

# About Affymetrix GeneChip® Targeted Genotyping Analysis Software Release 1.6

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## Summary of Changes

GTGS 1.6 is now compatible with Affymetrix GeneChip® Command Console (AGCC) instrument control software:

- GTGS batch creates sample files (.ARR), which are required before arrays can be washed or scanned
- GTGS reads AGCC intensity files (.CEL)
- GTGS is backwards compatible with GeneChip® Operating Software (GCOS), so you don't have to immediately transition to AGCC

### Data Analysis Changes

- New "Experiment Status Batch Update" operation in the Experiment QC Summary table (Manual Pass/Fail/Reset). In conjunction with flexible table sorting options, it is now much easier to select the subset of samples for batch genotyping.
- New "Delete All Experiments" operation in Array Data if no Genotype Results exist
- Completeness % metric (Genotype Results -> Fit Summary) is now based on best technical replicate of all passing experiments. In GTGS 1.5 the metric excluded the best technical replicate if it was a "manually-passed" experiment.

### Sample Tracking Changes

- Can now always change the GTGS project name
- All users can now delete bar-coded arrays within GTGS (not just the 'admin' user)
- The AGCC naming convention for .DAT and .CEL files includes an underscore before the channel code, i.e. *(a)1234567-12345\_A.cel*. This differs from the GCOS convention, which does not include an underscore. When the software is configured to NOT communicate with GCOS, both the Tracking operation "Hyb on Arrays" and the Array Data operation "Import Experiment List -> from Project" will pass an experiment list to the Array Data section that assumes that CEL file names include an underscore before the channel code.
- In the plate well transfer editor:
  - Always prevent user from mapping multiple source plate wells to single destination plate well
  - Unavailable wells are now displayed as selected when clicked. This makes it easier to diagnose why the 'Set' button remains disabled (there's an invalid selection)

### Miscellaneous Changes

- "Find" uses a more common search behavior, a change from the previous pattern matching behavior whereby certain characters had special meaning
- On application launch, fixed occasional *IndexOutOfBoundsException* error message
- On application launch, the window is not sometimes maximized
- Prevents importing experiments with duplicate names in an experiment list
- When GTGS 1.5 used "NT Authentication" mode instead of the default user selector at application launch, it would register experiments to GCOS with username = "domain name\user name" format. The GCOS Server security policy prevented the same user from accessing these experiments from GCOS, because their Windows user name wasn't "domain name\user name". In GTGS 1.6, only the NT username is passed to GCOS, so it will match the user's Windows user name.

- The “OK” button of an error message is now responsive to a mouse click

#### Installer Changes

- Upgrades GTGS 1.5 to GTGS 1.6, while maintaining user data and existing Microsoft SQL Server 2000 Personal Edition, service pack 3
- Allow new installs of GTGS 1.6 if Microsoft SQL Server 2005 Workgroup Edition, service pack 2 (or newer service pack), exists
- For installs with SQL 2005, GTGS 1.6 will not record a two month history of user logins. The SQL jobs “DBLoginAudit” and “Clean\_DBLoginAudit” are not installed.
- Installs newer versions of Sun’s Java Runtime Engine and Apache’s Tomcat application server
- Installs permanent license key

## **Frequently Asked Questions**

*Q: I have GTGS 1.5. Do I need to upgrade to GTGS 1.6?*

A: If you wish to transition your lab to only use Affymetrix GeneChip Command Console (AGCC) to control your wash stations and scanners, and you intend to continue performing the Targeted Genotyping assay, you will need to upgrade to GTGS 1.6. Note that Affymetrix support for GeneChip Operating Software (GCOS) to control these instruments is being phased out in favor of AGCC. Even if you don’t have to upgrade, you may decide to upgrade to take advantage of the feature enhancements and bug fixes described earlier.

*Q: Will installing this software delete my GTGS 1.5 data?*

A: The installer doesn’t modify the database containing your data. After the software upgrade is complete, you can access your data as you did for GTGS 1.5.

*Q: Should I upgrade to GTGS 1.6 in the middle of a project?*

A: No. You should not switch between use of GCOS and AGCC within a GTGS software project, as the different naming convention of .cel files may lead to some problems. The installer may ask whether you want to turn off GCOS compatibility mode immediately. Select this option if you : 1) have upgraded to AGCC for instrument control and are ready to begin processing experiments within a new GTGS software project, and 2) have no need to process additional experiments using GCOS software. Refer to the *AGCC and GCOS Compatibility Modes* chapter of the *Targeted Genotyping Software User Guide* for more information and for instructions on switching compatibility modes at any time after the upgrade to GTGS 1.6.

*Q: Will I lose any features if I upgrade from GTGS 1.5 to 1.6?*

A: No. All GTGS 1.5 capabilities are retained in a GTGS 1.6 upgrade. This includes the ability to retain communication with GCOS, if you don’t intend to immediately switch to AGCC.

*Q: If I reprocess existing data, will the genotype calls change?*

A: No.

*Q: Why can’t I install the server software on my computer?*

A: A *new* install of GTGS 1.6 server software doesn’t occur if Microsoft SQL Server 2005 Workgroup Edition isn’t pre-installed. An *upgrade* install of GTGS 1.6 server software doesn’t occur unless GTGS 1.5 server software is detected. At least one of your computers needs the server software in order to run GTGS. Affymetrix only supports software on Targeted Genotyping Pre-Amp and Post-Amp computers.

*Q: Can I install GTGS 1.6 server software on a computer that already has DMET server software?*

A: No.