

# Ruby & YAML: a perfect match

Armin Roehrl

Thx to why the lucky stiff, matz and all the others

*June 2003*



## A pragmatic look: contents

- ▶ short introduction
- ▶ real life YAML use
  - client-server data interchange; ERP-project;
  - generating Approximity website
- ▶ Syck (YAML + fast)
- ▶ outlook
  - schema
  - rpc/soap/...

## introduction

- ▶ YAML specification for storing objects in plain text
- ▶ readable, friendly language for storing lists, dictionaries, text, numerics and more
- ▶ cross-language specification (PHP, OCaml, Python, Ruby)
- ▶ typical use
  - Config files
  - Data-driven programming
  - Logging and reporting

- Interoperable serialization (Perl, Python, Java)
- ▶ Machine parsable
- ▶ Human readable
- ▶ Why the Lucky Stiff (Yaml.rb, Syck), Brian Ingerson (YAML.pm), Neil Watkiss (libyaml)
- ▶ in Ruby 1.8 as extension module
- ▶ no XML replacement (Ruby 1.8: XML support)

## marshalling

- ▶ load
- ▶ dump

## YAML in 4 minutes

- ▶ :-|>
- ▶ Maps, sequences, multi-line scalars (string, integer, float, time, ..)
- ▶ YAML is maps, sequences, and scalars
- ▶ Map = Hash
- ▶ Seq = Array
- ▶ Scalars = String, Integer, Float, Time, NilClass

## the dash - arrays

- ▶ the dash; sequences; sequences are in YAML  
Ruby arrays
- ▶ dinner:
  - beer
  - pizza
  - espresso
  - tiramisu
  - grappa
  - cuba libre

ruby:

```
['beer', 'pizza', 'tiramisu', ... ]
```

## the colon - hashes

```
title: <a href="/evt.html">EVT</a>
```

```
abstract: Extreme Value Theory.
```

```
ruby:
```

```
  {"abstract"=>"Extreme ...", "title"=>"<a ..."}
```

## Example (readable!)

```
invoice: 34843
date   : 2001-01-23
bill-to: &addr
      given  : Chris
      family : Dumars
      address:
          lines: |
                458 Walkman Dr.
                Suite #292
      city   : Royal Oak
      state  : MI
      postal : 48046
ship-to: *addr
```

## product:

- sku : BL394D  
quantity : 4  
description : Basketball  
price : 450.00  
- sku : BL4438H  
quantity : 1  
description : Super Hoop  
price : 2392.00

tax : 251.42

total: 4443.52

comments: >

Late afternoon is best.  
Backup contact is Nancy  
Billsmer @ 338-4338.

## Motivation: Server-Client project

- ▶ car-industry ERP project: Smalltalk :- ) and Java :- ( compatability wanted
- ▶ YAML-client solution shorter and cleaner than XML
- ▶ Speed no issue, as db bottleneck
- ▶ Two commands to heaven:
  - `to_yaml`
  - `YAML::load`

## meaningless statistic: LOC

method	client	server	total
YAML	35	54	89
XML	57	94	149
YAML/XML	61%	57%	59%

Email me if you want the source code

## Generating our website

- ▶ consistent look, recycle parts, etc.
- ▶ for HTML-dummies like Armin
- ▶ 

```
- !^FOLDER
  - fHome risk Home
  - !^INDEX iRisk
  - !^FOLDER
    - fConsulting Service Service
    - !^INDEX iConsulting
    - !^FOLDER
      - fStatistics statistics Statistics
      - !^INDEX iStatistics
      - !^PAGE pEVT@1 evt.html Extreme Value Theory
      - !^PAGE pMarket@1 market.html Market and Term Structure Models
      - !^PAGE pDatamining data.html Datamining
    - !^FOLDER
      - fFinance finance Finance/Insurance
      - !^INDEX iFinance
      - !^PAGE pEVT@2 evt.html Extreme Value Theory
  ..

iFinance: !^ITEM
```

```
title: Finance/Insurance
content:
- !^PUBS
-
  title: <a href="http://www.approximity.com/risk/Service/statistics/evt
.html">Extreme Value Theory</a>
  abstract: Describe and understand quantifiable rare events.
-
  title: <a href="http://www.approximity.com/risk/Service/statistics/mar
ket.html">Market and Term Structure Models</a>
```

Email Stefan Schmiedl (s@approximity.com) for the source-code.

## Future

Fresh from the wiki ...

▶ schema

```
--- #YAML:1.0 !okay/schema
okay/food:
  schema:
    - map:
      # References by key name
      /name: [ str ]
      /calories: [ str ]
      # Non-prefixed are plain options
      optional: [ /calories ]
    - seq:
```

```
# References by index  
/0: [ str, map ]  
/1: [ str, map ]
```

▶ !okay/rpc Protocol

## **YAML=simplicity**

- ▶ simplicity, not speed, though Syck is impressive
- ▶ good productive tool