G4460-60006 Feature Extraction Software Release Notes
=================================================================

Product:
  # G2566AA - Feature Extraction provided with the Agilent Scanner
  # G4460AA - G4462AA - Feature Extraction Commercial License
  # G4463AA - G4465AA - Feature Extraction Academic License

This release note contains:
* Changes in FE 11.5.1.1
* Installation Notes for Feature Extraction Software 11.5.1.1
* Known issues in Feature Extraction Software 11.5.1.1
* Fixes done in FE 11.5.1.1

This product includes software developed by the Apache Software Foundation
http://www.apache.org/.
Changes in FE 11.5.1.1

Feature Extraction 11.5 includes the following new and changed functions. (Details follow.)

- Feature Extraction 11.5 will now support PostgreSQL database:
  1. Feature Extraction now only uses PostgresSQL 9.1.2 for its database.
  2. MSSQL, MySQL databases are no longer supported
- FE now uses Apache PDF maker for QC report generation.
- The gDDN and rDDN metrics are removed from default metric sets.
  The default Metric sets do not have the rDDN and gDDN metrics. However the user can create custom Metric sets with these metrics.
- Extraction of Agilent arrays scanned on following third party scanners is enabled:
  1. Scanners:
     - NimbleGen
     - Innopsys
  Notes
  o In case of NimbleGen and Innopsys scanned images, it is necessary to have Read and Write permissions on the directory where the images are stored, as FE will convert these images to the required format first and store the converted image into the same directory as the original image.
  o Results from third party scanned images are not validated by Agilent.
- Ability to flag certain probes as critical.
  The software allows the user to mark probes in the design as critical probes and uses this list of critical probes during extraction. During extraction, if the probe has been flagged as critical and is an outlier, then FE generates warning(s) in the Batch summary report. The flagging of the critical probes is done using the Critical Probe List editor available through the Grid template properties dialog.
- Improved Corner Pattern Detection (CPD) protocol (available by request) for fully automatic grid placement of dim arrays
Installation Notes for FE 11.5.1.1

- Feature Extraction can be installed by downloading it from the web site (https://genomics.agilent.com) and based on the system specifications you can download the 32-bit or 64-bit version of the FeatureExtraction software.
- The Feature Extraction 11.5 is a standalone version. This version does not support upgrade from previous versions. If Agilent Genomic Workbench Standard Edition is already installed on the computer, you cannot install Feature Extraction 11.5. The installer for the FE 11.5 will also install the QC chart tool version 3.5.1.1.
- The database version in Feature Extraction 11.5 is PostgreSQL 9.1. The earlier standalone version of FE (FE 11.0) supported MySQL database.
- To bring protocols, metric sets, grid templates, or data from Feature Extraction version 10.7 or 11.0 into Feature Extraction version 11.5:
  1. If you have used any special protocols or metric sets in the previous version, then they must be exported from the current software before uninstalling it. You can then import the protocols and metric sets into Feature Extraction version 11.5 and the QC Chart Tool database.
  2. Feature Extraction version 11.5 does not support the import of grid template data from Feature Extraction version 10.7. If you have Feature Extraction version 10.7 installed and you want to transfer your grid template data to Feature Extraction version 11.5, do not remove Feature Extraction version 10.7 at this time. Use the Data Migration Utility to transfer grid templates from Feature Extraction 10.7 to Feature Extraction 11.5. The Data Migration Utility is available on demand.
  3. If you have Feature Extraction Version 11.0 installed and you want to transfer data from this version 11.0 to Feature Extraction 11.5, use the Data migration utility to Export Grid templates, Protocols and Metric Sets before uninstalling Feature Extraction 11.0. After exporting the required data, uninstall Feature Extraction 11.0 and then install Feature Extraction 11.5. Once the installation of Feature Extraction 11.5 is complete, use the Data Migration Utility to import the data (exported from version 11.0) into Feature Extraction 11.5.
  4. To export data from your old QC Chart Tool database, use a QC Chart Tool query and then export the query results. You can then import this data to the newly installed QC Chart Tool database. Queries cannot be exported; recreate them in the new version of the software.
- Recommended PC configurations for FE 11.5.1.1 are using a Intel(R) Core(TM)2 Duo CPU , Intel Xeon CPU 2GHz or higher (please see 5 below) based Processor with 2+ GB of RAM and at least 40 GB of hard disk space. Agilent recommends using 4 GB of Virtual Memory.
- Agilent has not tested FE on Itanium Processor architectures (IA-64). As such, Agilent does not support Feature Extraction on Itanium based windows machines.
- The supported English operating systems are –
  
  **32-bit Windows:**
  1. Windows 7 Professional SP1
  2. Windows 7 Enterprise

  **64-bit Windows:**
  1. Windows XP SP2
2. Windows 7 Professional SP1  
3. Windows 7 Enterprise

- In order to install FE, the user must be a member of the administrator group. On Windows 7 operating systems, both 32 and 64 bit versions, the user must disable User Access Control before installing FE. Not disabling User Access Control (UAC) could cause the software to fail to install as it will not be able to access required system registry to ensure correct installation.
- After uninstalling the previous version of Feature Extraction (i.e. FE 10.7.3.1 or FE 11.0.1.1), a reboot may be required. If the reboot is requested by the installer and it is not performed then installation of the new version of FE may fail.
- After installing the Feature Extraction 11.5 and QC chart tool software, reboot of the machine is not required. You can directly launch the applications from their installed location.
- Please refer to the Installation guide for more details regarding the installation process.
- Please contact Agilent Technical Support if you have more questions or problems.
Known Issues in Feature Extraction Software 11.5.1.1 and earlier

- Changing the color scale does not work while in grid mode. If the user attempts to change color scale from “All Channels” to “Red Channel” or “Green Channel” it does change (TT 2309).
- The eArray integration feature is not quite complete, in that after FE runs, the project explorer is not updated to reflect which grid template and protocol was automatically assigned. This can be confusing to a user after the project has finished as they do not get the feedback in the Project Explorer. User needs to right-click “Refresh” in the appropriate navigation panes in order to see the updated files (TT 2236).
- For new format scans while setting color ranges, the ability to adjust colors in high fidelity mode can lead to errors – namely if the user tries to set “Auto Scale Image” after unsetting this option. (TT 2166).
- Sometimes in rare instances, the switch to configure mode button will not be enabled after the extraction is complete. The extraction will have to be closed and re-opened to enable to config / run mode toggle (TT 2069).
- The grid template that is currently in use during an extraction can be removed causing the extraction to fail (TT 2042).
- Attempting to calculate spot size and centroids in manual grid mode using a high resolution scan of a third party array will cause FE to crash (TT 2032).
- It is not recommended to run projects containing multiple extractions directly through FENoWindows. Projects containing multiple 30-micron feature size 1 million feature array will run out of memory if run directly using FENoWindows. The work around is to either use the FE GUI to run these projects or to break up the project into multiple projects each containing 1 extraction (TT 2016).
- Do not remove the DBConnectInfo.ini file from the FE installation folder. If that file is not available the software cannot be removed via the install or Add/Remove programs (TT 1944).
- When viewing shape files, feature outliers are not visible until the image is zoomed or cropped (which effectively zooms) (TT 1955).
- Viewing the scan properties can cause the image to appear distorted. Minimizing followed by reopening the image will correct the issue (TT 1959).
- Scans of 2, 3 and even 5 micron resolution using full sized scan regions are quite large creating memory issues for the software. In order to address memory and performance issues the following restrictions are true about the imaging.
  a. The new view window feature (with Ctrl-N as the shortcut) that allows users to open one channel of the scan will not work for new format scans.
  b. When cropping a new format scan to view the image close up, what FE refers to as high fidelity mode, zoom out is disabled below 200%.
- When a two-channel tiff file is split into two single-channel tiff files (one for Red and one for Green) from the Agilent Microarray Scanner, On-Time project treats the split tiff files as two separate single-channel files (TT 282).
- Protocol, DyeNormList, or Grid Template cannot have special characters in the name or description. The character that is sure to break is ‘”‘(TT 652 & 657).
- FE is not designed to support concurrent users. The software will only allow one user to user FE at a time. If another user is logged into the same machine, only one will be allowed to run FE.
- You cannot open a .tif image from a CDROM or DVD. Copy the image to a hard disk or network share. (TT 1463)
- The port selected other than the default port on the installation wizard screen is not reflected (TT 178041)
- Issues with uninstallation of FE 11 software – it prompts for deleting the CommonStorageFolder and at times some of the application folders remain after uninstall process. (TT 178180)
- Grid browser does not update (TT 75985)
- Manual gridding: issues with unplaced grid (TT 178645)
- Gridding error yields missing array (TT 178646)
- FE Grid Template pane (TT 178702)
- In case of XDR images, if we have both the images in extraction set, then the images will not be cropped. But if you have any one image (i.e. either <image>_H or <image>_L) then the images will be cropped.
- While creating a Critical Probe list (and Dye Norm list) no progress bar is shown. Opening this UI can take a long time, especially for million-feature designs (TT 200107)
- Sometimes after installation two entries are displayed in Add/Remove programs for Agilent Feature Extraction 11.5(TT 199427)

====================================================================================================
Known Issues in QC chart tool software 3.5.1.1
====================================================================================================
- Sorting table by ExtractionDate can overwrite names incorrectly. Sorting on ScanDate can cause those values to be deleted. Closing QC Tool and re-opening fixes these issues (TT 200499)
- QC Tool Edit Metric Set has incorrect behavior. Second tab reads either “Selected Metrics” or “Existing metrics”, depending upon some user choices (TT 177758)
- New Annotation Import needs longer term solution (TT 178701)
- Data for the columns Author and Extraction Status is missing when we export query result and import it into the QC tool again. The above case happens if we export a query result , open the query result in an excel , create a copy of any of the existing rows, modify any of the fields except Author and Extraction Status, import it into the QC tool again, we see the Author and Extraction Status fields as blank for the newly added row (TT 178855)
- Importing a query result changes the order of the table columns (TT 179320)
- Query with operator not equal (<>) is not fetching correct results(TT 200429)
- On reimport, query records are not getting added correctly.(TT 200431)
- Sometimes on importing query with same Array id and extraction name values are not overwriting.(TT 200436)
- No error message is displayed when imported invalid file as 'Import FE stats and params'. (TT 200438)
Fixes done in FE 11.5.1.1 from previous releases

- Fixed crash while trying to log a warning related to autofocus. (TT 199625)
- FENoWindows hangs during extraction (TT 065574)
- Auto-Gridding fails for 8 X 60K arrays (Red only images) (TT 191802)