



Spreadsheets for Python & Ruby

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What I'm Talking About

- Why create Excel Spreadsheets?
- Getting XLWT/Surpass
(in case you have trouble with Google)
- How to use Surpass
- Converting XLWT to Surpass

Why Excel?

- CSV has “issues”
 - Hard for users.
 - Escaping & Quoting
 - Unwanted Data Type Conversion
 - Formats & Multiple Sheets
- It's a ridiculously easy way to extend the functionality of your app.

XLWT/XLRD (Python)

- <http://pypi.python.org/pypi/xlwt>
- <http://pypi.python.org/pypi/xlrd>
- <http://groups.google.com/group/python-excel>
- <https://secure.simplistix.co.uk/svn/xlwt>
- <https://secure.simplistix.co.uk/svn/xlrd>

Surpass (Ruby)

- <https://launchpad.net/surpass>
- <http://rubyforge.org/projects/surpass/>
- bzd info <http://ananelson.com/code/surpass>

Using Surpass

- Programmer interface not finalized.
- Check out examples/ and spec/
- **NO FORMULA SUPPORT YET**

Hello World!

```
require "rubygems"  
require "surpass"
```

```
book = Workbook.new  
ws = book.add_sheet
```

```
ws.write(0, 0, "Hello World")
```

```
book.save(__FILE__.gsub(/rb$/, "xls"))
```

```
pygmentize -f rtf -o hello-world.rtf examples/hello-world.rb
```

Support for Images (.bmp)

```
require "rubygems"  
require "surpass"
```

```
book = Workbook.new  
ws = book.add_sheet('Image')  
ws.insert_bitmap('examples/python.bmp', 2, 2)  
ws.insert_bitmap('examples/python.bmp', 15, 2)
```

```
book.save(__FILE__.gsub(/rb$/, "xls"))
```

```
pygmentize -f rtf -o images.rtf examples/image.rb
```


Lots of other goodies!

- Number & Date Formats
- Font Family, Size, Bold, Underline
- Borders & Backgrounds
- Merged Cells
- Outlines
- Column Widths & Row Heights
- Don't format a whole column...

Porting from Python to Ruby

- No unit tests!
- Getters & Setters
- Remember JRuby/Jython
 - Java is big-endian
 - Ruby defaults to little-endian
 - Must **specify** little-endian to have uniform results across cRuby/Jruby
 - Python?

Pretty similar, actually...

```
class NumberRecord(BiffRecord):
    """
    This record represents a cell that contains an IEEE-754 floating-point value.
    """
    _REC_ID = 0x0203

    def __init__(self, row, col, xf_index, number):
        self._rec_data = pack('<3Hd', row, col, xf_index, number)

# This record represents a cell that contains an IEEE-754 floating-point value.
class NumberRecord < BiffRecord
    RECORD_ID = 0x0203

    def initialize(row, col, xf_index, number)
        @record_data = [row, col, xf_index, number].pack('v3E')
    end
end
```

False Cognates

```
def col(self, indx):
    if indx not in self.__cols:
        self.__cols[indx] = self.Column(indx, self)
    return self.__cols[indx]
```

```
# Fetch the col indicated by index, or create it if necessary.
def col(index)
    cols[index] ||= Column.new(index, self)
end
```

Coming soon...

- executable documentation
- more & better unit tests
- formula support
- XLRD functionality
- XLWT recent improvements
- Optimization, Cleanup, New Features
- Ruby-Python pack/unpack directive translator