

CLAIMS

1. A method performed by a computing device comprising processing hardware and storage hardware, the method comprising:
 - receiving, from a requesting module, a file identifier and a section identifier, the file identifier identifying a compressed file, the section identifier identifying a section of the compressed file, wherein the section is internal to the compressed file such that there is compressed data between the start of the compressed file and the start of the section within the compressed file;
 - based on the file identifier, accessing random access data associated with the compressed file, the random access data comprising compression checkpoints captured while compressing an uncompressed file into the compressed file, each compression checkpoint corresponding to a respective location in the compressed file, each compression checkpoint comprising a respective compressor state corresponding to compression up to the checkpoint's location in the compressed file;
 - based on the section identifier, selecting a checkpoint;
 - sending, to the module, the compressor state of the selected checkpoint; and
 - sending, to the module, a portion of the compressed file starting at the location of the selected checkpoint.
2. A method according to claim 1, wherein the module comprises a decompressor, the method further comprising:
 - receiving, by the module, the compressor state;
 - configuring the decompressor with the compressor state; and
 - decompressing, by the configured decompressor, the portion of the compressed file, to output decompressed file data.
3. A method according to claim 2, further comprising extracting the section from the decompressed file data.
4. A method according to claim 1, wherein the checkpoints further comprise respective offsets relative to the start of the compressed file, each offset indicating a position in the compressed file.
5. A method according to claim 4, further comprising selecting the checkpoint based on the offset associated therewith.
6. A method according to claim 1, further comprising compressing the uncompressed file to produce the compressed file, wherein the uncompressed file is compressed as a single unit of compression such that a compressor compressing the uncompressed file

evolves a compression dictionary while compressing the entire uncompressed file.

7. A computing device comprising:
 - processing hardware;
 - storage hardware storing information configured to cause the processing hardware to perform a process comprising:
 - identifying a compressed file and an internal section thereof;
 - sending indicia of the compressed file and the internal section to a server;
 - receiving, from the server, a compression dictionary and an internal portion of the compressed file that is associated with the compression dictionary, the internal portion containing at least a beginning part of the internal section; and
 - priming a compressor with the compression dictionary and decompressing the internal portion of the compressed file using the primed compressor.
8. A computing device according to claim 7, wherein the compressed file comprises a compressed archive comprised of constituent files compressed within, wherein the indicia of the internal section comprises an identifier of a constituent file, wherein the computing device comprises a client computing device, wherein the server comprises a server computing device, wherein the indicia of the compressed file and the internal section is sent over a data network to the server, and wherein the compression dictionary and an internal portion of the compressed file are received via the data network.
9. A computing device according to claim 7, wherein the server stores a plurality of compressor states obtained from a compressor, wherein each compressor state was obtained according to compression of all of the uncompressed file data that preceded the compressor state.
10. A computing device according to claim 9, wherein the server selects the compressor state sent to the computing device and the internal portion based on the indicia of the internal section of the compressed file and based on a location of the internal section in the uncompressed file.
11. A computing device according to claim 7, wherein the indicia of the internal section comprises an identifier thereof, an offset relative to the uncompressed file, or an offset relative to the compressed file.
12. Computer storage hardware storing information configured to cause one or more computers to perform a process, the process comprising:
 - receiving, from a client, a request for an internal section of a compressed file;
 - in response to the request, determining a point in the compressed file that

corresponds to the internal section of the compressed file;

obtaining a compressor state that corresponds to the point in the compressed file, the compressor state corresponding to all of the compressed file prior to the point in the compressed file; and

based on the request, sending, to the client, the obtained compressor state and an internal portion of the compressed file that includes the internal section of the compressed file.

13. Computer storage hardware according to claim 12, wherein the compressor state is obtained by, based on the request, performing a compression algorithm on all of the compressed file prior to the point in the compressed file and obtaining the compressor state from the compressor.

14. Computer storage hardware according to claim 13, wherein the compression algorithm is performed responsive to the request.

15. Computer storage hardware according to claim 12, wherein the client decompresses the internal portion of the compressed file using the compressor state and without decompressing any of the compressed file that precedes the internal portion of the compressed file.