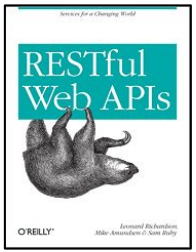
Describing

Mike Amundsen
@mamund

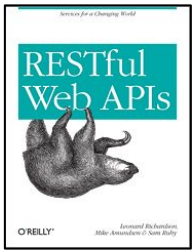
Designing and Building Great APIs



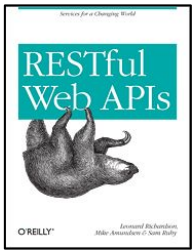
Describing Great APIs

- The value of description formats
- The ALPS Format

#mcaTravels **@mamund** #perth2018



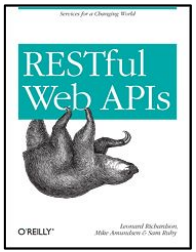
Description Formats



Description Formats

Description formats are implementation agnostic

- Dublin Core Application Profile (DCAP)
- XHTML Meta-Data Profile (XMDP)
- Application-Level Semantic Profile (ALPS)



Dublin Core Application Profile (DCAP)

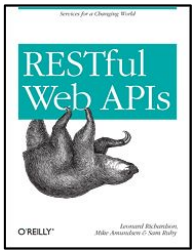
```
Description template: Person id=person
   minimum = 0; maximum = unlimited
   Statement template: givenName
     Property: http://xmlns.com/foaf/0.1/givenname
     minimum = 0; maximum = 1
     Type of Value = "literal"
   Statement template: familyName
     Property: http://xmlns.com/foaf/0.1/family_name
     minimum = 0; maximum = 1
     Type of Value = "literal"
   Statement template: email
     Property: http://xmlns.com/foaf/0.1/mbox
     minimum = 0; maximum = unlimited
     Type of Value = "non-literal"
     value URI = mandatory
```

XHTML Meta Data Profile (XMDP)

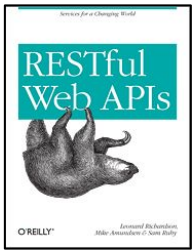
```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
 "http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head><title>sample HTML profile</title></head>
<body>
 <dl class="profile">
  <dt id='author'>author</dt>
   <dd>A person who wrote (at least part of) the document.</dd>
  <dt id='keywords'>keywords</dt>
   <dd>A comma and/or space separated list of the
    keywords or keyphrases of the document.</dd>
  <dt id='copyright'>copyright</dt>
   <dd>The name (or names) of the copyright holder(s)
    for this document, and/or a complete statement of copyright.</dd>
  <dt id='date'>date</dt>
   <dd>The last updated date of the document, in ISO8601 date format.</dd>
  <dt id='identifier'>identifier</dt>
   <dd>The normative URI for the document.</dd>
  <dt id='rel'>rel</dt>
```

Application-Level Profile Semantics (ALPS)

```
{
 "alps" : {
   "version" : "1.0",
   "doc" : {
     "href" : "http://example.org/samples/full/doc.html"
   },
   "descriptor" : [
     {
       "id" : "find-user",
       "type" : "safe",
       "doc" : {"value" :
         "User search form"
       },
       "descriptor" : [
         {
           "id" : "userName",
           "type" : "descriptor",
           "doc" : { "value" : "input for search" }
         },
         { "href" : "#userStatus" }
       ]
     },
```



The ALPS Format



Application-Level Profile Semantics

[Docs] [txt|pdf|xml|html] [Tracker] [Email] [Diff1] [Diff2] [Nits]

Versions: 00 01 02

Network Working Group
Internet-Draft
Expires: February 25, 2016

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CA Technologies, Inc.
L. Richardson

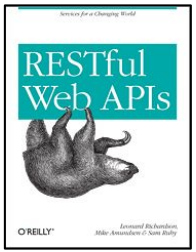
M. Foster

August 24, 2015

Application-Level Profile Semantics (ALPS)
draft-amundsen-richardson-foster-alps-02

Abstract

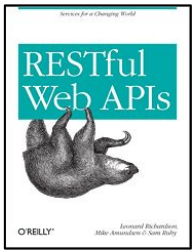
This document describes ALPS, a data format for defining simple descriptions of application-level semantics, similar in complexity to HTML microformats. An ALPS document can be used as a profile to explain the application semantics of a document with an application-agnostic media type (such as HTML, HAL, Collection+JSON, Siren, etc.). This increases the reusability of profile documents across media types.



```
<alps version="1.0">
  <link href="http://amundsen.com/media-types/maze/" rel="help" />

  <!-- semantic descriptors -->
  <descriptor id="maze" type="safe" def="RFC5988"/>
  <descriptor id="switch" type="safe" def="RFC5988" />

  <descriptor id="edit" type="safe" def="http://www.iana.org/assignments/link-relations/"/>
  <descriptor id="start" type="safe" def="http://www.iana.org/assignments/link-relations/"/>
  <descriptor id="current" type="safe" def="http://www.iana.org/assignments/link-relations/"/>

  <descriptor id="exit" type="safe" def="http://microformats.org/wiki/existing-rel-values" />
  <descriptor id="north" type="safe" def="http://microformats.org/wiki/existing-rel-values" />
  <descriptor id="south" type="safe" def="http://microformats.org/wiki/existing-rel-values" />
  <descriptor id="west" type="safe" def="http://microformats.org/wiki/existing-rel-values" />
  <descriptor id="east" type="safe" def="http://microformats.org/wiki/existing-rel-values" />
</alps>
```

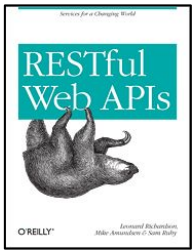
ALPS Format

- Descriptor
  - Id (unique)
  - Name (human-readable)
  - Type (semantic, safe, idempotent)
  - Text (human-readable comment)



ALPS Format

```
<descriptor
  id="homeLink"
  name="home"
  type="safe"
  text="link to home page">
```



So...

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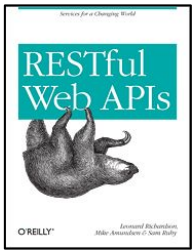
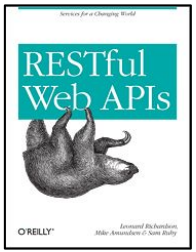
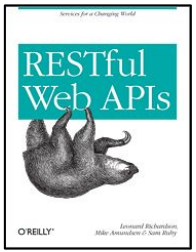


Describing Great APIs

- Description formats are implementation agnostic
- The ALPS format captures design essentials



Exercise


RESTful
Web APIs
O'REILLY


O'REILLY
RESTful
Web Clients
Mike Amundsen

Describing

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Designing and Building Great APIs