DelayedArray / HDF5Array update

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Recent additions to package DelayedArray

Recent additions to package HDF5Array

Work in progress and future work
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This would ordinarily take up 8 TB of memory:

```r
library(DelayedArray)
CM <- ConstantArray(c(1e6, 1e6), value=NA_real_)
CM
## <1000000 x 1000000> ConstantMatrix object of type "double":
## [,1] [,2]    [,3] ...   [,999999] [,1000000]
## [1,] NA NA NA .   NA   NA
## [2,] NA NA NA .   NA   NA
## [3,] NA NA NA .   NA   NA
## [4,] NA NA NA .   NA   NA
## [5,] NA NA NA .   NA   NA
## ... . . . . . .
## [999996,] NA NA NA .   NA   NA
## [999997,] NA NA NA .   NA   NA
## [999998,] NA NA NA .   NA   NA
## [999999,] NA NA NA .   NA   NA
## [1000000,] NA NA NA .   NA   NA

lobstr::obj_size(CM)
## 1.33 kB
```
**sinkApply()**

*sinkApply()*: a convenience function for walking on a *RealizationSink* derivative for the purpose of filling it with blocks of data

**Example: Fill a 1e6 x 1e6 on-disk matrix with random data**

```r
sink <- HDF5RealizationSink(c(1e6L, 1e6L)) # or TileDBRealizationSink
sink_grid <- defaultSinkAutoGrid(sink)
FUN <- function(sink, viewport) {
    block <- array(runif(length(viewport)), dim=dim(viewport))
    write_block(sink, viewport, block)
}
sink <- sinkApply(sink, FUN, grid=sink_grid)
close(sink)
M <- as(sink, "DelayedArray")
```
rbind(), cbind(), and sparsity

rbind() and cbind() of DelayedArray objects now propagate sparsity

```
ten1 <- HDF5Array::TENxMatrix("tenx1.h5")  # is_sparse(ten1) is TRUE
ten2 <- HDF5Array::TENxMatrix("tenx2.h5")  # is_sparse(ten2) is TRUE

bigtenx <- cbind(ten1, tenx2)  # is_sparse(bigtenx)  # TRUE
blockApply(bigtenx, FUN, ...)  # will take advantage of sparsity
```
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Recent additions to package HDF5Array

HDF5Array(): can now take an URL to a file on Amazon S3 (kind of slow!)

H5SparseMatrix: a DelayedMatrix subclass for representing and operating on an HDF5 sparse matrix stored in CSR/CSC/Yale format (e.g. 10x Genomics and h5ad formats)
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Work in progress:

\texttt{h5summarize(..., op=\texttt{"sum"})}: Optimized summarization of an HDF5 dataset or subset:
- Implemented in C (direct calls to HDF5 C lib in \texttt{Rhdf5lib})
- Operates at the level of the physical chunks
- More efficient than \texttt{blockApply()}
- Integration to \texttt{DelayedArray/DelayedMatrixStats}: \texttt{h5summarize()} will be used behind the scene by things like \texttt{rowVars()}

Future work:

\texttt{SparseArray} objects: In-memory sparse representation of arrays of arbitrary dimensions
- Already used internally by block processing of sparse \texttt{DelayedArray} objects (current name is \texttt{SparseArraySeed})
- Will go to their own package (currently in \texttt{DelayedArray})
- Implement fast native operations: arithmetic, \texttt{Math} group (e.g. \texttt{log}), summarization, etc..
  This will benefit block processing of sparse \texttt{DelayedArray} objects