

## 2.2.2: October 4, 2010

- Add new function *qpdf\_read\_memory* to the C API to call *QPDF::processMemoryFile*. This was an omission in qpdf 2.2.1.

## 2.2.1: October 1, 2010

- Add new method *QPDF::setOutputStreams* to replace *std::cout* and *std::cerr* with other streams for generation of diagnostic messages and error messages. This can be useful for GUIs or other applications that want to capture any output generated by the library to present to the user in some other way. Note that QPDF does not write to *std::cout* (or the specified output stream) except where explicitly mentioned in *QPDF.hh*, and that the only use of the error stream is for warnings. Note also that output of warnings is suppressed when *setSuppressWarnings(true)* is called.
- Add new method *QPDF::processMemoryFile* for operating on PDF files that are loaded into memory rather than in a file on disk.
- Give a warning but otherwise ignore empty PDF objects by treating them as null. Empty object are not permitted by the PDF specification but have been known to appear in some actual PDF files.
- Handle inline image filter abbreviations when they appear as stream filter abbreviations. The PDF specification does not allow use of stream filter abbreviations in this way, but Adobe Reader and some other PDF readers accept them since they sometimes appear incorrectly in actual PDF files.
- Implement miscellaneous enhancements to ***PointerHolder*** and ***Buffer*** to support other changes.

## 2.2.0: August 14, 2010

- Add new methods to ***QPDFObjectHandle*** (*newStream* and *replaceStreamData*) for creating new streams and replacing stream data. This makes it possible to perform a wide range of operations that were not previously possible.
- Add new helper method in ***QPDFObjectHandle*** (*addPageContents*) for appending or prepending new content streams to a page. This method makes it possible to manipulate content streams without having to be concerned whether a page's contents are a single stream or an array of streams.
- Add new method in ***QPDFObjectHandle***: *replaceOrRemoveKey*, which replaces a dictionary key with a given value unless the value is null, in which case it removes the key instead.
- Add new method in ***QPDFObjectHandle***: *getRawStreamData*, which returns the raw (unfiltered) stream data into a buffer. This complements the *getStreamData* method, which returns the filtered (uncompressed) stream data and can only be used when the stream's data is filterable.
- Provide two new examples: **pdf-double-page-size** and **pdf-invert-images** that illustrate the newly added interfaces.
- Fix a memory leak that would cause loss of a few bytes for every object involved in a cycle of object references. Thanks to Jian Ma for calling my attention to the leak.

## 2.1.5: April 25, 2010

- Remove restriction of file identifier strings to 16 bytes. This unnecessary restriction was preventing qpdf from being able to encrypt or decrypt files with identifier strings that were not exactly 16 bytes long. The specification imposes no such restriction.

## 2.1.4: April 18, 2010

- Apply the same padding calculation fix from version 2.1.2 to the main cross reference stream as well.