**Archiver**

Create indexer, compressor, block writer and indicator objects and start processing

**Compression Thread**

Compress source chunk of data, pass the job to the writer queue

**Writer Thread**

Store compressed chunks of data as data blocks

**Compressor Job Queue**

**Unarchiver**

Read index and file data Create folders  
Restore files

**FileIndexer**

Traverse folders  
Create file index  
Read file chunks  
Enqueue compression jobs

**Compressor**

Starts / stop threads  
Keep compression job queue

**BlockWriter**

Start / stop writer thread

Keep writer job queue

**ProgressIndicator**

Show progress % and time elapsed

**Writer Job Queue**

**Archiver Components**

Uses

Uses

Uses

Uses

Owns

Owns

Uses

Uses

**FileIndexer**

**Compressor Threads**

**Writer Thread**

**Compress   
job queue**

**Write job   
queue**

**Archiver Dataflow**

File and folder data

Compress jobs w/ file chunks

Write jobs w/ compressed data

Data blocks

Index blocks

**Data file**

**File system**

**Index file**

Header record

**Index block for each directory**

File/dir record

File/dir record

Index block

Index block

Index block

**Index file**

**Index File Structure**

**Index record – for each file and directory**

**Type**

0=header  
1=file  
2=directory

**Length**

File length

**File#**

No of data file

**Offset**

Offset in data file

**Name**

File / dir name

Index block

File/dir record

**Data File Structure**

**Data file**

Data block

Data block

Data block

**Data block**

Block#

Original block length

Block length

Data

Data block

