

Package ‘cgdv17’

September 15, 2019

Title Complete Genomics Diversity Panel, chr17 on 46 individuals

Version 0.22.0

Author VJ Carey <stvjc@channing.harvard.edu>

Maintainer VJ Carey <stvjc@channing.harvard.edu>

Description Complete Genomics Diversity Panel, chr17 on 46 individuals

Depends R (>= 2.15), methods, VariantAnnotation (>= 1.15.15)

Imports BiocGenerics, S4Vectors, IRanges, GenomicRanges, Biobase

Suggests parallel, GGtools, TxDb.Hsapiens.UCSC.hg19.knownGene,
org.Hs.eg.db, illuminaHumanv1.db

License Artistic-2.0

LazyLoad yes

biocViews SequencingData, SNPData, BiocViews

git_url <https://git.bioconductor.org/packages/cgdv17>

git_branch RELEASE_3_9

git_last_commit c8617e8

git_last_commit_date 2019-05-02

Date/Publication 2019-09-15

R topics documented:

cgdv17-package	2
countVariants	2
getRVS	3
padToReference	4
raggedVariantSet-class	4
variantGRanges	5
Index	6

 cgdv17-package

Complete Genomics Diversity Panel, chr17 on 46 individuals

Description

Complete Genomics Diversity Panel, chr17 on 46 individuals, illustrating subject-specific variant sets

Details

Package: cgdv17
 Version: 0.0.9
 Suggests:
 Imports: Biobase, IRanges
 Depends: R (>= 2.14), VariantAnnotation, org.Hs.eg.db, methods
 License: Artistic 2.0
 LazyLoad: yes
 biocViews: genetics
 Built: R 2.15.0; ; 2012-03-09 12:45:57 UTC; unix

Index:

countVariants	count variants in a raggedVariantSet instance
getRVS	acquire data for and construct a ragged variant set instance
padToReference	create a snpStats SnpMatrix instance by padding a ragged variant set to reference alleles wherever a variant is not recorded
raggedVariantSet-class	Class "raggedVariantSet"
variantGRanges	acquire a list of GRanges recording variants and locations

see vignette; CY17 is an ExpressionSet on individuals from CEU and YRI overlapping with the diversity set, popvec enumerates source populations, h1 is an exemplar VCF header structure

Author(s)

VJ Carey <stvjc@channing.harvard.edu>
 Maintainer: VJ Carey <stvjc@channing.harvard.edu>

 countVariants

count variants in a raggedVariantSet instance

Description

count variants in a raggedVariantSet instance

Usage

```
countVariants(rvs, delim, qthresh = 160, applier = lapply)
```

Arguments

rvs	instance of raggedVariantSet
delim	GRanges instance
qthresh	quality threshold for keeping a variant in count
applier	lapply-like function

Author(s)

VJ Carey <stvjc@channing.harvard.edu>

getRVS

acquire data for and construct a ragged variant set instance

Description

acquire data for and construct a ragged variant set instance

Usage

```
getRVS(packname, fns2samplenames = function(x)
  gsub(".*(NA.....).*", "\\1", x))

getrd(x, id)
```

Arguments

packname	string naming package where the resources are found
fns2samplenames	function to transform filenames to sample name tokens
x	instance of raggedVariantSet
id	character to select sample

Details

currently very specialized, as the protocol for managing collections of VCF files with discrepant variant sets per subject is not clear

assumes the package has inst/rowranges where row ranges of [readVcf](#) results are held

Author(s)

VJ Carey <stvjc@channing.harvard.edu>

padToReference	<i>create a snpStats SnpMatrix instance by padding a ragged variant set to reference alleles wherever a variant is not recorded</i>
----------------	---

Description

create a snpStats SnpMatrix instance by padding a ragged variant set to reference alleles wherever a variant is not recorded

Usage

```
padToReference(rv, gr, qthresh = 160, applier = lapply)
```

Arguments

rv	raggedVariantSet instance
gr	GRanges instance
qthresh	quality lower bound for retention of variant
applier	lapply like function

Author(s)

VJ Carey <stvjc@channing.harvard.edu>

raggedVariantSet-class	<i>Class "raggedVariantSet"</i>
------------------------	---------------------------------

Description

manage information on non-aligned variant sets from multiple VCFs

Objects from the Class

Objects can be created by calls of the form `new("raggedVariantSet", ...)`.

Slots

filenames: files will be held in inst/rowranges, named here
sampleNames: names of samples managed

Methods

[signature(x = "raggedVariantSet", i = "ANY", j = "ANY", drop = "ANY"): familiar subsetting syntax
sampleNames signature(object = "raggedVariantSet"): getter
show signature(object = "raggedVariantSet"): concise report
variantGRanges signature(rvs = "raggedVariantSet", delim = "GRanges", qthresh = "missing", applier = "missing"): getter
variantGRanges signature(rvs = "raggedVariantSet", delim = "GRanges", qthresh = "numeric", applier = "function"): getter with quality threshold

Author(s)

VJ Carey <stvjc@channing.harvard.edu>

Examples

```
showClass("raggedVariantSet")
```

variantGRanges	<i>acquire a list of GRanges recording variants and locations</i>
----------------	---

Description

acquire a list of GRanges recording variants and locations

Usage

```
variantGRanges(rvs, delim, qthresh = 160, applier = lapply)
```

```
variantNames(rvs, delim, qthresh=160, applier=lapply)
```

Arguments

rvs	raggedVariantSet instance
delim	GRanges instance for confinement
qthresh	lower bound on quality
applier	lapply like function

Author(s)

VJ Carey <stvjc@channing.harvard.edu>

Index

*Topic **classes**

raggedVariantSet-class, 4

*Topic **models**

countVariants, 2

getRVS, 3

padToReference, 4

variantGRanges, 5

*Topic **package**

cgdv17-package, 2

[, raggedVariantSet, ANY, ANY, ANY-method
(raggedVariantSet-class), 4

[, raggedVariantSet, ANY, ANY-method
(raggedVariantSet-class), 4

cgdv17 (cgdv17-package), 2

cgdv17-package, 2

countVariants, 2

CY17 (cgdv17-package), 2

getrd (getRVS), 3

getRVS, 3

h1 (cgdv17-package), 2

padToReference, 4

popvec (cgdv17-package), 2

raggedVariantSet, 3–5

raggedVariantSet-class, 4

readVcf, 3

sampleNames, raggedVariantSet-method
(raggedVariantSet-class), 4

show, raggedVariantSet-method
(raggedVariantSet-class), 4

variantGRanges, 5

variantGRanges, raggedVariantSet, GRanges, missing, missing-method
(raggedVariantSet-class), 4

variantGRanges, raggedVariantSet, GRanges, numeric, function-method
(raggedVariantSet-class), 4

variantNames (variantGRanges), 5