Release Notes

BCL Convert v3.9.3

INTRODUCTION

These Release Notes detail the latest release of BCL Convert, including known issues.

BCL Convert converts per cycle binary data output by Illumina sequencers containing basecall files and quality scores to per read FASTQ files.

FEATURES

Support tile filtering via regular expressions on the command line (--tiles & --exclude-tiles):

- Replacement for tiles/ExcludeTiles/ExcludeTilesLaneX in bcl2fast2
- A single expression format is used (see User Guide)
- Simultaneous, overlapping white-list & black-list functionality
    - Tile list is filtered to include only matching terms of '--tiles' whitelist
    - Result then has '--exclude-tiles' blacklist filtered out
- Safety: every term must match at least one tile, or an error is triggered
    - whitelist terms must match an entry in the RunInfo tile list
    - blacklist terms must match the set produced by the whitelist, if any, or RunInfo tile list otherwise

Revised metrics

- Per-read quality stats in new 'Quality_Stats.csv' file
- Added derived statistics to quality, adapter, demultiplex, index-hopping, & top-unknown-barcodes stats files
- Improved format of Adapter and Demux stats files
    - Eliminated "# of >= Q30 bases" and "Mean Quality Score" in the Demultiplex_Stats.csv file
    - Replaced these metrics with "YieldQ30" and "Mean Quality Score" in the Quality_Stats.csv
    - Included "index", "index2", "ReadNumber", and "% Adapter Bases" in the Adapter_Metrics.csv file
    - Eliminated "R1/R2_AdapterBases" and "R1/R2_SampleBases" from the Adapter_Metrics.csv, replaced with SampleID, Lane, index, read specific entries in the "AdapterBases" and "SampleBases" columns
- Top Unknown Barcodes output expanded from 100 to 1000

Allow uppercase TRUE for NoLaneSplitting in sample sheet due to Excel behavior

Performance and robustness improvements

RESOLVED ISSUES

- bcl conversion crashed when run had less than 26 cycles
- fastq-list inputs from a no-lane-splitting run had the wrong sampleID
- Incorrect Top Unknown Barcodes output for two different index lengths
- Top Unknown Barcodes output is empty when # of entries would be < 100
- Catch error with TrimUMI,0 and CreateFastqForIndexReads,1 options that would cause discontiguous read output
- Improved and corrected several error messages and other status output

KNOWN ISSUES

- If a directory is specified as input to '--sample-sheet', bcl-convert will hang at the beginning of a run while trying to copy that path as a file to <outdir>/Reports/SampleSheet.csv
- BCL Convert does not validate when "Logs" or "Reports" is provided for a Sample_Project, and the software will be unable to create the subdirectories if these string are provided.
- BCL Convert will not provided a warning or error when a corrupt bci lane file is found in strict or robust mode
- BCL Convert does not support the –first-tile-only option being specified for SP flow cells, but the new **–tiles** option can be used as a substitute.