class files folder. All responses to all questions are automatically saved to this file, so you needn't worry about saving the responses. The class file is an XML file type saved in a zip file and named from the class name and time and date stamped with when class file was created. The Analyzer program extracts the data in the class file and presents it to you for grading and reporting purposes.

3.4 The menu items

The **Icon menu** items are typically used with all question types and have a short description of the function when you hover the mouse over them.
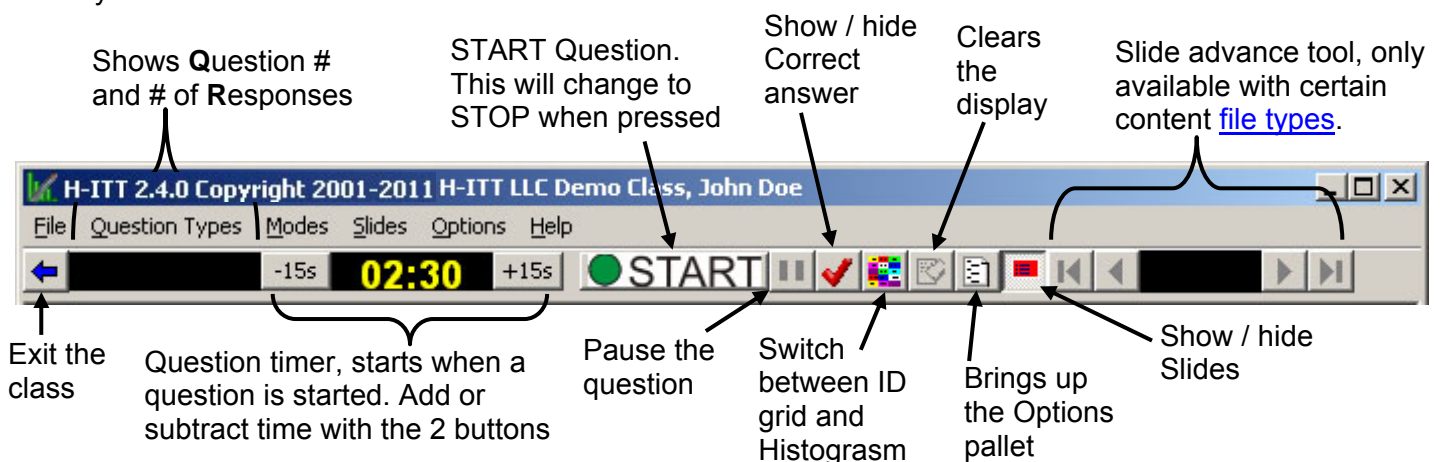
The **pull down menu** items provide quick access to the functional items in Acquisition, such as opening slides, selecting the mode and question types as well as others. Each is detailed below.

3.4.1 File pull down

The Export ID Box display and Export Histogram options are available when a question is stopped. This saves a graphic image (i.e. *png, *.jpg, etc) of the ID boxes or Histogram that you can reference later.

Exit, exits the class (same as the blue back arrow icon)
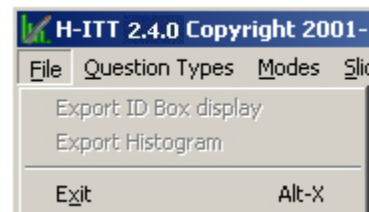
3.4.2 Question Types pull down

The Question types menu lets you select various aspects of the particular question being asked. There are 2 basic question types: Multiple choice (single-digit responses) and Fill in the blank (multi-digit responses). Details of applying these 2 question types are shown in 3.4.3.1 and 4.4.3.2.

The default is shown, Multiple choice with 5 answer selections and Letters. For MC questions you can choose the number of possible selections from 1-10 (A thru J). If a remote answer is out of the range selected it will not be recorded (i.e. 5 MC answers selected, a remote answering G/6 will not be recorded). The number of "bars" on the Histogram reflects the number of possible answer selections.

True False, and Yes No Abstain options set the answer selections to 2 and 3 respectively, and also label the Histogram appropriately for the selection.

Fill in the blank option sets the program up to collect multi-digit alpha/numeric responses. This option is only used when the remotes are capable of multi-digit responses (these remotes have an LCD screen) or web based clickers are used. All MC type question options are not available when Fill in the blank is selected. There are certain modes (discussed below) that automatically invoke the "fill in the blank" question type, so if the MC options are not selectable, verify the Mode options.
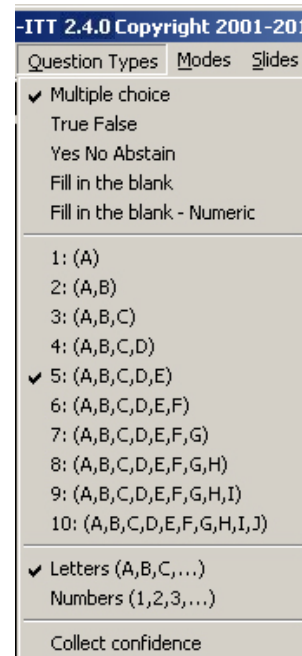
Fill in the blank – Numeric option is used for positive and negative decimal numeric answers where a numeric tolerance percentage can be included with the correct answer.

Letters and Numbers put the selected label on the Histogram and also includes these in the class file that shows up in Analyzer in the Student responses window.

Collect Confidence, used with MC questions allows the student to enter a confidence factor (high, medium or low) along with their answer. This can be used in Analyzer to weight the answers based on the confidence factor the student enters.

3.4.3 Question Types details

3.4.3.1 Multiple choice types

Students answer MC questions by pressing the desired key on their remote. All H-ITT remotes are capable of sending in Multiple Choice responses.

Assigning a correct answer to an MC question can be done either in Acquisition with the keyboard, or using the Instructors remote, either when the question is being asked, or when the Histogram is being displayed. Correct answer(s) can also be assigned (or edited) in Analyzer using either the question grader, or applying a global answer key. Correct answers can also be "authored" in the question using Qgen2 (H-ITT XML question generator).

3.4.3.2 Fill in the blank answer types

Students answer Fill in the blank questions by entering the answer in their remote, and then sending their answer with the remotes SEND key. Only multi-digit capable remotes (with an LCD screen) or internet based clickers (i.e. SoftClick) are capable of sending responses to Fill in the blank question types, the Multi-Digit mode on the remote must be selected.

Student answers can be up to 20 characters, alpha, numeric or a combination of these, along with various other characters. Some examples of answers are:

- Positive and negative Decimals i.e. 125.361, -125.361
- Fractions and mixed numbers i.e. 15/16, 5/2, -12 15/16
- Text capability can be use for spelling or data entry, i.e. ANIMAL, JOHN DOE.

- Letters and numbers can be combined for various answers you define: i.e. 5E3 could mean $5x10^3$

Reference the Appendix 5.5.2 for additional information.

Assigning a correct answer can be with your instructor's remote during the question, or with your keyboard by entering it in the correct answer box when the question is stopped. Correct answers can also be assigned or edited in Analyzer with either the question grader, or applying a global answer key to a set of questions, or "authored in the question using Qgen2 (H-ITT XML question generator).

The correct answer box pops up when a fill in the blank question is stopped. If you assign a correct answer the Histogram will only have 2 bars, correct and incorrect. If you cancel the correct answer box the Histogram will show the answer distributions with the answers sent.
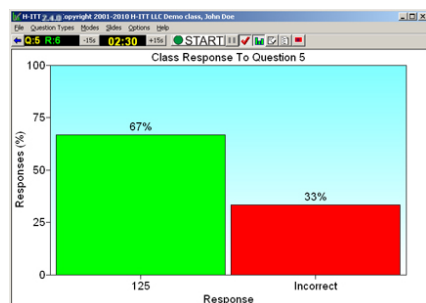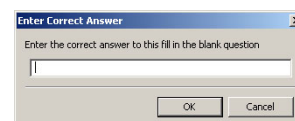
Correct answer assigned as 125 (click the red checkmark to show bar in green)

Correct answer not assigned (note the answers that were given show up under each bar)
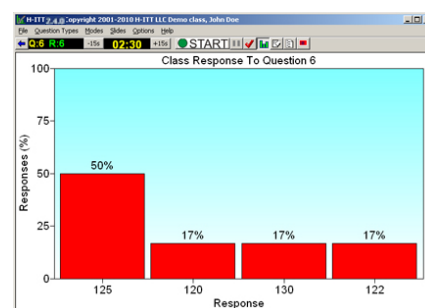
3.4.3.3 Fill in the blank – Numeric answer types

Students answer Fill in the blank- Numeric questions by entering the decimal answer in their remote, and then sending their answer with the remotes SEND key. Only multi-digit capable remotes (with an LCD screen) or internet based clickers are capable of sending responses to Fill in the blank question types, the Multi-Digit mode on the remote must be selected.

Student answers can be up to 20 numbers with the negative and decimal characters, for example: 125.361, or -125.361

The Histogram will auto scale to fit all answers given. The Correct answer can be assigned the same as above for plain Fill-in-the-blank question types. If a correct answer is assigned, the Histogram will show the correct answer at the top, and have a green bar centered on the correct answer with 2 smaller green bars "outlining" the answers within the tolerance you provide (from options>advanced).

Example to right, correct answer is 103 with a 2% tolerance
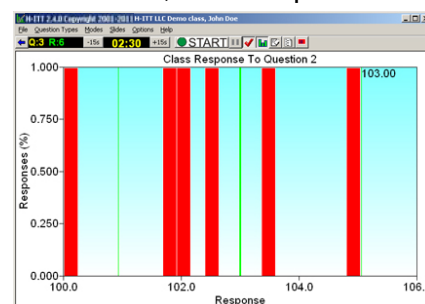
3.4.4 Modes pull down

The Modes menu sets up the Acquisition for various configurations. The single question option is the default.

Single question can be either Multiple Choice type questions, or a Fill in the blank type question that can be selected from above Question Types section 3.4.3.

Testing – fill in the blank sets up Acquisition to receive multi-digit responses from remotes in the paper based testing mode as described below in section 3.4.4.1

Testing – multiple choice sets up Acquisition to receive single character, MC responses from remotes in the paper based testing mode as described below in section 3.4.4.2

Homework Collection sets up Acquisition to receive multi-digit responses from remotes when students download answers from homework assignments upon returning to class as described in section 3.4.4.3

Student ID Collection sets up Acquisition to receive each students school ID that can be used to add to the roster in Analyzer as described in section 3.4.4.4

Student Name Collection sets up Acquisition to receive each student's name that can be used to add to the roster in Analyzer as described in section 3.4.4.5

Screen Name Collection sets up Acquisition to receive each students screen name that can be displayed in their ID box instead of the default 3 digits of the remotes serial number as described in section 3.4.4.6

Toolbar only shrinks the Acquisition program to a small toolbar, typically used with the "Float on top of other windows" option as described in section 3.4.4.7

Float on top of other windows keeps the Acquisition program visible and in front of other applications that may be running on your computer. This option is not available on MAC operating systems.
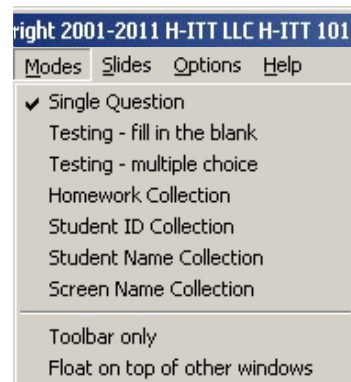
3.4.4.1 Testing – fill in the blank details

This mode is used when you hand out a paper based test where the answers require multi-digit responses. Students are self paced and use their remotes to select the question number they are answering and enter/send their answer. Only multi-digit capable remotes, (these type clickers have an LCD screen on them) or internet based clickers can be used with this mode. The student selects the question number they are answering on their remote, then enters their answer and sends it. The remote gives confirmation their answer is recorded, and the ID display gives additional information with the box attached to their ID box. The first number (in yellow) is the question number, and the second number indicates they have answered that question. Students can scroll through questions and verify/edit answers on the LCD screen on their remotes or the test mode pallet on web based clickers. The student may change their answer(s) up to the maximum allowed.

The instructor may assign the correct answers by sending in their answers from an assigned instructor's remote along with the students, or assign them later with the answer key options in Analyzer.

The students
Clicker ID#

The number of times
they have answered
this question (in white)

123   3 1

The question they have answered (in yellow).
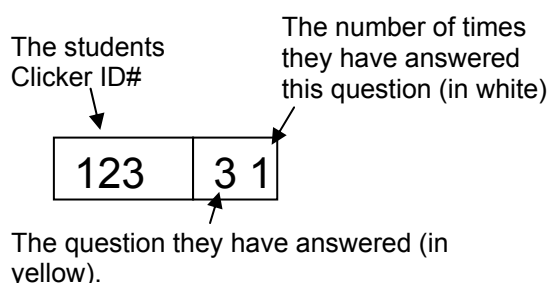
Example, ID435 answered question number 2, once.

Example, ID507 answered question number 1, twice.

3.4.4.2 Testing - multiple choice details

This mode is used when you hand out a paper based test where the answers are multiple choice. Students are self paced and use their remotes << and >> keys to scroll to the question number which is displayed in their ID box.

The << and >> keys on their remotes allow the students to move to the next question or to review previous questions. The ID boxes are used to let the student know which question number they are answering and if they have answered the question.

The ID boxes show up identical as with the Fill in the blank testing mode, the only difference is the question number they are answering is not sent with the answer so the students need to scroll to the question number with the << and >> keys on their remotes then answer that question.
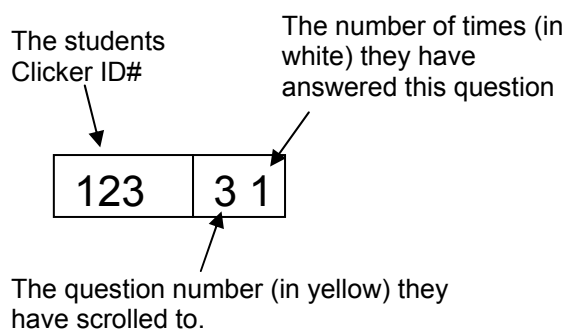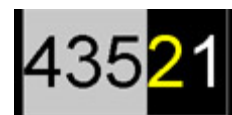
The students Clicker ID#

The number of times (in white) they have answered this question

Example, ID435 in on question 2 and has answered it once.

The question number (in yellow) they have scrolled to.

Example, ID474 has advanced to question 3, but has not answered it yet.

3.4.4.3 Homework Collection details

Multi-digit capable remotes and web based clickers can store up to 50 student answers to homework assignments and report these answers in class to Acquisition when this mode is selected. Select Homework collection and press the green start question button. The timer will start and you can either stop homework collection with the red stop question button, or let the timer run out.

The processing time to collect homework assignments depends on the student count and how many questions there are in the homework assignment. A guideline would be to allow at least 1 minute for a class of 30 students to report 10 homework questions each.

When a student reports their homework their ID box will appear the same as in the testing modes. Confirmation that the answers sent are recorded is provided on the remote, with a secondary confirmation showing in the ID display. When you see the last question number (i.e. a yellow 10 for a 10 question assignment) in each ID box, you will know all homework has been reported. The remotes send the answers entered along with the question number, If a student does not answer (skips a question number) it will be recorded as a "no response" for that question.

The instructor may assign the correct answers by sending in their answers from an assigned instructor's remote along with the students, or assign them later with the answer key options in Analyzer.

3.4.4.4 Student ID, Name, and screen name Collection

Multi-digit capable remotes and web based clickers have a "Roster mode" where the students can enter and send information that can be added to the roster. The 3 categories of information that can be collected are the student's school ID#, the students name, and a screen name that can replace the default last 3 digits of the remote serial number in the ID box.

Clicking on one of these options puts the Acquisition ready to collect the desired information. Press the green "start question" button and allow students to respond. When all students have sent in the desired information, stop the question, and a "save file" prompt will appear.

The saved file is a *.csv file and is automatically saved to the class files folder, but you can re-direct the file to a folder and a file name of your choice.

The information of the saved file depends on the collection mode you selected as described below.

- Student ID collection will put the student ID in the 2nd column and the remote ID in the 5th column.

- Student Name collection will put the student Name in the 1st column and the remote ID in the 5th column.

- Screen Name collection will put the remote ID in the 1st column and the screen name in the 2nd column.

Note that the Student ID and Student Name files have the columns set up to match the standard (default) roster format to make adding this information to the roster column for column compatible with the standard roster format. You can easily add this automatically collected information using your computers browser tools with copy and paste functions to your Roster.csv file.

The Screen name file is set up for direct load into acquisition from the Options>ID display pallet.

To load the Screen name file, check the box "Display screen name instead of remote ID number" and press the Browse button
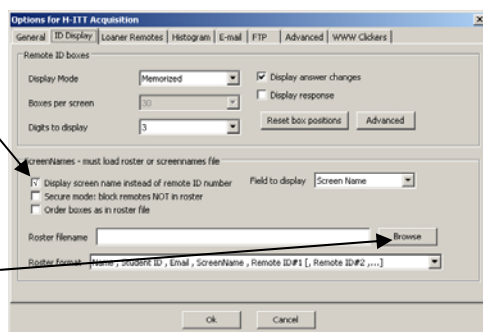
The Browser opens to the class file folder.

Highlight the file name and click Open.
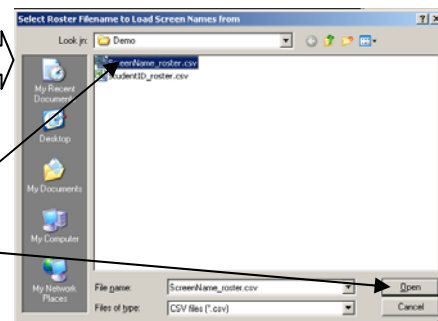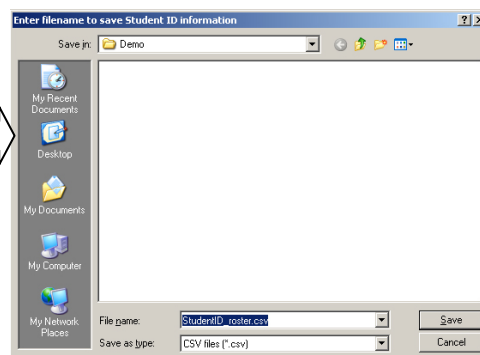
TIP: A screen name replaces the remote serial number in the ID box displayed in Acquisition. The screen name can simply be a number that you have labeled the remotes with. Instructing your students to send the number labeled on their remotes using the Roster Info option of their remote. This provides an easy way to collect and display the information needed to associate the remote serial number with a labeled number.

3.4.4.5 Toolbar only mode with Float on top function.

The Toolbar mode allows you to shrink the Acquisition program to a small header that can "float on top" of any other applications (Windows only) and be ready to collect responses from content being delivered from virtually any program you are displaying to your class.

To optimize the toolbar, first, re-size the Acquisition to make the toolbar as small as possible. This uses your computers "window sizing tools" pull in the right side to the end of the Icons. Size the height appropriately for the Histogram to pop up in based on your preference. *Note that after setting the toolbar mode you will not be able to resize it, however using the options menu, un-check toolbar mode, resize as needed then re-check toolbar mode.*

It is not necessary to re-size, but it makes the floating toolbar smaller on top of your application.

Choose the correct solution for the equation

$$2X-2=18$$

A) X=9   B) X=10
C) X=20   D) X=16
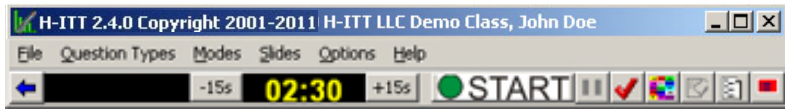
Tool bar mode example. Notice that the toolbar width was sized down to the end of the icon bar so the toolbar is as small as possible.

The example to the right shows the floating toolbar on a PowerPoint presentation. You can grab the toolbar and move it anywhere in the screen to make it unobtrusive to the content.
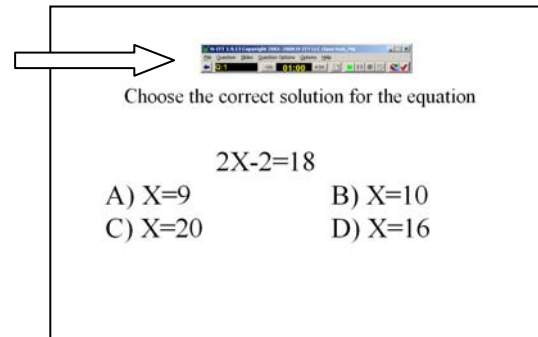
Press the Green START question button to collect responses. The window in the bottom left of the toolbar shows the question number and the number of responses that have been received. Press the Red STOP question button, and the Histogram will appear.

3.4.5 Slides pull down

Displaying questions in Acquisition is done using the Slides pull down menu.

Open Slides File brings up a browser where you enter the file type of your questions (like PPT, Word, blackboard, etc) and then browse to and open them. See 3.4.5.1 for details (some file types not available on MAC)

Open Slides Folder brings up a browser where you enter the type of image files contained in a folder (i.e. *.jpg, *.gif, etc) and then browse to the folder and open. See 3.4.5.2 for details

Browse to web site URL: Selecting this option from the Slides menu opens a window where you can type in the web site URL. This only functions when you are networked. The Acquisition program will display the web page within the slides window.

Show White Screen and Show Black Screen: The options provide for a blank slides window, either black, or white. These can be used for digital ink applications where you use a slate, or other device to add writing or such to display to the audience.

First Slide, Previous Slide, Next Slide, Last Slide: These options perform the same function as the slide control tool from the Icon tool bar. All slide folder formats and some slide files can use this, see the file type chart under Slides Files described above. Notice the "hot key" definitions that can be used.

Window location: You can select the location of the slides position depending on the split orientation. If you select horizontal split, you can choose to put the slides window either on top of, or below the ID grid. If you choose a vertical split, the location of the Slide can either be on the right side or left side of the Acquisition screen.

Split Orientation: You can select either a horizontal or vertical split between the slide and the ID grid.

Text size: In XML formats (H-ITT XML and Blackboard XML ZIP files), you can change the relative size of the text by selecting the desired size.

Show / Hide slides: Shows or hides the current slide. This option is also available from the Icon toolbar.

Fit Slide, Fit Width, Fit Actual: These options are available when a picture type slide is displayed such as from a slides folder, file types gif, jpg, tif and png. Selecting fit Slide and Fit width will resize the graphic appropriately for the width or height depending on horizontal or vertical split. Fit Actual displays the slide in its original size, regardless of the window size.

15
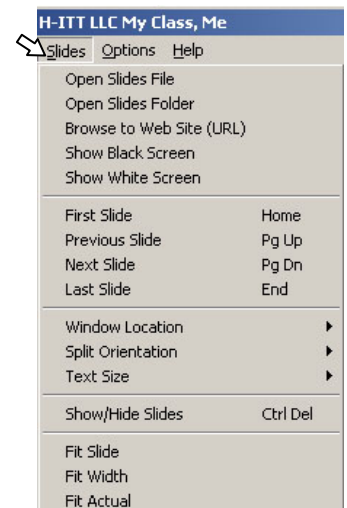
About the Slides Window: The slides window "splits" the display between the content (questions/answers) and the ID grid. Ideally you want to maximize audience visibility of both the content and the status ID grid so the viewing area should be divided appropriately. The ID boxes will automatically adjust for the area provided, but "sizing" the content slide may be necessary to get best visibility. Below are some examples of a PPT where the "page layout" function of PPT is used to obtain maximum audience visibility:

PPT displayed in the default Landscape. Note the "wasted" display area and the imbalance between content and ID grid
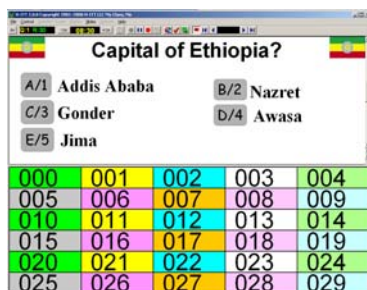
PPT layout adjusted to 3.5 high and 10 wide. Note the balance between the PPT content and the ID grid for visibility.
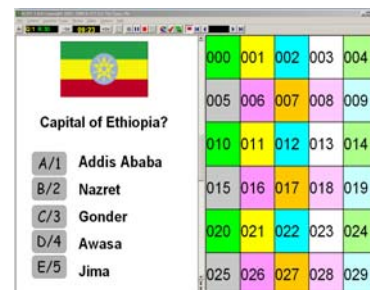
Same PPT set to "standard Letter" size. The visibility between the content and ID grid is optimized.

The slides window default is set up for approximately 50% of the total area when a slide is displayed. The split area is completely adjustable by "grabbing" the split bar with your mouse and sliding it. Optimizing the split screen layout is not necessary to collect and grade responses, but these tools can be used to enhance the audience visibility based on the screen size and display format you use.

About Slide *files* and Slide *folders*: A slide file is a single file that may have multiple pages with many questions. A slide folder is a folder that contains multiple files and each file has a single question. Advancing through questions may differ based on the slide type.

In general, Slide files are advanced using the file type's typical method, i.e. advance a PowerPoint file to the next page by clicking on it, or advance a word document page by clicking the slide bar (or grabbing the bar and sliding it). Some file types can be advanced with the slide tool, and instructors remote, noted below. Slides in a folder (as well as some types of files identified below) are advanced with the slide control tool on the icon toolbar or the instructors remote.

Note: When the slide file type can be advanced with the slide tool, the slide number and the total number of slides will appear in the slides control tool window, shown to the right. When the slide control tool is available, you can use your instructors remote to control which question slide is displayed.
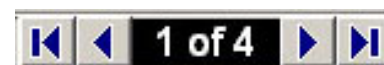
3.4.5.1 Slides File:
The Acquisition program allows you to display questions and answer choices in many file formats, so you don't need to convert your existing content. In most cases, you can simply display what you already use. Acquisition supports the following slide file types to be displayed within the slides window, accessed from the Open Slides File option of the slides pull down menu

File type	Slide advance tool available
Power Point (Windows version only)	NO
Word (Windows version only)	NO
Excel (Windows version only)	NO
PDF (Windows version only)	NO
H-ITT XML	YES
Blackboard XML ZIP	YES
HTML	YES
Plain Text	NO
Delimited >< text	YES

To open a slide file, click on the Open Slides File from the Slides pull down menu. A dialog box will appear, select the type of file you want to display, and browse to the file and click "open".

3.4.5.2 Slides Folder:
A slides folder is a folder that contains multiple graphic files and each file has a single question with the multiple-choice answers. The files within the slides folder are graphic type files that can be of the following formats:
- TIFF files
- JPEG files
- GIF files
- PNG files

Selecting slides folder provides the option of loading general graphic slides saved as tifs, gifs, jpegs, or pngs as well as MS PowerPoint presentations that are "saved as" one of these formats.

NOTE: PPT image exports are "numbered" different, so if you are using image slides saved from a PPT, open them from the file type indicated as from Power Point (i.e. Power Point GIFs)

To display slides from a folder, click on Open Slides Folder from the Slides pull down menu, and a window will appear. Select the format of the slides, and use the browser to locate the folder, highlight it, and click open.

Also see section "Creating and Displaying Questions" below for details on creating these graphic slides using PowerPoint.

3.4.6 Options pull down

Selecting an item from the Options menu brings up the Options pallet with specific options for that item at the forefront. Below is a brief description of each option with details about that option in the following sections.

General: Instructor information, assigning instructors remote, prompting for class labels, class file: save directory and alternate locations.

ID Display: Allows customization of the ID grid boxes including screen name applications.

Loaner Remotes: Allows set up of a temporary remote to a student.

Histogram: Allows customization of the Histogram appearance and data, including "always indicate the correct answer".

E-Mail: Tools to set-up Email of the Class file when a class is stopped.

FTP: Tools to send the class files to an FTP site when a class is stopped.

Advanced: Various user preference options

WWW Clickers: Enables internet and web-enabled devices to respond.
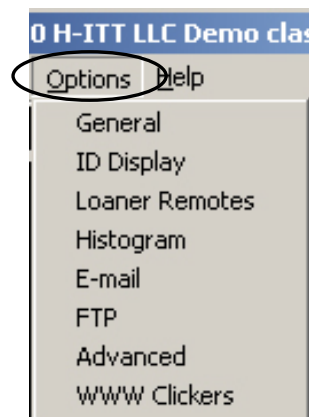
3.4.6.1 Options>General

<u>The Name and Approximate enrollment</u> fields are the same fields used when the class is created, and you can modify these here also. Note the approximate enrollment is used to size the ID boxes appropriately for the available screen space; we recommend entering 10% larger enrollment here than what your initial roster is.

<u>Instructors remote ID, enable remote and keyboard control:</u> You can use either the computer keyboard or a remote (or both) to assign correct answers and control other functions of the software. The primary benefit of answering the questions along with the students in Acquisition is that it tells the software what the correct answer is. Grading will then be automatic in the Analyzer program by simply comparing your answer to the student's answer. Also this will allow you to display the correct answer in green on the Histogram.

To assign an instructor's remote check the box labeled use instructor remote and type in the ID number for the remote you will use (the entire number, no letters or leading zeros).
See below, for details of the commands available for controlling the software with the instructor's remote or assigning the correct answer with your keyboard.

Prompt for class or question label: The default is "Never" but you can select to be prompted to add text or a comment about the question or class in a box at the point in time you select. Select "Start" or "End" for either the Question or Class. The text you add to either the question or class will be available in the Analyzer for reference.

Maximum answer changes: The default is 3 but you can select the number from 1 to 10. If 10 is selected, the number of changes is unlimited. This allows the student to be able to change their answer for each question. Note that the first answer by a student is considered change 1, so if 3 changes are selected, the student can "change" their answer 2 more times. A default is to show student answer changes in the ID box by an additional number to the right of their ID showing the changes. This can be disabled from the Options>ID display pallet.

Class Files locations and save options: Class files are always saved to the Primary folder, unless you choose a prompt from the Advanced tab, and choose not to save it. You can specify a secondary location to save the class files to. The primary location is where you assigned the class when you created the class. For the secondary location, click the browse button to point the software to another folder or drive where you want another copy of the class files to be saved. This location can be a floppy, zip, USB thumb drive, network share folder, or any location on the hard disk. In addition, you can save the class file data to a *.csv file in the above location(s) in several formats selected from the pull down. This option is for advanced users where specific data manipulation for analysis is needed.

Controlling the software with the instructor's remote:
The instructor remote can control various functions of the Acquisition program for single question types. For Fill-in-the-blank question types, the instructors remote can only be used to enter and send the correct answer when collecting responses.
For Multiple Choice single questions, the keys function depends on the state of the Acquisition program as described in the following table:

State of the Acquisition program: While the screen is clear and program is idle	
'>>'	Start question
'A'	Add time
'B'	Subtract time
'C'	Next slide
'D'	Previous slide
'E'	Stop class (exit)
State of the Acquisition program: While collecting responses	
'A - J'	Assign correct answer with selected key.
'>>'	Stop question.
State of the Acquisition program: While displaying the graph	
'A - J'	Assign correct answer with selected key.
'>>'	Clear screen return to idle state.

Note that assigning the correct answer for multiple choice question type can be done when the question is being asked, or when displaying the Histogram and you can change the correct answer if desired.

Assigning correct answer with the keyboard: To enable the computer keyboard to assign the correct answer check the box "Enable Instructor Keyboard Input". You can assign the correct answer either when the question is being asked, or when the Histogram is being displayed.

A list of all the keys recognized by the software during questioning is shown below.

Keyboard key Response

Keyboard key	Response
A, a, or 1	A or 1 assigned as correct answer
B, b, or 2	B or 2 assigned as correct answer
C, c, or 3	C or 3 assigned as correct answer
D, d, or 4	D or 4 assigned as correct answer
E, e, or 5	E or 5 assigned as correct answer
F, f, or 6	F or 6 assigned as correct answer
G, g, or 7	G or 7 assigned as correct answer
H, h, or 8	H or 8 assigned as correct answer
I, i, or 9	I or 9 assigned as correct answer
J, j, or 0	J or 0 assigned as correct answer
>	Advance to next question (test mode)
<	Go back to previous question (test mode)

3.4.6.2 Options>ID Display

<u>Display Mode</u> The default is memorized and is useful to allow students to easily locate their ID box. Memorized means that when remotes are initially received and displayed in a new class the location of each box will remain throughout the semester. Sequential in time will display the ID boxes as they are received in time. The first response will show up in the top left corner, the next will appear just to the right, and so on. Multiple answers from the same remote will show up sequential in time as opposed to showing an answer change in the ID box. Selecting Sequential in time will erase any memorized box position.

<u>Reset box positions:</u> Resets ID box positions from their memorized locations. A warning will appear to make it difficult to accidentally reset the memorized positions.

<u>Display answer changes:</u> Check the option to show the number of times the student changed their answer. The ID boxes will have an additional box that shows how many times the question was answered.

<u>Display response:</u> Check the option to show the student's answer. The ID boxes will have an additional box that shows which key (A-J) the student chose in the multiple choice mode.

<u>Boxes per screen:</u> If you are using memorized box locations you can change this parameter from the Options>General tab. If you select Sequential in time, you can set the number of boxes to display from the pull down menu, and select the desired number. NOTE that the ID box size will automatically adjust for the available area. This approximate number gives the program a basic starting size.

<u>Digits to display:</u> Use the pull down to change the number of digits/characters displayed in the ID boxes. The minimum is 1 and the maximum is 9.

<u>Advanced:</u> Used to customize the Colors and Fonts within the ID boxes. The default colors are shown, and are implemented based on the last digit of the remotes serial number. Select the item you wish to change by clicking on the colored box and changing the color. To change the font style in the ID boxes, click on the Change button next to the font window, and standard font options can be selected.
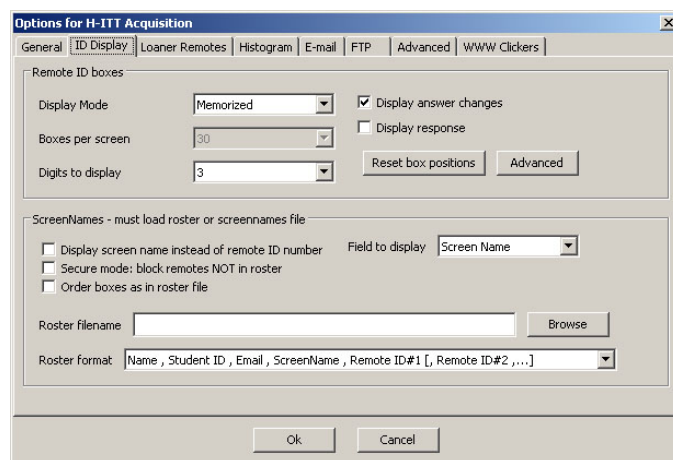
Displaying screen names: The ID box default is to show the last 3 digits of the remotes serial number. You can change this within the Screen Names section; check the box to show screen names instead of remote ID numbers, and browse to and load the file that contains the clicker serial number and the replacement screen name.

There are two files you can use to apply screen names to display in the ID box:

1) Using the Roster: Include a Screen Name then load the roster. The roster is created in the Analyzer program, and the roster format must include the Screen Name to be able to be displayed. Reference section 4.7 regarding the roster.

2) Using a Screen Name file and load it by selecting the screen name format (i.e. ScreenName, Remote ID) and loading it. This file is a two-column comma separated file that has the screen name in the first column followed by the remote ID number in the second (or vise versa). For example:

> Joe, 234196
> Sue, 394657
> Bob, 416537

The ScreenName file must be a comma separated plain text, or *.csv file type. You can manually create this file or if you have Multi-digit capable remotes, you can automatically generate this screen name file. Students use the "Roster Info" option on their remotes to send in their screen name. Use Acquisition "screen name collection" mode and start a question, allow students to send their screen name and stop the question. A prompt will allow you to save this screen name file. The defaults are ScreenName_roster.csv saved to the class root folder.

NOTES about a screen name: The screen name can be up to 9 characters long, however short names such as initials are best so they fit and are easily visible to the class within the ID box. Also, you can assign a number as a screen name such as 1,2,3,4 etc that can be useful when the remotes are kept in a classroom and students are issued a specific remote when they attend the class (i.e. John gets remote labeled 1, Mary gets #2…etc). See, section 5.7.1 for specific "how to" implement numbered remotes in the screen name column of the roster.

Secure mode: Block remotes not in the roster: Within the screen names section, check the secure mode box. The remote serial numbers that are displayed are limited to those in the roster. You must load your roster (the roster is generated in the Analyzer program). To load your roster, select the Browse button next to the roster file name and locate your roster file and click Open. You must also select the correct format of your roster using the pull-down roster format menu.

Order Boxes as in Roster file: If this box is checked, students' ID boxes will appear in the same order as the roster. The first roster name will show up in the top left corner, the next will appear just to the right, and so on. Roster order is taken from the roster, so you must load your roster (the roster is generated in the Analyzer program). To load your roster, select the Browse button next to the roster file name and locate your roster file and click Open. You must also select the correct format of your roster using the pull-down roster format menu.

3.4.6.3 Options>Loaner Remotes

This option can be used when a student loses or forgets to bring their remote to class. If you keep some "spare" remotes, you can loan the student one and set up this remote to respond to questions in place of their own remote. This helps the student and simplifies the grading process.

From the Loaner Remote tab of the options window, type in the transmitter ID number of the remote that you will be loaning to the student in the loaner remote ID box.

Next, type in the remote ID number of the remote that the student normally uses in class (but forgot to bring to class) in the student remote ID box.

Click the add button to activate the loaner remote. The loaner remote will be added to the issued loaner remotes list.
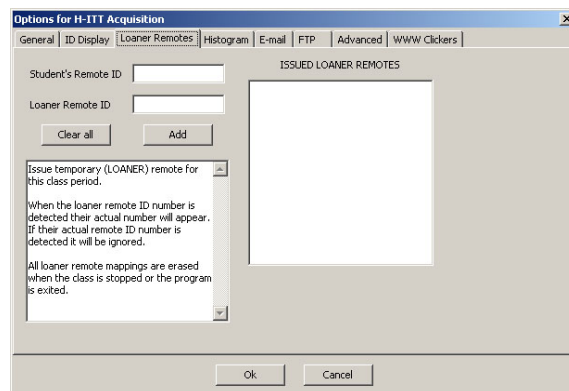
When the loaner remote ID number is detected when answering questions, the student's actual number will appear. If the student's actual remote ID number is detected it will be ignored.

All loaner remote mappings are erased when the class is stopped or the program is exited.

3.4.6.4 Options>Histogram

Format: Select either percentage or raw numbers. Each Histogram bar will indicate either the percentage of remote responses that gave that answer or will show how many remotes gave that answer.

Orientation: The Histogram can be displayed as either vertical bars, or horizontal bars.

Display label on bar: The label is either the percentage, or raw numbers shown for each bar in the location chosen with the pull down menu.

Always indicate correct answer: If this is checked, the default will be to turn the bar green *when you assign a correct answer*. The Icon tool bar also has a "show / hide" correct answer button. If you choose to set the default to always show correct answer, this button will hide it. If you do not check the "always show" box, the "show / hide" Icon button will show the correct answer when pressed.

Display x-axis label: Display y-axis label: and Display graph title: The default labels (and title) are shown in the box to the right of each check box option. You can change these labels by simply typing in the associated label box or omit labels by un-checking the appropriate box.

Colors and Fonts: By clicking on any of these items within this section, you can modify the appearance, color, font, etc as desired. Defaults sets the colors and fonts back to the factory default.
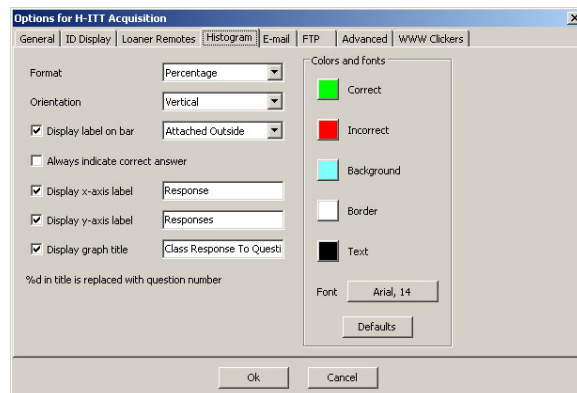
3.4.6.5 Options>E-mail

When the class is stopped you can automatically E-Mail the class file to any valid email address with this option.
Check the box labeled "E-mail class files to the following e-mail address:" and enter the email address you want the class file to be sent to. You can remove the .zip extension from the class file if needed to pass spam filters.

Fill in your email address and name.

Information in the Outgoing e-mail server SMTP area must be completed. If you do not know this information, contact your IT department or system administrator for assistance.
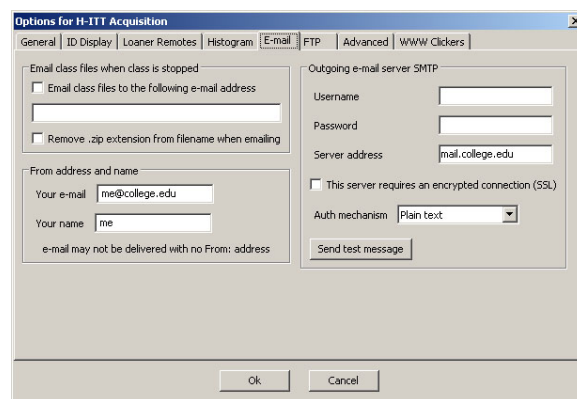
3.4.6.6 Options>FTP

When the class is stopped you can automatically post the class file to any FTP site with this option.
Check the box and fill in the requested information about the FTP site. If you do not know this information, contact your IT department or system administrator for assistance.
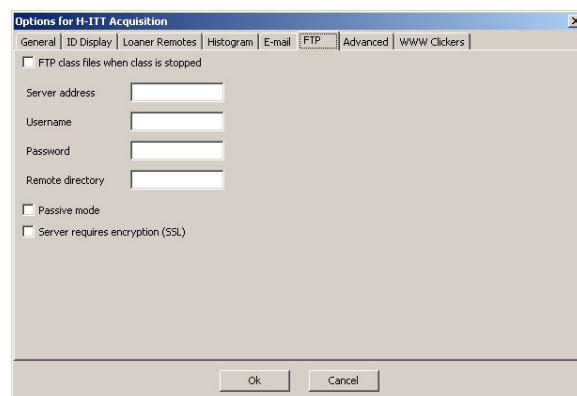
3.4.6.7 Options>Advanced

Prompt to save class data after each question: If this is checked, a prompt window will appear when you start a new question asking if you want to save the previous question data. Note, the default is to always save class files, and this is only used if you do not want to save the information and data collected for this class.

Use countdown timer: The Default is to use the countdown timer. If this is not checked the question timer is disabled.

Automatically display Histogram when question is finished: The default is to show the Histogram when the question is stopped. You can un-check this box, and Histogram will not be displayed.

Place Histogram data on clipboard when question is finished: If this option is checked, once the question is finished, you can open a spreadsheet or text editor application and paste the Histogram data into it. The data is in columns, tab separated; Key#, #Responses, %, correct/incorrect, min and max time (mS):

Example:
```
A      1       11.1111 correct   8609      8609
B      2       22.2222 incorrect 7078.5    8938
C      2       22.2222 incorrect 7539      9359
D      2       22.2222 incorrect 7031.5    7813
E      2       22.2222 incorrect 7226.5    7984
```

Enable DDE (Dynamic Data Exchange) server: Used when a DDE is set up, reference the DDE section of the Appendix for details.

Do not show question type text in ID display background: The default is to display the question type, and other information about the question set-up on the black screen in the idle mode and when a question is started. Checking this option omits the question type text.

Sleep base units when between questions: Checking this option inhibits the remotes from getting a "green light acknowledgement" when a question is not being asked. This feature can be useful to reduce the occurrence of a false positive confirmation that the student had their answer recorded by the computer. This option is not available with some older type base units, but works with IR base units RX2100 (ABR model only) and RX2200 and all RF base unit models.

Prompt for number of questions in testing mode: The default is to prompt for the number of questions when a test mode is started. Check this box to always use the default number of questions as assigned in the Default test question count you can type in the default number of test questions.

Auto advance question number for multiple choice tests: When checked the ID box automatically advances to the next question when a student enters an answer. Students can not scroll through questions or change their answer.

Record screenshot in class file when question ends: This will take a screen shot of your monitor for each question which is available in Analyzer for viewing.

Password protect this section: You can include a password requirement to access this class by checking the box and entering at least 5 characters as your password. If you assigned a password when you created the class, you can change it here if desired.

Input Source: This window allows you to choose your keyboard as the input source, used in the Demo mode. When keyboard is selected, remote responses will not be collected, but you can simulate remote inputs with your keyboard to see how the ID grid displays when a question is started, and how the Histogram appears when the question is stopped. A class file will be created, so you can view the results, and even grade them in the Analyzer program. See section 3.6 Using the demo mode for additional information.
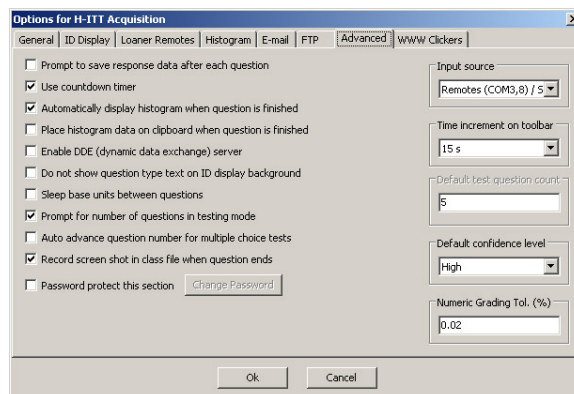
Time increment on toolbar: The default time increment is 1 minute, and you can choose a different time increment from the pull down menu (1 second to 5 minutes). Adding or subtracting time on the clock with the timer control on the icon toolbar will add or subtract the increment of time selected here. Acquisition will remember the last time setting, as well as the time increments.

Default test question count: The default number of questions for testing modes.

Default Confidence level: You can specify the default confidence level; high, medium or low that will be applied to student's answers if they do not change it with their remotes. Confidence grading is only applicable when "Collect Confidence" is selected from the question type pull down menu.
Numeric Grading Tolerance: Sets the tolerance of correct answers when Fill-in-the-blank – numeric Mode is selected.

3.4.6.8 Options>WWW.Clickers

This allows the Acquisition program to accept inputs from H-ITT's web enabled devices, such as SoftClick and MultiPoint.

Click the "New" button to get a "WWW. Session ID and/or a WWW. Homework Collection portal at H-ITT's host site.

Your assigned session and / or homework ID will appear in the window. You can use these WWW ID's for the entire school year; that is, you only need to get a new ID assigned once.

Once assigned, you can enable or disable the desired WWW. ID by clicking the appropriate "Enable" box.

It is Important that students using SoftClick, and/or remote classrooms joining the host with MultiPoint login with the proper session or homework ID. Acquisition provides several visual aids in the program (discussed below) that can be used to ensure they have logged in to the correct session.

WWW. Session ID is used for all "in-class" questioning modes such as Multiple Choice, Fill in the Blank, Testing, and roster collection modes. When a question is started in Acquisition, any information (i.e. Students answers) is cleared from the Session ID area at the H-ITT's host site. This ensures that only students answers that are sent during questioning are received.

WWW. Homework Collection is used specifically for collecting homework assignments. The H-ITT host site maintains all students' homework answers under the Homework ID until these are retrieved by the Acquisition program. This allows students to retrieve and complete/edit their answers at any time before answer collection. The Homework ID area at the host site is cleared when Homework collection in Acquisition is completed and stopped.
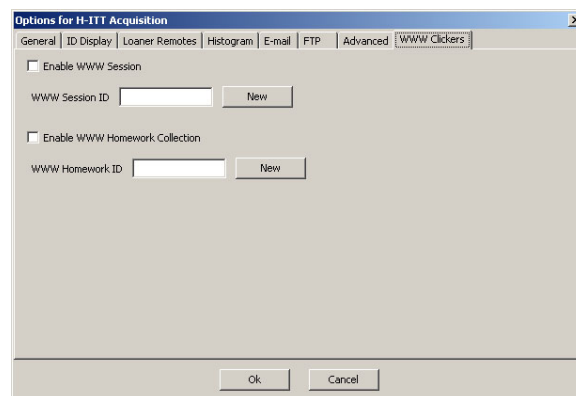
Visual aids provided in the Acquisition program:

When a WWW session is enabled, the Session ID will be displayed in the standard "Question type text" area.

The ID is also displayed on the top bar after the class and instructor name, used when the Acquisition is in the toolbar mode.

When a WWW Homework session is enabled, the "Question type text" area will show the homework session ID.
NOTE: This will appear when the Homework Collection Mode is selected from the Modes pull down menu.
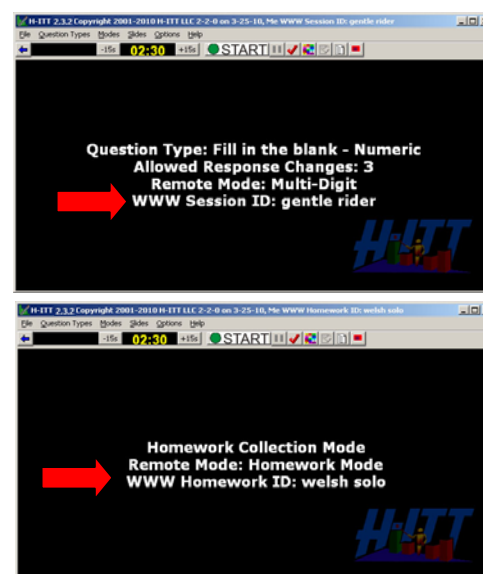
About the WWW feature:
1. Responses collected are treated exactly like responses from H-ITT's remotes throughout response collection and data analysis.
2. Acquisition can receive www responses at the same time as standard remote responses. That is, IR remotes, RF remotes and SoftClick and Multipoint can all simultaneously respond to questions.
3. www responses are not real time like the remotes are: Answers will experience a slight time delay after sending to pass through the IP protocol, and are not necessarily displayed in the Acquisition ID box in the "time sequence" they were sent.
4. If you are using SoftClick for Homework you must inform your students of the Homework ID to be used. IF students complete the homework assignment under an incorrect ID, **IT CAN NOT BE COLLECTED**. This application differs from an "in-class" question session in that the correct ID to be logged into is not being displayed when answering questions, nor can they verify their answers are being received via their ID box until they are in class.
5. **In class** does not necessarily mean the students need to be physically in the classroom to send www answers. In class refers to real-time delivery of questions where students answer when the question is asked (i.e. after the question is started "green button" and before the question is stopped "red button"). If you are using a "live feed" to a remote location to pose questions, then students at the remote location(s) can respond to your questions using SoftClick or real clickers at the remote location using MultiPoint.

3.5 Creating and Displaying Questions
You can pose questions and collect gradable responses in a variety of ways; they are shown below In a nutshell. Use the one that is best for your teaching style for the question being asked. "Creating questions" does not mean you need to type-up, or copy-past, or create any pre-authored content. Verbal on-the-fly questions are presented audibly and spontaneous, chalk board questions are "displayed" as you write them. If you want to display questions using a computer and projector display, chances are you already have "created" the questions, or have access to them and they may be ready to display in their current format, or may need some simple modifications to provide best audience viewing.
First step is to decide how you want to pose questions from the below list, then follow the link to details on implementing that method.

Ways to pose questions:
- Verbal - The question can be spontaneous, and may or may not have a correct answer, press the start question button and collect responses, stop the question and view results, grade if desired.
- Chalkboard - Similar to verbal, simply write the question on the blackboard and press the start button. This is a very common method of displaying questions to the audience. It takes very little prep time and can be done on the fly for spontaneous questions as well.
- Open your question file in the slides window (limited file types available for Mac and Linux OS) from the Slides>open slides file selection. Choose the file type you want to display from the "files of type" pull down on the browser window opens. For Windows the default file type is PowerPoint. These links provide some specific information about Microsoft Office documents - Microsoft PowerPoint, Word, Excel, and Text. The H-ITT XML is a special question set format that can be created using H-ITTs Qgen2 question generator program. Questions created in Qgen2 have many advantages, such as including correct answers, question types, auto advance to next slide with question timer, include learning objectives, and many more Acquisition functions that are authored into each question.
- Paper based: Hand out a paper based test or quiz and from the Modes pull down menu, select the testing mode. See section 3.4.4 for details
- Blackboard XML - TestGen, Examview, or other content provided by book publishers is typically distributed and can be exported in Blackboard XML form. It can be loaded and displayed in the Acquisition program.

- H-ITT XML – H-ITT provides [Qgen2](#) question generator utility program that allows you to easily create your own content in H-ITT XML format with special question specific functions like pre-assigned correct answer, question type, question time, auto-advance questions and more.
- Graphics files: - Create the questions using any authoring tool that can export as a graphic files such as GIF, JPG, TIFF or PNG and display them in Acquisition with the "open slides folder" option.
- PDF files – Use existing content in pdf format, or create the questions using any authoring tool that can export as a PDF file and open in Acquisition with the "open slides file" option. This option is only available on the Windows version.
- From the Internet: Select "Browse to Web Site URL" from the slides pull down, and enter the site address. Browsing to a URL is only available on the Windows version.
- HTML - Create the questions using any authoring tool that can export as an HTML file. Note that HTMLs can be either a Slides File (one file with multiple questions), or you can have HTML files for each question/answer in a folder and open with the Slides Folder option. This allows advancing with the slide tool or remote control.
- Text and [H-ITT delimited text files](#) - Create a plain text file or delimited text file of questions. Open in the Acquisition program and display to the class.
- Any content file that can be computer displayed can use the [Toolbar Mode](#) to collect gradable responses.

About Microsoft Office files:
Office documents such as Word, Excel, and PowerPoint are displayed in the slides window as "active" documents. That is, when you click in these, they function as normal, and you can edit them in the slides window, or for PowerPoint, which is opened in the run mode, animation and such operates normally. When you have clicked within one of these files, Windows OS (Operating System) is focused on these, and normal Acquisition functions are inhibited. Clicking anywhere outside of the slides window will revert Windows focus back to the Acquisition application, and it will resume normal operation.
See also section 5.5 regarding Microsoft Office 2007/2010 issues if the active office document you are trying to display does not open within the Acquisition window.

Using PowerPoint to display your content slides: PowerPoint default page layout is typically "landscape" to fill your monitor when run. This size does not fit well within the slides window, and it is recommended that you use the "portrait" layout from the PowerPoint page set up menu when creating the presentation. This layout fits well within the slides window, allowing for approximately 50% of the window for the slide and 50% of the window for the ID grid. An example of sizing the PPT for best visibility is shown in [section 3.4.5](#)
You can open the PowerPoint presentation directly in the Acquisitions slide window, and it will play exactly as normal, with animation, advance on a mouse click etc. If the PPT is very large, it may not open, in which case you can save it as graphic pages and display it with from a slides folder using PowerPoint's "save as" feature, and save as one of the graphic formats above (jpg, tif, gif or png). This will default to creating a folder in the same directory and with the same name as your PPT. Each page of your PPT will be saved as a separate graphic file in that folder.
Display PPT's saved as image files from the "open slides folder" menu, and select the PPT version is the graphic file. The difference between the PowerPoint graphic and standard graphic options is the way the slides are sorted for display. If PowerPoint graphic are selected then the slides will be sorted in the order they have been created in PowerPoint. If just plain "graphic slides" are selected then the slides will be sorted in alpha-numeric order by the file name. Note that the filenames that PowerPoint creates do not sort alpha-numerically by filename in the proper order.
When using bitmap formats such as gif, png, tiff or jpeg (especially those made in PowerPoint) the text and graphics can look pixilated when they get resized. This is due in part to PowerPoint's poor rendering of slides in bitmap formats and the inherent problem with displaying text as a bitmap. It seems that PowerPoint doesn't do a good job antialiasing the fonts when it creates bitmap slides and to resize a bitmap some of the pixels must get thrown out making the text hard to read. To get around this problem, keep the bitmap slide its actual size using the "fit actual" option in the slides menu.

Mac and Linux Users: Loading a PowerPoint file directly into the Acquisition program is not possible on these platforms. Please convert the presentation to image files (jpg, gif, etc).

Using MS office documents Word, Excel and Text to display content slides: These type files are opened in Acquisition from the "open slides file" menu, and open as active documents. This means you can edit them within the window, but can not intrinsically separate the question sets. Advancing to a question set usually requires "sliding" the document down with the mouse or side slide bar tool. There are several easy workarounds for this:

For word documents, from the page set up menu, size the pages to fit each question/answer set individually and resize the fonts for best visibility. Then you can advance pages by clicking in the side slide bar, or use the page up, page down keys on your keyboard.

For Excel, adjust the cell sizes to fit into the slides window. This may take some trial and error, but once set, these will display fine. Note that formulas in the displayed cells may cause problems, so copy and "paste special as values".

For Text files, include the delimiter "><" between questions, see below.

Another workaround: In general, MS office documents can be saved as plain text files. Save them as plain text and add the delimiter as discussed below.

Delimiting Text files: Include the *greater than* and *less than* characters "><" after each question/answer selections to be displayed. This provides a "page break" so each question/answer set is displayed separate, and allows for advancing to each question set using the Slide toolbar, or remote control. Following is an example of using the delimiter to separate questions/MC answers:

Question 1
A. Answer   B. Answer   C. Answer
D. Answer   E. Answer
><
Question 2
A. Answer
B. Answer
><
Question 3
etc
><

Blackboard ZIP files. Export your content in Blackboard format from various programs:
TestGen: Run the TestGen program and select the "create a paper test" on start up. Load your *.bok file and select your MC (multiple Choice) questions and choose "add to test." You should have your test built in a separate window at this point. Highlight the test window, and then choose export from the file pull-down menu. Choose Blackboard as the export type and note where you save it. Browse H-ITT to this file to load the questions.

Examview: Run Examview and load your MC (Multiple Choice) questions and choose export from the file pull-down menu. Choose Blackboard as the export type and note where you save it. Browse H-ITT to this file to load the questions.

Other content programs: Most content providers allow for exporting to a Blackboard format. In general, select a question format with multiple-choice answers and either "save as" or "export to" a Blackboard.zip file. If Blackboard is not an export option, in most cases you can "save as" or "export to" a file type that can be displayed within the acquisition window. In cases where no export or "save as" is available, and the content can be displayed on your computer, then it is possible to display the content and use the Toolbar mode of Acquisition to collect gradable responses and display results. See 3.4.4.5 Toolbar mode for details.

MicroTest: Run MicroTest and load your question set. Export your question set as a BlackBoard xml file. This will create the xml and a folder that contains the images used in the set. Use QGen2 to modify questions and export as xml for viewing in Acquisition.

H-ITT XML; created with Qgen2:

H-ITT Qgen2 is an easy to use question generator utility that can create, or convert your content into H-ITT XML format with special question specific control functions. You can download H-ITT Qgen2 free from H-ITT.Com>Downloads page. Content created with the H-ITT Qgen2 program is displayed from the H-ITT XML option in the Slides pull down menu.

The advantages of using the H-ITT XML format are:

- The correct answer can be pre-assigned with the questions.
- The Acquisition functions: Question type, Question timer, Response type, and Chances can be pre-assigned and are question specific.
- You can advance questions automatically when the question timer expires.
- You can include class labels, and question comments that can be included in the grades report for to tag questions with learning objectives or goals.

Advanced users may create H-ITT formatted XML content. A detailed description of the H-ITT XML format is described in section the Appendix, section 5.3.3.

3.6 Using the Demo Mode

The Demo Mode allows you to "play" with the programs without having a H-ITT base unit connected, or needing to create a class. This mode is selected from Acquisition's main screen; click on the Demo Mode button, the class folder and class files created will be named Demo Mode. If you have any open com ports when you select the Demo mode, you will need to manually select "keyboard" as the input source from the Options>Advanced pallet.

When Keyboard is selected as the input source you use your computer's keyboard to "simulate" clicker responses instead of actual clicker responses.

Note that you can run *your* class in a "demo mode" if desired, by selecting the keyboard as the input source from the Options>Advanced tab.

To use the demo mode do the following: *(This discussion assumes the default class settings which is multiple choice question type with 5 possible answers, and 3 allowed answer changes).*

Assume you have asked a multiple choice question, then start collecting responses by clicking the green start question button. You should notice the timer is counting down. Press any letter A-E, or number 1-5 on your keyboard and ID boxes simulating responses will begin to appear with each press. The numbers inside the boxes simulate the last 3 digits of the ID numbers for the student's remotes. These ID boxes give "confirmation" to you and the student: When a student sees their number on the screen, then they know their answer is recorded in the system, and you can easily see which students have not responded.

Once you have simulated some clicker responses click the red circle button to stop the data acquisition process and show the Histogram of the responses. This Histogram is one of the keys to successful teaching. If more than 90% choose the right answer, you may be wasting your time on this material and need to move on. If the Histogram shows not many students know the correct answer then you must spend more time on this particular material.

You can assign a correct answer to the question when the Histogram is being displayed if desired. The default is to not show the correct answer to the students, but you can show it by clicking on the "show / hide correct answer" Icon on the toolbar (it is the red "check mark"). Notice that you can change the correct answer when the Histogram is displayed by simply pressing the desired key (A-E or 1-5).

You can repeat this start question, simulate responses, and view results as many times as you want. You can also use all other features and functions of Acquisition like displaying slides, and using the paper based test mode when in the demo simulation mode.

A class file is automatically created, and you can view and edit the results from this simulation in the Analyzer program to learn about the entire system.

4 Analyzer

Analyzer: Start this program to:
- Evaluate responses from an Acquisition session
- Associate student names with remote ID numbers (Roster)
- Assign/modify correct answers
- Assign point values to questions
- Report grades to your grade book or spreadsheet program
- E-mail or WebCT students their up-to-date status (grades and points)

The H-ITT Analyzer program grades/reports responses saved in class files created with the H-ITT Acquisition program. It associates student names with remote ID numbers through the use of a roster file, allows assignment/modification of correct answers either by question or globally through an answer key file, provides question points weighting and confidence factors and sums up the points by question, class, or year to date. It easily copies and pastes student points into grade books or spreadsheet program, or exports as standard or modified file formats for many applications. Many roster building options/methods are provided as well as student information tools like e-mail or WebCT to let your students know how they are doing.

This section describes the features of the H-ITT Analyzer program.

4.1 Starting Analyzer

Double click the Analyzer Icon to start the Analyzer program.

When you created a class in Acquisition, it is available in Analyzer.

NOTE: If you used the default class file locations, your class will show in the list of classes under the class Name column. If you used an alternate location for your class file folder when you created the class you will need to add this class by clicking the ADD A CLASS link. Then browse to the class file folder in the location you created it. Once added this class will always show in the Class Name column.

Click on the Class name to open that class for grading/reporting.

class file link - this is a convenient way to browse to your class folders.

Analyzer start up screen.

If the class name does not appear, click on the **Add a Class** button and browse to the class folder named the same as the class folder you created in Acquisition, the class will show up in the Class Name column.

Options allows you to set-up some initial default values for new classes.

Language. English is the default, but various languages can be implemented through authorized distributors.

Support links to H-ITT web site where you can find various documentation and support items.

Version Check: click the check mark to verify you have the latest version, and download if desired.

Exit exits Analyzer (also available from the File pull down)

NOTES:
There are 2 common situations regarding the location of the class files generated in Acquisition and adding them in Analyzer:

1 When the Acquisition and Analyzer programs share the same class folder: When Acquisition and Analyzer are used on the same computer and the default directory is used (i.e. >My Documents>My H-ITT files) the class name created in Acquisition will appear under the Class Name column in Analyzer.
If you created a different location for your class, you must add it by clicking the ADD A CLASS link. Browse to the class folder that you created in Acquisition (i.e.1st period math, or MWF physics 101) highlight the folder and click the OK button.
2 When Acquisition and Analyzer do not share the same class folder: There are several ways to transfer the class file from the computer that Acquisition was used on to collect responses (the class computer), to the computer that you want to use Analyzer to grade and report the responses (the office computer).

- First install H-ITT CRS on your office computer. This will create the default file structure with the class file root folder (i.e. My Documents\My H-ITT files).
- Then create a folder under this and name this folder the same name as the class name you created in Acquisition.
- Transfer the "class file.zip" created in Acquisition to this class folder.
- Click ADD A CLASS, browse to the class folder that you created, highlight the folder and click OK.

FIY: You only need to do this once for each new class.

Acquisition always sends the class file to local computers class folder, but also provides tools for automatically sending the class file to alternate locations from the options>General tab where you can save to a zip or alternate location such as a USB memory drive. In addition, you can email the class file to your office (Options> Email), or post to an FTP (Options>FTP).

Default class file location: (Also see the Appendix for additional information on file and folder locations)
The default location called the Class File Root Folder (CFRF) where the Acquisition and Analyzer look for class files depends upon the operating system.
Windows: 'My Documents\My H-ITT Files\<class name>'
Mac OSX: 'Documents/my_h-itt_files/<class name>'
Linux: '~/my_h-itt_files/<class name>'
When adding an empty class files folder to the Analyzer, the Analyzer will use the name of the folder as the class name and leave the instructor name blank. Once a class file is placed into the folder and the class is graded, the Analyzer will update the class and instructor name to reflect what is in the class file with the newest date.

4.2 Analyzer general description
This section describes functions of the H-ITT Analyzer program, the figure below is the Class header.
First, throughout this manual, access to options and screens may be referred to as from the "pull down menu", or from the "Icon bar" and from the "Tab" window. These refer to areas of the toolbars at the top of the class screen:

Pull down menus →
Icon bar, or Icon menu →
Window Tabs. →
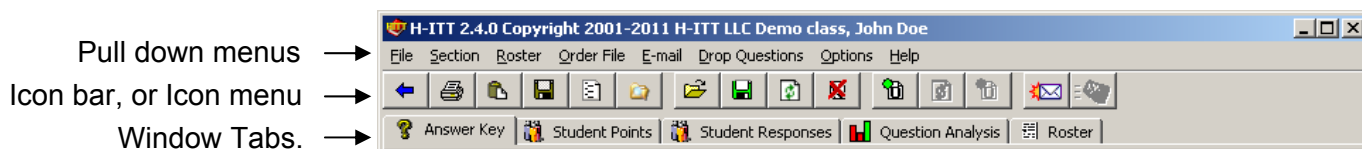
The Icon bar provides an easy access to some of the most commonly used options. A short description of each Icon function is provided by hovering your mouse over the Icon.
Pull down menu items are detailed in section 4.9.
The Window Tabs opens windows specific to the function (the answer key window is the default). These are:
1. Answer Key, section 4.3
2. Student Points, section 4.4
3. Student responses, section 4.5
4. Question Analysis, section 4.6
5. Roster, section 4.7

4.3 Answer Key Window

Click the Answer Key tab to view the Answer Key window.
The Answer key window gives you an overview of class performance and you can grade, or assign correct answers here.

The settings link brings up the Answer key options (section 4.3.2).

The Class column, In this example there are 3 classes, or rather Acquisition sessions where questions were asked, the first one is un-graded, and not included in the totals. For class 2, Acquisition was set up as Multiple choice, and the 3rd class used the fill in the blank question type. Each class is numbered and time/date stamped.

NOTE the "status" of each question, {empty} means no correct answer has been assigned.

The Edit button Edit the specific class's set of questions:
- Add a class label and comment.
- Assign instructors remote ID.
- Assign points values for all questions in this class.
- Change the date of the class.

The key button allows you to apply a global answer key to the class file, See 4.3.1 for details.
The Grade button enables/disables the grades for that class from being included in the grade reports.
The X button removes the class from being graded, and moves it from the class folder into a sub-folder called "removed". You can bring this class back by browsing to the "removed" folder and move the class file back to the class folder.

The Question Column shows each question for each class. Clicking on the BLUE question number brings up the individual question grader described below. Clicking the Histogram brings up the question analysis window for that question, Section 4.6. Clicking the down arrow ignores this particular from grading.

Responses Column: This gives you an overview of how students did by question. The format is:

# of responses (# correct, # incorrect).

Correct Answer(s) column: This shows which answers you have assigned as correct. Other status text for the question can be displayed, such as {Empty} which means no answer has been assigned.

Points Column: This column shows the correct answer point value you have assigned. Note for MC questions, if all answers were incorrect, then the total possible points for the question would show as point value you assigned for an incorrect answer.

Average points column: This column shows the average points score that is calculated for each question as (total points awarded / total points available).

YTD points column: This shows a running total, by question of possible points available Year to Date for all classes.

At the top right of the Answer key window is a shortcut link to individual student response details. From this screen you can review and edit each student's responses. Details on this are found below under the Students points window section 4.4 (where you can directly click on a student name to bring up the details).

Question Grader: Clicking either the question number (in Blue) or clicking the item in the correct answer column opens the question grader. If you have assigned a correct answer in Acquisition, it will be shown. There are three grader types that will pop up based on the question type, MC or fill in the blank or fill in the blank-numeric. These graders allow you to:
- Assign multiple correct answers (or a tolerance for numeric type)
- Assign points values by question, or by individual answers.
- View, edit or add a question Label/Comment (click the tab at the top of the grader).
- Ignoring the question omits this question from being included in the points totals and grades.
- Globally assign all answers correct or incorrect.

Multiple choice grader allows you to check and uncheck answer selections for the individual question. You may assign multiple correct answers, and different point values for each answer.

Fill in the blank grader allows you to enter or edit correct answer add multiple correct answers assign different point values for each answer.

Fill in the blank-numeric grader allows you to enter or edit correct answer add a tolerance and assign different point values for each answer.

4.3.1 Grading the students.

H-ITT provides many ways to "grade" student responses:

First, decide if the question has a correct answer.
Some questions may not have a correct answer like voting, attendance or just for class participation. These can be automatically "graded" simply based on if a student responded or not.
Assigning a correct answer to each question is typical for quizzes, tests and even verbal on the fly questions, and there are 3 different ways you can do this described in the following Section 4.3.1.1.

Second is to decide on your grading method, or how you want to grade for reporting. Basically there are 2 methods, using a weighted point system, or straight percentage of (correct answers / total questions). Section 4.3.1.2 provides details on how to implement the grading method you choose.

4.3.1.1 Assigning correct answers to questions
There are several ways to assign/edit the "correct" answer(s) to each question:
- From Acquisition, The correct answer can be assigned when the question is asked using either the computer keyboard or the instructor remote, see section 3.4.6.1 for additional information.
- From the Analyzer>Answer key window, two options: Load an ANSWER KEY for the question set (described below) or assign/edit individual questions from the Question grader described above (click the blue question number to bring up the question grader).
- Pre-Author the correct answer with the question in H-ITT xml format using H-ITT Qgen2.

From the Class column of the answer key window you can load an **ANSWER KEY** from the "key button":

The Key button opens a browser window where you can load the answer key for the class file. The Answer key is a plain text file (*.txt) or comma separated file (*.csv) file that you create using either a text editor or spreadsheet program (like MS excel) as discussed below. See *.txt and *.csv examples below.

Notes:
- You can assign multiple "correct answers" for each question.
- The answer key can have both multiple choice (MC) and fill in the blank (Multi-Digit MD) answers.
- Multiple Choice answers can be either letters or numbers
- Examples of both a text (*.txt) and a spreadsheet (*.csv) answer key file are shown below.

An example of an "answers.txt" file (answer key for a class file set of 4 questions) is:

1,C	MC type: C is the correct answer for question 1
2,A,D	MC type: A and D are correct answers for question 2
3,12.5	MD type: 12.5 is the correct answer for question 3
4,12.5,12.50	MD type: 12.5 and 12.50 are correct answers for question 4

An example of "answers.csv" spreadsheet file

1	C	
2	A	D
3	12.5	
4	12.5	12.50

Same Answer key shown above (i.e. C is correct answer for Q1, etc), created in MS Excel, and saved as a CSV file.

About the Answer Key: The answer key file assigns the correct answer(s) to responses contained in the class file, and is not otherwise associated with the actual question content. Therefore the format or delivery method of the question content does not matter; you apply the answer key to the results contained in the class file. The "name" of the answer key file is your choice as long as it is either a *.txt or *.csv file type. The default directory (where the browser opens to) is the Class folder, however you can use any "file organization" method you prefer to maintain and associate the class file and answer key file.

4.3.1.2 Grading with points or percentages

You can use either a points based method, or a percentage grading method, or a combination of these. Which method you choose is up to you, below is an overview of each method:

First it is important to understand what a Class File is and how Analyzer grades them:
Every time you start Acquisition, ask questions and collect responses then close Acquisition a new Class File is created. This Class File contains the student responses separated by question number and shows up in the Answer Key window in Analyzer under the Class column.
Analyzer "grades" all the Class Files that are enabled for grading the Class column, and keeps a running total of "points earned" shown in the Student Points window.

Points Based grading: This is the default method used in Analyzer. This will keep a running total of points earned for each student throughout the school year. The Points method is simple and automatic; it promotes student attendance, participation and preparedness, and is typically used to apply a "participation" factor to student's final grade. The default points values are 3 points for a correct response, 1 point for an incorrect response, and 0 points for no answer. This point value scale will automatically adjust based on if you assigned a correct answer or not, such that, if you do not assign a correct answer, the basis becomes the point value you assign for the incorrect answer. Example: if the points weighting is 3 for a correct answer (and no correct answer is assigned), 1 for an incorrect answer, and 0 for no answer then a student answering will get 1 out of 1 possible, a student not answering will get 0 out of 1.

There are options to assign different point values both globally for all Classes (Options>Answer key tab) or individually by question (click on the blue question number).

Below is an example of point based grades exported as a CSV. Raw is the points earned, the Max YTD available points is 95, and grades are provided in % and Decimal.

Name	Student ID	Remote ID	Raw	Max	Percent	Fraction
Abraham Lincoln		423456	82	95	86.32%	0.863
George H. W. Bush		426871	83	95	87.37%	0.874
George Washington		423462	85	95	89.47%	0.895
Grover Cleveland		431464	93	95	97.89%	0.979
James Madison		423607	81	95	85.26%	0.853
Jimmy Carter		423501	56	95	58.95%	0.589
Ronald Reagan		423401	81	95	85.26%	0.853
Theodore Roosevelt		423683	85	95	89.47%	0.895
Thomas Jefferson		423945	62	95	65.26%	0.653
Ulysses S. Grant		423475	60	95	63.16%	0.632
Max Possible Points			95	95	100.00%	1

NOTE the header is included and is enabled from the Options>export Points tab.

Percentage based grading: Percentage grading is typically used for individual tests and quizzes where the percentage grade is simply the number of correct answers to the total number of questions. For this you would set the global points values to 1 point for a correct answer, and 0 points for or an incorrect (or no) answer from the Options>Answer Key pallet.

Now every question is worth 1 point, so if you ask 10 questions, and a student gets 9 right, the grade will be 90%, and is shown in the Student Points window in both decimal and percentage form.

If you do not assign a correct answer, the question is ignored for grading purposes. Example, if you ask 10 questions, and only assign a correct answer to 5 of them, the grade for a student that got 4 of the 5 correct would be 80%.

If you want to report student's grades for a single class file, you must either un-grade or remove all other class files in the Answer key window. To un-grade click the Grade button, to remove click the X button for those classes. Note: When you remove a class, it is put in a folder in the Class Folder named "removed". To get a removed class back, simply move the class file from the "removed" folder back to the Class folder, and re-start the class. You can access Individual student grades for each class from the students points detail option in the answer key window.

TIP: If you use the H-ITT system for just giving tests, and only want % grade reporting, then after grading it, export the results from the Student Points window, and remove the class.

Below is an example of a Percentage based grades exported as a CSV. Raw is the points earned, the Max is 1 point per question for a class that had 10 questions, and grades are provided in % and Decimal.

Name	Student ID	Remote ID	Raw	Max	Percent	Fraction
Abraham Lincoln		423456	8	10	80.00%	0.8
George H. W. Bush		426871	8	10	80.00%	0.8
George Washington		423462	7	10	70.00%	0.7
Grover Cleveland		431464	9	10	90.00%	0.9
James Madison		423607	7	10	70.00%	0.7
Jimmy Carter		423501	8	10	80.00%	0.8
Ronald Reagan		423401	8	10	80.00%	0.8
Theodore Roosevelt		423683	8	10	80.00%	0.8
Thomas Jefferson		423945	9	10	90.00%	0.9
Ulysses S. Grant		423475	7	10	70.00%	0.7
Max Possible Points			10	10	100.00%	1

NOTE the header is included and is enabled from the Options>export Points tab.

Using both percentage and points based grading:
There are several ways you can use the H-ITT system for both cumulative participation grading (points) and individual test scoring (percentages).

1. You can use the grade button to select only those classes or class that you want to report.
2. You can use the "x" button to remove classes that you do not want to report.

Either method is OK. Here are some tips if you want to remove some classes (x button) and retrieve them later for reporting.

Using your computers tools to create folders is an easy way to separate Class Files that you want to grade as percentage, and those that you want to use for "participation" with the scaled points system.

The file organization method you use is up to you but a good way is remove all class files from the Answer Key window to the removed folder with the "X" button. Then when you hold an Acquisition session the new Class File will be the only class shown when you open Analyzer. You can grade and report it if desired, or remove if, for example, it's a Class File that you want to use as a running total for applying a participation factor to mid-term or final grades.

Using your computers tools, create a folder in the class files folder, call it, for example TESTS where you will move your classes you want to grade with the percentage method. Grade and report these, then move these classes from the removed folder to this "TESTS" folder. This way you will keep the class files you want to use as cumulative points purposes separate from the class files you want to use for percentage grading. Then, for example, when you want to report the cumulative points for midterm or final grades simply move all the files from the removed folder (which contains only the class files that you use for cumulative points grading) back to the Class file folder, grade and report them.

4.3.2 Answer Key Options

From the Options pull down menu, select Answer key. The options window is also available from the Icon tool bar, the icon that looks like a sheet of paper.

Check the appropriate box to show the desired option in the Answer Key window. These are self explanatory

Opens the options for confidence grading, see below.

Enables the advanced options in the answer key window, see below

Sets the global default point values for all questions. Type in the points values you want and click the Apply button.

Confidence grading options:
This allows you to acquire information relating to how confident the students are with their answers and applies a weighting factor to their points based on their confidence, and if they answered correctly. In order to be able to use confidence grading, you must enable and collect student confidence in Acquisition. The default confidence factors are shown. These are multipliers of the points values you have assigned, either globally or by the question. You can edit these factors by clicking in the box.

Note: Confidence grading is only available for Multiple Choice answer types.

Advanced Options:
Enabling the advanced options will add question specific options in the Question column of the Answer key, with the following **D**rop question, **U**n-drop question and "**x**" remove question.
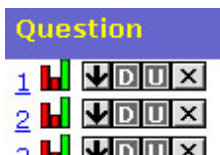
A descriptive pallet will appear when you click any of these advanced options that will describe it's function, with an option to accept or cancel.

4.4 Student Points Window

Click the Student Points tab to view the Student Points window.
The Student Points window is where you access students' grades and set up for reporting these grades. The default window shows total points for each remote ID until you load a roster. Once you have a roster with student names these will appear as shown. There are many other options to viewing data in this window that you can choose by clicking **Settings**, or from the options>Student Points menu, reference section 4.4.1 for details.
The blue column headers (i.e. Name and Total Points) can be used to "sort" the data set (alphabetically, or by ascending / descending values)

To revert the order back to the order of the roster, click on the yellow **Roster order** text at the top.

Click on either the yellow **Export to clipboard**, or **Export to File** to get these points from Analyzer and into your grade Book. These copy and export functions are also available from the pull down "file" menu, and also on the Icon toolbar (shown as a clipboard and as a black floppy disk). See also grading the students section 4.3.1 for additional information on reporting. If you export to a file, a browser will pop up asking you where to save the report and a file name. The report is by default a CSV file type and is named Grades.
The **Total Points** are shown for all classes that are enabled for grading (from the Answer Key window) and can be expanded for additional detail (such as points by class or points by question) using the Display options.
- Raw (this is how many points the student has earned)
- Max (this is the total possible points)
- Percent (Raw/Max X 100)
- Fraction (Raw/Max)

You can view Student Points Details compared to the Answer key by clicking on the student name (or remote ID if a roster is not loaded), a window will appear with the Answer Key giving details for that students responses for each class and question. The student detail window is also available from the Answer key tab window.
The student points detail is part of the Answer key, accessing it from the Student Points window is a convenient way to bring up details for any particular student.
On the Right side of this window you will find the individual students answers that you can edit for each class and question. Details of this window are described below.

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1. The student name (if in the roster) and the remote ID are shown at the top. You can move to Previous or Next student in the roster by clicking the appropriate link in yellow text.

2. Incorrect answers are shown in red. You can edit student answers by clicking on the answer and change it.

3. In the Points column, it shows "points earned" of "total points available".

4. Total points earned are given cumulative for the student by class and also YTD course total.

4.4.1 Student Points Options

Either clicking the **Settings** from the Student Points window, or selecting Options>Student Points from the pull down menu brings up the view/export options set up pallet. The grade report can be modified in many ways to suit your reporting needs as described below.

Columns - display options:

Select the desired data column by checking the indicated box. Only the student information fields that are in your roster will show up as a selectable item. In this example the Roster only contains Student Name, Student ID and Remote ID columns. When checked, a column with the desired information will be included in the Student points window and in the export grades report.

Rows – display options:

Select the desired data row by checking the indicated box.

FYI: By selecting Hide remote ID's with no roster information will remove these from the grades report which is useful if a student drops the class.

Total Points by: A pull down menu where you can select to show point details by class and / or by question along with the totals. The Default setting is totals only

Display max possible points: You can choose to display (and export) the maximum possible points, and select this to be either in the last row or the first row.

Export Settings: This brings up the Export Options Dialog.
These options are specific to the grades export. Select as needed to suit your grade book needs.

4.4.2 Reporting grades

There are three general ways to report student grades and performance. Items 1 and 2 below are "file type" reports and item 3 is the email reporting tool.

1. Export the grades report to a file by clicking the `Export to file` link from the Student Points window (or from the File pull down select "Export Points to File" link). A browser will popup allowing you to save the grades report to a location of your choice. The export can be either a *.csv file or a *.txt file. The default name and type is grades.csv. The default location is the Class Files Folder, which you can access from the Section pull down, select explore class file folder (also accessible from the "open class files folder" on the icon toolbar). The exported report will contain all columns and rows as shown in the Answer Key window. You can modify the export from the Options>Answer Key pallet, or access this by clicking the `Settings` link in the Answer Key window. Exported grades reports in *.csv format open in excel for Windows where you can easily copy and paste Grades to your grade book or report these directly to administration depending on your needs.
2. `Export to clipboard` will copy all the columns and rows of information to your clipboard where you can paste this into an application, such as a gradebook. As described in 1 above, you can select the export information (columns and rows) to match your grade book program to make it easy to paste the report directly into a gradebook application that accepts "pasting" in the grades.
3. Email reports is a one click way to keep all your students informed of their current "clicker" points. This is a one click time saver when your school administration requires you to update students of their progress on regular intervals throughout the session. This requires that each students email be included in the Roster with a roster format that has a column for Email, and the email account has been set up from the Options>Email Server settings.

You can email all students at once from the Email pull down, select "Email Answer Key and Student responses) option. This is also available from the icon shortcut "email grades to students" on the icon toolbar. The email students receive is shown below.

This is what an emailed grades report would look like in the students email. Each student will get their individual status report.

In this example the points values are the default 3,1,0 participation scale.
This report was sent to Sam Adams, and the answer he submitted for each question is shown along with the "correct answer as you graded it.
Totals for each class (each session you started the class, collected responses, and closed Acquisition) are shown as well as the "course" totals (their current grade) shown at the bottom.

FYI, when you start the "email all students" you have the option to add your text to the email and the option to not send the grades report. This is a convenient way to send all your students any message, at any time. In addition, you can email any student individually with or without the grades report from the Answer Key window, click on the "email student" link when showing student responses.

In addition you can email individual students from the Answer Key window. Click on `Show Students` *select the student with the next and previous links and click on the students name to email them.*

H-ITT: responses and points

Student Name:	Sam Adams
Class:	Demo Class
Instructor:	Me
Remote ID Number(s):	500033
Total Points Achieved:	**19.00**
Maximum Possible Points:	**23.00**
Percentage Points:	**82.61%**
Classes Attended:	**3**
Classes Missed:	**0**

Thank you for using the H-ITT system.

Class	Question	Correct Answer(s)	Points	Average Points	YTD Points	Sam Adams RID:500033 Answer	Points	YTD Points
1 Tuesday 11 Oct 11 12:12 PM	3 Questions in this class. Enable grading							
2 Tuesday 11 Oct 11 12:27 PM	1	A	3	2.60	3	A	3 of 3	3
	2	C	3	2.60	6	C	3 of 3	6
	3	A,E	3	3.00	9	A	3 of 3	9
	4	Ignored	0	1.80	9	C	0 of 0	9
	5	{empty}	1	1.00	10	C	1 of 1	10
	Class Total:		**10**	**9.20**		**Class Total:**	**10 of 10**	**100.00%**
3 Tuesday 11 Oct 11 12:29 PM	1	12	3	1.00	13	13	1 of 3	11
	2	11,78	3	3.00	16	11	3 of 3	14
	3	147	3	3.00	19	147	3 of 3	17
	4	{empty}	1	1.00	20	347	1 of 1	18
	5	1/2	3	2.60	23	1	1 of 3	19
	Class Total:		**13**	**10.60**		**Class Total:**	**9 of 13**	**69.23%**
	Course Total:		**23**	**19.80**		**Course Total:**	**19 of 23**	**82.61%**

These scores are based on remotes registered prior to Tuesday October 25, 2011 at 06:40:33 PM

4.5 Student Responses Window

Click on the Student Responses tab to bring up the Students responses window

The Student responses window is provided for special applications where you want to know what answer each participant gave as opposed to how they scored in points or grades referenced to a correct answer.

MC answers are shown as the letter choice.

T/F, Y/N and Y/N/A answers show these letters.

Fill in the blank answers are shown in full.

#	Name	C2 Q1	Q2	Q3	Q4	Q5	C3 Q1	Q2	Q3	Q4	Q5
1	Sam Adams	A	C	A	C	C	13	11	147	347	1
2	Mary Jones	A	C	E	B	C	13.5	78	147	365	1/2
3	Adam Smith	A	C	E	B	C	13.5	78	147	365	1/2
4	Louis Lane	A	A	E	B	C	13.50	78	147	365	1/2
5	Tracy Moore	B	C	E	C	C	13.5	78	147	365	1/2

Clicking the **Name** heading will sort the students in ascending or descending alphabetical order, and clicking on Roster Order will revert back to the sort per the roster.

4.5.1 Student Responses Options

Like the Student points window, the columns displayed are tied to the Roster with respect to the displayed fields and are modified by clicking the **Display Options** link, or from Options>Student Responses pull down menu.

Copy or export a file of the student responses data by clicking the yellow "export" text above the Student Responses tab window.

The Export Settings are the same as for Students Points export settings with the file type being a CSV file and a default name "Responses.csv". Click the Export Settings button to modify this.
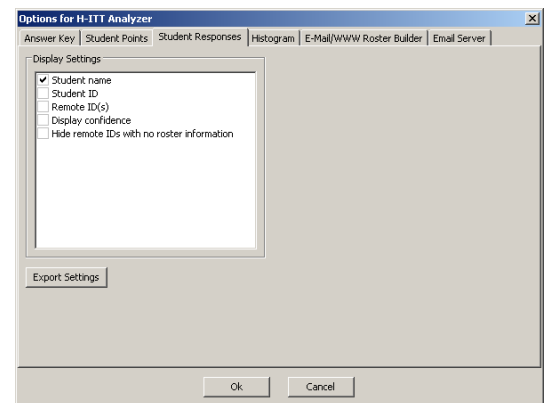
4.6 Question Analysis Window

Click on the Question Analysis tab to bring up the Question Analysis window.

The question analysis window provides a detailed look at each question, providing the same Histogram of answers that was created when the question was asked in the Acquisition program, plus a time graph of how long it took for students to respond and a screenshot of the question with ID grid. You can click the question screen shot to enlarge it.

A link to the Grader is provided at the top of the window for easy access when needed.

The details are shown in two main sections, Average response time and Individual student responses with response times.

Graph to clipboard lets you paste the Histogram in another document. Copy to clipboard lets you paste the graph data including times or To File provides a tab delimited data set of the Average time section and To File lets you save a copy of the Histogram in *.png format.
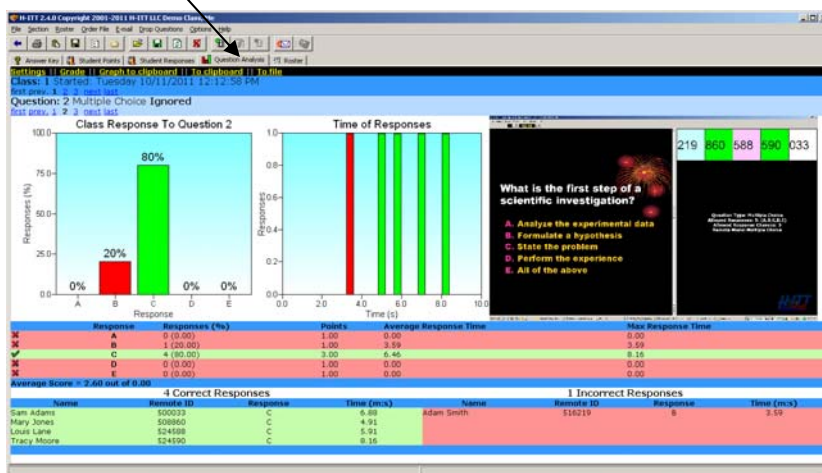
Each column has a header description, which is self explanatory for both sections. The time included in the exported data is given in mili-seconds which is a thousandth of a second. For example, in the Average section, the Average, Minimum and Maximum response time columns are shown as 3610.00 which is 3.61 seconds, and 125070.00 would be 125.07 seconds, or 2 minutes and 5.07 seconds.

The Individual response section shows each students answer to the question and the time (in seconds) it took for them to answer.

NOTE: you can show the correct answer in the Histogram (turn correct answer bars green) from the options>Histogram menu described below.

4.6.1 Histogram Options

The method for modifying the Histogram is similar to the method in Acquisition: from the Options>Histogram tab of the pull down options menu.

Always indicate correct answer option is a popular option for the Histogram, so it is easy to see where the students answered from a "correct answer" standpoint. Check the "always Indicate Correct Answer" box to turn the correct answer bar Green.

The other options for the Histogram are discussed in detail in the Acquisition section of this manual in section 3.5.6 under Options>Histogram.
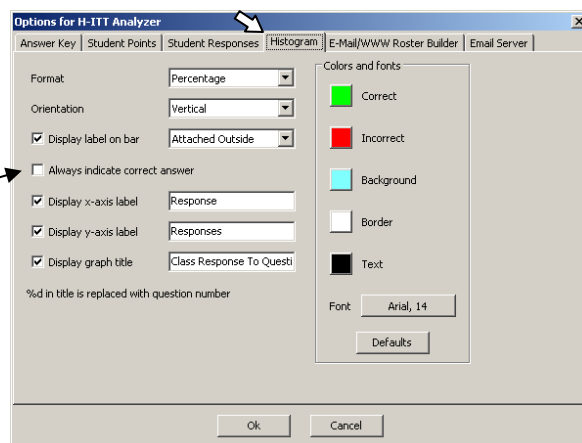
4.7 Roster Window

The Roster associates the student with answers from their remote and can include other pertinent student information as described below. You do not need a roster to collect data and responses from the Acquisition program. If a roster is not created, this window will only show the remote serial numbers in the Remote ID 1 column that responded to questions in an Acquisition session. The Analyzer program provides many ways for you to build your roster in various formats to meet your specific needs. Once you have your roster implemented, all previous responses from a remote ID will be associated to the student information in that same row for grading and reporting.

Click on the "Roster" tab to view the current roster:

The default roster format is shown.

If you have not created your roster only the Remote ID numbers that were detected when the class was run in Acquisition will show.

There are many ways to add the student information to the roster. The simplest is to type them in the appropriate cell by clicking in the cell. Other time saving options are discussed below.

Note the "extra" columns for remote ID#. These are always provided in all roster formats and can be used when a student changes remotes (example uses either an IR and an RF remote, both remote ID#'s can be included for that student).

H-ITT Analyzer is very flexible and versatile in the roster format and ways to create the roster specific to each class using tools and files you may have access to.

Providing this flexibility means that there are considerable options for you to choose from regarding your roster format and ways to create it.

We urge you to take time to review the roster formats and tools available to create the roster in the next section. In almost all cases you will find that implementing the roster format you want to perform the functions you need, can be implemented with minimal effort on your part.

4.7.1 Creating a roster

H-ITT provides many automated ways to create your roster based on your application and student information you may already have. Here are some automated roster building options:
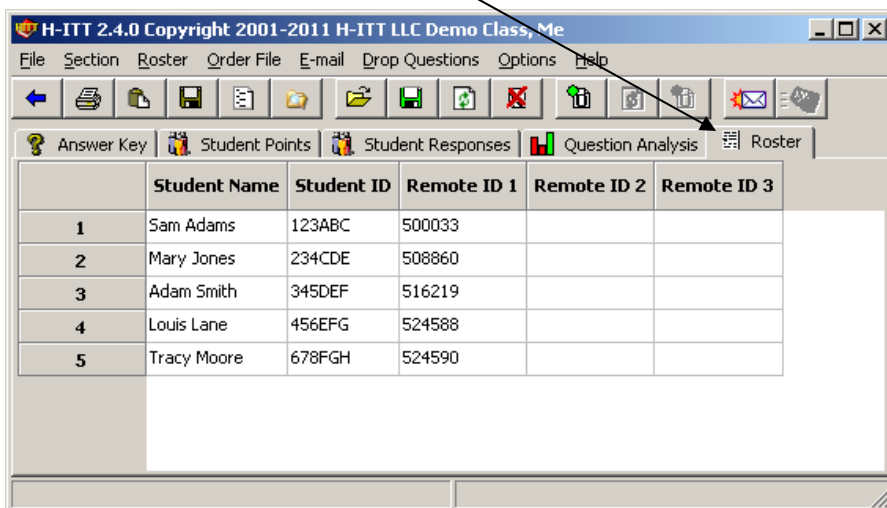
<u>When Students own their remote</u> and/or large class venues, typical of higher education, here are 2 options:
1. <u>Use web registration</u>: (**recommended)** The students complete their roster information on-line and you can build your roster with a simple one button update.
2. <u>Use the email roster builder tool</u>: Students email you their roster information, which is automatically "mined" from your email account and will build the roster.

<u>When the school owns the remotes </u>(i.e. remotes stay in the classroom) and/or smaller class venues, typical of K-12, use the <u>RosterMaker</u> utility. You load student information in, run RosterMaker in class and load the completed roster in Analyzer.

Other methods to build your H-ITT roster are available and included below. In general for these you will follow these 2 steps:

1 - Choose the roster format that best fits your needs, see below, section 4.7.2.

2 - Build the roster using one or more of the tools as described in following section 4.7.3.

4.7.2 Roster format

The first step in creating your roster is deciding on the format, or rather how much pertinent information you want to include in your roster.
Select Change roster format from the roster pull down menu:
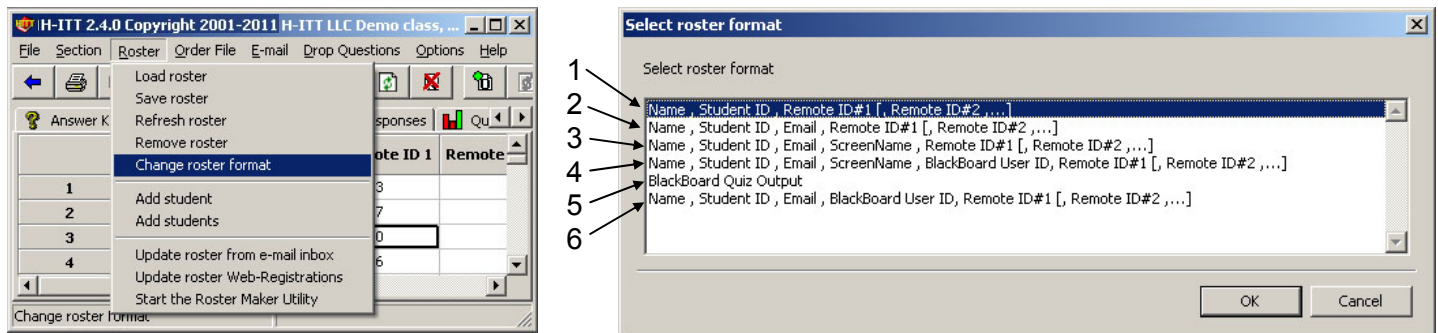
Below is a description of the roster formats with information regarding what each additional field can be used for:

	FORMAT	DESCRIPTION
1	Student name, Student ID, remote ID#'s	The basic default roster, has the minimum information. Student ID is the students school ID, or a corporate Employee ID, can be used as an alternate "student" identifier when reporting grades.
2	Student name, Student ID, Email, remote ID# 's	The added Email is the students email address so you can email students their H-ITT grades with a mouse click. If the Email Roster builder tool is used their Email address is automatically added when the program "mines" your inbox.
3	Student name, Student ID, Email, ScreenName, remote ID#'s	Adding a ScreenName, allows you to show this ScreenName in the Acquisition ID grid box in place of the typical last 3 digits of their remote ID#. The ScreenName column can be used for "numbering" remotes for "class pack" applications.
4	Student name, Student ID, Email, ScreenName, Blackboard User ID, remote ID#'s	If your school has a "student or learning management system" (LMS) such as BlackBoard, WebCT, Sakai etc, you should use this format (or format 6 below). This field can be used by your LMS when exporting the grades reports either individually to students or as reference for entering their grades into your LMS. If you use the Blackboard/WebCT questionnaire to build the roster, their user ID will automatically be included.
5	Blackboard Quiz Output	Select this format if you use Blackboard to generate your roster (by giving students a BB/WebCT quiz).
6	Student name, Student ID, Email, Blackboard User ID, remote ID#'s	Same format as 4 above, except a ScreenName is not used.

Definitions of the roster fields:

1. Name - the name of the student: Firstname Lastname, or Lastname Firstname, (or any characters such as middle or surname are OK). CAUTION using commas in the students names: If you are creating a plain text roster to load you must include quotes around the name otherwise the comma in the name will be treated as a "separator" and cause an error in the roster
2. Student identification (ID) number - the student ID number as assigned by your school, treated as alphanumeric and is not case sensitive.
3. Screen Name - Used in the Acquisition program in ID box instead of Remote ID number.
4. E-mail address – The students email address, if included, reports can be e-mailed to students.
5. Blackboard ID – Blackboard is used as a generic term for the students ID based on a "student or learning management system" such as BlackBoard, Sakai, Moodle, etc. If your school has a system that uses an alternate student ID (other than the schools student ID) for grades and/or other reporting activities, then you should use this field to enter that student ID. This field is alphanumeric and is not case sensitive.
6. Remote ID - The student's remote ID number, six or seven digits printed on the remote. Note multiple remote ID numbers can be assigned to each student by adding the new remote's serial number to the next remote ID field in the roster.

NOTES about the roster file:

- Each line of the roster file corresponds to an individual student.
- The entire roster must be the same format, however it does not require that all fields be filled in.
- When creating your roster file if you are creating a plain text roster to load you must include quotes around the name otherwise the comma in the name will be treated as a "separator" and cause an error in the roster.
- Blank lines or lines containing only commas (,) will be ignored when the roster is imported.
- The Analyzer can load text files created on any platform: Windows, MAC, or Linux. That is, it can automatically detect the proper line ending.
- The Student ID number is treated as an alphanumeric string meaning that the number can contain characters such as S123456. However it also means that 0001234 and 1234 are two different Student ID numbers. This is important when using the order file.
- The WebCT Quiz Output is a special format that is to be used when the roster is generated using the WebCT quiz described below.
- If another roster file was loaded prior to loading this roster, it will be removed and the new roster will be the only roster information in memory. You cannot import more than one roster at a time into the program.
- If the roster file contained errors, the Analyzer will tell you what the errors are. Certain errors such as a single remote ID number assigned to two different students will cause the Analyzer not to load the roster. Please read and understand the error messages and they will give you some clue as to what the errors are.
- One common error is to select the wrong format. If you get an error and suspect your roster is fine double check its format and the format you select prior to importing.
- To practice importing a roster, you can download sample roster files from the H-ITT site, create some class files using keyboard mode in the Acquisition, and import these rosters into the Analyzer.

Here are examples of a few lines of the basic 3 column roster files (name, Student ID, remote ID) in text and also spreadsheet formats:

An example Roster.txt file:

Dave Smith,12345,272811
Sam Adams,45678,273128
Mary Jones,65971,273129
Adam Smith,12398,273565
Sue Johnston,75869,273577
Tracy Moore,41526,276263
Hyman Ulis,36541,276264
Lucas Thomas,85641,317840
Joe Rudman,41526,324701
Lois Lane,75813,335812

An example Roster.csv spreadsheet file:

Dave Smith	12345	272811
Sam Adams	45678	273128
Mary Jones	65971	273129
Adam Smith	12398	273565
Sue Johnston	75869	273577
Tracy Moore	41526	276263
Hyman Ulis	36541	276264
Lucas Thomas	85641	317840
Joe Rudman	41526	324701
Lois Lane	75813	335812

4.7.3 Ways to Build the Roster

Once you have selected the roster format that is best suited for your needs, the next step is to get the student information in the Roster. H-ITT provides several automated ways to do this as described below.

By Hand: - Simple for small classes - If you have collected responses from all remotes, the remote ID will already be there, so all that is needed is to type in the respective student name and (optional) their Student school ID.
NOTES:
Remote ID numbers which have responses associated with them cannot be deleted. If you try to delete a remote ID number that has responses, it will be moved to the end of the list.
You cannot change the order of the students in the roster within the roster editor without changing each line manually. There are 2 ways to change the order of the roster: You may do this directly in your roster.csv and re-load it, or you can use the order file option. See Order file section 4.9.4 for more information.

Use H-ITT's RosterMaker utility: - You will need a list of your students information (i.e. name, student ID etc) that you want to include in your H-ITT Roster. In most cases this is provided by your school. You load this list into RosterMaker, run the utility in class and tell the students activate their remote when their name appears. This adds their remote's serial number to the loaded list. Start RosterMaker from the Roster pull down menu, select "Start the Roster Maker Utility". Instructions for using RosterMaker are accessed from RosterMaker's Help menu and also available under the support section at h-itt.com.

H-ITT's Web registration Roster builder: - There are 4 simple steps to using H-ITT's web registration:
1. Hold class and use Acquisition to get at least 1 response from each of your students remotes. This adds the remote ID's to the Analyzer Roster that is used to match remote ID's at the registration site.
2. Enable Web registration in Analyzer from the Options>Email/WWW roster builder by entering a unique Class ID in the box provided under WWW Roster builder options. See section 4.7.3.2 E-mail/WWW Roster Builder options for more info on the Class ID.
3. Tell your students to register their information (i.e. their remote's ID#, name, School ID, etc) using that class ID at the "web registration" link at h-itt.com.
4. Then select "update Roster from Web Registrations" from the roster pull down menu. Your roster will automatically be completed.
Full details and instructions for using H-ITT's Web registration are found at h-itt.com from the Support >Software link (under the CRS support Documentation heading).

E-Mail roster builder: Good for classes of any size. Typically used in higher education when students own their remote and have email. The H-ITT Analyzer has an automated roster builder that can "mine" emails from students that send in their information in the proper format. You tell each student to send an Email to you with their name, clicker ID and other information in a specific format, and the analyzer reads your e-mail and builds the roster for you. See section 4.7.3.1 for details and examples.

WebCT quiz: Good for classes of any size. H-ITT offers a pre-made WebCT quiz that you can load into WebCT and have your students take. Save the results and import it directly into the Analyzer.

Complete details and examples for using the WebCT quiz is described below in the WebCT Roster Building tools, see section 4.7.3.3

Create and load a Roster file. Adding information to the class roster can be easily done using spreadsheet copy and paste tools. There are several ways to get the roster info needed:

First use Acquisition, collect a response from each remote you intend to use in that class. Note that you can do this the first day of class, letting the students enter a response. This will automatically add the remotes serial number to your roster.

If you have access to your class information in a spreadsheet or other file, the file will probably contain at least the students' names, and their school ID numbers, and may have some other pertinent information you may want to add to your H-ITT Roster. Using this "school provided" information is a common way; simply copy and paste cells, text or even entire columns with student information from your schools info into your H-ITT roster.

If you have multi-digit capable remotes, you can automatically collect student names, their school ID number and also a screen name in Acquisition, reference section 3.4.4.4 for details.

When the Roster file is complete, use the "load roster" from the Roster pull down (see below if this option is grayed out), browse to your completed roster and load it. It is recommended that you keep your class roster in the class folder for good housekeeping reasons, but this is not necessary, and your roster file can be anywhere accessible on your computer.

NOTE: In some previous versions of the H-ITT CRS some roster import functions are grayed out. You must create the class (in Acquisition) and have collected at least one response, which creates the necessary class file structures to load a roster.

WWW: Good for classes of any size. Several universities have built web registration pages based on CGI/Perl, PHP, or Java. This is a good investment if H-ITT remotes are utilized across the campus. H-ITT does not provide this software, but will provide support needed to assist in implementing this.

4.7.3.1 Email Roster builder tool

The H-ITT Analyzer can build a roster file automatically through the use of your email account. It opens your email Inbox and reads your email messages from your students and parses out the student's name, remote ID number, student ID number and e-mail address and other information. The students must send you an email message in a special format. The Analyzer recognizes this format and extracts the information. The format is very simple, and an example of a registration e-mail message is shown below. The Email tool uses the email address you set up in the Email tab of the Options menu.

Once students have sent the proper registration emails, you can load this information into the Roster by selecting "Update roster from email inbox" from the Roster pull down menu, or by clicking the flaming envelope from the Icon toolbar. You can up-date the roster as many times as necessary until your roster is complete. When you run the e-mail update tool, it will open your inbox and scan all the email messages and build the roster for you. If you do not have a roster loaded into the Analyzer, it will first ask you for a roster filename to save the information. You must specify a new (non-existing) roster file to save the results. If you have a roster that you want to append the information to, first import it into the Analyzer, then run the e-mail tool. The e-mail tool will not overwrite an existing roster file. However, it will append the information to any roster that is already loaded into that class.

Composing the e-mail message:
It is up to you how you choose to get students to email you the information; however, a simple method is to hand out an instruction sheet to the students and instruct them to send you an email in the format you provide in your instruction sheet.

The format of the students email registration is defined below:

----------------- Message Subject ----------

H-ITT:Register ⟵———————— The subject must only contain this

----------------- Message Body -------------

Name: *Jane Doe* ⟵——— The student name here

StudentID: *12abc3* ⟵——— The student school ID# here

RemoteID: *512342* ⟵——— The H-ITT Remote ID# here

ScreenName: *JD* ⟵——— OPTIONAL, screen name, can be displayed in Acquisition's ID box

WebCTID: jd1234 ⟵——— OPTIONAL, Your Student Management System student ID.

ClassID: A ⟵——— OPTIONAL, email Class ID number, used for multiple classes you may teach

The Analyzer must find two items in the email message to start processing. The first is the subject line which must read "H-ITT:Register". The second is the line "StudentID:" followed by a student ID number must be in the body of the message. The commands are *not* case sensitive and multiple spaces before or after the colon (:) are also ok. In other words, the subject line could also read 'H-ITT :Register', 'H-ITT: register', 'h-ITt : register', or 'h-itt:register'. However, Analyzer will ignore e-mail messages that *do not* contain this information.

The form of the email should match your chosen roster format. At a minimum, the e-mail message body should contain the student Name, StudentID followed by their remote ID number and the text 'H-ITT:Register' on the subject line. The order of the lines does not matter. However there can only be one command per line.

Examples of student registration email are:

Using Microsoft Outlook   Using Mozilla Thunderbird
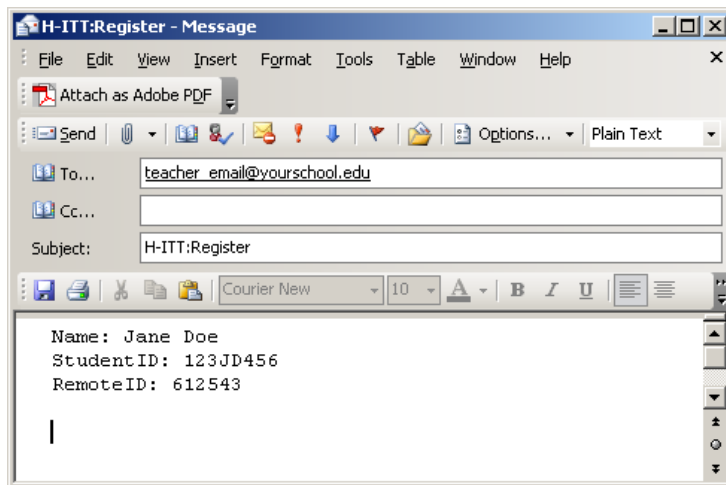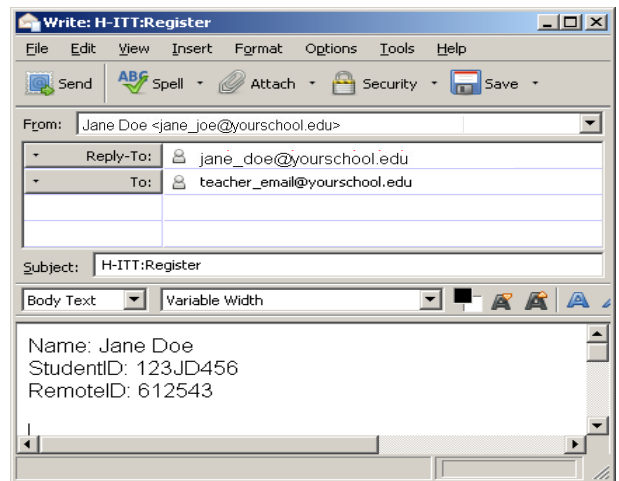
NOTES:
- Class ID: If you teach multiple sections choose a unique class ID for each section. Choose a simple 1 or 2 character ID such as A, B, 1, or 2. It does NOT have to match the class name you entered in the Acquisition program. Choosing a long class ID such as "Dr. Frankenstein Morning English Section -1-" will undoubtedly cause every e-mail message sent by the students to be completely ignored. When you have the class ID filled in, the e-mail tool will only download those messages that exactly match the class ID that you entered from the "Email/WWW Roster builder" tab of the Options menu. Note: the matching is NOT case sensitive, i.e., A and a are treated as a match.

- Confirmation/Error e-mail message: If the students e-mail message is successfully recorded, they will receive a reply e-mail message. If any errors were detected in the e-mail message, the entire registration message will be ignored. Depending upon the type of error, they may receive a reply e-mail message explaining the error. However, the following two types of errors will result in NO reply e-mail message

    1. Incorrect subject line (should be h-itt:register).
    2. Incorrect ClassID: or using ClassID: when ClassID is not used.

- When you are finished checking your inbox with the analyzer, you should inform your students. Tell them that if they haven't received either an error or confirmation reply message, their email had one of the above two errors and they should make corrections and resend the message.

- Updating student information (sending a second e-mail message). Once the registration e-mail has been successfully recorded, a student can update or change their information by sending another e-mail message with the new information in it. This is handy if they lost their remote mid-semester and had to replace it. They should compose the new message as described above and send it. All the information in your roster will be overwritten with the information contained in the new e-mail message. The only important thing to remember is to make sure their student ID is the same in both your original message and the new message. The software uses the student ID to uniquely identify their information such as: remote ID, name, e-mail, etc. If they entered a different student ID, the information will simply be added to the roster file. This precludes students from changing their student ID mid semester.

- The email software (e.g., Outlook, Eudora, etc.) that is normally utilized to read e-mail must leave the e-mail messages on the server. If they are removed from the server, then the Analyzer will not be able to read them. Check the settings in the e-mail software and change it to leave messages on the server. After changing this setting, any e-mails that have been downloaded via the email software will have to be resent. Tell your students to keep these things in mind when composing their e-mail messages.

- But primarily tell them to spell everything correctly especially the commands (the words before the colons ":"). In addition, tell them that you (or any other human being) are NOT reading these e-mails. Our software program is downloading the messages and automatically picking out the information. We have made the e-mail reader as forgiving as possible, but keep these things in mind when composing their message:

- Use plain text for emails to send your message not HTML.

- The commands are not case sensitive. 'NAME:', 'NAMe:', 'name:', or 'Name:' are all fine.

- Having 'RE:' in the subject and '>' in the body are ok. The tool will process the message. This allows you to send a template to the students and have them reply to it and fill in the information.

- The information can be corrected or updated at any time by sending another e-mail.

- The software uses the student ID number as a unique identifier to update its information. At a minimum all e-mails must contain 'studentid:'. If not they will be rejected.

- The following abbreviations can be used for the commands:
    RemoteID: → RID:
    ClassID: →CID:
    StudentID: →SID:
   ScreenName: →ScreenID:
    WebCTID: →WebCT:

4.7.3.2 E-mail/WWW Roster Builder options

The Top section provides general format options for the email tool (described below).

And the bottom section provides a field where you can enter a unique class ID for using the Web Registration roster building tool.

WWW Options (for Web Registration)

The Class ID you enter can be any letters and/or numbers you choose. We recommend it be unique, but also not too long as the students will need to enter this class ID when they register on-line. When you enter a class ID and click OK an area at H-ITT's web registration server is created. All student information registered under this Class ID will be maintained in this area. When you "up date roster from web registrations", Analyzer matches the remote IDs in the roster window to the Remote ID's students enter under this Class ID at the web registration server. Upon a match of these remote ID's, all student information they completed in H-ITT's web registration form is automatically added to the roster.
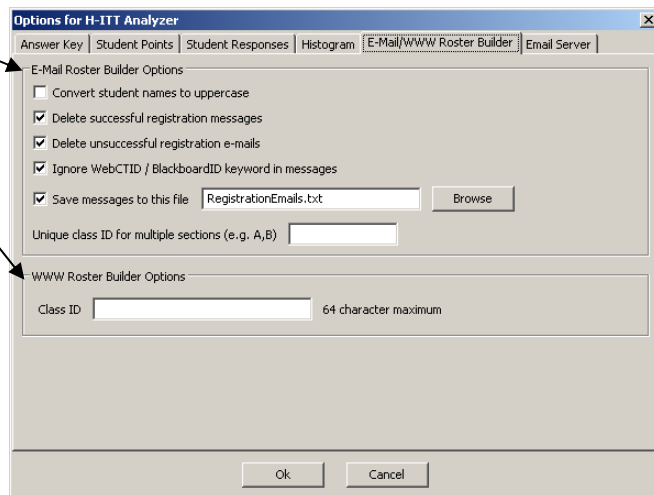
Email options:

Convert Student names to uppercase: converts all names it detects in the name field to UPPERCASE.

Delete successful registration messages: the e-mail tool will delete the registration e-mails from your inbox that were successfully recorded. If this is unchecked, you will have to delete them yourself.

Delete unsuccessful registration messages: the e-mail tool will delete the registration e-mails from your inbox that contained errors and were not recorded. If this is unchecked, you will have to delete them yourself.

Ignore WebCTID / BlackBoardID keyword in messages: check this if you want the email tool to ignore the 'webctid:' or 'BlackBoardID:' keywords in the e-mail messages. The rest of the information in the messages will still be recorded.

Save messages to this file: If checked, it will dump all the text of each message to a plain text file for safekeeping.

Unique class ID: Use to identify the class the students are registering for if you teach multiple classes. Also used if you teach multiple sections of the same class of students and want to create separate rosters for each section. See 4.7.3.4 below for details.

In order to use the Email Roster Builder you must set up your email account in Analyzer, see Options>Email tab for setting up your email account.

Update your roster from the roster pull down menu, select update roster from email inbox, or click the flaming envelope on the Icon toolbar.

4.7.3.3 WebCT Roster Builder tool

In general, you can use your WebCT or Blackboard student management system to give a "quiz" to your students and collect information that can create, or be added to the H-ITT Roster. There are several versions of WebCT/Blackboard and depending on which version your school is using along with what information you want to collect, your specific application may require some modifications.
The following are some guidelines, with some specific instructions using the templates provided.

For WebCT 6 or Blackboard CE 8:
A "standard" for cross platform xml question delivery is emerging and WebCT 6 or Blackboard CE 8 follow this standard. H-ITT provides a template (h-itt.zip) with a preset of questions which will collect: Last Name, Student ID, e-mail, screen name, remote ID. Here is how:
1. 1. Save the h-itt.zip to your computer. In WebCT/BB under "Build" go to "Manage Course" and then "Import", and upload the zip file you saved. The *H-ITT Registration Quiz* will be available under your *Assessments* Course Tool. (If this tool does not exist, please add it by going to "Manage Course" and then "Tools"). This quiz provides Students: name, IDnumber, Email, ScreenName, RemoteID.
2. 2. When you get students answers to this quiz, you will need to format them so they match the column information in your H-ITT Roster. To do this, view the Overall Statistics, then choose Manage Columns, then click "Hide Item" for all the unwanted or out of order information (i.e. first name, user name, grade, attempt, score, etc). Then delete the header rows. The only items remaining should be: Last name, Student ID, e-mail, screen name, remote ID. Then click OK and click Download Records.
3. Click Save and choose a file name and location to put this H-ITT roster (the default file format is csv, and the location should be your specific class files root folder).
4. You can load this file directly by choosing the proper roster format (i.e. Name, Student ID, e-mail, screen name, remote ID). Or you can copy and paste this information into the proper columns of your current roster

For previous WebCT versions:
H-ITT provides a template *.txt file for the quiz from the H-ITT-CRS downloads page at H-ITT.com. A sample text format quiz is also shown below.
1. Download 'H-ITT_Registration_Survey_WebCT.txt' to your desktop from H-ITT's download page, or copy the example registration below and save as a text file.
2. Upload the file into your WebCT file area.
3. Import the questions from the file into your question database.
4. Create a Quiz call it "H-ITT Registration Information" and add the four H-ITT registration questions to the quiz. It is important to keep the questions in the numeric order as specified. Leave the points fields blank since you will not grade this.
5. Let your students take the quiz. The quiz asks the students for their Student ID number, ScreenName, E-Mail Address, and H-ITT Remote ID Number. Their name and WebCT user ID will automatically get included in the quiz results; there is no need to ask for this information.
6. After the quiz is finished export the quiz results to disk. Save it to your H-ITT class files folder for that class. (e.g. 'My Documents\My H-ITT Files\<class name>')
7. Select "WebCT Quiz Output" from the roster pull down menu. Then browse for the roster filename; i.e. the quiz result file. Then click ok. The Analyzer will load this file and use it for the roster.

WebCT campus edition is slightly different, given below. WebCT Vista users should follow general instructions given above.
1. Download 'H-ITT_Registration_Survey_WebCT.txt' to your desktop from H-ITT's download page, or copy the example registration below and save as a text file.
2. Upload the file into your WebCT file area. To do so within WebCT select Control Panel->Manage Files->Upload->Browse and select the file 'H-ITT_Registration_Survey_WebCT.txt' on your desktop then hit upload.
3. In WebCT, import the questions from the file. Select Homework->Question Database->Import Questions From File->Browse -> Select 'H-ITT_Registration_Survey_WebCT.txt' -> Add Selected -> Import. You should see 4 questions.
4. In WebCT, Create a Quiz call it "H-ITT Registration Information" and add the four H-ITT registration questions to the quiz. It is important to keep the questions in the numeric order as specified. Leave the points fields blank since you will not grade this.

5. Let your students take the quiz. The quiz asks the students for their Student ID number, ScreenName, E-Mail Address, and H-ITT Remote ID Number. Their name and WebCT user ID will automatically get included in the quiz results; there is no need to ask for this information.
6. After the quiz is finished, go to the detail view on the quiz and click on "Export quiz detail to disk". Save it to your H-ITT class files folder for that class. (e.g. 'My Documents\My H-ITT Files\<class name>')
7. Select "WebCT Quiz Output" from the roster pull down menu. Then browse for the roster filename; i.e. the quiz result file. Then click ok. The Analyzer will load this file and use it for the roster.

Example of a WebCT Quiz:

```
# Start of question: H-ITT Registration Information 1
:TYPE:S:
:TITLE:1 H-ITT Registration Information (Student ID Number)
:QUESTION:T
Enter your student ID number

:IMAGE:
:ANSWERS:1
:CASE:0
:FEEDBACK1:H
:CAT:H-ITT Survey
# End of question: H-ITT Registration Information 1

# Start of question: H-ITT Registration Information 2
:TYPE:S:
:TITLE:2 H-ITT Registration Information (E-Mail Address)
:QUESTION:T
Enter your e-mail address

:IMAGE:
:ANSWERS:1
:CASE:0
:FEEDBACK1:H
:CAT:H-ITT Survey
# End of question: H-ITT Registration Information 2

# Start of question: H-ITT Registration Information 3
:TYPE:S:
:TITLE:3 H-ITT Registration Information (Screen Name)
:QUESTION:T
Enter a 3 character Screen Name (e.g. your initials)

:IMAGE:
:ANSWERS:1
:CASE:0
:FEEDBACK1:H
:CAT:H-ITT Survey
# End of question: H-ITT Registration Information 3

# Start of question: H-ITT Registration Information 4
:TYPE:S:
:TITLE:4 H-ITT Registration Information (H-ITT Remote ID)
:QUESTION:T
Enter your H-ITT Remote ID number (look under the battery) enter just the numbers not the preceding letters.

:IMAGE:
:ANSWERS:1
:CASE:0
:FEEDBACK1:H
:CAT:H-ITT Survey
# End of question: H-ITT Registration Information 4
```

4.7.3.4 Using the roster functions for multiple sections

Several strategies exist for using the Analyzer in large enrollment courses with multiple sections.

Example: One lecture with multiple sections:

In this situation, all the students (~500) meet for the lecture where you use H-ITT and then meet separately in drill or recitation sessions. Your registrar requires you to report grades by section. You collect H-ITT data for the large lecture but need to split it into sections to report the final grades to your registrar.

To split the H-ITT data by sections, simply make separate roster files for each section i.e. 'roster1.csv', and 'roster2.csv' etc. Then for each section, load its roster and then cut and paste the points to excel, or export to file for WebCT/Blackboard. The analyzer will only aggregate points for those students who are on the roster and leave the rest at the end of the student points list. You can turn off the display of the extra students with the options>student points menu.

Example: Multiple or two lectures per day:

In this situation, you teach 500 students over two lectures per day (i.e. 250 students per lecture, one in the morning and one in the afternoon), covering the same material in each lecture. You allow the students to attend either lecture or both. You use H-ITT in each lecture to collect data, and your registrar requires you to report the grades for each lecture separately.

To grade the in-class questions with the Analyzer create two rosters, one for the morning and one for the afternoon. Within the Acquisition program save all the class files for both morning and afternoon lectures in the same folder. In other words, only create one class in the Acquisition and use it both in the morning and afternoon. When you grade the class files in the analyzer, you will see two classes per day and have to grade both. Then to associate students with their points, load the roster for that lecture. The analyzer will aggregate the points for the students regardless of what lecture they attended (morning or afternoon), then cut and paste into excel.

One caveat: This doesn't stop a student from attending both lectures and getting points for both lectures and there is no way with the Analyzer (at the present time) to stop this from happening. One way to mitigate this is to cap the total number of in class points in excel. This of course would reward students for attending your lecture twice which is, of course, better than not coming at all.

4.8 Email Server set-up

The Email tab of the Options menu provides for setting up a new email account that is used with the email functions within Analyzer.

The email functions are:

- Sending students their grades report.
- Building the Roster with the Email roster builder tool.

Fill in all sections: You may need to contact your IT personnel for some info needed here if you do not know this information. Below is some general information.

The analyzer can use either post office protocol (POP), or Internet mail access protocol (IMAP) to communicate with your email server. These two protocols are supported by all email servers including Microsoft Exchange as well as all UNIX based e-mail servers. To do so, it needs to know the Internet name
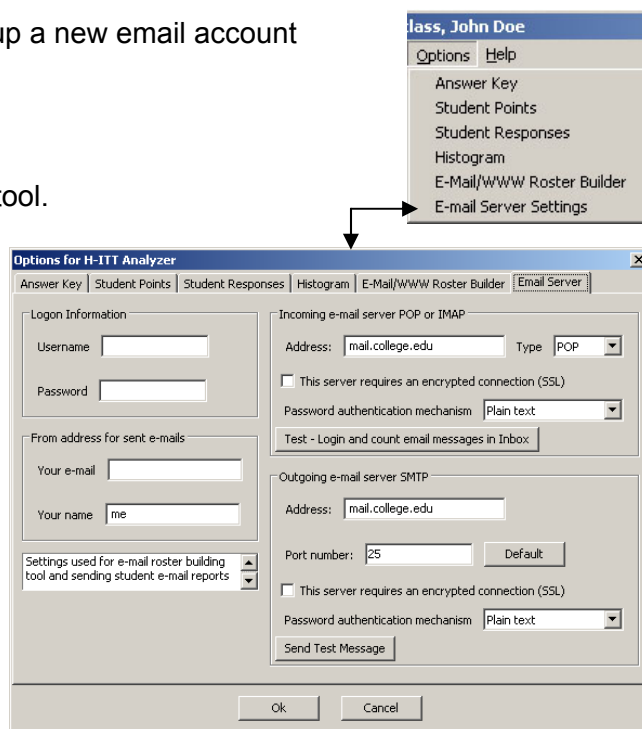
(IP address) of the E-mail server (e.g. email.college.edu) and your username and password. If you don't know this information, ask your IT support staff for this information.

The Analyzer uses the simple mail transfer protocol (SMTP) for sending registration confirmation and error messages to students if you are using the email roster builder tool.
The Analyzer also uses SMTP for sending e-mail reports containing all student responses and points.

Another important point is that the email software (e.g., Outlook, Thunderbird, Eudora, etc.) that is utilized to read e-mail messages by the user must leave the e-mail messages on the server. If the messages are removed from the server, then the Analyzer will not be able to read them. Check the settings in the e-mail software and change it to leave messages on the server. After changing this setting any e-mails that have been downloaded via the email software will have to be resent for the Analyzer to process them.

Test buttons for both outgoing and incoming emails are provided.

Microsoft Exchange Issues
The e-mail building tool is successful in communicating with Microsoft Exchange servers in both POP and IMAP mode. If you are having trouble talking to your exchange server, contact your systems administrator and make sure that either the POP or IMAP protocol is enabled. Not all exchange servers will have these enabled since Microsoft has their own messaging API called MAPI that Outlook uses. MAPI is currently not supported by the Analyzer software.
A couple of common exchange problems and solutions:

- You can log in but analyzer detects no e-mails in inbox: Make sure you are using the correct address for the server. Often times the real server will be hidden behind a dummy server. In this case even though the server address is email.college.edu, the server you want to use might be called email2.college.edu (or something else). Contact your system administrator to verify.
- You cannot login: Sometimes the user ID must be specified as domain/user-id/mailbox. Contact your system administrator to verify.

4.9 Pull Down Menu items

The Pull down menu bar has the following items. Clicking on the pull down menu brings up the following options.

Pull down menus →
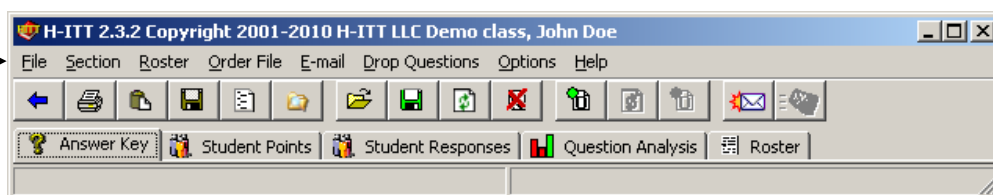
Each pull down menu is described below:

4.9.1 File pull down menu

Export Points to File: Exports student points to a file, also see Options>Export points.

Export Points to Clipboard: Places student points on a clipboard, also see Options>Export points.

Page setup: Allows page set up for printing.

Print: Prints the current tab window view.

Exit: Exits Analyzer.

4.9.2 Section pull down Menu

List of classes: Opens the Analyzer opening screen.

Options: Brings up the options menu.

Explore File Folder: Opens browser default to the class folder.

E-Mail Students: Emails all student there current point status (only available when students email address are loaded in the roster), also see E-mail pull down menu and Options>E-mail.

4.9.3 Roster pull down menu

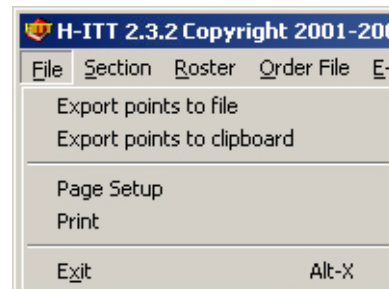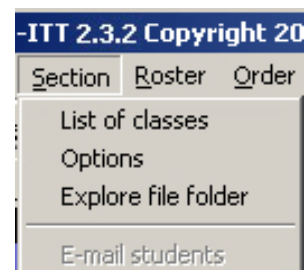NOTE: In some previous versions of H-ITT CRS some roster functions may be grayed out. To make these available, you must have created a class file in Acquisition and collect at least 1 response in Acquisition to access all roster functions. See also Creating a Roster section 4.7.1.

Load Roster: This will bring up the roster format selection, and then provide a browser so you can browse to, and load a roster.csv file that you have created.

Save Roster: Saves the roster. This will append the current loaded roster file with manual edits made from the Roster Tab Window.

Refresh Roster: Refreshes the Roster file with edits made from the Roster Tab Window.

Remove Roster: Removes the roster from the Roster Tab Window. Note any remote ID's that are in the class file (i.e. ID's that answered questions in Acquisition) will remain in the Roster tab window. This will not delete the Roster file in the class folder.

Change Roster format: Pops up a window with the roster format selections. Also see Roster Formats.

Add Student: Creates a new row in the Roster Tab Window so you can manually add a student.

Add Students: Brings up a window that allows you to add multiple rows to the Roster Tab Window.

Update roster from e-mail inbox: Adds new student email registrations to the roster. Also see Ways to build the roster, section 4.7.3

Update roster Web-Registrations: Adds new student Web-Registrations to the roster. Also see Ways to build the roster, section 4.7.3

Start the Roster Maker Utility: Starts RosterMaker. Instructions for using roster maker are in the Help menu in RosterMaker. Also see Ways to build the roster, section 4.7.3

4.9.4 Order file pull down menu

The Order File is an easy way to order the students in the way your grade book is ordered. The order file is a plain text file that contains a single column of Student ID numbers in the order you wish them to appear. After the order file is imported into the Analyzer, the Student Points view and Student Responses view can be put in the order of the order file by clicking on the Load order file order link. Refreshing or Removing are only available after you have created and loaded an Order file.
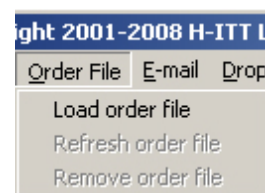
The roster file must be completed first prior to loading an order file. If a student ID number appears in the order file but not in the roster file, a blank row with only the student ID number will appear in the Analyzer. If a student is in the roster file but not in the order file, the student will be placed at the end of the listing of student points.

It is best to create the order file from the roster given to you from your registrar. This often changes over the

semester. Therefore, to order the student points, only the order file needs to be updated each time changes are made due to students changing their schedule. This is much simpler than changing and sorting the roster file.

You can create an order file several ways.

To Load the order file do the following:
1. Make sure your roster has the student school ID numbers that will be in the order file.
2. Create the order file, it is a single column plain text file or a spreadsheet '.csv' file. It is best to use information from your school roster since it is probably already ordered to match your grade book. If it's in a spreadsheet format, delete all columns except the Student ID column (make sure this column is the first column in the spreadsheet) and save it as a *.csv file. If your student information is in a plain text format then delete other student information only leaving a list of the Students ID's. Save it as a plain text file.
3. Load the file into the Analyzer by selecting Load Order File from the Order File pull down menu. When the order file is loaded, a new link will appear in both the Student Points, and Student Responses tab windows called Order file Order. To place the student points or student responses view and export report in the order file order, click on the Order file order link. You can click in the Roster order link to sort the students back in the original roster order.

Refresh order file: If you make changes to the Order file, you can refresh it.

Remove order file: removes the order file. Note this does not delete the order file from the class folder.

4.9.5 Email pull down menu

Update roster from Email inbox: Adds new student email registrations to the roster. Also see Roster building options, Email tool section.

The following options are available when students email addresses are included in the roster.

Email Student's answer key and responses: You can e-mail grade reports to all students as often as you like. Selecting this prompts you to confirm your request and then provides you with a window to type a general response for your students. Check the box to send each student the answer key and their responses so they can see the year-to-date performance in your class. Note: Your roster must include the e-mail addresses of your students. Also see the Email tool in Roster building options.

Place list of e-mail addresses on Clipboard: Sometimes it is desirable to create an e-mail alias in your e-mail program such as outlook for your entire class. If a roster has been loaded into the analyzer that contains e-mail addresses, or if the e-mail tool has been utilized to create the roster, the Analyzer can create a list of e-mail addresses. The Analyzer will ask for a character to use to separate the e-mail addresses within the list. Typically this is a ; or ,.The form of the email address list is:

"student name1" <student1 email address>;"student name2 <student2 email address>; etc. Enter your desired character and click Ok. Then you can paste this list in any application.
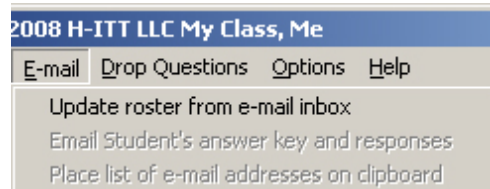
4.9.6 Drop Question pull down menu

You can drop questions with the lowest points from the pull down "Drop Questions" menu. This allows you to drop a user defined number of questions with the lowest scores for all students. To do this select "Drop lowest X number of questions" A window will appear where you can select the number of questions to be dropped. The analyzer will drop this number of questions with the lowest scores for each student.
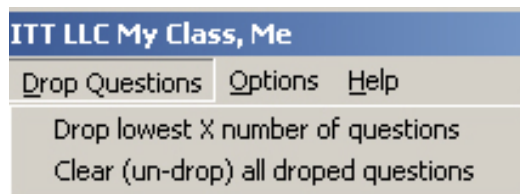
Responses to questions that have been dropped either manually or through this feature are not included in

this operation. This means that if a student has answered 4 questions and you manually dropped 1 of them and then you run this tool to drop the lowest 3 questions for all students, then all the questions for that student will be dropped.

To clear or un-drop all questions for all students select "Clear (un-drop) all dropped questions" from the Drop question pull down menu. All the questions that have been dropped for all students will be restored.

4.9.7 Options Pull down menu

The Options pallet is used to customize and set up many aspects of the Acquisition for your preferences and application. Access the options pallet from the options pull down menu or the options icon on the toolbar (looks like a note paper).

Most of the Options pallets are described in the Window tabs sections above that relate to these set-up options, and are linked to here:

Answer key, see 4.3.2

Student Points, see 4.4.1

Student Responses, see 4.5.1

Histogram, see 4.6.1

E-mail/WWW Roster Builder, see 4.7.3.2

Email Server Settings, see 4.8
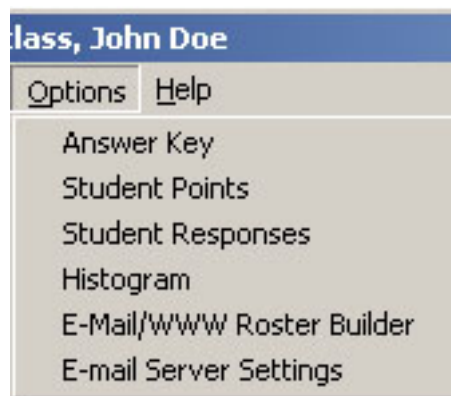
4.9.8 Help pull down menu

The Help items are Internet based, so you will need to be connected to the Internet to use these functions.

Help: (also available with the F1 key). Will go to the Support section of the H-ITT website.

Check for Upgrade: (also available from both Acquisition and Analyzer start up screen) Will check H-ITT site for any updates to the H-ITT CRS, and provide the option to download if an up date has been posted.

H-ITT home page: Will go to the home page of the H-ITT web site.

About: Provides specific info about the Analyzer program.
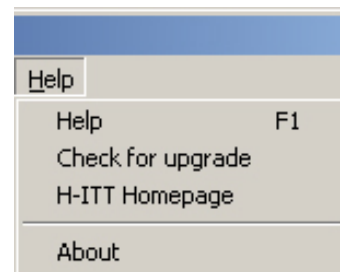
5 APPENDIX

5.1 Microsoft Office 2007 and Office 2010 issues

When Microsoft released Office 2007, some changes were made to file extensions (i.e. *.PPT to *.PPTX) and some file property settings that affect the way Office documents opened for browsing. This resulted in certain files such as PowerPoint, Word and Excel opening outside of the Acquisition slides window. Depending on your operating system, various ways are provided to reset these values:

If you are using Vista or Windows7, If the H-ITT CRS installation is performed from the Administrators account, the proper settings will be made. Or if the CRS is already installed, and PPT (or other Office files) do not open within the window, you can download and install a registry patch file from H-ITT.com under the CRS downloads section under the "templates and supplemental information" section. The file is named "regfix.zip". Save this file, extract the contents to your computer and double click the extracted file (Administrative privileges are required).

If you are using XP, or previous versions, Installation from the administrator account or applying the Regfix file as described above will work, but with XP or previous Windows versions you may also manually change these settings in your computer as discussed below.

To manually change this setting, do the following:
1. Double click the "My Computer" Icon on the desktop.
2. From the Tools pull down menu Select Folder options.
3. From the Folder options Pop-up, select File types and use the scroll bar to locate the file type (Microsoft PowerPoint Presentation, for example).
4. Highlight the file type and click on the Advanced button, and the Edit File Type window will appear
5. Check the box labeled Browse in same window and click OK. If this option is grayed out, you do not have high enough authorization on the computer to make these changes, and you will need to have your IT department do this.

Follow the same procedure for other file types i.e. Microsoft Word Document and Microsoft Excel Worksheet.

5.2 Uninstalling H-ITT programs

Uninstalling the H-ITT software is straightforward. It depends upon what operating system you are using. See one of the following sections for instructions for your operating system.

Note that uninstalling the H-ITT software will not remove the class files or the settings files from your computer. To remove these files, see section on purging the H-ITT software from your computer.

Windows uninstallation instructions Click on Start->Control Panel->Add remove Hardware and select H-ITT in the list. An automated uninstall wizard will guide you through the process.

Mac OSX uninstallation instructions Move the Analyzer and Acquisition applications to the trash.

Linux uninstallation instructions Remove the directory where you installed H-ITT by typing 'rm -rfp /usr/local/H-ITT'. If you installed the H-ITT software to a location other than the default location, replace '/usr/local/H-ITT' with your custom location.

5.2.1 Purging the software from your computer

Uninstalling the software will not delete the class files or settings files from your computer. However, under some circumstances you may want to completely remove the class files and settings files from your computer. This operation depends upon what operating system you are using. See one of the following sections for instructions for your operating system. You may want to back up these files prior to deleting them.

If you want to uninstall the software first, see previous section.

Windows purging instructions: To remove the settings files, delete all the files and folders in the following directory: 'C:\Documents and Settings\<user name>\Application Data\H-ITT' where <user name> is the user name that you used to login to the computer.

To remove the class files, remove the files and folders in the following directory; 'My Documents\My H-ITT Files' The H-ITT software does not write any information to the windows registry. However the windows installer service that is used to install the software does write some information to the registry.

Mac OSX purging instructions: To remove the settings files; delete all the files and folders in the following two directories:

'Documents/my_h-itt_files/Analyzer' and 'Documents/my_h-itt_files/Acquisition'.

To remove the class files, remove the files and folders in the following directory:

'Documents/my_h-itt_files'.

Linux purging instructions: To remove the settings files, delete all the files and folders in the following two directories:

'~/.h-itt/Analyzer' and '~/.h-itt/Acquisition'

To remove the class files, remove the files and folders in the following directory:

'~/my_h-itt_files'.

5.3 Power Users & System Administrators

The H-ITT system has been designed with power users and system administrators in mind. This section describes specific details of file formats, locations where these files are saved and ways to control the Acquisition application via dynamic data exchange (DDE). This information may prove useful to users who wish to write their own grading software or generate question sets that can be imported into the H-ITT software. In addition, system administrators can use this information for relocating files to user accessible read/write areas or backing up H-ITT installations across several computers.

5.3.1 Class File Formats

The response data saved by the H-ITT Acquisition application and later loaded and graded by the H-ITT Analyzer is saved in XML format. The XML data is compressed using the platform agnostic zip format into a zip file.

The H-ITT Acquisition program can also save the data in comma separated values (CSV) format. The user must manually enable this feature in the options settings and the Analyzer cannot read the csv files.

CSV Class File Format
The software does not save the response data in CSV format by default. The user must enable this feature on the first page of the settings dialog box for each class. There are two different CSV class file formats that the user can select from.
CSV class file format 1
The first format has 1 line for the question data, followed by a line of data that contains the last response for each unique remote ID number detected. For example:
Question,<question number>,<start time of question, seconds from start of class>
RemoteID,Key,Time from start of question in milliseconds
...
Question,<question number>,<start time of question, seconds from start of class>
RemoteID,Key,Time from start of question in milliseconds
...
where <question number> is the number of the question asked.
For example, a CSV file from a class with three remote users with ID numbers 1245, 47463, and 8793272, where 2 questions were asked would look like:
Question,1,10
1245,A,3409
47463,C,23424
8793272,E,12345
Question,2,890
1245,D,3409
47463,D,23424
8793272,A,12345

CSV class file format 2
This format contains a line of data that contains the last response for each question and each unique remote ID number detected. For example:
Question number,RemoteID,Key,Time from start of question in milliseconds
For example, a CSV file from a class with three remote users with ID numbers 1245, 47463, and 8793272, where 2 questions were asked would look like:
1,1245,A,3409
1,47463,C,23424
1,8793272,E,12345
2,1245,D,3409
2,47463,D,23424
2,8793272,A,12345

5.3.2 CSV Roster file format

The H-ITT roster, used to associate students with remote ID numbers, is a plain text CSV file and can be created in a variety of methods. This section describes the roster file format. The following are general examples of what each line in the roster file should look like depending upon how much optional information you want to use. You cannot mix formats within a roster file, choose one of them and use it for all students.
Name , Student ID , Remote ID#1
or
Name , Student ID , E-mail, Remote ID#1
or
Name , Student ID , E-mail, ScreenName , Remote ID#1
or
Name , Student ID , E-mail, ScreenName , WebCT/BlackBoard User ID, Remote ID#1
or
WebCT Quiz Output (see below)
or
Name , Student ID , E-mail, WebCT/BlackBoard User ID, Remote ID#1
or
If information is missing, leave it blank, for example:
Name , Student ID , , ScreenName , Remote ID#1, If you don't know a particular student's e-mail address.
Blank lines and lines consisting of just commas ',,,,,' are ignored.
One student with multiple remotes
If a student loses a remote and purchases a new one mid semester, simply add the new remote ID number after the last one in the roster file as displayed below. The analyzer will associate all the points from both remotes to the student for the entire semester. The number of different remotes one student can use during the semester is unlimited. Just make sure it is not used by anyone else during the semester.
Name , Student ID , Remote ID#1, Remote ID#2, ..
or
Name , Student ID , E-mail, Remote ID#1 , Remote ID#2, ..
or
Name , Student ID , E-mail, ScreenName , Remote ID#1 , Remote ID#2, ..
or
Name , Student ID , E-mail, ScreenName , WebCT ID , Remote ID#1 , Remote ID#2 ..
or
Name , Student ID , E-mail, WebCT/BlackBoard User ID, Remote ID#1, Remote ID#2 ..
or
Note that the WebCT quiz output is not capable of handling multiple Remote IDs.

5.3.3 XML Slides File Format

The H-ITT Acquisition program fully supports XML formatted slides. XML, or extensible markup language, is an industry standard, non-proprietary way to represent structured data. HTML the language of the web is itself a subset of XML and XML files look similar to HMTL files. It will be assumed that you know something about XML. There are several good books on the subject.
XML files are plain text files and are created with any text editor. Note that some special XML editors exist too. Formatting fonts and such can be declared as a CDATA section. Everything inside a CDATA section is ignored by the parser. A CDATA section starts with '<![CDATA[' and ends with ']]>'. The following examples include the XML CDATA sections for reference.

All current XML tags and attributes for the question sets are supported with H-ITT CRS ver. 2.0 or greater and XML files will always remain backward compatible with older versions of the same rev level, i.e. 1.9.x.

The tags and attributes of the H-ITT question XML format are:

<?xml version="1.0" encoding="UTF-8"?> *Element description*
<QuestionList> *Root node*
     Attributes: None
<Question> *Question node*
     Attributes:
     layout="LAYOUT1 through LAYOUT9" *Arrange question, answers and images in various schemes.*
     time="hh:mm:ss" *Sets the question timer for this question.*
     type=" MC, TF, YN, YNA, FILL_IN_THE_BLANK" *Defines the question type.*
     chances="1 through 10" *How many times students are allowed to change their answer.*
     response_type=" LETTERS or NUMBERS" *Changes label on Histogram.*
<Image> *(optional) Path to question Image filename. Image filename must be '.jpg, png, gif'*
     Attributes: None
<Body> Body of question text.
     Attributes: None

NOTE: The Answer Tags differ based on the question type as follows
→For MC, TF, YN, YNA question types:

<A> through <J> The answer choices text
     Attributes:
     image="path to the image to be displayed with the answer selection"
     correct="True or False" *Assigns the correct answer, leaving blank assumes False.*

→For Fill in the blank question type:

<answer> *the correct answer; numbers, letters and symbols, compatible with multi digit remotes.*
     Attributes: None

EXAMPLE: In the following XML example, question 1 is MC and question 2 is fill in the blank:

```
<?xml version="1.0" encoding="UTF-8"?>
<QuestionList>
 <Question layout="LAYOUT2" time="00:10:00" type="MC" chances="1" response_type="LETTERS">
  <image>sample H-itt Xmlimages\mc005-1.jpg</image>
  <body>
   <![CDATA[<b>
   <font face="Arial" size="5">This is where the question text is</font>
   </b>]]>
  </body>
  <a image="sample H-itt Xmlimages\mc005-2.jpg" correct="False">
   <![CDATA[<b>
   <font face="Arial" size="5">Answer A</font>
   </b>]]>
  </a>
  <b image="sample H-itt Xmlimages\mc005-3.jpg" correct="True">
   <![CDATA[<b>
   <font face="Arial" size="5">Answer B</font>
   </b>]]>
  </b>
 </Question>

 <Question layout="LAYOUT2" time="00:10:00" type="FILL_IN_THE_BLANK" chances="1" response_type="LETTERS">
  <image></image>
  <body>
   <![CDATA[<font face="Arial" size="7">fill in the blank question</font>]]>
  </body>
  <answer>125 1/2</answer>
 </Question>
</QuestionList>
```

5.3.4 DDE Dynamic Data Exchange Server

DDE or dynamic data exchange allows programs to seamlessly communicate with one another. Using it you can acquire remote responses into your own software through the Acquisition program as well as control the Acquisition program. To enable it, in the Acquisition program select the Advanced tab from the Options menu and check the box labeled Enable DDE.

Here is the DDE information you need to interact with the Acquisition program. Consult your programming language manual for information on using DDE.

service = H-ITT_ACQUISITION

topic = QUESTION

item = RESPONSE

Your client must have an OnAdvise event to receive data from the Acquisition. Every valid response, one that displays or changes a box on the screen, is sent out via DDE in the following format:

Question Number , Remote ID , Key , Time(ms)

The following commands can be sent to the Acquisition program:

START start the question

STOP stop the question

PAUSE pause the question

SHOW_HISTOGRAM show the Histogram once question is finished

INC_TIME increment the timer

DEC_TIME decrement the timer

FIRST_SLIDE show first slide

PREV_SLIDE show previous slide

NEXT_SLIDE show next slide

LAST_SLIDE show last slide

MINIMIZE minimize Acquisition program

RESTORE restore Acquisition program

5.3.5 COM, Serial - USB Port enumeration

The H-ITT software uses the following algorithm to enumerate (find) the available COM/Serial ports on the computer. This includes USB to COM port adaptors and H-ITT's USB base unit, which has a USB to COM port adaptor built into it.

Windows COM - Serial - USB Port enumeration

Under windows the number of COM ports installed on the computer is included in the registry. Upon startup the H-ITT software opens the registry and searches the sub keys of HKLM\SYSTEM\CURRENTCONTROLSET to see if they have COM listed in the portname field. Then it searches these entries to make sure they contain the class global unique identifier (GUID) that Microsoft has assigned to COM ports which is: 4D36E978-E325-11CE-BFC1-08002BE10318. H-ITT has discovered that some virtual COM port software uses other non standard GUIDs such as: CC0EF009-B820-42F4-95A9-9BFA6A5AB7AB, so it scans for them as well.

After finding the list of COM ports, the H-ITT software then attempts to open each port. If it can open a port, then it assumes it's free and lists it on the starting page. If it cannot open a port, then it assumes it is taken by another application and does not list it on the starting page.

Mac OS X COM - Serial - USB Port enumeration

Under the MAC OS X operating system, all COM/serial ports must be installed via a USB adaptor such as the Keyspan USB to serial adaptor. H-ITT's USB base unit has a built in USB to serial adaptor that is supported by the Mac. During startup, the application finds the USB-to-Serial ports on the Mac by using the IOKit API.

After finding the list of COM ports, the H-ITT software then attempts to open each port. If it can open a port, then it assumes it's free and lists it on the starting page. If it cannot open a port then it assumes it is taken by another application and does not list it on the starting page.

Linux COM - Serial - USB Port enumeration

During installation, while the user is logged in as root, the install script copies the file '/proc/tty/driver/serial' to '~/.h-itt/serial'. This enables the non-root user starting the Acquisition application to read the file '~/.h-itt/serial' which contains the list of COM ports in it. The contents of that file may look something like this:

serinfo:1.0 driver revision:
0: uart:16550A port:000003F8 irq:4 tx:3 rx:0
1: uart:16550A port:000002F8 irq:3 tx:3 rx:0
2: uart:unknown port:000003E8 irq:4
3: uart:unknown port:000002E8 irq:3
4: uart:unknown port:00000000 irq:0
5: uart:unknown port:00000000 irq:0
6: uart:unknown port:00000000 irq:0
7: uart:unknown port:00000000 irq:0

The first number of each line following the first line is the COM port number that is recorded. After finding this list of COM ports, the H-ITT software then attempts to open each port with the name '/dev/ttyS#', where '#' is the port number. If it can open a port, then it assumes its free and lists it on the starting page. If it cannot open a port, then it assumes it is taken by another application and does not list it on the starting page.

Hot swapping of USB base units and USB adaptors

The Windows version of the H-ITT Acquisition application supports hot swapping of USB base units and USB to serial adaptors while the application is running and displaying the front page only. Unplugging and plugging in USB base units while the class is started is not recommended. Users should wait 5-10 seconds for the Acquisition application to update the list of ports after a device has been connected or disconnected. The Linux and Mac versions of the Acquisition application do not support plugging and unplugging of USB base units and USB to COM adaptors while the application is running. Users of these operating systems must exit, then restart the Acquisition program for it to recognize changes in the ports and base units.

Troubleshooting COM - Serial - USB port problems
Here are some tips to help if the H-ITT Acquisition program is having trouble finding ports on your computer:

- On Windows, open the registry editor and search for the GUIDs mentioned above. If these GUIDs are not found, then there are no COM ports installed on the computer and the Acquisition application will not find any. If the GUIDs are found under the key mentioned above, then the Acquisition application should be finding the COM ports.
- Check to make sure no other applications have the COM ports opened. Once the Acquisition program gets the list of COM ports, it tries to open them. If another application has the ports opened then the Acquisition program will assume these are in use and will NOT list them on the front page. This includes other users who are logged onto the computer who may have COM ports opened.
- Version 1.8 or later of the H-ITT Acquisition program will open the ports listed on the front page which have a base unit type selected. This is to allow responses to be detected on the front page and is different from earlier version of the application that do not open the ports until the class is started. This means that if user A logs into the computer and leaves the Acquisition program opened to the front page and then user B logs into a different account and user A has not logged out or shut down the Acquisition program, when user B runs the Acquisition application, it will NOT list the ports for which user A has a base unit type selected.
  For example:
  1. A computer has three COM ports available COM1, COM2, and COM3.
  2. User A logs in and starts the Acquisition program and selects base unit types forCOM1 and COM2.
  3. User B logs in via switch user while leaving user A logged in and the Acquisition application running under user A's account, when user B starts the Acquisition application only COM3 will be listed as available.

5.3.6 Files and file locations

The H-ITT software creates and utilizes several folders and files for saving both data (the student responses) and grades in the Analyzer, as well as global settings such as the list of classes and the memorized box positions.

The 3 main areas where folders and files are located are:
1. Applications folder: This is where the H-ITT CRS Acquisition and Analyzer executable applications are installed. This location depends on the operating system, and the default is shown when the applications are extracted. You can change this location upon installation.
2. Class Files Root Folder (CFRF): The Acquisition creates this folder to store individual class folders and files in. You can change this location using a "paths.txt" file.
3. Global Settings Folder is created upon installation, and contains the global settings files. You can change this location using the "paths.txt" file.

This section describes what information the various files contain, where the software saves them by default, and how to change these default locations. Typically the user doesn't need to worry about where the files are saved, but under certain circumstances this information can be useful. Some changes from version 1.8.X (and prior) as to where the '.ini' settings files are saved have been made. These differences will be pointed out below.

The lists below summarize the important file locations (folders) and files for the H-ITT CRS software. They depend upon the operating system and will be described in more detail in the following sections.

NOTE: Windows Vista may virtualize the paths for file and folder locations making locating and re-directing these locations somewhat more difficult.

The following list is a brief summary of the important files and locations, with details on each below.

Important file locations (folders or directories):
• Class files root folder (CFRF): Default location (folder) where the Acquisition application creates folders for each class (CFF) to hold their class files. In addition, the Analyzer goes here by default when looking for class folders. This location can be changed using the 'paths.txt' file.
• Class files folder (CFF): Location (folder) where the Acquisition saves the class files and Analyzer looks for class files. Each class has a separate CFF and they are located in the CFRF by default. This location can be changed when creating the class or on the first page of the setting notebook in the Acquisition.
• Global settings folder (GSF): Location (folder) where the application stores the global settings file ('*.ini'). This location can be changed using the 'paths.txt' file.

Important files:
• Class files: Created each time the class is started in the Acquisition and saves the responses recorded in class. Read by the Analyzer for grading purposes. They have a '.zip' extension.
• Class settings files (version 1.8 or later only): The settings for each class are saved in this file for each application in the CFF. They have a '.ini' extension.
• Global settings files: The global settings for each application are saved in this file for each application in the GSF. They have a '.ini' extension. Note, in version 1.7 or earlier they also save the settings for each class.
• GradeBook file: File that saves all the grades in the Analyzer. It has the name 'GradeBook.hgb' and is located in the CFF.

5.3.6.1 Class files root folder (CFRF)
The Acquisition program creates a root folder (CFRF) for each individual class folder, where files for that class are stored. The default CFRF is the following directory depending upon your operating system:
• Windows: 'My Documents\My H-ITT Files'
• Mac OSX: 'Documents/my_h-itt_files'
• Linux: '~/my_h-itt_files'
This location can be changed with the 'paths.txt' file.

5.3.6.2 Class File Folder (CFF)
When a new class is created, the Acquisition program creates a subfolder in the CFRF called the Class File Folder (CFF). When student responses are collected in Acquisition, a class file (has a '.zip' extension) is used to save the responses that are collected in class along with the class specific settings. This Class file.zip and the class file settings are saved to this Class File Folder.
One file.zip is created each time the class is started and responses have been collected for at least one question, and the class is stopped. These class files.zip in the Class File Folder are files that must be taken to the instructor's computer for grading with the Analyzer if the Analyzer is run on a separate computer.
The Class File Folder name is the name of the class you assigned when first starting a class. For example, depending upon the operating system the class files are stored in the following folders:
• Windows: 'My Documents\My H-ITT Files\<class name>'
• Mac OSX: 'Documents/my_h-itt_files/<class name>'
• Linux: '~/my_h-itt_files/<class name>'
where '<class name>' is replaced with the name of the class that was given when the class was created.
Notes:
- The location of the class files folder (the folder called '<class name>') can be changed on the first page of the settings dialog in the Acquisition program or at the time the class was created.
- A copy of the class files can be saved in an additional location. See first page of the options settings dialog in Acquisition program.
- The CSV class files will also be saved in this location if the user is creating CSV files as well.

5.3.6.3 Global Settings Files (GSF)
These files have a '.ini' extension and each application has a separate file that it uses to save global settings of each application to.
For version 2.4.x, the filenames are:
Acquisition: 'H-ITTAcquisition_2_4.ini'
Analyzer: 'H-ITTAnalyzer_2_4.ini'
For version 2.3.x, the filenames are:
Acquisition: 'H-ITTAcquisition_2_3.ini'
Analyzer: 'H-ITTAnalyzer_2_3.ini'
For version 2.2.x, the filenames are:
For version 2.1.x, the filenames are:
Acquisition: 'H-ITTAcquisition_2_1.ini'
Analyzer: 'H-ITTAnalyzer_2_1.ini'
For version 2.0.x, the filenames are:
Acquisition: 'H-ITTAcquisition_2_0.ini'
Analyzer: 'H-ITTAnalyzer_2_0.ini'
For version 1.9.x the filenames are:
Acquisition: 'H-ITTAcquisition_1_9.ini'
Analyzer: 'H-ITTAnalyzer_1_9.ini'
For version 1.8.x the filenames are:
Acquisition: 'H-ITTAcquisition_1_8.ini'
Analyzer: 'H-ITTAnalyzer_1_8.ini'
For versions 1.7.x or earlier the filenames are:
Acquisition: 'H-ITTAcquisition.ini'
Analyzer: 'H-ITTAnalyzer.ini'

The global settings consist of the options that are adjusted on the options dialog from the front page of each application and the last window size and position.
The settings (.ini) files for both the Acquisition and Analyzer are saved in the following directories depending upon your operating system:

• Windows: 'C:\Documents and Settings\<user name>\Application Data\H-ITT\<program name>'
• Mac OSX: 'Documents/my_h-itt_files/<program name>'
• Linux: '~/.h-itt/<program name>'
where <program name> is either Analyzer or Acquisition, and where <user name> is the name used to log onto the computer. Possibly "Administrator" or "Default User" if a logon name is not utilized.
Notes:
  • Windows Vista may "virtualize" the paths for file and folder locations making locating and re-directing these locations somewhat more difficult.
  • These files are not human readable and can only be opened with their respective application.
  • The location of these files can be changed using the 'paths.txt' file (see below).

Some changes to the contents of these files occurred in prior versions and are described below.
1.8.X specifics:
• If a class file folder was created outside the default class files root folder, then its location will also be saved in this file.
1.7.X or earlier specifics:
• This file also saves all the settings for each class. That is all the options for every class that can be adjusted via the options dialog box after starting the class. This information is not saved in version 1.8.X or later, which are saved in separate class settings files in the class files folder.

Linux users There is an additional settings file called 'serial' that resides in the '~/.h-itt' directory.

This file is placed there by the install script and is an exact copy of the file '/proc/tty/driver/serial', which contains a list of the COM ports available to the system. It is copied there during installation to allow the acquisition program to enumerate the COM ports since it doesn't have privileges to read from '/proc/tty/driver/serial' unless the user is logged in as root. If additional COM ports are added to the system after installing the software the user must log in as root and update './h-itt/serial' from '/proc/tty/driver/serial'.

Class Settings Files:
Class settings files pertain to version 1.9 or later of the H-ITT CRS software. The class settings files save all the settings and options for each class that can be adjusted in the options dialog window. Each class has a separate settings file that is saved in the class files folder, which is where the class files are saved.
The filenames are the same for each class but are different for each application.

They are:
For version 2.x:
Acquisition: 'Acq_class_2_4.ini'
Acquisition: 'Acq_class_2_3.ini'
Acquisition: 'Acq_class_2_2.ini'
Acquisition: 'Acq_class_2_1.ini'
Acquisition: 'Acq_class_2_0.ini'
Analyzer: 'Anl_class_2_4.ini'
Analyzer: 'Anl_class_2_3.ini'
Analyzer: 'Anl_class_2_2.ini'
Analyzer: 'Anl_class_2_1.ini'
Analyzer: 'Anl_class_2_0.ini'
For version 1.9.X:
Acquisition: 'Acq_class_1_9.ini'
Analyzer: 'Anl_class_1_9.ini'
Notes:
• If the class files folder gets changed via the first page of the options dialog box in the Acquisition application, then this file will get moved to the new location.
• This enables one to move not just the class files, but the class settings from computer to computer. See section below on moving classes from one computer to another.

GradeBook File
The Analyzer saves the file called 'Gradebook.hgb' in the same location as the class files. This file is not human readable and can only be opened with the Analyzer. The analyzer automatically opens and saves to this file during program execution.

5.3.7 Changing the location of files with "paths.txt"

The location of both the Global Settings Files ('.ini' files) and the class files root folder (CFRF) can be changed using the "paths.txt" file. This can come in handy when you need work around issues related to:
   • Cleaning of user-generated files on computers by the IT department.
   • Users do not have access to a storage location on the local computer and/or executable applications are not permitted to be run from external drives such as a USB drive.
Note that if you just want to save your class files to an alternate location, do not use this feature. Simply choose an additional save location from within the Acquisition program options->general tab. In addition the CRS can be run from a USB drive where the applications, ini's and class files can reside, see section 5.3.7.1 for details.

It is required that the H-ITT Acquisition program (and associated files including the paths.txt file) be installed on the local computer prior to the computers image being "frozen".
   • The paths.txt file must reside in the same folder as the H-ITT Acquisition and Analyzer executable programs reside.

- Create a text file called 'paths.txt' and place it in the same folder as the Acquisition and Analyzer applications

There are 3 lines in the paths.txt file:
The first line tells Acquisition where to put the global ini files.
The second line tells Acquisition where to put the class files, and the class ini files.
The third line is a unique folder name in the root of one of the computers drives (i.e. the USB drive) that the Acquisition program locates, and prepends to the two above locations where the files will be stored. **Therefore, you must create a folder on an accessible drive, i.e., USB drive with a unique name** (to make sure there is no other folder of the same name on your computer), for example **h-ittroot**

As example, the paths.txt file below will force the program to locate the drive letter that has a folder called h-ittroot , and prepend this drive letter to the first two lines when placing the ini's and class files

```
.
Classfiles
h-ittroot
```

So for this example, if the folder named h-ittroot was on a USB drive that shows up as the "F" drive, then:
The global ini files would be located at F:\h-ittroot
The class ini and class files would be located at F:\h-ittroot\Classfiles.

Now assume the USB drive was plugged into a different drive letter, for example the "E" drive, then the Acquisition would look for the ini files and classes located E:\h-ittroot\Classfiles.
So it does not matter which drive letter is used, the program will find it based on the folder name, in this example "h-ittroot".

If Acquisition is started and the folder called, for example h-ittroot, can not be located (i.e. if using a USB drive it must be plugged in) the following error message will appear:
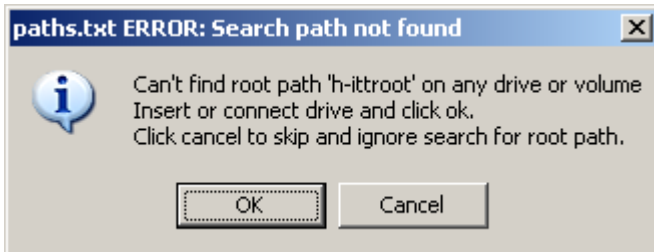
If you install the USB drive, click OK the program will run as normal.
If you cancel: The global ini files will be located in the folder where the application resides on your computer, and a classfiles folder under this folder will be where the class files and class ini will be located. If the user does not have any write access to this folder, there will probably be other error messages as well.

The paths.txt file does not necessarily need to have all the lines depending on your needs, the third line can be omitted, and these paths can be absolute or relative. Below are some examples of the application:

Force the ini file to be saved to 'c:\'
c:

Force the ini file to be saved where the applications reside
.

Force the ini file to be saved in a subdirectory called foo
foo

Force the ini and class files root folder to be saved where the applications reside
.
.

Force only the class files root folder to be saved where the applications reside. Leave first line blank and then:

.
Force the ini and class files root folder to be saved on the D:\ drive:
d:
d:

UNC paths can also be used, which are better to use than the drive letter of the mapped drive. For example:
**\\server\h-itt**
\\server\h-itt

5.3.7.1 Installing H-ITT on a USB thumb or flash drive

The H-ITT software applications can be installed onto a USB thumb or flash drive that can be taken with the user. All the settings and class files will reside on the thumb drive. This can be useful in situations where the user is not allowed to install software onto the computer in the lecture hall.

H-ITT provides a pre-structured file set that you can load onto an empty USB drive, located at H-ITT.com under the Support>Software section within the section called "Templates and supplemental information" and is in zip format. This must be extracted to the USB drive such that the file structure remains intact.

Detailed Instructions are provided in the same location as the zip file at H-itt.com

The example below shows the structure of the extracted zip contents on the USB drive:
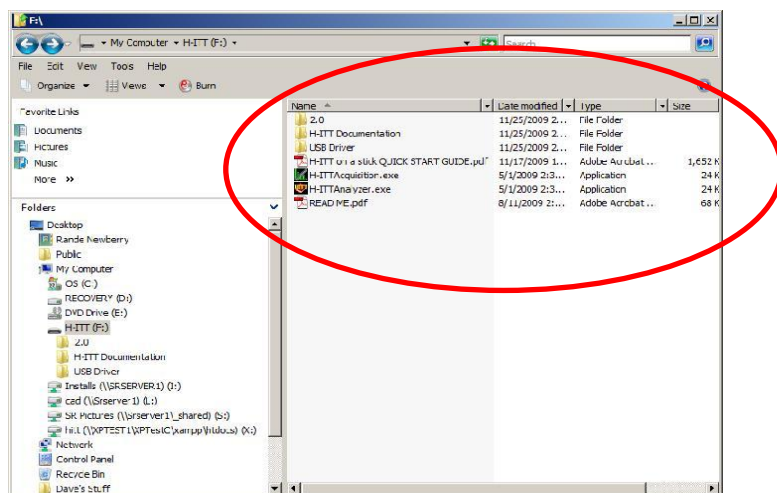
5.3.8 Moving Classes

Moving classes and their settings is only possible in version 1.8 or later.
To move or copy a class and all its settings from one computer to another do the following:
1. Exit the applications on both computers.
2. Copy or move the entire contents of the class file folder from the class files root folder on the source computer to the class files root folder on the target computer.
3. Start the applications and the classes will appear (or disappear if moved off the old computer) with all of their settings.
Notes:

• If the class files folder is being moved to a location outside of the class files root folder on the target machine, then it will have to be added. Use the same procedure in the Analyzer for adding a class and browse for this new class files folder. In Acquisition, create a class but change the location of class files to this new location.

5.3.9 Backing up or relocating a H-ITT CRS Installation

To backup or relocate a H-ITT installation to another computer transfer (or backup) all files and subdirectories in the following directories as indicated below for each operating system. This assumes you have not changed their location as discussed in the previous section.

Prior to relocating these files, all H-ITT applications must be closed on all the computers affected. After the files have been transferred, restart the applications on the target machine and it will automatically pickup the new settings. Care should be taken as overwriting the files on the target machine will erase all of its H-ITT settings. Currently there is no way to merge two installations into one.
Copy or move all the files in:
Windows:
 'C:\Documents and Settings\<your user name>\Application Data\H-ITT'
and
'My Documents\My H-ITT Files'
MAC OSX:
'~/Documents/my_h-itt_files'
Linux:
'~/my_h-itt_files'
and
'~/.h-itt'
This will backup/transfer all settings for both the Acquisition and Analyzer. If you have multiple users using one machine with different login names, you will have to do this for each user name.
For example to transfer H-ITT from one computer to another, do the following:
1. Install H-ITT on the new computer.
2. Do not start either program or add any classes. This operation will overwrite any newly added classes and settings on the target computer.
3. Copy all files and subdirectories listed above for your operating system to their corresponding location on the target computer.
4. Start the Acquisition or Analyzer and you will see your list of classes. If you have multiple users using one machine with different login names, you will have to do this for each user name.

5.3.10 Analyzer and Acquisition start up procedure

How they find the settings and classes.
Both the Acquisition and Analyzer use the following procedure when starting up to locate class files and settings files. This information can be useful in understanding and troubleshooting H-ITT CRS installation in environments where files maybe moved or deleted, or for just intellectual curiosity.
Version 1.8 or later start up procedure
1. The application starts and checks for the existence of the 'paths.txt' file. If it finds one, then it adjusts the locations of either the class files root folder or the global settings files or both.
2. The global settings file is opened and the application finds in this file the global settings as well as the location of any class folders outside of the class files root folder.
3. The class files root folder is interrogated. Each sub folder is opened and the application looks for its respective class settings file. If it finds one, then it adds this class to the list. If it doesn't find one, then this folder is ignored. The sub folder searching is only one level deep (sub folders of subfolders are not searched).
4. The folders for the classes outside the class files root folder are searched for their respective class settings files. If it finds one, then it adds this class to the list. If it doesn't find one, then this folder is ignored.
5. The application now has all the information to build the list of classes that appear on the front page.

5.3.11 Troubleshooting classroom computer installations

The policies of information technology (IT) departments related to installing and maintaining the classroom computers can sometimes cause problems for the H-ITT software that is installed on the classroom computers. Typically these problems arise from policies related to removing user-generated files once a week or at every reboot, or forbidding users from installing software on the computer.

H-ITT has included several features to help the software co-exist with these policies. This section describes the common problems and solutions. If these solutions do not address every issue, please inform H-ITT of the problem, and they will be happy to work with your IT department to arrive at a solution.

It is always a good idea to contact your institution's IT department as well to find out what exactly their policies are.

The problems and solutions are different depending upon which version software you are using. We strongly recommend up-grading to the latest H-ITT CRS version. Version 2.x.x has addressed a lot of these issues, however due to the various school policies and computer setups these type problems may still exist.

List of classes on front page of Acquisition program disappears at every reboot, once a week, or every logout/login

There are a several reasons why this can happen. The most common reason is that the user did not login to the computer (and possibly domain) that they did when the class was created. The global settings file and the class files root folder locations are different for each user account on the computer. Double check that the users are logging in with the proper information.

If this does not solve the problem, you may need to work with your IT department to permanently resolve this issue, here are some options:

- Ask the IT department not to delete the global settings file.
- Put the class files folder for these classes back into the class files root folder, then when the global settings file gets erased the Acquisition program will still find all the classes and their settings.
- Redirect the location of the global settings file with the 'paths.txt' file to a location where it will not get deleted either on the computers hard drive or a network share.
- Redirect the location of the global settings file and the class files root folder with the 'paths.txt' file to a location where it will not get deleted and where you want the class files root folder to reside, either somewhere else on the computer's hard drive or a network share or floppy or USB thumb drive.

Again, its a good idea to work with your IT department when resolving this issue, especially if using the 'paths.txt' file so it will not get erased as well.

5.4 USB Driver Installation

Windows, H-ITT CRS version 2.x.x and higher will automatically install the required USB drivers for Windows systems when the application is installed. For previous versions (i.e. 1.9.x or lower) the USB drivers need to be installed separately. To separately install the USB drivers, do one of the following:

If you are connected to the Internet, in most cases when the base unit is connected via a USB cable, your "found new hardware" wizard can locate the appropriate drivers on the net, and you do not need to download the drivers separately. There are two parts to the driver, so when the wizard pops up, follow directions indicated, and when it pops up AGAIN, follow directions to load the second driver. The system will not work until BOTH parts are installed.

If you are not connected to the Internet, drivers for your windows version need to be downloaded and installed in your computer. H-ITT provides drivers for Windows operating systems in 2 formats: 1) As a self-installing exe file and 2) In a zip format.

For the self-installing executable: From the CD, click on the driver file "2000/XP/Vista Auto Installer" and follow the prompts. From the Internet at H-ITT.com>downloads section, download the file CDM 2.02.xx.exe to your computer. Then install by a double click on the downloaded file name (CDM 2.02.xx.exe) and follow the prompts. The drivers will automatically install, and provide a confirmation that installation was successful.

For the Zip format, download the zip file to your computer, and extract the zip contents to a folder you create. It is recommended that you create a folder to extract the contents of the zip file to because there are many files in the zip, and extracting to your desktop, or "C" drive will put a lot of unnecessary files that can "clutter" these global locations. Note also that once the drivers are installed, you may delete the zip file and all the extracted files, so once installed, deleting these is much simpler if contained within a separate folder.

Once extracted, when you connect a base unit to your computer the found new hardware wizard will popup. Follow the instructions, and point to the folder that you extracted the zip file to. There are TWO parts to the driver that need to be installed, and the Wizard will prompt you to load both parts.

If you do not get the "found new hardware" wizard when the base unit is connected via a USB cable there are two reasons:

1. The USB drivers may already be installed, in which case you should test if the USB com port is functional from the start-up screen of the Acquisition program (refer to section 3.1).

2. Your computer settings do not provide for auto detect of new USB connected hardware, or your login authorization does not allow installing applications on the target computer. In this case you may be able to manually install the drivers depending on your version of Windows and the authorization level you have to install applications on the desired computer. If you do not have the required authorization for this installation, contact your IT department to install the USB drivers for the target computer or contact H-ITT support for other issues.

Macintosh, download and install drivers for your Mac version:

There are two unique drivers for the Mac, the Power PC version, and the Intel version. Detailed instructions are found on the CD, click on the driver installations instructions link for your version of MAC, or visit H-ITT.com download page if you do not have a H-ITT software CD.

Linux, USB drivers are built in

If you have a Linux operating system the driver installation is not necessary, however various versions of Linux may or may not work with H-ITT software applications.

***Technical note:** The USB component of H-ITT's base units utilize a 3rd party USB driver set from FTDI which we believe provides the most widely used, and most robust USB support components available. Within the various operating systems used, manufacturers are continually upgrading and/or modifying various aspects of their OS. FTDI is a leader in maintaining compatibility with new release/service packs/upgrades to all operating systems supported. H-ITT strives to make available the latest OS drivers at H-ITT.com>downloads within a week or so of the OS release. However, if you've installed a new release OS, or do not find the appropriate driver on H-ITT's site, then refer to FTDICHIP.com to receive the latest driver set.*

5.5 Some Application guidelines

Below are some typical application guidelines that may help you easily implement some of the many the features and options of the H-ITT CRS
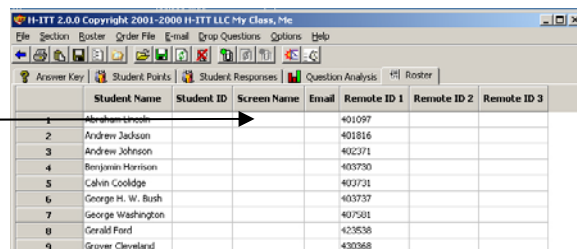
5.5.1 Numbering your remotes.

H-ITT provides "number labels" with class packs for applying to each remote which can be assigned in Analyzer and displayed in the Acquisition ID box. You do not need to number your remotes for the software to work properly, however numbering can be useful when the remotes stay in the classroom and are assigned to students when they come to class; it provides an easy way for students to identify their assigned remote. And also can provide for displaying this number in Acquisitions ID grid (as opposed to the clickers serial number of other screen name assigned) and can provide a uniform sequential ID grid "order" in the Acquisition ID boxes (i.e. 1,2 3 etc in order).

In most cases you will need to create an association between a students name, and the number you label the on the remote and the remotes unique serial number. The association of these 3 elements is done in the Roster, step 1 below. Then step 2 below is to set up Acquisition to display this number instead of the default last 3 digits of the remotes serial number.

Step1

First you must use a roster format that includes a screen name column, and then add the student names to this roster. Section 4.7 describes many tools and methods to do this easily. Once you have created a roster with student names it should look something like this with the students name associated to a clicker serial number.

Now type in the numbers that you will place on the associated remote (in the Screen Name column on the same row as the ID number)

Now place the number label on the associated remote.

Note: If you have pre-labeled the remotes, you must make sure the number you put in the screen name column matches the remote ID number in that row in the roster.

After you have added the numbers in the screen name column, save this new roster using the Roster pull down menu, Save Roster.

Step2

Start Acquisition and open the class that you just created the roster with screen names for.
From the Options pull down menu, select ID Display.
Check the box to show screen names instead of remote ID numbers.
Select Screen Name as the field to display (if not already the default)
Verify the Roster format options are the same as your roster, if not, select the correct format.
Browse to your roster with screen names, highlight it and click Open.
Click the OK button to exit the ID Display options pallet.

The ID boxes in Acquisition will now show the screen name (or rather number) you assigned.

NOTES: If you have numbered the remotes in order (i.e. the first student name is Screen name 1, the second, is screen name 2, etc) you can display these in sequential order in the ID grid by checking the option "Order boxes as in roster file" in the Options>ID Display pallet.
If the numbers in your rosters screen name column are not in order, you can open your roster.csv file and sort in ascending order of the screen name column using spreadsheet, or text tools, and re-load the sorted roster.

5.5.2 Fill in the blank answer formats

When grading student answers for multi-digit fill in the blank question types, it is important that an exact match is made between one of the "correct answers" you supply, and answers the student sends.
The Program performs an ASCII character match between your answer(s) and the students. If these do not match EXACTLY, the student answer will be graded as incorrect.
Therefore you should inform your students of the "format" you expect of their answers to avoid having to enter multiple correct answers.
The most common error is when a decimal answer is required, and the significant digits are not specified: The number of significant digits must match one of your correct answer(s). Example: If you tell the students to supply their answer to 3 significant digits after the decimal, and the "correct answer" you input is -12.520. A student response of -12.52 is not a match and will be graded as incorrect.
You can always review students answers in Analyzer, and add correct answers in situations where needed, but you can use this "exact match" criteria to enforce both "listen to my instructions" which is important to the learning experience, and also to enforce the value of place holders in numbers; Technically 12.52 is not equal to 12.520 because of the accuracy the added 0 implies.

Here are some other suggestions regarding various answer types:

<u>Fractions</u>, separate numerator and denominator with the / symbol, and for mixed numbers separate the whole number from the fraction with a space, example: 12 1/2 (twelve and one half).

<u>Using letters and characters in answers:</u> Using letters to indicate various functions in the answers allows many different "math" type answers. For example if you want students answers that include powers of 10, (standard symbol is "e") we suggest that the text "E" be used as the "raised to the power of 10" indicator. Example 12E5 (twelve times 10 to the 5th power). To indicate an exponent such as 12^5 you might use the text "P" to indicate the power the number is raised to, i.e. 12P5 (twelve to the 5th power).

In General, the answers from the multi-character remotes can be any character set available on the remote, even equations like Y-MX+B can be sent. Remote answers can be up to 20 characters.

5.5.3 Exporting to BlackBoard

To have the name field properly formatted for exporting to WebCT or Blackboard, the roster format must include the students WebCT or Blackboard ID. From the Student Points Options select "Format Name for BlackBoard import".

Once this is done, do the following to import grades into WebCT/Blackboard. (Note: these instructions are for WebCT campus edition. If you are unfamiliar with WebCT it is a good idea to contact your local help desk for support as well.)

1. From Options>Student Points select " Format Name for BlackBoard import" in columns to display section.
2. From the Export Settings (on Options>Student Points) select "Include column headings".
3. Export the points to a *.csv file and save it on your desktop.
4. Login to your WebCT account.
5. From the control panel for the course, click on Manage Course.
6. Under Manage Students, click on Import Students.
7. Click on the Browse button next to the empty filename field.
8. A new page will appear with a list of files in your file area. Click on the Browse button on the bottom of the page and select the file that you exported and click on open.
9. Then click on upload on the WebCT page.
10. The file will now appear in the list of files. Select the file by clicking on the radio button then click on add selected at the bottom of the page. The window will close and the filename field will now contain the name of the file that you uploaded.
11. Make sure the Separator field says Comma and click on import. WebCT will then ask you for confirmation and whether or not you want to make the new columns etc. Read and follow the rest of the WebCT screens and your points will be imported.

5.5.4 Question delivery modes

There are four basic configurations you can use based on how you want to pose questions to your class:

1. The full screen configuration
This is the default and typically used for:
- Verbal on the fly questions and polling
- Questions written on your chalk board

Simply press the green button to start collecting responses, Acquisitions full screen window is used to display clicker responses, and show the Histogram when the question is stopped (press the red button).

This mode can also be used where the classroom has 2 independent display setups, where one can run and display the content, and the other can run Acquisition to collect responses and show the Histogram.

Reference section 3.3 for the full screen basics
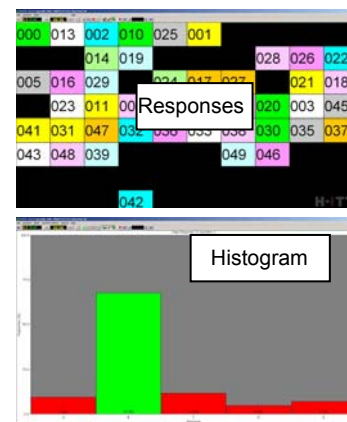
2. The split screen (slides) configuration:
Use the slides pull down menu (open slides file), select a file format (PPT is the default) browse to your question file and click open.
- Slides files, opens and displays standard content file formats such as PowerPoint, Word, Excel, text and other standard document formats as well as Blackboard content files, HTML and special H-ITT formats. (Some File types not available on Mac)
- Slides folder, opens graphic or picture content in folders such as jpg or tiff, and other graphic formats.
- White or black screen, used with digital ink tools such as the Dukane airslate.
- Web based content, browse to any web site (Not available on Mac)

The Acquisition window will split so that a portion is used for displaying the content and a portion is used to display responses as they are collected, and show the Histogram when the question is stopped. You can change the split to best fit both the content and ID / Histogram areas using the many options from the slides pull down menu. Reference section 3.5.4 for details.
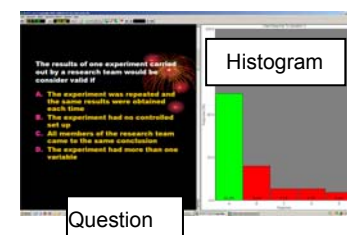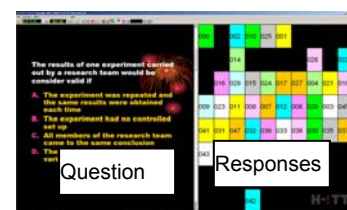
3. The Toolbar configuration, Select MODE>Toolbar only.
Used to collect responses and show the Histogram with virtually any content delivery method. In this mode, the Acquisition program is shrunk to a small toolbar that can float on top of whatever program you are using to display the content to the class (not available for Mac). You can move the toolbar anywhere on the screen. In the example the toolbar is located in the top right of a PPT presentation. Students verify their answer is recorded via the green light on their remote. An input counter on the toolbar lets you know how many responses are collected. The Histogram will pop-up when the question is stopped. In the example, the toolbar was moved to align the Histogram with the answer choices. Reference section 3.5.9 for details.
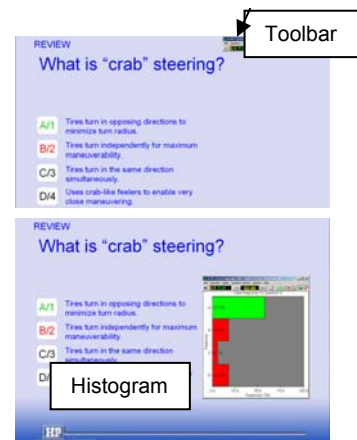
4. The Paper based testing configuration. Select MODE>Testing, either Fill-in-the-blank for multi-digit, or Multiple Choice for MC questions.

In this mode students can work at their own pace to answer questions from a paper quiz or test that you hand out. Acquisition operates in the full screen mode with additional information attached to each students ID box that lets them know which question they are answering, and if they have answered it. Students use the left and right arrow keys on their remotes to scroll through paper based questions. There is no Histogram associated with paper based testing. Reference section 3.5.2 for details.
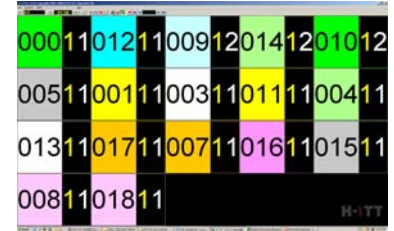
5. The Homework collection mode. Select MODE>Homework Collection

In this mode students can automatically send in their homework assignment they have saved in their remote. Only Multi-digit capable remotes and/or SoftClick can be used with the Homework collection mode. In The Homework Collection mode, the ID grid configuration looks the same as the Testing configuration

5.6 Supplemental Applications

The following applications are available at H-ITT.com

5.6.1 RosterMaker

RosterMaker is available from Analyzers Roster pull down menu, select "Start the RosterMaker utility". Instructions for using RosterMaker are available from it's help pull down menu and also at h-iit.com >support>software page.

RosterMaker associates a student's name that you provide with the clicker they are using to create the H-ITT Roster.

Here is the general scope about "how RosterMaker works":

1. Import a list of your student's names into RosterMaker.
2. Assign columns in your student name import to match the Roster format you are using.
3. If students own the remote they are using, go to step 4. Otherwise If you keep the remotes in the class (I,e, a Class Pack) then you should identify the remotes (i.e. numbering) so that the students always use the same remote in this class.
4. Start RosterMaker to COLLECT the roster info. The students name will show up on the screen where the student will be prompt to activate their clicker. Thus, RosterMaker makes the association between the name being displayed and the clicker number received.
5. When all students have clicked in you will be prompt to save the file. It is recommended to save this in the class file folder for this particular class.
6. Close RosterMaker, and Open Analyzer. From the Roster pull down, select "load Roster". Browse to the file you just saved from step 5 above and click open. This will populate your Roster in Analyzer.

5.6.2 Qgen2

Qgen2 is available from the Downloads section at h-itt.com.
Instructions for using Qgen2 are available from it's help pull down menu.
Qgen2 is a question generator program that outputs in h-itt xml slide file type.
In general, you enter or copy/paste questions and answer selections, including pictures and such as needed for your questions. Include question specific delivery preferences like correct answer(s) question time and more. Preview and set up the question set for best viewing based on your preferences in Acquisition and save it.
From Acquisitions slide menu, select open slides file and select h-itt xml as the file type then browse to the saved question set and click open.

Here are some key features of the h-itt xml question set format:
- The correct answer(s) are included in the question, no need to add or assign these later.
- The questions can auto advance, press the start button in Acquisition and all questions are "asked" in order automatically. Or you can advance questions with your instructors remote, or using your keyboard.
- Class, and/or Question labels and comments can be pre-authored in the questions. These can be used to track learning goals or state standards, or as notes available in Analyzer.
- The time provided for students to answer each question can be set for individual question or globally.
- The number of times you allow students to change their answer can be set by question or globally.
- Acquisition will automatically adjust to the question type as needed for each specific question. This includes the number of answer selections for Multiple Choice questions, and Fill-in the blank and numeric question types, or a combination of any within the question set.
- Preview your questions to know what they will look like in a simulated Acquisition screen.
- Multiple question/answer layouts, font styles and sizes to choose from.

If you are authoring new questions, we recommend using Qgen2. In addition most any question set you already have can be easily implemented with copy and paste functions as well as the ability to convert existing standardized question sets from Examview, MicroTest and more exported in standard BlackBoard question format.

5.6.3 MultiPoint

A software application that allows student responses from remote sites to be collected at a host site with the CRS.
Instructions for MultiPoint are available from it's help menu and also at
h-itt.com>support>software>MultiPoint page.
MultiPoint is a fee licensed application that uses the internet as the portal between remote classrooms and the host site. A good internet connection at the host and remote sites is required.

Here are some key features of MultiPoint:

- Software is a self installing application that is simple to use: It is either ON, collecting and relaying responses, or OFF…and that's it!

- Supports all of the Modes of the H-ITT CRS V2 software including multiple choice, multi-digit alpha/numeric, fill-in-the-blank, paper based testing modes, homework mode, as well as roster building functions.
- Remote classrooms can use either H-ITT's IR or RF remotes.
- Responses from remote classrooms can be collected simultaneously with remotes at the host site.
- All responses, local and remote, are compiled to display the results Histogram, and the data is always saved for analysis, grading and reporting with the Analyzer application.
- Unlimited number of remote sites or participants.

MultiPoint is enabled in Acquisition from the Options>WWW.Clickers pallet, see section 3.4.6.8 for details

5.6.4 SoftClick

SoftClick is an internet based application that allows students to send responses to the CRS using virtually any device that is web-enabled, such as laptops, cell phones and PDAs.
Instructions for using SoftClick are available at h-itt.com>support>software>SoftClick page.
SoftClick requires a good internet connection in the classroom.

Here are some key features of SoftClick:
- Low cost, students can purchase a license for 1 semester or 1 year at H-ITT's on line store.
- Supports all of the Modes in the H-ITT CRS V2 software including multiple choice, multi-digit alpha/numeric, fill in the blank, paper based testing modes, homework mode, as well as roster building functions.
- Can be used simultaneously with all H-ITT's IR and/or RF remotes.
- Can also be used by faculty to collect student's responses from remote locations like off-site classrooms, homes or offices.

Instructors enable SoftClick for their class one time and the session ID will remain the same so student login is simple and easy to remember.

SoftClick is enabled in Acquisition from the Options>WWW.Clickers pallet, see section 3.4.6.8 for details

6 INDEX for common topics

This index is designed to point the user to where specific topics are implemented in H-ITT CRS. It assumes that you have installed H-ITT CRS and can access the Acquisition and Analyzer to implement topics that point to where to look. For example, the TOPIC "Add or create a new class" WHERE TO LOOK points to Acquisition start-up screen, if you go to the Acquisition start up screen you will see the "Create a class button". If you click on the WHERE TO LOOK link you will jump to the section in this manual that describes the topic.

Topics that are not intuitive in nature within the applications have the link to a section(s) in this manual where you can get additional information.

TOPIC	WHERE TO LOOK
Add or create a new class	Acquisition, Start up screen
Add a class to analyzer	Analyzer, start up screen
Answer, assign or change correct answer	In Acquisition when during questioning. In Analyzer from the Answer key or grader
Answer Key, creating answer key file	Manual, section 4.3.1.1
Answer Key, loading global answer key	Analyzer, answer key window (click on key icon)
Answer, choices, restrict MC responses to the possible choices	Acquisition, question options pull down
Answer, allow students to change answers	Acquisition, Options>General
Answer, delete question, or do not grade answers for a question	Analyzer, answer key>grader (click the blue question number in the question column)
Answer, weighting points for each question individually	Analyzer, answer key>grader (click on the blue question number)
Answer, always show correct answer in Histogram	Acquisition or Analyzer Options>Histogram
Answers, weighting points globally for all questions/answers	Analyzer, options>answer key
Answers, showing students answers in the ID box	Acquisition, options>ID Display
Backup locations for Class files	Acquisition, options>general
Blackboard, displaying questions	Acquisition, slides pull down menu and 3.5
Blackboard, exporting grades to.	Section 5.5.3
Block remote IDs not in roster, secure mode	Acquisition, options>ID display
Boxes, the ID grid, show screen name	Acquisition, options>General
Cell phones used to enter answers	Acquisition, SoftClick section 3.4.6.8
Change answer, show changes in ID box	Acquisition, options>ID display
Change answer, allowing students to change their answers	Acquisition, options>General
Change answer, Editing students answers	Analyzer, click on students name in Student Points window to view and edit individual students answers.
Class files, locating directory of	Acquisition and Analyzer start up screens, and Manual, section 5.3.6
Class files, saving in alternative locations	Acquisition, options>general and Manual, 5.3.7
Class files saved in alternate format	Acquisition, options>general
Class, create a new class	Acquisition, start up screen
Class, Add the class to Analyzer	Analyzer, start up screen
Collect student responses	Acquisition, start a question (green button)
Computers used to enter answers	Acquisition, SoftClick section 3.4.6.8
Copy and paste grades	Analyzer, Student points window
Correct answer	See Answers above
Create a class	Acquisition, start up screen
CSV file format	Manual, section 5.3
Demo mode, how to use	Manual, section 3.6

Displaying Questions	Acquisition, slides pull down menu and 3.5
Drop questions from grading	Analyzer, answer key>grader, and drop questions
Directories, locations of	Manual, Appendix section 5.3.6
E-mail, sending class files	Acquisition, Options>e-mail
E-mail, roster building tool	Manual, section 4.7.3.1
E-mail, report to students on progress	Analyzer, e-mail pull down menu to send all, or click on students name in student points window to send individually. Also see 4.4.2
E-mail set up	Options> email Acquisition, or Analyzer
Examview, exporting content to Blackboard	Blackboard questions
Exporting e-mail addresses	Analyzer, Email pull down menu
Exporting student grades	Analyzer, export to file link, also an Icon toolbar item
False positives, reducing, sleep base until question is asked	Acquisition, options>advanced
File, directory locations.	Manual, 5.3.6
File, changing locations of	Manual, 5.3.7
Frozen computer, limited user access to read/write	Manual, 5.3.7
FTP, sending class files	Acquisition, options>FTP.
Grades, how to report	Manual, 4.4.2
Grading the student responses	Acquisition, when a question is asked, and Analyzer grading section
Grading changing student answers	Analyzer Student points click on student name
Grading, one class with multiple sections	Analyzer, roster manipulation, see Manual section 4.8.5
Green light, students remotes, turn off between questions	Acquisition, options>advanced
Hiding ignored questions	Analyzer, Options>answer key
Histogram, saving Histogram data	Acquisition, Options>advanced and also from the file pull down menu
Histogram, hiding	Acquisition, options>advanced
Histogram, layout and appearance	Acquisition, options>Histogram
Installing the H-ITT CRS	Manual, section 1
Installing the CRS on a USB memory drive	Manual, 5.3.7.1
Installing USB drivers	Manual, Appendix section 5.4
Instructor, remote and keyboard control	Acquisition, Options>general
Keyboard commands for instructor	Acquisition, Options>general
Keyboard mode to simulate remote inputs	Acquisition options>advanced (input source)
Label, adding to questions and classes	Acquisition, options>General
Labels, viewing	Analyzer, options>answer key, and the Grader
Limited user computer access for read/write	Manual, 5.3.7
Loaner remote	Acquisition, Options>loaner remote
Moving class files	Manual, section 5.3.8
MS office 2007 files, do not open correctly	Manual, section 5.5
Order file, changing students order in the Roster	Analyzer, Order file pull down
Paper based testing	Acquisition, Modes pull down menu
Password, change, Acquisition	Acquisition, options>advanced
Paths.txt file	Manual, 5.3.7
Points, changing values for individual questions	Analyzer, answer key>grader (click on the blue question number)
Points, changing values for all questions in a class	Analyzer, Answer key window (from the class edit button)
Points, globally changing default values	Analyzer, options>answer key
Points, viewing/exporting	Analyzer, student points window
PowerPoint, Integration	Manual, section 3.5

PowerPoint, opens outside of acquisition	Manual, section 5.5
Prompt, for question and class labels	Acquisition, options>General
Questions, Creating	Creating and displaying questions, section 3.5
Questions, Displaying	Acquisition, slides pull down menu and section 3.5
Question removal from grading	Analyzer, grader and drop question pull down menu
Question type, Multiple choice, or Fill in the blank	Acquisition, Type pull down menu
Question type, Fill in the blank formats	Appendix, 5.7.2
Remotes, blocking remotes not in roster	Acquisition, options>ID display
Remote location, getting responses from	Acquisition, SoftClick section 3.4.6.8
Reporting student scores	Analyzer 4.4.2
Roster, creating	Analyzer, section 4.7.1
Roster, formats	Analyzer, Roster pull down menu
Running the CRS from a USB drive	Manual, 5.3.7.1
Saving class files to an alternate location	Acquisition, options>general
Screen names, adding to roster	Analyzer, Roster window, and Appendix 5.7.1
Screen names, display in ID box	Acquisition, options>ID display
Screen names, creating a ScreenName file	Manual, section 3.5.3
Secure mode, block remote IDs not in roster	Acquisition, options>ID display
Sequential in time, ID box locations	Acquisition, options>ID display
Show correct answer on Histogram	Acquisition, Options>Histogram and icon toolbar and in Analyzer, Options>Histogram.
Sleep mode, disable base unit when no question is asked	Acquisition, options>advanced
Start a new class	Acquisition, main screen
Slides, displaying questions	Acquisition, slides pull down menu
SoftClick, web enabled device inputs	Acquisition, SoftClick section 3.4.6.8
Sorting students order in the roster	Analyzer, order file pull down menu
Student answer	(see Answers)
Testing remotes (or clickers)	Acquisition, start up screen
Testing modes, paper based	Acquisition, Modes pull down menu
Testing the software without base unit or clickers	Acquisition, demo mode, and Manual section 3.6
Timer, change timer value	Acquisition, timer on icon toolbar
Timer, change time increments	Acquisition, Options>advanced
Time taken by student to answer question	Analyzer, question analysis window
Tool bar mode	Acquisition, Modes pull down menu
USB driver installation	Manual, section 5.4
Uninstalling the software	Manual, section 5.1
Web site	h-itt.com
WebCT Integration	Analyzer, Options>export points
Windows Vista and Office 2007	Manual section 5.5
Zip Class files	Manual section 5.3.1
Zip, displaying Blackboard questions in,	Acquisition, slides pull down menu