Release Notes for WaferSense™ ATS 1.5.0

November 2008

This document summarizes changes made to the ATS host software – *TeachView*™ *and TeachTarget*™ – in this maintenance release. The document also includes an overview of the new *TeachReview*™ software application.

Ordering

The ATS 1.5.0 host software replaces previous versions. There is no change in ordering details. Only version 1.5.0 will be available after November 2008.

Upgrading your ATS Host Software

Simply install the new software from CD-ROM as you installed the previous version. The installer will replace the relevant applications automatically. To install the software, place the CD-ROM in your PC's drive. If the installer doesn't start automatically, open the CD-ROM in the Windows browser, and double click the *Setup.exe* file. This installation does not change the *ATS Firmware Updater* or the WaferSense Auto Teach Sensor Link drivers.

You can verify that you have the correct version of *TeachView* and *TeachTarget* by running the applications, and selecting About TeachView or About TeachTarget, respectively, from the Help menu. The version shown should be 1.5.0.0 for *TeachView* and 1.5.0.0 for *TeachTarget*.

Modifications to the WaferSense ATS Firmware

An improvement to the ATS wafer's firmware makes finding light targets on a dark background more accurate and reliable. This improvement resides in the firmware in the ATS wafer. The application called "ATS Firmware Updater" will allow you to update the firmware in your ATS wafer. Read about how to use the ATS Firmware Updater in the *ATS User's Guide*.
If the firmware in your ATS wafer is version 308 or earlier, you need to update your ATS wafer firmware. You can check the version of your ATS wafer firmware from the ATS Firmware Updater, or by using the "About your ATS Wafer" command in the Help menu of either TeachView or TeachTarget.

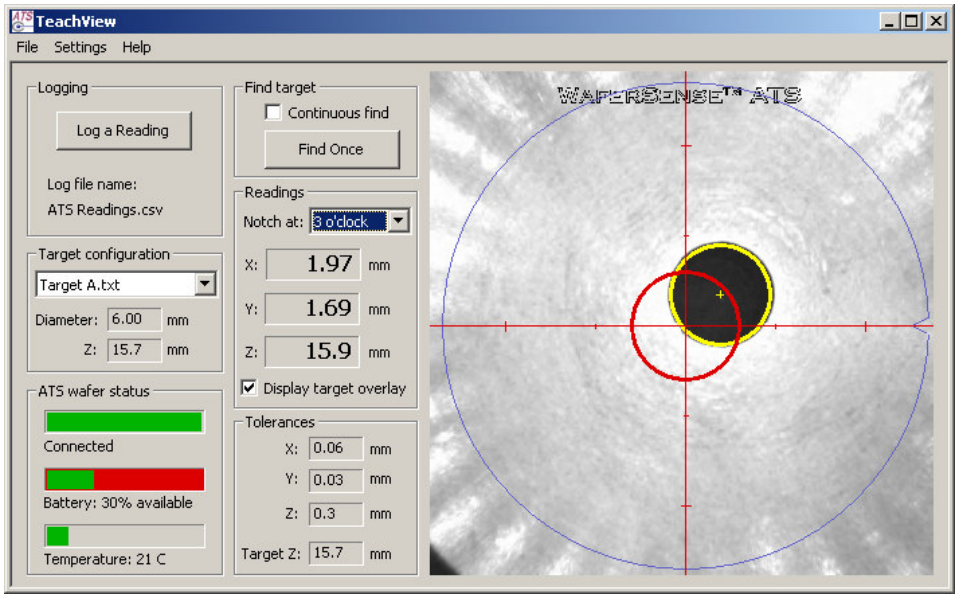
Modifications to the TeachTarget™ Application

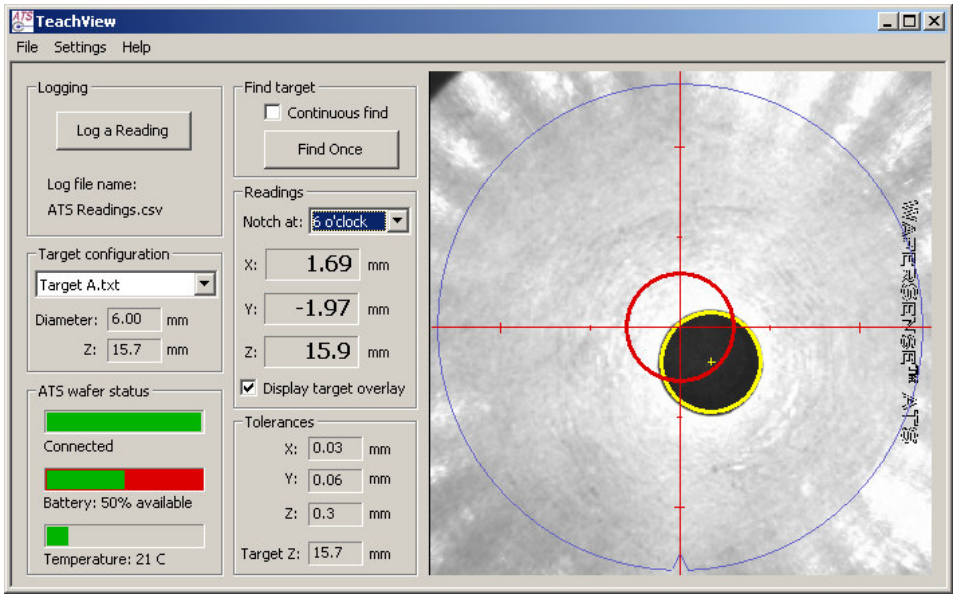
1. **Light targets on dark backgrounds**
   When you are creating a target configuration file in TeachTarget, you can now specify that a light target on a dark background, rather than the default dark target on a light background.

2. **Choice of units: millimeters or inches**
   You can now specify either millimeters or inches for readings, tolerances, and target parameters. You specify units by using the **Settings > Set Target Criteria** menu item.

Modifications to the TeachView™ Application

1. **Wafer notch orientation**
   In previous releases, the wafer was always displayed with the notch at the 3 o'clock position. You can now choose the notch orientation to be at 3, 6, 9, or 12 o'clock. The displayed X and Y readings and tolerances are always relative to the horizontal X axis and the vertical Y axis of the video image, regardless of the orientation of the wafer. This means that when you change the wafer orientation by 90 degrees, the X and Y readings change places, and either the X reading or the Y reading changes sign. In the first example below, the notch is at 3 o'clock. In the second example, the notch is at 6 o'clock, the X and Y readings have changed places, and the Y reading is now negative.





Similarly, when you change the wafer orientation by 90 degrees, the X and Y tolerances change places. Tolerances are always positive values, so they never change sign.

2. **Choice of units: millimeters or inches**
   You can now specify either millimeters or inches for readings, tolerances, and target parameters. You specify units by using the **Settings > Set Target Criteria** menu item.

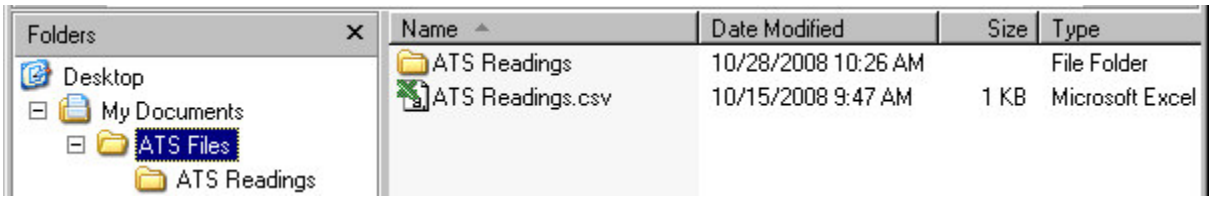
3. **Ignore target Z value**
   In previous releases, when you selected **ignore target Z value** in the Set Target Criteria dialog, there was no indication in the main window of TeachView. Now, when **ignore target Z value** is selected, the **Z** reading and the tolerances for **Z** and **Target Z** in the main window appear dimmed as a reminder.

4. **Target configuration parameters and tolerances added to display**
   The main window of TeachView now displays the selected tolerances and target Z value that you set in the Set Target Criteria dialog. The display is read-only; to edit these values, you must still use the **Settings > Set Target Criteria** menu item.

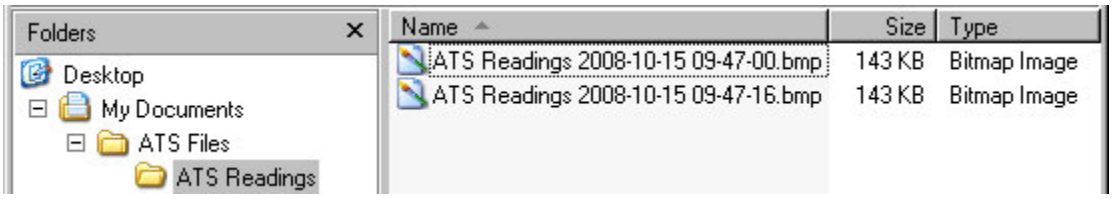
   The main window also now displays the target diameter and height (Z) for the selected target configuration file. You can't edit these values.

5. **Tolerance ranges increased**
   The range of tolerances that you can specify has been increased from 0.5 to 2.0 mm for X and Y, and from 1 to 2 mm for Z. Note that this increased range for the Z tolerance does **not** mean that ATS can find targets over a wider Z range. When you are performing a Find operation, the distance from the bottom of the teaching wafer to the target should still be within 1 mm of the Z distance used to create the target configuration file.

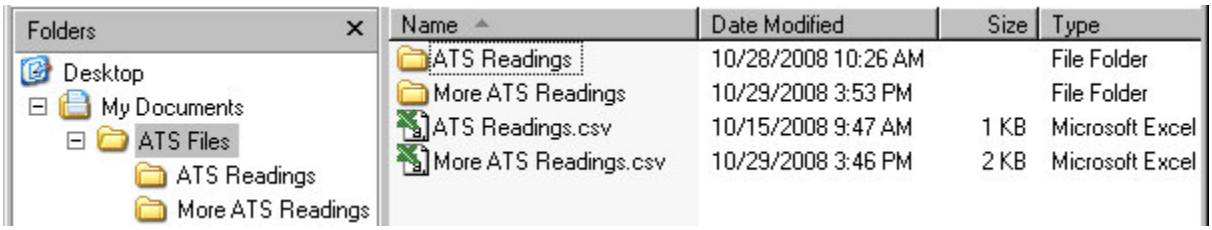
6. **Video images saved with log entries**
When you log a reading, *TeachView* now saves a copy of the video image. Image files are saved as .bmp files in a subdirectory relative to the log file. For example, if readings are logged in *ATS Readings.csv*, the *ATS Files* folder will include an *ATS Readings* folder,



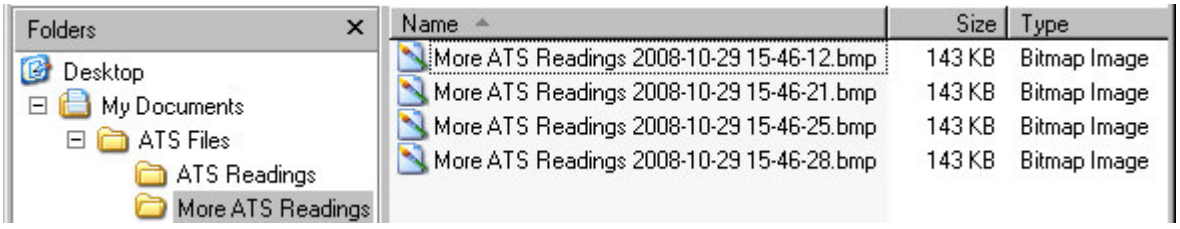
and the *ATS Readings* folder will include bitmap files.



If there are several readings files, there will be corresponding folders for their image files. In the following example, we also have *More ATS Readings.csv* and its associated folder *More ATS Readings*.



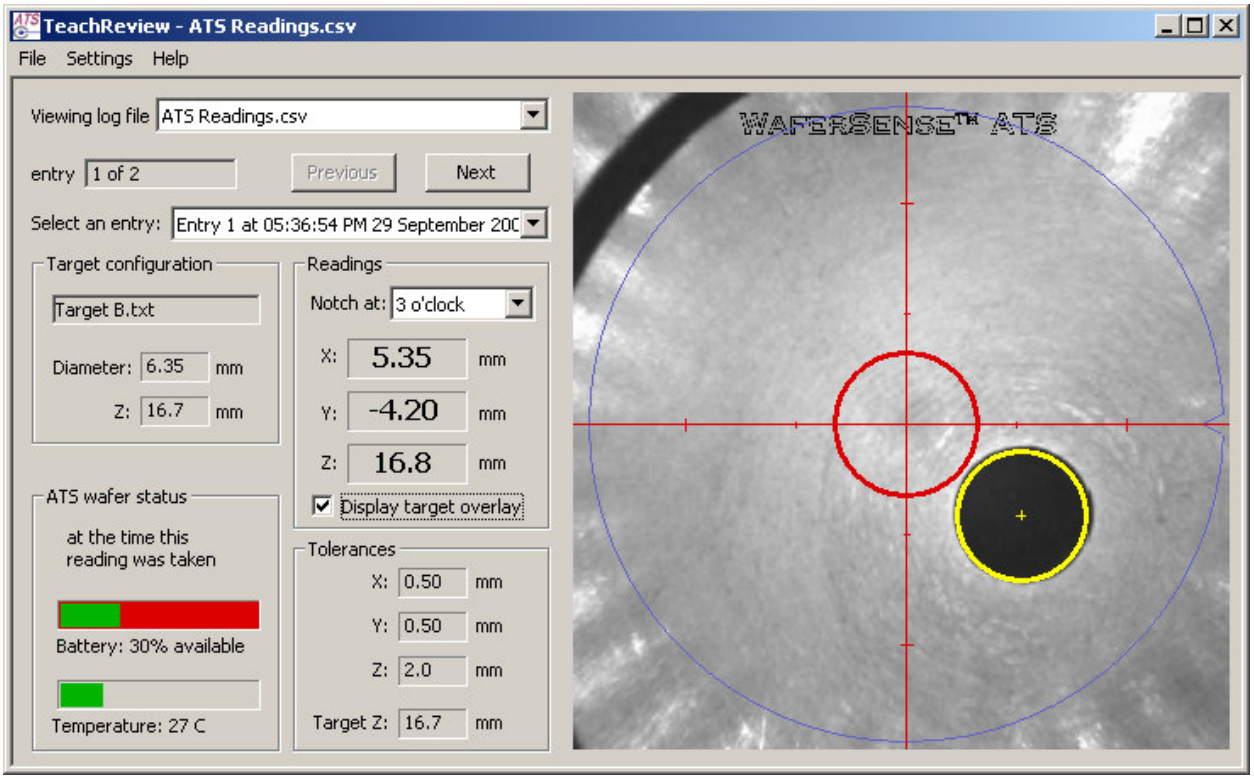
And, the *More ATS Readings* folder contains the image files associated with *More ATS Readings.csv*.



You can use the new *TeachReview* application to display log file entries and the associated image files. If you move a log file, you must also move the corresponding subdirectory of image files with it, or *TeachReview* won't be able to find the image files.

New TeachReview Application™

A new application, *TeachReview*, lets you display log file entries and the associated image files. The *TeachReview* user interface (see below) is very similar to that of *TeachView*, but *TeachReview* displays information from log files (*TeachReview* does not communicate with the ATS wafer).



TeachReview can read log files created with earlier releases of *TeachView*. Log files from earlier releases don't contain some information that is included in release 1.5 log files and don't have associated image files, so the image display and some of the other controls might be blank when viewing such log files.

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