

Ruby reference implementation of the openEHR

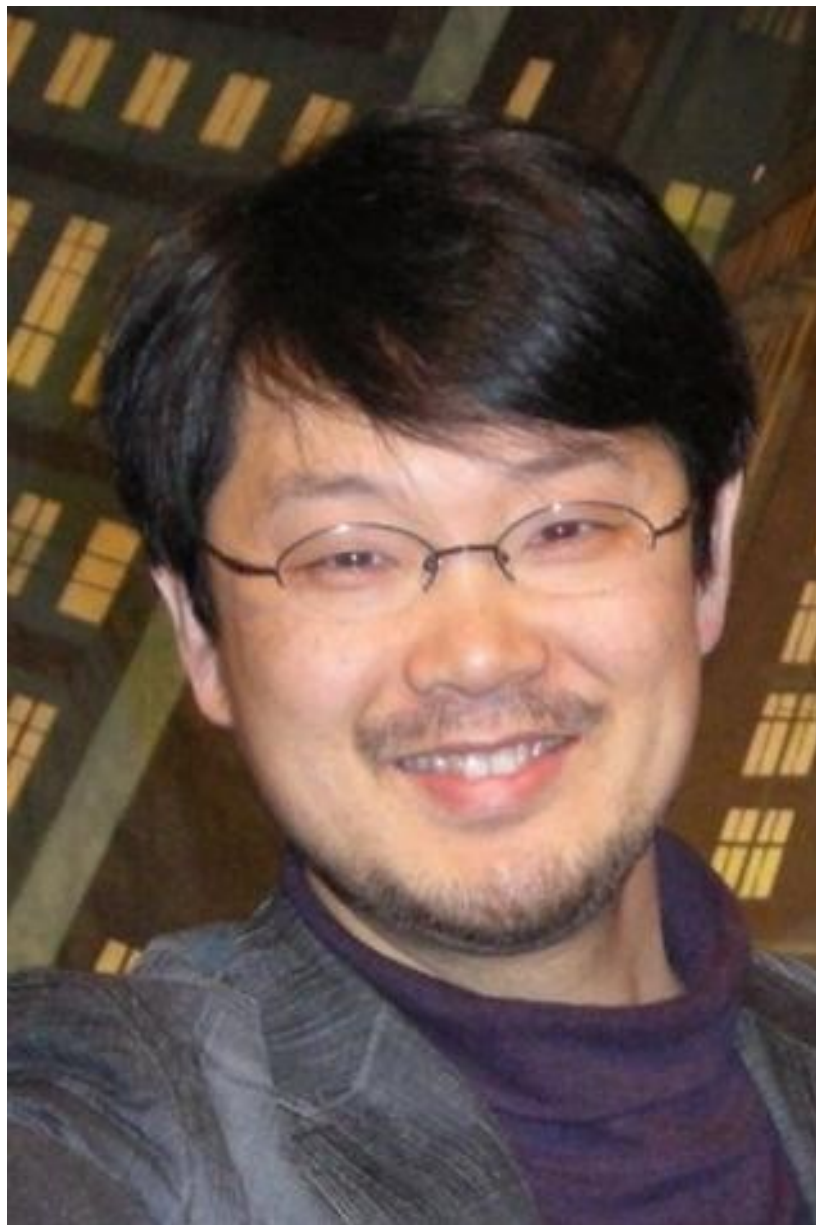
Shinji KOBAYASHI,
Akimichi TATSUKAWA

What is Ruby?



PROGRAMMING
Language

Object oriented
script(interpreter)
language



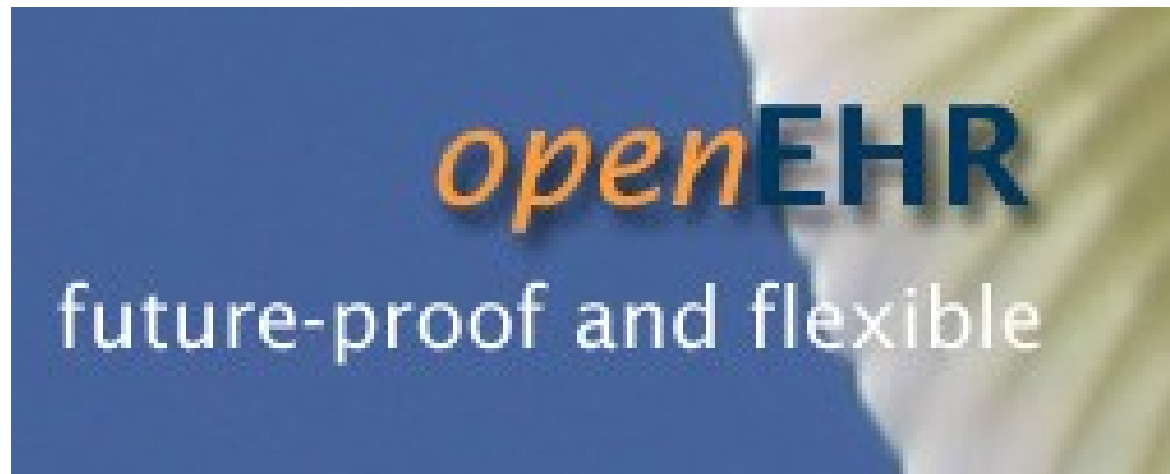
Yukihiro 'Matz' Matsumoto

Designed for
developers' ease

Open Source Software

Linux,
Windows,
Mac,
BSDs

The openEHR Project



Semantic
interoperability of
healthcare
information

ISO / CEN 13606

Open source
implementation!

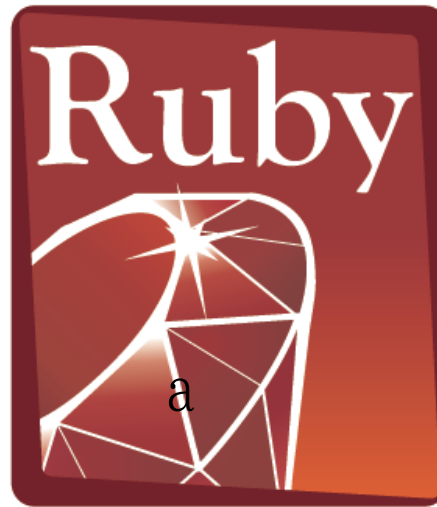
But...

Eiffel(C#)
Java

Enough?

No!

More and more!



PROGRAMMING
Language



Current status
of the Ruby
implementation
of the
openEHR

EHR	Demographic	Integration	Template OM	
Composition			Archetype prof	
Security	Common	AOM		ADL
Data Structures				
Data Types				
Support				

Known difficulties



Multiple inheritance



Single inheritance

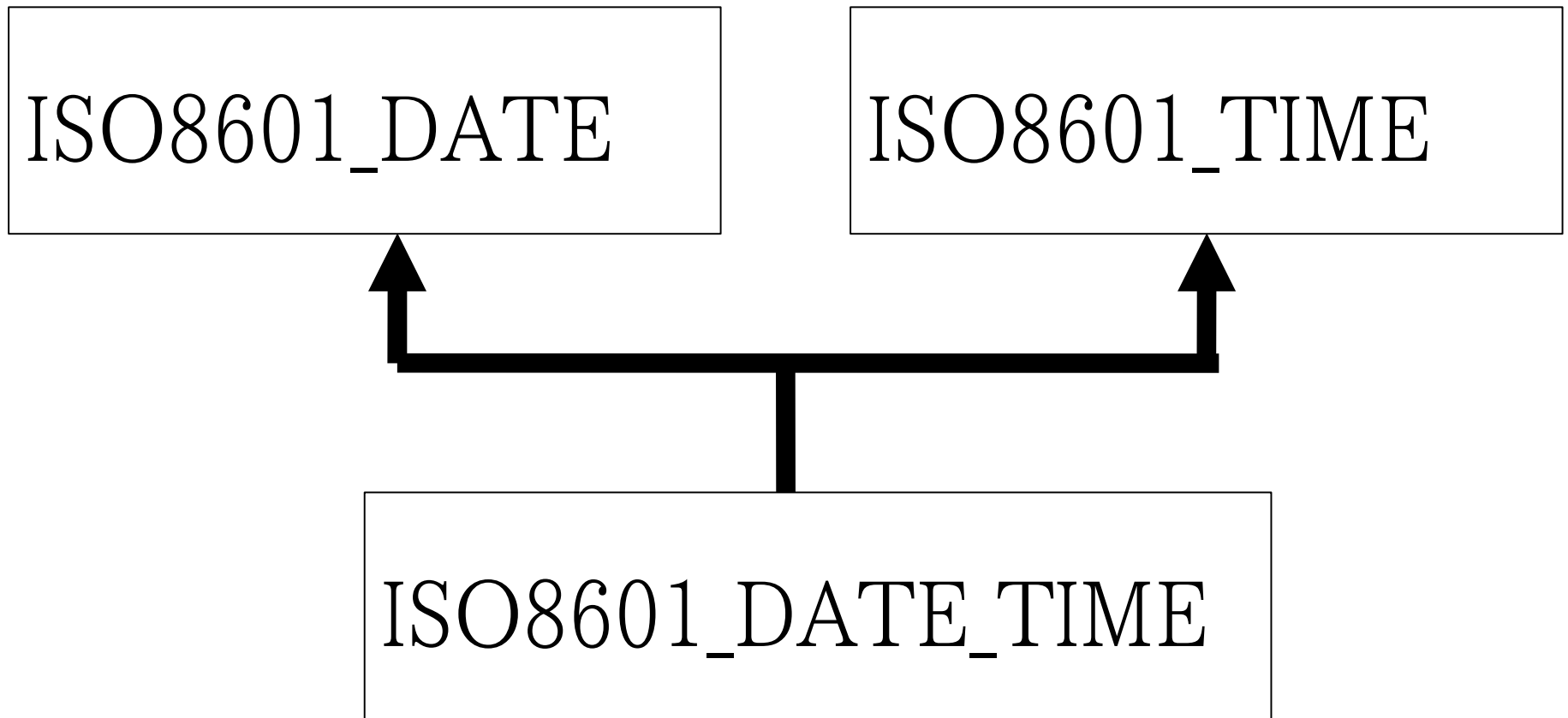
+

mixin

(implementation)



PROGRAMMING
Language



rm::support::assumed_library



ISO8601_Date_Time

- +year
- +month
- +day
- +hour
- +minute
- +second
- +fractional_second
- +as_string

ISO8601_Date

- +year
- +month
- +day
- +as_string

ISO8601_Time

- +hour
- +minute
- +second
- +fractional_second
- +as_string

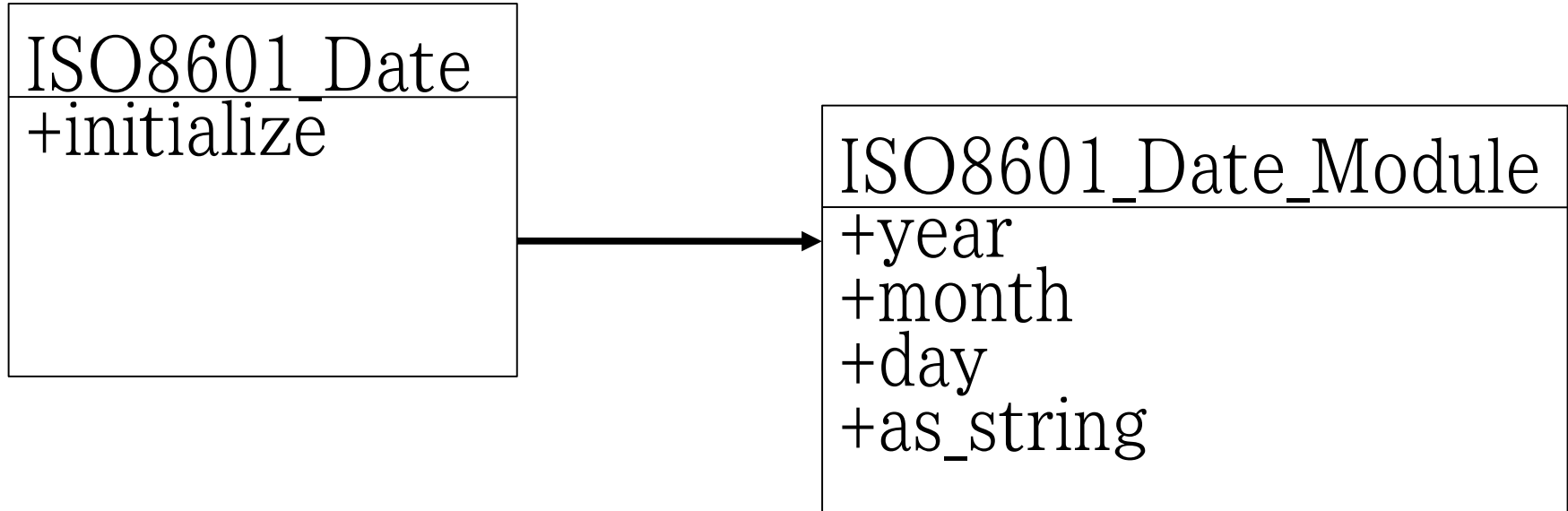


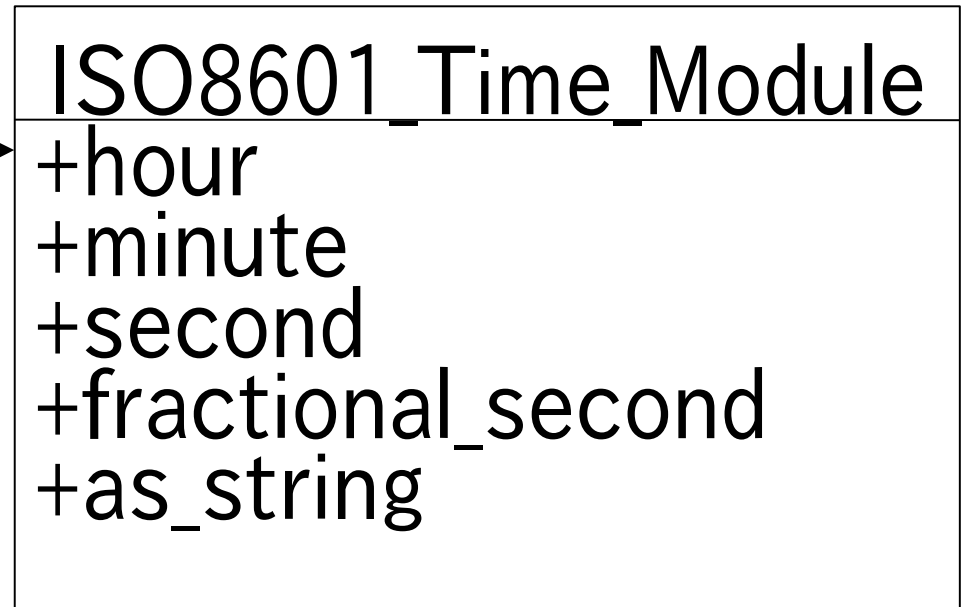
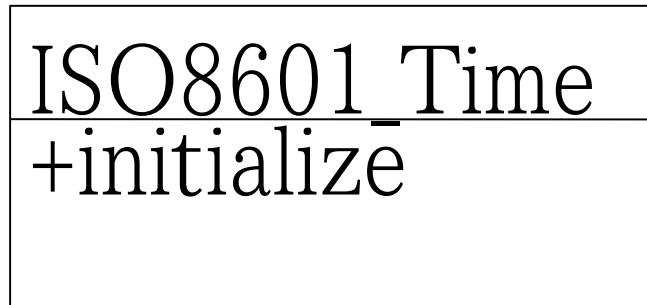
Module = Class - constructor

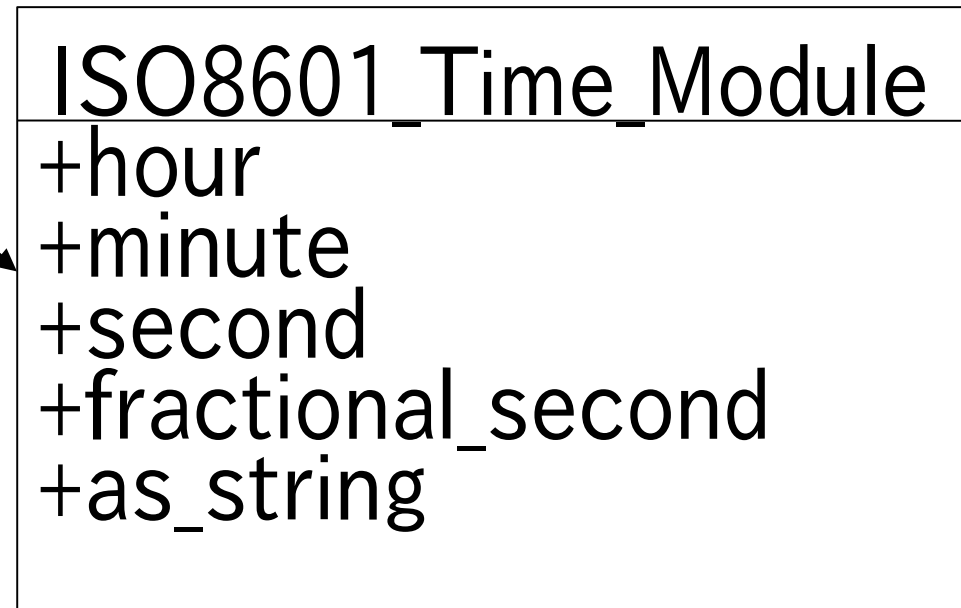
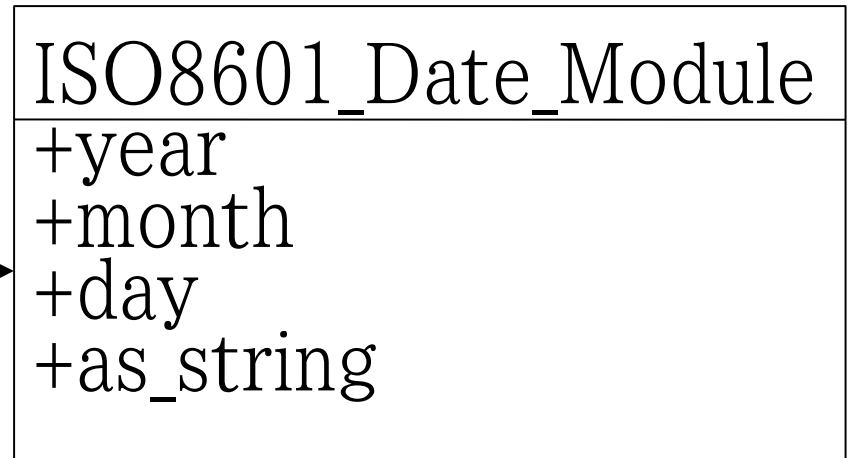


Class = Module + constructor

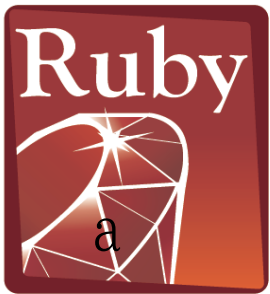








mix-in

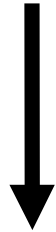


PROGRAMMING
Language

Circular import

A.java

```
import B  
public class A
```



B.java

```
import A  
public class B
```

```
ab.rb
```

```
class A
```

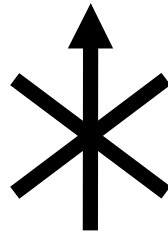
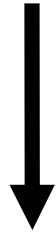
```
end
```

```
class B
```

```
end
```

a.rb

```
require B  
class A
```



b.rb

```
require A  
class B
```

Summary

Although our
implementarion covers
about half of the openEHR
specification, we can
resolve the known
difficulties in
implementation.

Ruby language shows
enough possibility to
implement the
openEHR specification

The openEHR
specification also
proves its universality
independent on
computer language

Conclusion

Ruby is good



Thank you for
your attention

<http://openehr.jp/>