Normalise Suite, version 2.7 (c) 2001-2010 Ben Beheshti, M.D. Ph.D. (ben.beheshti@utoronto.ca) c/o Jeremy A. Squire, Ph.D. (squirej@queensu.ca) http://individual.utoronto.ca/beheshti/software/ _____ _____ Contents: Release History _____ _____ _____ Release History _____ Version 2.7 Notes: build JUNE 5, 2010 _____ MINOR NOTES: -ALL PROGRAMS: Accumulated fixes now compiled to current version. Version 2.6 BETA Notes: build JULY 14, 2006 _____ MINOR NOTES: -PROFILER: Bug fix: Data-smoothing with fewer available spots than window size would crash software. build APRIL 4, 2006 _____ MINOR NOTES: -ALL PROGRAMS: Added UHN 19k8.1 microarray genelist. build MARCH 30, 2006 _____ SIGNIFICANT NOTES: -PROFILER: Karyotype option added for the generated consensus region (selected by default). MINOR NOTES: -PROFILER: HTML karyotype window now lists source of data.

-PROFILER: Bug fix: Launching IE for HTML was hanging profiler (THIS MAY STILL BE A PROBLEM.. TURN OFF LAUNCH IE for now as temporary fix). build MARCH 26, 2006 _____ SIGNIFICANT NOTES: -PROFILER: Option to determine consensus changes (present in eg. 75% of samples) across individual projects when plotting results. MINOR NOTES: -PROFILER: Bug fix: Removing a file that was selected for smoother/region sometimes did not refresh smoother/region tab checkboxes. -PROFILER: Added option to set baseline line color. build MARCH 19, 2006 _____ SIGNIFICANT NOTES: -PROFILER: Bug fix: "Contigs must reach at least this many number of features to be kept" option fixed (user setting was ignored). MINOR NOTES: -PROFILER: Bug fix: "Post-processing" was not working when selected (unless post-processing options were changed). -PROFILER: Bug fix: "No chromosomes..." error when deselecting "Include original plot ... " & selecting "Post-processing... " in Region Detection tab. -PROFILER: Bug fix: Creating HTML profiles in root folder of drive would crash program. -PROFILER: Bug fix: HTML navigation arrow link to composite image was not working when saving as RGB images. -PROFILER: Bug fix: Post-processing checkbox would not deselect when switching between projects in Region Detection tab. -PROFILER: Bug fix: Fixed crash where saved smooth/region file, but user deletes file between profile generation. -PROFILER: Added option to set baseline line width. Default baseline color now set to black (was gray). -PROFILER: Added option to treat projects as independent, non-overlapping feature sets. -PROFILER: Added option to not plot the region data spots (i.e. just have the threshold lines present). -PROFILER: "Place ideogram at baseline..." option now works for dynamically generated ideograms. -PROFILER: Log file location in HTML output (top panel) is now a link. -PROFILER: Quick select chromosome 1 option added. build DECEMBER 20, 2005 _____ MINOR NOTES: -PROFILER: Bug fix: Saved data smoothed project files and region project files were not including organism information.

-PROFILER: Bug fix: Organism information was not being properly loaded from some older project files resulting in software crash.

Version 2.5 Notes: build NOVEMBER 15, 2005 _____ SIGNIFICANT NOTES: -IMPORTER: Bug fix: Was not correctly importing genelists that had chromosome localization (would omit localization information). -ALL PROGRAMS: Software now able to import, normalise, project, and profile mouse CGH data. MINOR NOTES: -IMPORTER: Bug fix: Saved message (after importing) was not correctly reporting user-defined genelist name. -PROJECT: Bug fix: When single spots filtered out, was not reporting the correct number of spots filtered/removed. -PROJECT: Bug fix: Was not saving organism type in project file; now saves this information. Profiler will try to work around this in 'older' project files (prior to this release) by 1) searching through genelist used, or 2) asking user. -PROFILER: Bug fix: Karyotype link in left frame of HTML results would not correctly link (i.e. broken link) if its source data folder moved. -PROFILER: Bug fix: Deselecting "Place chromosome ideogram into image" option would crash the software. -PROJECT: Added option to allow applying adjustment factor to project data (as opposed to doing this to only the smoothed data in profiler). build JUNE 5, 2005 _____ SIGNIFICANT NOTES: -IMPORTER: Completely rewritten and given more consistent interface. build MAY 15, 2005 _____ MINOR NOTES: -PROFILER: Bug fix: Selecting region calling on a data smoothed file but selecting to not plot the data smoothed file would crash the software. -PROFILER: Bug fix: Selecting reset button in Region Detection tab did not use deactivated colour for post-processing window size. build APRIL 24, 2005 _____ MINOR NOTES: -PROFILER: Bug fix: Selecting "Remove File(s)" would not remove the file's Smoothed+Region detection derivative file. build APRIL 20, 2005 _____ SIGNIFICANT NOTES: -NORMALISE: Bug fix: Significant memory leak fixed during view scatter plots (normalise results view), each time switching between pre- and post-normalisation resutls view.

MINOR NOTES:

-PROFILER: Speed improvement gain when plotting multiple projects together. -PROFILER: Threshold line labels now printed in color rather than black (when plotting multiple region detection results). build APRIL 2, 2005 _____ SIGNIFICANT NOTES: -PROFILER: Bug fix: Significant memory leak fixed during profile preview, each time viewing any chromosome. build MARCH 30, 2005 _____ MINOR NOTES: -PROFILER: Bug fix: Crash during data smoothing when too few spots on the chromosome (< window size). -PROFILER: Bug fix: HTML output file handle was not closed until program exit (internal issue). -PROFILER: Bug fix: When de-selecting "level of change" plot option, software did not actually do so entirely on subsequent plot. -PROFILER: Option to plot centromere line for dynamically generated chromosome ideogram now a separate user option (from cytoband lines). -PROFILER: Reorganized "Profiler Settings" tab layout for consistency and logical flow. build MARCH 27, 2005 _____ SIGNIFICANT NOTES: -ALL PROGRAMS: Cytoband information (MB start, end) integrated from the latest build NCBI (build 35.1; "ideogram" file). MINOR NOTES: -PROFILER: Bug fix: HTML output displayed header text for "Karyotype(s):" even when no region calling was performed. -PROFILER: Bug fix: Dynamic ideogram generation was not properly showing bands for chromosomes 7, 8, 11, etc. at 550/400 level. -PROFILER: Option to use dynamically generated chromosome ideograms now selected by default. -PROFILER: Error reporting enhanced such that error log file lists chronologic user actions selected to facilitate debugging. -PROFILER: Drop-down selections now properly width limited (aesthetic). -PROFILER: Black line designating centromere now drawn in for dynamically generated chromosome ideograms. -PROFILER: Thicker black border drawn around dynamically generated chromosome ideograms.

build MARCH 20, 2005

SIGNIFICANT NOTES:

-NORMALISE: Bug fix: Importer function would occassionally not import even though user had correctly provided all information for importing. -NORMALISE: Bug fix: Importer function would occassionally not generate recognizable custom genelist after importing. -PROFILER: User option added to select cytoband resolution (850, 550, 400) when dynamically generating chromosome ideograms.

MINOR NOTES: -NORMALISE: Bug fix: When error message "Filters too stringent" given, user taken to incorrect tab ("GPR file settings", rather than "Filter settings"). -NORMALISE: Bug fix: When error message "Filters too stringent" given, option to generate pre- and post-normalisation plots was still given despite the fact that normalisation had not occurred. -PROFILER: Quick instructions tab updated.

build MARCH 13, 2005

SIGNIFICANT NOTES:

-PROFILER: Bug fix: Median and average sliding window data smoothing functions would crash software (LOWESS not affected); apparently this was a longstanding bug.

-PROFILER: Option to generate karyotype descriptive text output now made more accessible (previously had to "save the region project file" to get this output; now turn on "Use this region calling information to generate in table format a type of descriptive karyotype" option).

-PROFILER: Karyotype descriptive text output now presented with preview and HTML output (if the option is selected).

MINOR NOTES:

-PROJECT: Bug fix: When importing data files, project did not recognize chromosomes "23" and "24" as "X" and "Y"; now will correctly import these. Reimport if profiler is not creating plots for your chromosome X and Y data.

-PROFILER: Bug fix: "Save region project file" option in Region Detection tab was sometimes not deselecting properly (internally).

build MARCH 8, 2005

SIGINIFICANT NOTES:

-PROFILER: Bug fix: Crash when selecting smooth then region on smooth data but not plotting any of original raw data (i.e. only plotting region calling data of data smoothing data). This is a longstanding bug.

MINOR NOTES:

-PROFILER: Bug fix: Selecting remove or clear files in the Load Files tab, then plotting a new file would not recognize new file (bug from Mar 3). -PROFILER: Bug fix: Dynamically generated chromosome image was drawn too close to bottom border of plot. -PROFILER: Bug fix: Plot individual chromosomes upright when using dynamically generated chromosome images didn't generate ideogram properly.

build MARCH 3, 2005

SIGNIFICANT NOTES:

-NORMALISE: Bug fix: Normalise was not correctly annotating cytobands that do not have subbands (eq 1p33). Recreate normalised data files. -PROFILER: Bug fix: Previously, plotting stopped after the last data point was plotted for each chromosome, even if it wasn't at the end of the chromosome; now backbone spacing added until end of chromosome reached; fixes issue of dynamically generated chromosome ends not being drawn. -PROFILER: Profiler now determines cytobands itself rather than relying on normalised & project data file cytoband information; otherwise plots may have had incorrect cytoband information (but still correctly plotted) using older data files (see bug fix February 4, 2005 build; this fix will help so you don't have to recreate all your normalised and project data files just to get correct cytoband info on the plots. Newly created data files will have correct cytoband info though). MINOR NOTES: -PROFILER: Bug fix: Software crash if data smoothing (or region calling) but not plotting the original raw data. -PROFILER: Bug fix: Reset button in data smoothing tab would not remove smoothed file as a selectable option from region detection file list. -PROFILER: Bug fix: Reset button in region detection tab would reset all files for region detection, not just currently displayed file. -PROFILER: Bug fix: Clicking reset buttion in region detection tab, then reset button in data smoothing tab may crash the program. -PROFILER: Bug fix: Dynamically generated chromosome not always outlined in black; lines designating cytobands not always drawn in light gray.

-PROFILER: Option added to region detection tab to allow region calling on data smoothed file while using thresholds from the unsmoothed raw data.

build FEBRUARY 27, 2005

SIGNIFICANT NOTES:

-PROFILER: Bug fix: Error checking for software crash had been disabled from a previous build (sorry!); reenabled.

build FEBRUARY 4, 2005

SIGNIFICANT NOTES:

-PROJECT: Bug fix: Project was not correctly annotating cytobands that do not have subbands (eg 1p33). Recreate project data files. -PROFILER: Bug fix: Profiler was not plotting cytobands that do not have subbands. Run Profiler after recreating new projects.

MINOR NOTES:

-NORMALISE: Bug fix: Importer function was not working due to a compiler issue. -PROJECT: Bug fix: Importer function was not working due to a compiler issue. -PROFILER: Bug fix: Profile preview would crash when loading JPG format whole genome plot.

-PROFILER: Speed improvements for generating and previewing plots.

-PROFILER: Speed improvements for dynamically generating chromosome ideograms. -PROFILER: Option given for demarcating cytoband boundaries when dynamically generating chromosome ideograms.

-PROFILER: Option given to set the width of the dynamically generated chromosome ideogram.

-PROFILER: With HTML output, dynamically generated chromosome ideogram displays

cytoband on mouse-over. -PROFILER: With HTML output, non-enhanced mouse-over menu has been updated for improved readability. -PROFILER: Additional instructions added to Quick Instructions tab regarding fidelity of plots with ideograms. build JANUARY 18, 2005 _____ SIGNIFICANT NOTES: -PROFILER: Option to dynamically generate chromosome ideograms to match the plots. MINOR NOTES: -PROFILER: HTML output results now has zoom option for composite results image. build JANUARY 1, 2005 _____ SIGNIFICANT NOTES: -PROFILER: Option to plot both individual chromosomes and whole genome plot in same HTML output now available. MINOR NOTES: -PROFILER: HTML navigation frame added for quickly viewing different chromosomes. Version 2.4 Notes: build DECEMBER 28, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Updated error message reporting to abbreviate error message if too long. -PROFILER: Added a quick select for all chromosomes button. -PROFILER: Started to shorten the size of the window to fit on lower resolution (< 1024x768) screens. build DECEMBER 7, 2004 _____ MINOR NOTES: -PROFILER: Plot colour selection window now has option to allow for black plot background. -PROFILER: Legend window in preview now has a vertical scrollbar. build NOVEMBER 20, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Updated error message reporting to allow the error log to be saved. build OCTOBER 29, 2004 _____ MINOR NOTES:

-ALL PROGRAMS: Updated error message reporting so that it is more informative and provides error trace.

build SEPTEMBER 12, 2004

MINOR NOTES: -PROFILER: Bug fix: Should not resize preview window if image larger than screen resolution. -PROFILER: Line width option added to settings.

build SEPTEMBER 1, 2004

MINOR NOTES:

-PROFILER: Bug fix: Removing all files with "Remove File(s)" button would not clear files from data smoother/region calling tabs.

-PROFILER: Now outputs what file headers are missing if the program reports that the input project is missing correct headers.

build AUGUST 29, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Bug fix: Keyboard accelerators ("Alt-key") for some buttons was not displaying button flash (visual confirm). -NORMALISE: Bug fix: Keyboard accelerator for "Feature Settings" tab not working; fixed to Alt-R. -PROFILER: Bug fix: Clicking reset button in region calling tab would toggle smooth options. -PROFILER: Bug fix: Hitting ESC in selecting colours/markers/etc was not working. -PROFILER: Bug fix: Deselecting a file for smoothing would not remove it from region calling tab files list. -PROFILER: Bug fix: "Include original project" in smoother tab was not always showing correct user selection. -PROFILER: Bug fix: Hitting reset button (smoother or region calling) clearing the project at top if not plotting original file. -PROFILER: Bug fix: Tweak to region data plotting order algorithm. -NORMALISE: Foreground filter upper limit set to 5000. -NORMALISE: Preview window resizes to fit entire image for viewing. -PROFILER: Option "Include original project" added to region calling tab. -PROFILER: Option added to rename output HTML final file to "index.html". -PROFILER: Option to specify where to begin plotting region data from baseline.

build AUGUST 24, 2004 _____ ____ SIGNIFICANT NOTES: -NORMALISE: An "Assess microarrays" button added to the "Feature Settings" tab. MINOR NOTES: -NORMALISE: More options (eg. F1 Median, F1 Mean, etc) added to the "GPR File Settings" tab. -PROFILER: Preview window resizes to fit entire image for viewing. -PROFILER: Updated HTML output link to software website (http://www.utoronto.ca/cancyto/software/). build AUGUST 20, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Crash when data smoothing on chromosomes with significantly fewer spots than window size. -PROFILER: Added option to double the vertical resolution of generated images. build AUGUST 9, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Keyboard shortcuts added (alt-key accelerators). -PROFILER: Added option to plot ideogram at plot baseline for consensus maps. build AUGUST 3, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Output for cluster or summary file was not working (broken July 19). -PROFILER: Bug fix: Fixes for compatibility with older project files (version 1.998, etc). -PROFILER: Bug fix: Saved smooth or region file now updated with correct software version, timestamp. -PROFILER: HTML not generated in preview if unnecessary (from July 25); i.e. only if with vertical lines in genome view. -PROFILER: HTML output now also lists name of log file. build JULY 25, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Forgot to enable the fix from July 20 ("including chromosomes with spots < window size"). -PROFILER: Bug fix: Changing settings for region detection would not always regenerate region file. -PROFILER: Bug fix: Vertical lines on genome plot sometimes improperly designated chromosome boundaries. -PROFILER: Bug fix: Hitting cancel during plot occasionally crashed program. -PROFILER: Progress window will now stay open until dismissed. -PROFILER: Option to generate vertical lines with genome plot on preview now works; on by default.

build JULY 20, 2004

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SIGNIFICANT NOTES: -PROFILER: Baseline noise determination was including chromosomes with spots < specified window size. MINOR NOTES: -ALL PROGRAMS: Load file list window does mouse over filenames (good for really long file names + paths). -PROFILER: Bug fix: Corrected internal temporary file save locations. -PROFILER: Increased maximum automated region detection size of window option to 1000. -PROFILER: Smoother and region calling file list window enlarged for readability. -PROFILER: Speed improvement by not regenerating smooth or region files if unmodified during subsequent runs. -PROFILER: Output HTML top frame (file list) improved; colour-coded. build JULY 19, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Did not launch internet browser (Windows Registry is unreliable!). -PROFILER: Progress window made more informative, records log similar to normalise and project. build JULY 18, 2004 _____ SIGNIFICANT NOTES: -PROJECT: Removed data smoothing and region calling option (they are now in profiler). MINOR NOTES: -ALL PROGRAMS: User settings file algorithm changed; file extension also changed (from ".cfg" to ".ncfg"). -NORMALISE: Cancel option added. -PROJECT: Cancel option added. -PROJECT: Added option to allow save/load user settings. build JULY 16, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Added support for drag-&-drop of files when loading files. -NORMALISE: Button added to launch project. -PROJECT: Button added to launch profiler. build JULY 15, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Sometimes may crash when selecting a data-smoothed project to region call. -PROFILER: Bug fix: Plot legend window would not list all files plotted. -PROFILER: Bug fix: Progress status bar now updated correctly when loading files.

build JULY 14, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Region detection from project added into profiler. MINOR NOTES: -ALL PROGRAMS: Hyperlinks in quick instructions tab now shows correct mouse cursor and allows mouse wheel. -NORMALISE: Added explanation of dye-switch experiments to Fluor-flip window. -PROFILER: Bug fix: Bug introduced build July 9, 2004: would crash when loading previously data-smoothed project. -PROFILER: Bug fix: Adjustment option for data smoother was not displaying correctly. -PROFILER: Bug fix: Karyotype text file was not formatted correctly (was previously part of Project software). -PROFILER: HTML option will now attempt to launch user's preference of internet browser (eq. IE, Mozilla, Opera, etc). -PROFILER: Custom colours option added to graph settings window. -PROFILER: Visual improvements to graph settings window. -PROFILER: Region calling page text changed to describe algorithm more clearly. -PROFILER: Bug fix: Region calling user-override default now correctly set to +/-0.2 (previously set to +/- 0.4). -PROFILER: Minor colour tweaks (switched HTML values for lpurple and dpurple). -PROFILER: Preview window now provides a legend window. -PROFILER: 'Quick select chromosomes' button added; good for preview. ***** Version 2.2 Notes: build JULY 9, 2004 _____ SIGNIFICANT NOTES: -ALL PROGRAMS: Quick step-by-step instructions tab added. MINOR NOTES: -PROFILER: Option to prompt and save smoothed file (this file name used in HTML). -PROFILER: Bug fix: Data smoother option was available for wrong files. build JULY 4, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Blank entry occasionally appearing on data smoothing files list. -PROFILER: Bug fix: Colour and marker selection window sometimes not properly showing "BOTTOM" layer text. -PROFILER: Added plot colour legend in HTML javascript mouse-over popup window. -PROFILER: Added reminder to select chromosomes to plot when generating profiles. -PROFILER: HTML file size reductions (optimization). -PROFILER: Added megabase position and plot colour to the output HTML "flagged list" link.

-PROFILER: Speed improvements.

build JULY 3, 2004 MINOR NOTES: -PROFILER: Data smoother gives option to not plot original (unsmoothed) data file when plotting smoothed data. -PROFILER: Removed 'Plot all selected files together into same canvas' option. build JULY 1, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Data smoother from project added into profiler. MINOR NOTES: -PROFILER: Minor colour tweaks. -PROFILER: Window layout reorganization for plot order selection; "top layer" is now at top of the window. -PROFILER: HTML output lists files according to plot order: "top layer" is first listed file. Version 2.1 Notes: build JUNE 28, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Plotting order option added (significant code rewrite). MINOR NOTES: -PROFILER: Reorganized temporary file location; better for cancel button. -PROFILER: Added megabase position in the HTML javascript mouse-over popup window. -PROFILER: Removed 'Plot average value' option. build JUNE 25, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Cancel button added. MINOR NOTES: -PROFILER: Bug fix: Profiler was hanging when computer selected dark red as a plot colour. -PROFILER: Bug fix: Generating summary file will now check for correct file headers before proceeding. -PROFILER: Minor tweaks to color selections. build JUNE 18, 2004 _____ MINOR NOTES: -PROJECT: Updated region calling page with selection of # STD always on. -PROFILER: Selected colours for profile are now graphically displayed in HTML output. -PROFILER: Option added to label threshold lines.

build JUNE 17, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Fixed bug introduced June 6 2004, causing profiler to crash when plotting threshold lines for multiple region files. -PROFILER: Bug fix: Now plots threshold lines at the correct position on graph, even when changing graph Y max size. -PROFILER: By default, turned on the plot threshold lines option. build JUNE 16, 2004 _____ MINOR NOTES: -PROFILER: Set default output to the preview window instead of generating HTML. -PROFILER: More responsive status message when generating whole genome plot. -PROFILER: Faster save composite file when plotting several projects on same plot. -PROFILER: User-defined title for HTML output is now suggested as output filename. build JUNE 14, 2004 _____ MINOR NOTES: -NORMALISE: Bug fix: Import function was allowing chromosome 0. -NORMALISE: Updated import function to allow importing multiple files at the same time with the same settings. -PROJECT: Bug fix: Import function was allowing chromosome 0. build JUNE 13, 2004 _____ MINOR NOTES: -NORMALISE: Bux fix: Import function was not properly enumerating blank accessions. -PROJECT: Bux fix: Import function was not properly enumerating blank accessions. -PROFILER: Speed improvements when repeatedly plotting the same files together in a plot per session. build JUNE 8, 2004 _____ SIGNIFICANT NOTES: -NORMALISE: Ability to import (non-GPR) microarray data files directly into normalise, even if you don't have a genelist for it. ***** Version 2.0 Notes: build JUNE 6, 2004 _____ MINOR NOTES: -NORMALISE: Bug fix: Selecting genelist window now correctly sized automatically + other improvements too. -NORMALISE: Added option to allow save/load user settings.

-NORMALISE: Added option to prompt for genelist associations and experiment labelings before normalising. -PROFILER: Bug fix: Sometimes markers are getting different colours than was selected by user. -PROFILER: Improvements to colour and marker selection (user- and computer-selected). build JUNE 3, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Speed improvements for profiling (note: recreate the project file with this version to realise the speed increase). build MAY 31, 2004 _____ SIGNIFICANT NOTES: -PROJECT: Ability to import custom normalised data files directly into project. build APRIL 29, 2004 _____ MINOR NOTES: -PROFILER: Bug fixes related to additions from yesterday. -PROFILER: Minor tweak: by default, projects are plotted with 'line' option turned on. build APRIL 28, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Added ability to increase image resolution of plots (i.e. zoom in). -PROFILER: Preview capability (will be more useful when "Region Detection" and "Data Smoothing" moved to profiler from project). -PROFILER: Option to plot only selected chromosomes (good for use with preview). build APRIL 17, 2004 _____ MINOR NOTES: -IMPORTER: More stringent control of bad chromosome localizations so that they automatically appear as "-1" for MB and "N/A" for chromosome. build APRIL 15, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: corrected errors related to log value plotting: region plots and 'GAIN' / 'LOSS' descriptors were displaying incorrectly in images. build APRIL 14, 2004 _____ MINOR NOTES: -PROFILER: Option to plot log10 or log2 normalised intensity ratios (on linear axis).

build APRIL 7, 2004

SIGNIFICANT NOTES: -NORMALISE: Flexibility in GPR input file format; user-define the headers from your GPR file that Normalise Suite should look for when loading input data files for normalisation.

MINOR NOTES: -NORMALISE: Options added for single channel zero intensity foreground spots (good for experiments using a universal control that have no expression for certain genes).

build MARCH 4, 2004

_____ SIGNIFICANT NOTES: -PROJECT: Option added for post-processing of region project files to discard changers within user-specified minimum contig size and/or intraspot spacing. build MARCH 2, 2004 _____ MINOR NOTES: -PROJECT: Layout reorganised to group related items together. -PROJECT: Option added to disable ratio adjustment used in building larger contigs during region calling. -PROFILER: Option for marker colours/types/lines window to switch them all to with/without line. build MARCH 1, 2004 _____ SIGNIFICANT NOTES: -PROJECT: Bug fix: Single spots were mismanaged when creating region project files. This will correct some 'odd' calls. build FEBRUARY 29, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Option added to plot "amount" of change rather than "presence" of change information from region file. -PROFILER: Added option to display threshold lines for "amount" of change on plot. MINOR NOTES: -PROJECT: Additional settings added to the noise filter. -PROJECT: Bug fix: Region calling was skipping the last chromosome (usually chromosome Y). -PROFILER: Region files can now be plotted with lines rather than as points only. -PROFILER: Added option to disable mouse-over menu of links in HTML view of results. build FEBRUARY 28, 2004 _____ SIGNIFICANT: -PROJECT: Updated algorithm for determining level of least noise for use in region calling. MINOR NOTES: -NORMALISE: Progress bar added to provide user feedback. -PROJECT: Progress bar added to provide user feedback. build FEBRUARY 25, 2004 _____ SIGNIFICANT NOTES: -PROJECT: Updated and corrected algorithm for simple median/mean sliding window normalisation; window can be left-, middle- (non-reductive), or right-sided. MINOR NOTES: -ALL PROGRAMS: Proper check of software integrity/corrupted files prior to

running.
-PROFILER: Updated cluster file output so that accession appears properly in Eisen
cluster image.

build FEBRUARY 23, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Support added for other organisms (eg. Mouse, Yeast, Other).. Note however only human profiling currently works, but software foundation is built. -ALL PROGRAMS: GUI made consistent between the software programs; interface improvements. -ALL PROGRAMS: Added support for Vancouver whole genome tiling path arrays. -ALL PROGRAMS: Added some wheelmouse support (for log windows). -IMPORTER: Progress bar added to provide user feedback. -NORMALISE: "View normalisation results": scatter plot properly displays in a window, and allows user to switch between views of "before" and "after". -PROFILER: Bug fix: Plot by "frequency" now determines frequency/average excluding experiments where no value is present for the feature/clone. -PROFILER: Progress bar added to provide user feedback. ***** Version 1.999 BETA Notes: build FEBRUARY 12, 2004 _____ MINOR NOTES: -PROFILER: HTML Mouse-over menu option available to "flag" spots into a scratch pad and expanded menu functionality. ***** Version 1.998 BETA Notes: build FEBRUARY 10, 2004 _____ MINOR NOTES: -PROFILER: Bug fix: Profiler will not attempt to generate images for project files that lack cytoband mapping information. -PROFILER: Added expanded mouse-over option to provide menu of links to various internet databases. build FEBRUARY 3, 2004 _____ MINOR NOTES: -NORMALISE: Bug fix: Added better error reporting for GPR files that have incorrect header information. -PROJECT: By default will now save a log file automatically with each project file. build January 30, 2004

MINOR NOTES:

-PROFILER: Bug fix: Program was trying to graph some spots with unknown chromosome position. build January 28, 2004 _____ MINOR NOTES: -NORMALISE: Disabled LOWESS normalisation until can work out a bug. build January 27, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Included UHN Human CpG 12k1 microarray genelist. build January 20, 2004 _____ MINOR NOTES: -ALL PROGRAMS: Included UHN Yeast 6.4k4 microarray genelist. -ALL PROGRAMS: Included UHN Human 19k6 single-spotted microarray genelist. build January 15, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Option to plot whole genome results in a single image. build January 13, 2004 _____ SIGNIFICANT NOTES: -PROJECT: Option to select threshold level (1, 2, 3 STD, etc) for automated region detection algorithm (note: before was defaulting to 1 STD). build January 12, 2004 _____ SIGNIFICANT NOTES: -PROFILER: Option enabled to allow datasets to plot using lines-points instead of just points. -PROFILER: Option enabled to allow users to plot mean frequency of gains vs. losses for a group of files. -PROFILER: Option enabled to allow users to generate a summary file with mean frequency of gains vs. losses for a group of files. MINOR NOTES: -PROJECT: Allows one to apply a corrective factor post median normalisation, to correct for its tendency to be affected by outliers. build January 11, 2004 _____ MINOR NOTES: -PROFILER: Cleaned up file names in output images, HTML. -PROFILER: Should still be able to generate a composite image if data for some chromosomes are missing.

-PROFILER: Option added to plot individual chromosomes upright. -PROFILER: Added support for lines-points in addition to points. -PROFILER: Code clean-up. build January 10, 2004 _____ SIGNIFICANT NOTES: -NORMALISE: View scatter plot results of normalisation on files ("before" and "after" plots generated). -PROFILER: Can generate single composite image with results from all chromosomes. -PROFILER: User can select to place chromosome ideogram at plot axis in image. MINOR NOTES: -PROFILER: Bug fix: User-selected plot marker types were not being used in images. -PROFILER: Bug fix: Fixed chromosome spot spacing from a bug introduced last week. Version 1.997 BETA Notes: build January 7, 2004 _____ MINOR NOTES: - ALL PROGRAMS: Using updated graphics libraries that may provide additional functionality in the future. - PROFILER: User can select to save images in PNG format or JPEG format (JPEG files are 10-15x larger, but true color). - PROFILER: Updated status window to give progress during generation of images. build January 6, 2004 _____ SIGNIFICANT NOTES: - PROFILER: Can build consensus maps of regions of change from CGH results. MINOR NOTES: - PROFILER: User can select marker colours and types, or allow automatic selection. - PROFILER: Legend of markers colours and shapes listed in the HTML output. ***** Version 1.996 BETA Notes: build January 4, 2004 _____ SIGNIFICANT NOTES: - PROFILER: Can select that multiple files are composited together into one image, or each file is profiled separately. MINOR NOTES: - IMPORTER: Menu option "Instructions" now points to the user manual PDF. - PROFILER: Different graph markers are used to represent different results plotted in the same graph. - PROFILER: Can now select to use background-subtracted or

non-background-subtracted values for generating profiles/cluster files. - PROFILER: When generating a cluster/summary results file, features are now correctly sorted (chr1 -> X, Y; not chrX, Y, 1 -> 22). - PROFILER: User selectable whether to generate HTML output or simply the image file(s). build December 30, 2003 _____ SIGNIFICANT NOTES: - PROFILER: Mouse-over of spots in HTML plots now correctly identifies spot information. - PROFILER: Clicking on spot in HTML plots links to the NCBI database. MINOR NOTES: - PROFILER: Bug fix: User was able to load nonexistent project file(s). - PROFILER: Bug fix: The first data point was not plotted for chromosomes 2 and onward. build December 19, 2003 _____ MINOR NOTES: - PROJECT: Added confirm for overwrite file when saving project (if project file with same name already exists). - PROFILER: Added confirm for overwrite file when saving summary of results file (if file with same name already exists). - PROFILER: Updated the single chromosome plot HTML page to include HTML frames (plots now appear in the right frame of the same window). build November 26, 2003 _____ MINOR NOTES: - PROJECT: Added option to save a list of spots that have been remove by noise filter. build November 25, 2003 _____ MINOR NOTES: - PROJECT: Added option to allow single spots to pass through noise filter (previously, these were removed). build November 23, 2003 _____ SIGNIFICANT NOTES: - PROJECT: Bug fix: Problems when using normalised files of genelists without chromosome mapping information. build November 16, 2003 _____ SIGNIFICANT NOTES: - ALL PROGRAMS: Data files have been restructured for consistency. Unfortunately, the software will be INCOMPATIBLE with earlier data files created by Normalise Suite (earlier than version 1.996). Any data you wish to profile, etc must be rerun through Normalise -> Project -> Profiler. Sorry for the inconvenience. - NORMALISE: LOWESS data smoother has been added as a normalisation option. Note GLOBAL LOWESS may be slow (computationally intensive); please be patient.

MINOR NOTES:

NORMALISE: Experiment settings moved to its own tab.
NORMALISE: Added option to view graphically pre- and post-normalisation results, but currently disabled until fully debugged.

build August 31, 2003

SIGNIFICANT NOTES:

-ALL PROGRAMS: Software has been given graphic interface and all new programming from ground-up.